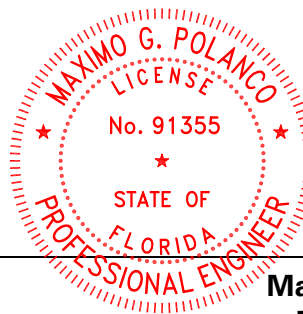

TRAFFIC IMPACT ANALYSIS

**1440 Michigan Avenue
Miami-Dade County
Miami Beach, Florida**

***Prepared For:*
2Future Holdings
7657 Golf Channel Drive
Orlando, Florida 32819**

***Prepared By:*
Langan Engineering & Environmental Services, LLC
1221 Brickell Avenue, Suite 1800
Miami, FL 33016
FL Certificate of Authorization No: 6601**



This item has been digitally signed and sealed by Maximo Polanco, PE on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

**Maximo G. Polanco, P.E.
P.E. License No. 91355**

A handwritten signature in blue ink, appearing to read "E. Schwarz".

**Eric Schwarz, P.E., LEED AP
Principal/Vice President**

June 2025;
Revised: August 2025

300354701

LANGAN

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EXECUTIVE SUMMARY

Langan Engineering & Environmental Services, LLC was retained to prepare a traffic-impact analysis for the proposed 1440 Michigan Avenue residential development. The 0.52-acre site is located approximately 100 feet south of 15th Street between Lenox Avenue and Michigan Avenue in Miami Beach, Florida. The site is currently occupied by a surface level parking lot. The redevelopment will comprise the construction of a three-story building with 23 residential units and 24 surface level on-site parking spaces with an expected completion date of 2028. We analyzed four stop-sign controlled intersections for the 2028 build conditions. The peak-hour traffic-impact analyses with the proposed development's impacts in 2028 yielded the following results:

- All four stop-sign controlled intersections are expected to operate within their adopted LOS during the morning and afternoon peak hours with and without the development's impacts.
- The proposed development's driveway connection to Michigan Avenue is expected to operate at LOS A during the morning and afternoon peak-hours.
- The expected traffic volumes from the proposed development do not warrant the need for exclusive turn lanes at the driveway connection to the public road.
- The gate-controlled entrance will have sufficient vehicle-stacking storage to accommodate the expected morning and afternoon peak-hour queues due to entering traffic.
- The development will promote the use of different modes of transportation through the implementation of several TDM strategies.

We conducted intersection-capacity analyses for the existing, no build (future without project) and build (future with project) conditions. The proposed development is expected to generate 223 daily, 30 morning peak-hour, and 30 afternoon peak-hour trips.

1.0 INTRODUCTION

Langan was retained to prepare this impact-analysis report for the proposed 1440 Michigan Avenue residential development that is expected to be built by 2028. The 0.52-acre site is located approximately 100 feet south of 15th Street between Lenox Avenue and Michigan Avenue in Miami Beach, Florida. The redevelopment will comprise the construction of a three-story building with 23 residential units and 24 surface level on-site parking spaces with an expected completion date of 2028.

We analyzed four stop-sign controlled intersections for the 2028 build conditions during the morning and afternoon peak hours. We found that all four stop-sign controlled intersections are expected to operate within their adopted LOS during the morning and afternoon peak hours with and without the development's impacts. This report presents the traffic-data and traffic-impact analysis for this proposed development.

1.1 Project Description

Attachment A contains the figures of this report and **Figure 1** illustrates the site location. **Appendix B** contains a copy of the site plan showing the proposed development program and the development parcel (Folio No.: 02-4203-009-6980). The proposed development will have access through a two-way driveway with connection at Michigan Avenue. The maximum acceptable LOS for roadways and intersections is LOS E for county and city roads.

1.2 Study Methodology and Study Area

Langan undertook the following steps to prepare this study in accordance with the methodology requirements by the City of Miami Beach Transportation and Mobility Department. **Appendix C** contains a copy of the methodology letter.

- Collected morning (7 to 9 AM) and afternoon (4 to 6 PM) peak-hour vehicle turning-movement volumes at the following study intersections:
 - 15th Street and Lenox Avenue (unsignalized)
 - 15th Street and Michigan Avenue (unsignalized)
 - 14th Street and Lenox Avenue (unsignalized)
 - 14th Street and Michigan Avenue (unsignalized)
- Used Peak Season Conversion Factors (PSCF) from the Florida Department of Transportation (FDOT) to convert the traffic data into peak-season volumes.
- Prepared trip-generation estimates for the proposed development based on accepted trip-generation rates developed by the Institute of Transportation Engineers (ITE).

- Calculated a growth rate for background traffic by using the highest growth rate calculated between FDOT historical data from traffic-count stations near the project, and from comparing 2015 to 2045 SERPM Traffic Volume growth rates. The 2015 to 2045 SERPM model generated a growth rate of 0.48%. To provide a conservative analysis, we assumed a growth rate of 0.5%.
- Developed trip-distribution estimates for the project based on the cardinal distribution for the corresponding Traffic Analysis Zone of the Miami-Dade County 2045 Long Range Transportation Plan (LRTP). A computer program used to develop the 2045 LRTP Directional Distribution Report generates directional distributions for each TAZ for the eight secondary-intercardinal directions (NNE; ENE; ESE; SSE; SSW; WSW; WNW; NNW).
- Prepared morning and afternoon peak-hour intersection-capacity analyses for the following conditions at the study intersections: 2024 existing, 2028 future no-build, and 2028 future build.
- Prepared tables summarizing the LOS and delay for each intersection and intersection approaches for the existing, no-build, and build conditions.
- Calculated the morning and afternoon peak-hour LOS intersection-capacity analyses of the development's driveways for the 2028 build conditions.
- Prepared a queuing analysis for the proposed gated entrance using the methodology from *Transportation and Land Development* published by the ITE.

2.0 DESCRIPTION OF EXISTING CONDITIONS

Langan visited the study area to collect the lane-configuration and traffic-control data shown in **Figure 2**.

2.1 Roadway Characteristics

15th Street

15th Street is a two-lane with exclusive left turn lanes, undivided, east-west, city-maintained, local roadway with no posted speed limit.

14th Street

14th Street is a two-lane, undivided, east-west, city-maintained, local roadway with no posted speed limit.

Lenox Avenue

Lenox Avenue is a two-lane, undivided, north-south, city-maintained, local roadway with no posted speed limit.

Michigan Avenue

Michigan Avenue is a two-lane, undivided, north-south, city-maintained, local roadway with no posted speed limit.

2.2 Traffic Counts and Volumes

Traffic-volume data was collected on Tuesday, October 22, 2024, from 7:00 to 9:00 AM and 4:00 to 6:00 PM. We applied FDOT's season adjustment factors (1.07) to convert the traffic data into peak-season volumes. We compared the data of each intersection and determined that the study area peak hour occurred between 8:00 AM and 9:00 AM and between 4:45 PM and 5:45 PM for the study area. **Figure 3** illustrates the existing weekday morning and afternoon peak-hour traffic volumes. Appendix D contains the traffic data and seasonal-adjustment factors.

2.3 Intersection Capacity Analysis (Level of Service)

We conducted 2024 existing-conditions capacity analyses for the study intersections using HCS software. We found the study intersections are operating within their adopted LOS during the morning and afternoon peak hours. **Table 1** summarizes the results of the existing-conditions analysis. **Appendix E** contains intersection-volume tables; **Appendix F** contains the capacity-analyses worksheets.

Table 1 - 2024 Existing Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) 15 Street & Lenox Avenue	Unsignalized	Eastbound	A	9.3	B	10.8
		Westbound	B	10.1	B	10.9
		Northbound	A	8.5	A	9.0
		Southbound	A	8.5	A	9.4
(2) 15 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.4	B	11.6
		Westbound	A	9.9	B	11.4
		Northbound	A	8.4	B	10.1
		Southbound	A	8.2	A	9.3
(3) 14 Street & Lenox Avenue	Unsignalized	Eastbound	A	7.3	A	7.8
		Westbound	A	8.3	A	7.6
		Northbound	A	7.2	A	7.6
		Southbound	A	7.2	A	7.5
(4) 14 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.3	A	10.0

Capacity analyses for stop-sign controlled intersections are calculated for certain intersection approaches, not for the entire intersection. The stop-sign controlled approaches of stop-sign controlled intersections often exceed their adopted LOS during peak hours because all vehicles must stop and incur a delay before proceeding through the intersection. Capacity analysis provides an indication of the adequacy of intersection and roadway facilities to serve traffic demand. The evaluation criteria used to analyze the study intersections is based on the *7th Edition Highway Capacity Manual* published by the Transportation Research Board.

3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

We reviewed the county Long Range Transportation Plan (2050 LRTP) and found no roadway improvements in our study area included on the latest LRTP that would impact the proposed development.

4.0 NO BUILD CONDITIONS

This section of the report covers background traffic growth and future traffic volumes used to evaluate the no build conditions. The no-build conditions evaluate future traffic volumes without the impacts of the proposed development.

4.1 Background/No Build Traffic

Background, or no build traffic volumes, account for annual increases in traffic from approved and unbuilt land-development projects and historical increases in traffic volumes. Developing no build traffic operating conditions allows us to project what can be expected to exist in the study area without the proposed development.

We developed 2028 no-build traffic volumes by applying a compounded growth rate to the 2024 volumes. We compared the ten-year linear-trend growth rate (-1.60%) to the 2015 to 2045 SERPM Traffic Volume growth rate (0.48%) and determined that the 2015 to 2045 SERPM growth rate is the higher growth. However, to provide a conservative analysis, we assumed a growth rate of 0.5 percent to develop future background volumes. The growth-rate factor accounts for increased background traffic volumes and was applied to the existing volumes to develop 2028 no-build traffic volumes.

4.2 Intersection Analysis No Build Conditions

We conducted intersection capacity analyses and found that the unsignalized intersections are expected to operate within their adopted LOS during the morning and afternoon peak hours. **Figure 4** illustrates the 2028 no-build traffic volumes. **Table 2** summarizes the results of the 2028 no-build conditions capacity analysis. Appendix F contains the capacity-analyses worksheets.

Table 2 - 2028 No Build Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) 15 Street & Lenox Avenue	Unsignalized	Eastbound	A	9.3	B	11.0
		Westbound	B	10.2	B	11.0
		Northbound	A	8.5	A	9.1
		Southbound	A	8.5	A	9.5
(2) 15 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.4	B	11.7
		Westbound	A	10.0	B	11.6
		Northbound	A	8.4	B	10.2
		Southbound	A	8.3	A	9.4
(3) 14 Street & Lenox Avenue	Unsignalized	Eastbound	A	7.3	A	7.9
		Westbound	A	8.3	A	7.7
		Northbound	A	7.2	A	7.6
		Southbound	A	7.2	A	7.6
(4) 14 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.3	A	10.0

5.0 BUILD CONDITIONS

This section of the report covers site-generated trips, trip distribution, and future traffic volumes used to evaluate the build conditions. The evaluation of the build conditions analyzes the future traffic volumes for the anticipated build-out year of the residential development by adding the development-generated traffic to the 2028 no-build peak hour traffic volumes.

5.1 Site-Generated Trips

The proposed development is expected to generate 223 daily, 30 morning peak-hour, and 30 afternoon net-new peak-hour trips. We prepared daily, morning peak-hour and afternoon peak-hour trip estimates for the proposed development using equations from the 11th Edition of the ITE *Trip Generation Manual* based on Land Use 220 – Multifamily Housing (Low-Rise). **Table 3** summarizes the trip-generation estimates for the proposed development. **Appendix G** contains the trip-generation data.

Table 3 - Trip Generation Estimates

Use	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Uses								
Multifamily Housing (Low-Rise)	23 DU	223	7	23	30	19	11	30

5.2 Trip Distribution

We determined the directional distribution of site-generated trips based on the cardinal distribution data for TAZ 647 from the Miami-Dade County 2045 Transportation Model (see Appendix D) and from the development’s access to the surrounding roadway network. We interpolated the 2015 and 2045 directional-distribution values from the model data to develop percentages for 2028. **Table 4** shows the proposed development’s trip distributions. **Figure 5** shows the proposed development’s traffic distributions to the study intersections. **Figure 6** illustrates the morning and afternoon development-traffic assignments at the study intersections.

Table 4 - Cardinal Distribution

Year	NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW
2015	18.20%	5.40%	5.90%	8.60%	3.50%	18.50%	18.70%	21.20%
2045	12.60%	5.20%	4.10%	4.60%	3.40%	24.80%	28.10%	17.30%
2028	15.77%	5.31%	5.12%	6.87%	3.46%	21.23%	22.77%	19.51%

5.3 Intersection Analysis Build Conditions

We conducted capacity analyses for the study intersections and determined that the stop-sign controlled intersections are expected to operate within their adopted LOS during the morning and afternoon peak hours with and without the developments' impacts. The 2028 build traffic volumes were derived by adding the total site-generated trips to the 2028 no-build traffic volumes. **Figure 7** illustrates the 2028 build morning and afternoon peak-hour traffic volumes. **Table 5** summarizes the 2028 build LOS for the morning and afternoon peak hours.

Table 5 - 2028 Build Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) 15 Street & Lenox Avenue	Unsignalized	Eastbound	A	9.4	B	11.1
		Westbound	B	10.3	B	11.2
		Northbound	A	8.6	A	9.1
		Southbound	A	8.6	A	9.6
(2) 15 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.5	B	12.0
		Westbound	B	10.1	B	11.7
		Northbound	A	8.6	B	10.5
		Southbound	A	8.3	A	9.5
(3) 14 Street & Lenox Avenue	Unsignalized	Eastbound	A	7.3	A	7.9
		Westbound	A	8.3	A	7.7
		Northbound	A	7.2	A	7.6
		Southbound	A	7.2	A	7.6
(4) 14 Street & Michigan Avenue	Unsignalized	Eastbound	A	9.3	B	10.1

5.4 Driveway Volumes and Turn Lane Analysis

We analyzed the development's proposed driveway connection to Michigan Avenue and found it will operate at LOS A during the morning and afternoon peak hours for the 2028 build conditions. The driveway will operate as a two-way ingress/egress driveway. We analyzed the need for exclusive turn lanes at the proposed driveway connections based on 2023 FDOT Access Management Guidebook guidelines and determined that the driveway connection to Michigan Avenue does not warrant the need for exclusive left or right-turn lanes. **Figure 8** shows the project site generated trips at the driveway connections to public roadways; Appendix F contains the capacity analysis worksheets.

6.0 QUEUEING ANALYSIS

We prepared a queuing analysis for the proposed gate-controlled entrance for the residential development and found that it will not cause entering traffic to spillback onto the adjacent public roadway (Michigan Avenue). The driveway connection to Michigan Avenue will serve residents and will be a custom sliding gate-controlled entrance. The site plan included in **Appendix B** shows the location of the gate-controlled entrance.

We used the queuing-analysis methodology from Transportation and Land Development published by the ITE. This methodology requires hourly rates of vehicle arrival and service times for the gate-controlled driveway to determine vehicle-queue lengths. The queues resulting from this analysis are 95th percentile queues, which are those expected to be generated 95 percent of the time. The vehicle arrival rate was based on the project's peak-hour trip generation, summarized in Table 3. The development is expected to generate seven (7) morning peak hour entering trips and 23 morning peak hour exiting trips for a total of 30 morning peak hour trips, and 19 afternoon peak-hour entering trips and 11 afternoon peak-hour exiting trips for a total of 30 afternoon peak hour trips. As the total for the morning and afternoon peak hour trips were the same, per the direction of the City of Miami Beach, we used the peak-hour total values to provide a conservative analysis.

The proposed gate operation will operate with a sliding gate that will operate horizontally. Residents will be able to open the gate through a bar code reader. We collected service times at the gated entrance of the Fiji at the Oasis residential development, which operates with a similar type of gate equipment proposed by the developer. The data was collected on Wednesday, September 18, 2019, between 3:30 and 6:00 PM. The service-time data is included in **Appendix H**. To provide an overly conservative analysis, we used a service time of 30 seconds to account for any additional delays that can occur during atypical conditions. Vehicle lengths of 22 feet were used to convert the number of vehicles to linear feet.

Table 6 summarizes the results of the queuing analysis and indicates that no queues are expected. However, to provide a conservative analysis, we assumed the queue for the proposed gated entrance is not expected to exceed one vehicle. The driveway will provide 24.5-feet of storage to the property line, and an additional 20-feet of stacking before Michigan Avenue. **Appendix I** contains excerpts from the ITE and the queuing analysis calculations.

Table 6 - Queuing Analysis Summary

Entrance	Entrance Type	Storage Capacity (feet)	95 th Percentile Queue Length		Exceeds Capacity?
			Vehicles	Feet	
Michigan Avenue and Driveway Entrance	Resident	22	1	22	NO

7.0 TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

The site abuts Michigan Avenue and Lenox Avenue. The proposed development is approximately a five-minute walk to the nearest bus station (Route 20 & MTROALT) located north of the intersection of 15th Street and Alton Road. Citibike serves the City of Miami Beach, with a docking station located south of the intersection of Michigan Avenue and Michigan Court (approximately a two-minute walk from the site). Appendix D contains a copy of the transit route maps.

To encourage the use of the public transportation in the area the development is proposed to implement Transportation Demand Management (TDM) strategies, which will focus on providing Miami-Dade Transit bus and trolley route information on or near employee bulletin boards to promote the use of public transportation. The infrastructure will also provide bicycle racks to encourage non-vehicular travel. The most important action will be doing a regular employee outreach to provide them with the multiple commute options and establish preferences to target TDM efforts. **Table 8** summarizes the proposed TDM strategies.

Table 7 - Proposed TDM Strategies

Action	Details
Residents Survey	Survey residents to determine current commute characteristics establish preferences, and target TDM efforts.
Education, Marketing, and Outreach	Offer new employees a packet of materials and/or provide personal consultation detailing sustainable (non-SOV) travel options.
Bicycle Facilities	On-site bike racks will be available for employees, residents, and visitors.
Travel Mapping	Transit route maps and schedules will be made available on site to employees and visitors.
Loading Area	The proposed on-site loading area will have specific timeframes to avoid traffic conflicts in the regular peak-hours.

8.0 TRASH COLLECTION OPERATIONS

The proposed development will have on-street trash pick-up, which aligns with other developments along Michigan Avenue. As such, trash trucks will not be required to enter or exit the site, and all trash bins will be rolled out onto Michigan Avenue by on-site personnel in the timeframes coordinated with the Miami-Dade County Department of Solid Waste. Additionally, all residents parking on-site will enter through the main driveway to Michigan Avenue to access the ground floor parking garage.

9.0 PARKING MANUEVERABILITY ANALYSIS

As shown in the maneuverability analysis, a Chevrolet Suburban sized vehicle can safely maneuver through the site and into the parking spaces. However, the westernmost parking space on the north side of the parking garage (space 01) has maneuvering constraints to allow for safe maneuvering of a Chevrolet Suburban sized vehicle. Additionally, the parking space located at the southeast corner of the parking garage (space 24) experiences similar constraints. As such, these parking spaces will be designated for compact vehicle parking. Additionally, we recommend designating the southwestern most parking space for compact vehicles only. Appendix B includes the maneuverability analysis plans.

10.0 PARKING SUMMARY

The proposed development will comply with City of Miami Beach code of ordinance off-street parking requirements and alternative parking incentives to reduce the required number of on-site parking spaces as outlined in Section 5.2.14. The following outline the specific parking incentives that were applied:

- Bicycle parking long-term: The minimum off-street parking requirements may be reduced by one off-street parking space for every five long-term bicycle parking spaces provided off-street, not to exceed 15 percent of the off-street parking spaces that would be required in tier 1.
 - Per this reduction, the development will provide seven (7) long term bicycle spaces and reduce their required parking by one (1) parking spaces.
- Bicycle parking short-term: The minimum off-street parking requirements may be reduced by one off-street parking space for every ten short-term bicycle parking spaces provided off-street, not to exceed 15 percent of the off-street parking spaces that would be required in tier 1.
 - Per this reduction, the development will provide 16 short term bicycle spaces and reduce their required parking by one (1) parking spaces.

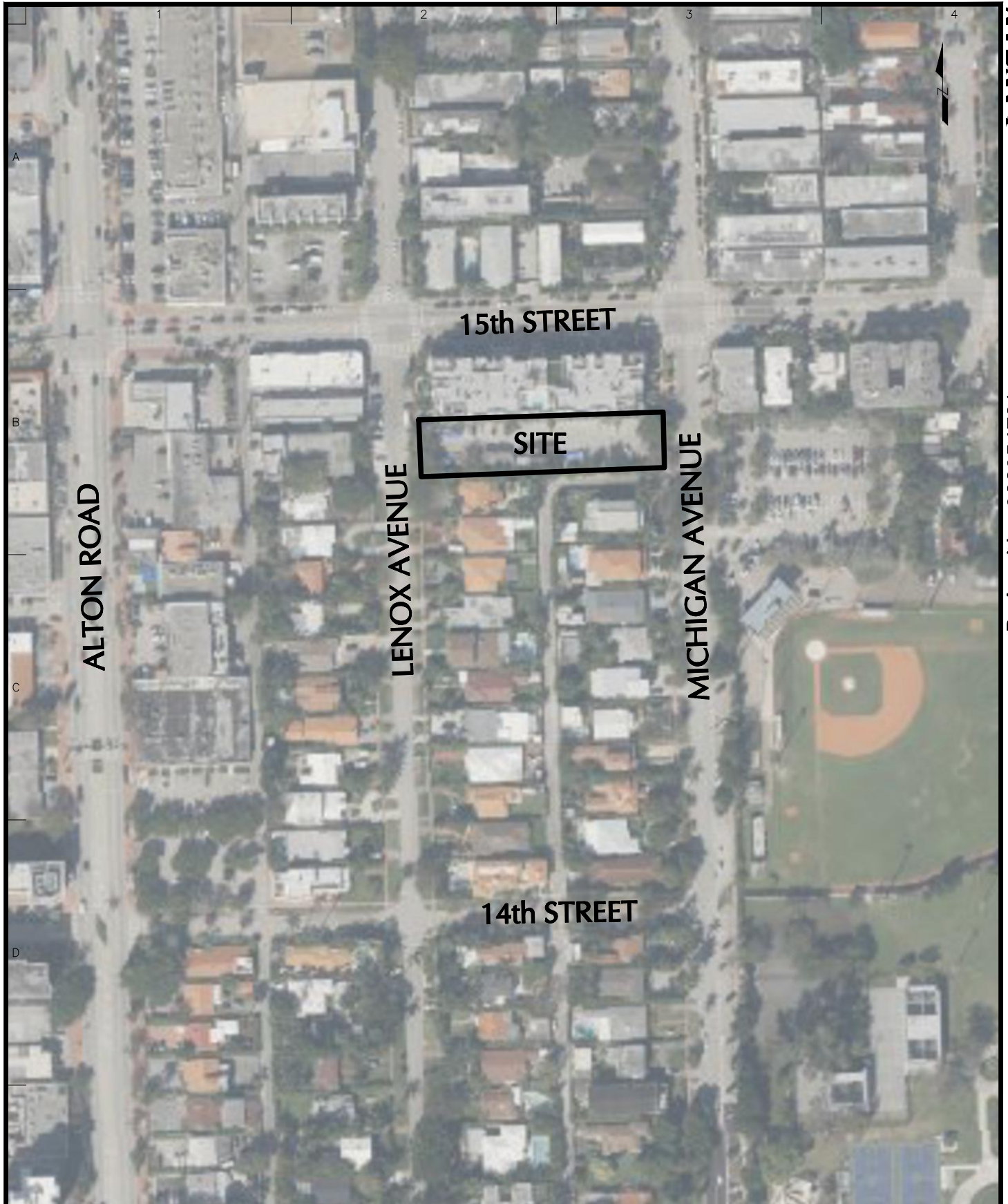
Without any reductions applied, the site would be required to provide 26 on-site parking spaces. This accounts for one space per unit (23 spaces) and 10 percent guest spaces (3 spaces). However, based on the parking reductions described above, the development can reduce their required parking by two (2) spaces through the inclusion of seven long term bicycle parking spaces and 16 short term bicycle parking spaces (23 bicycle parking spaces for the 23 proposed units). As shown on the site plan, the proposed development will provide the 24 required parking spaces, which complies with the alternative parking incentives reductions. **Appendix J** contains the Miami Beach Parking Code.

11.0 CONCLUSIONS

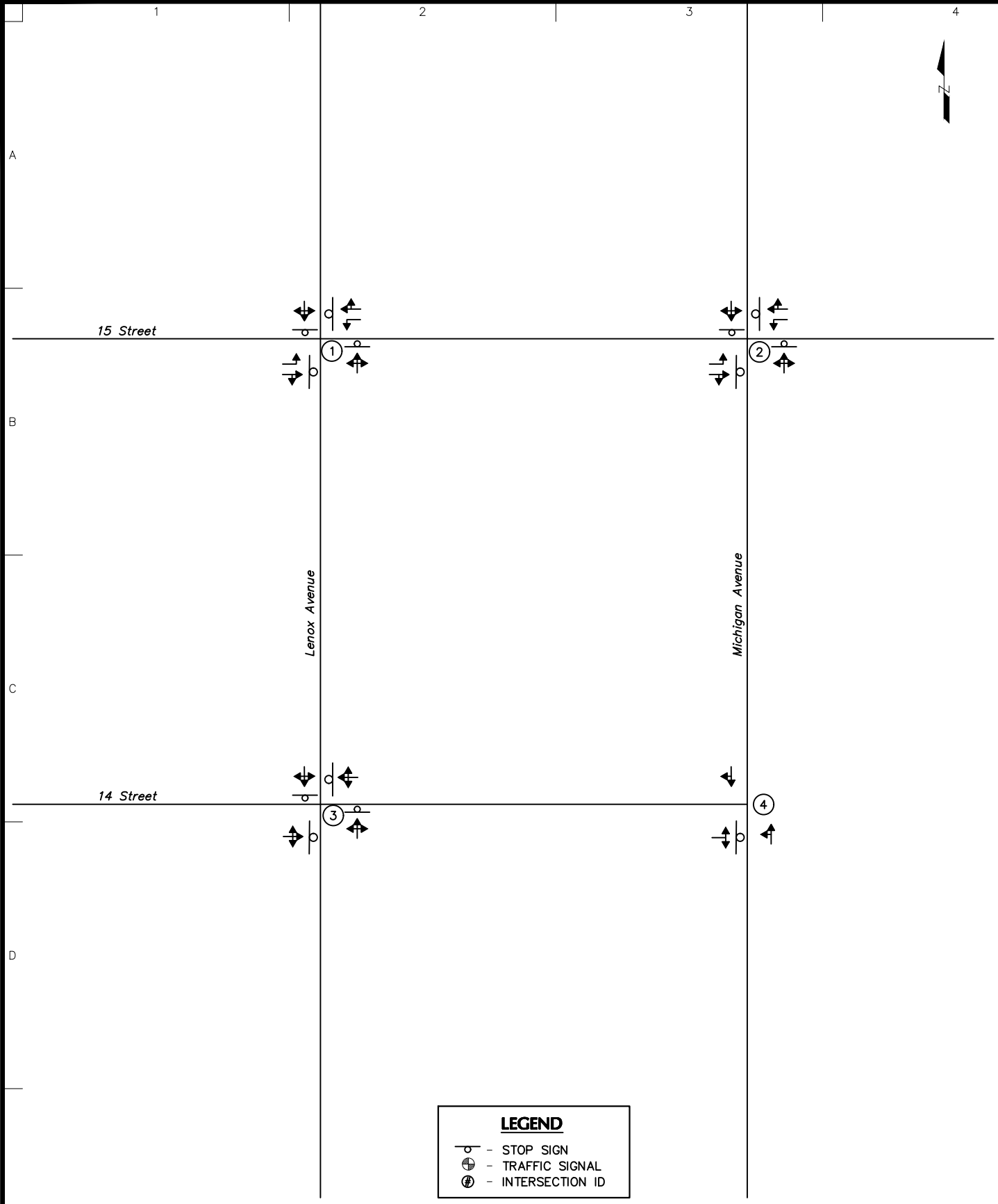
Langan performed a traffic-impact analysis for the 1440 Michigan Avenue residential development expected to be completed by 2028. The analysis shows the following results for the 2028 build conditions:

- All four unsignalized intersections are expected to operate within their adopted Level of Service (LOS) during the morning and afternoon peak-hours with and without the proposed project's impacts.
- The proposed driveway connections to Michigan Avenue and Lenox Avenue are expected to operate at LOS A during the morning and afternoon peak-hours.
- The expected traffic volumes from the proposed development do not warrant the need for exclusive turn lanes at the driveway connection to the public road.
- The gate-controlled entrance will have sufficient vehicle-stacking storage to accommodate the expected morning and afternoon peak-hour queues due to entering traffic.
- The development will promote the use of different modes of transportation through the implementation of several TDM strategies.

APPENDIX A
FIGURES



<p>LANGAN Langan Engineering and Environmental Services, Inc. 110 East Broward Boulevard, Suite 1500 Fort Lauderdale, FL 33301 T: 954.320.2100 F: 954.320.2101 www.langan.com</p>	Project	Drawing Title	Project No.	Drawing No.
	1440 MICHIGAN AVENUE	SITE LOCATION MAP	300354701	1
	MIAMI BEACH		Date	
	MIAMI-DADE COUNTY FLORIDA		Drawn By	
			Checked By	Sheet 0 of 1



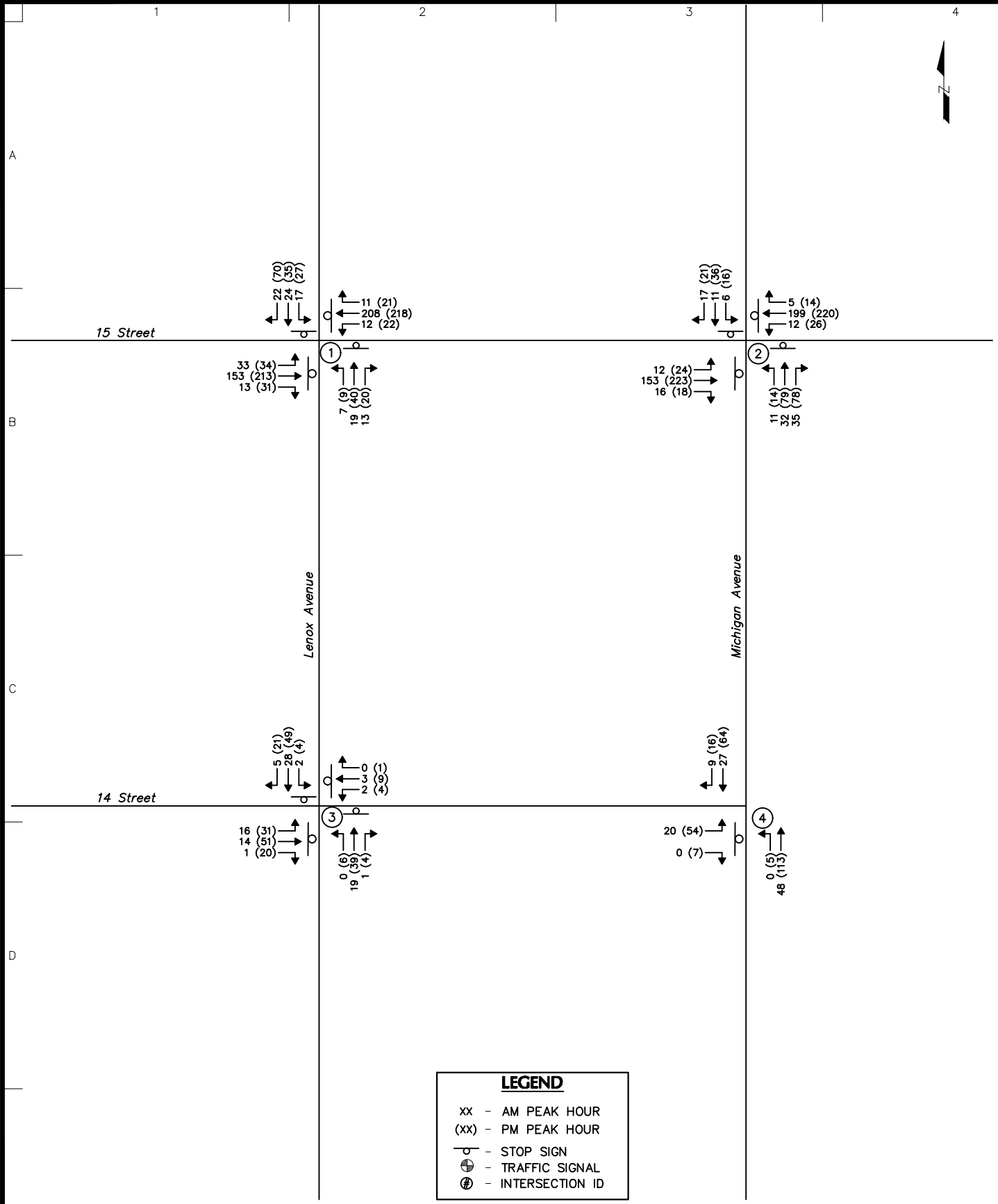
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Project
1440 MICHIGAN AVENUE
 MIAMI BEACH
 MIAMI-DADE COUNTY FLORIDA

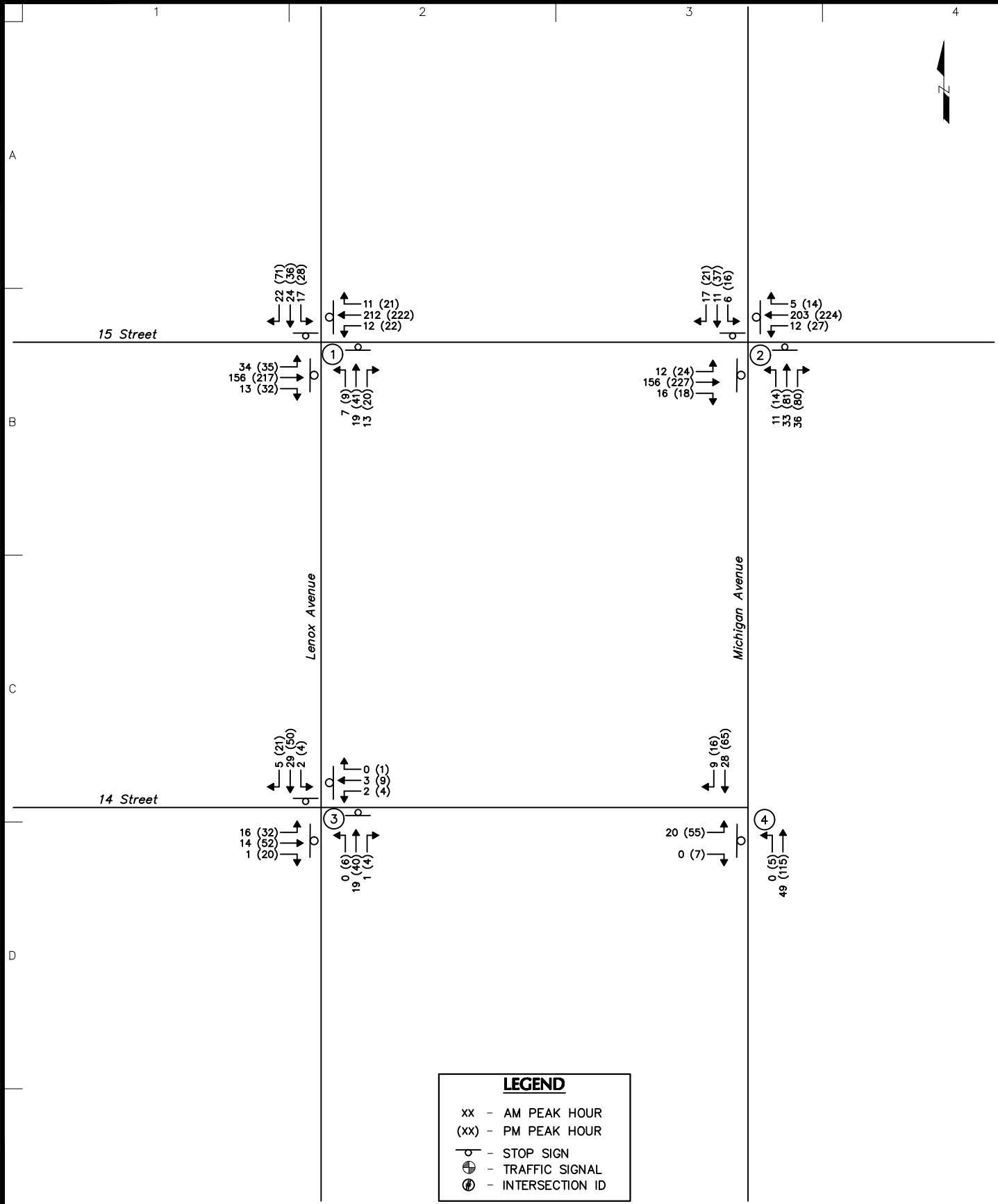
Drawing Title
LANE CONFIGURATION

Project No.
300354701
 Date
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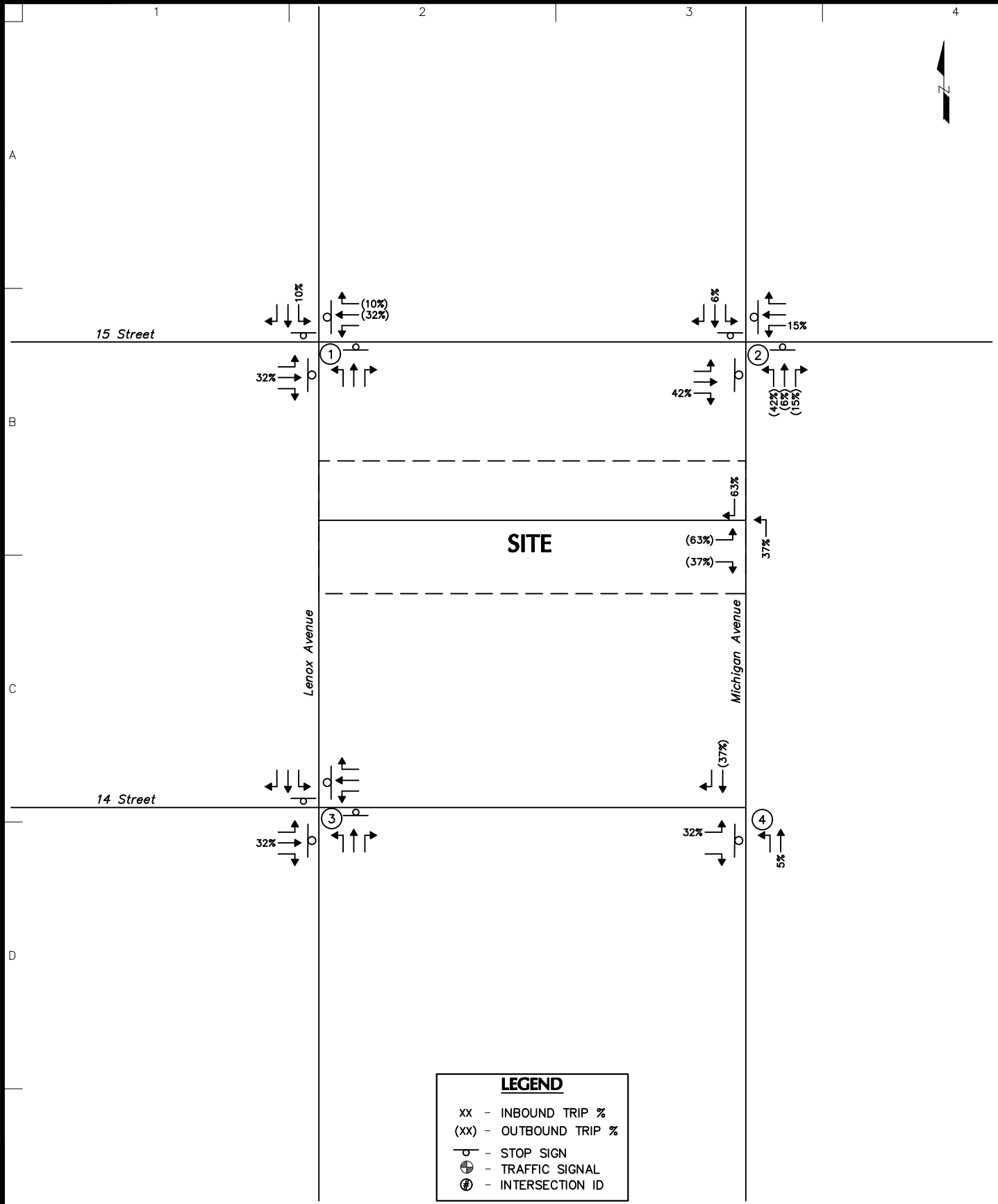
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2
 Sheet 0 of 1



<p>LANGAN Langan Engineering and Environmental Services, Inc. 110 East Broward Boulevard, Suite 1500 Fort Lauderdale, FL 33301 T: 954.320.2100 F: 954.320.2101 www.langan.com</p>	Project	Drawing Title	Project No.	Drawing No.
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			Drawn By	
			Checked By	Sheet 0 of 1



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	MIAMI BEACH MIAMI-DADE COUNTY FLORIDA		Date	
			Drawn By	
			Checked By	
				Sheet 0 of 1



LEGEND

- xx - INBOUND TRIP %
- (xx) - OUTBOUND TRIP %
- ⊖ - STOP SIGN
- ⊕ - TRAFFIC SIGNAL
- ⊙ - INTERSECTION ID

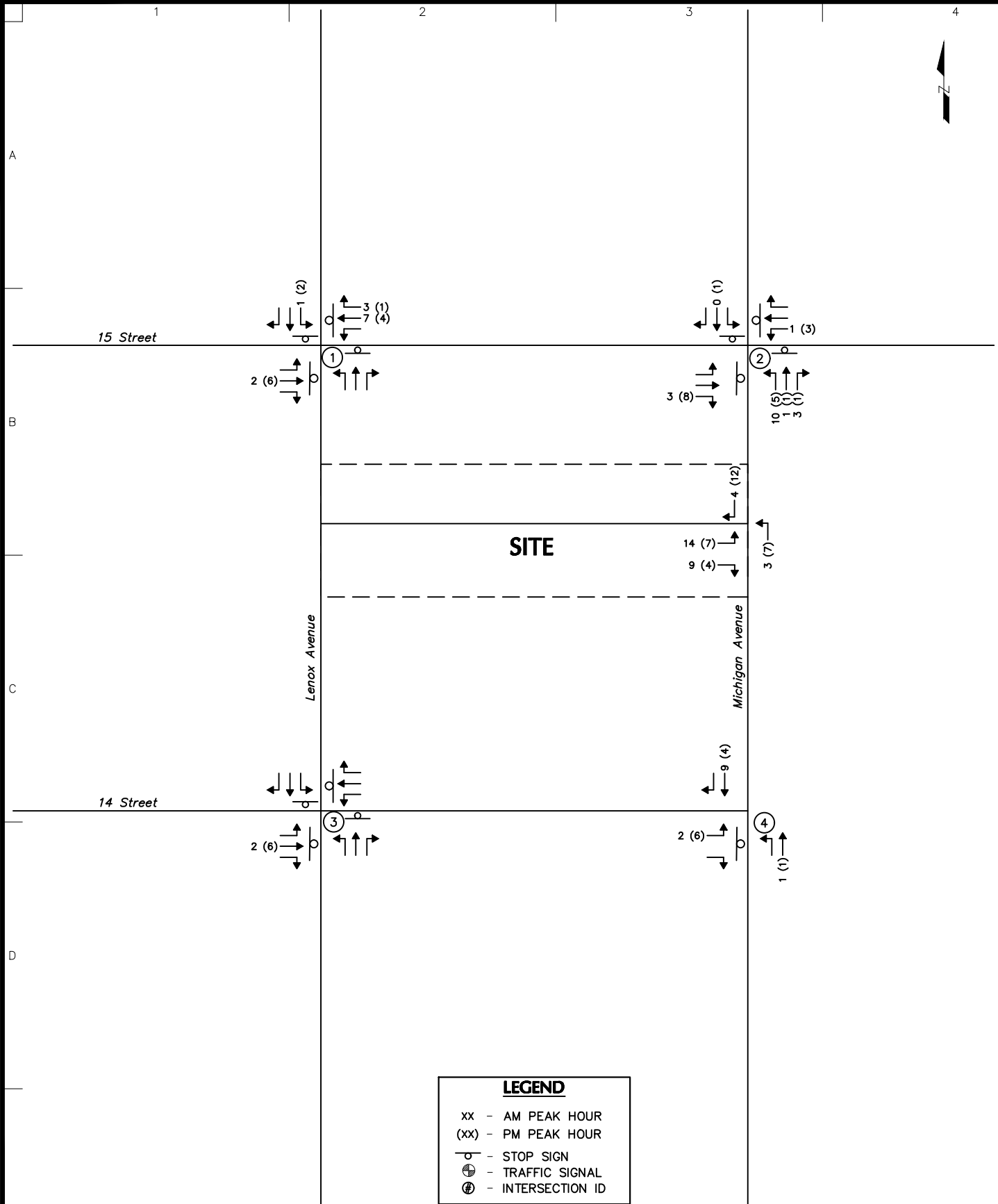
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Project
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 MIAMI-DADE COUNTY MIAMI BEACH FLORIDA

Drawing Title
PROJECT TRAFFIC DISTRIBUTION

Project No.
300354701
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 Sheet 0 of 1



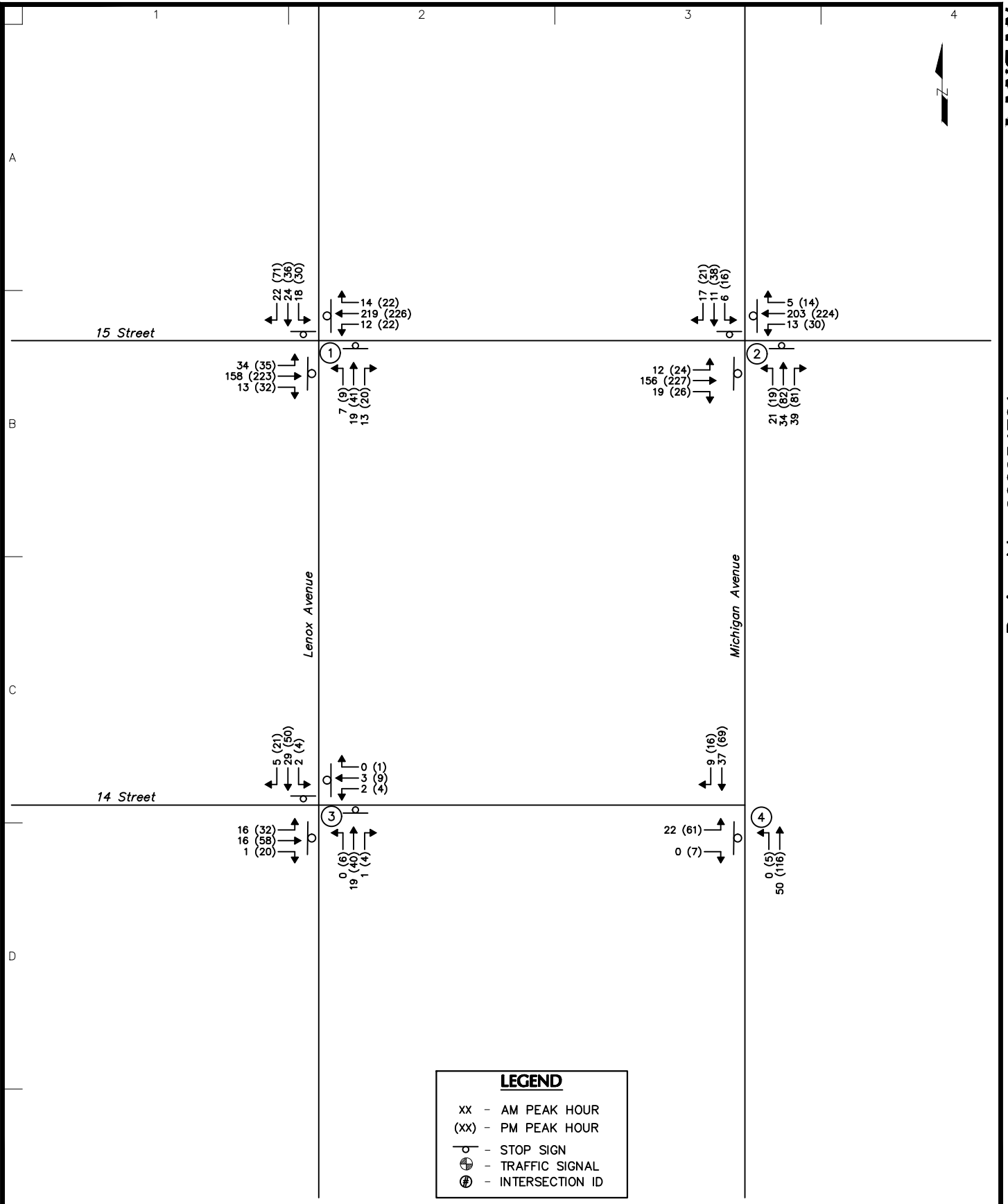
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Project
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 MIAMI BEACH
 MIAMI-DADE COUNTY FLORIDA

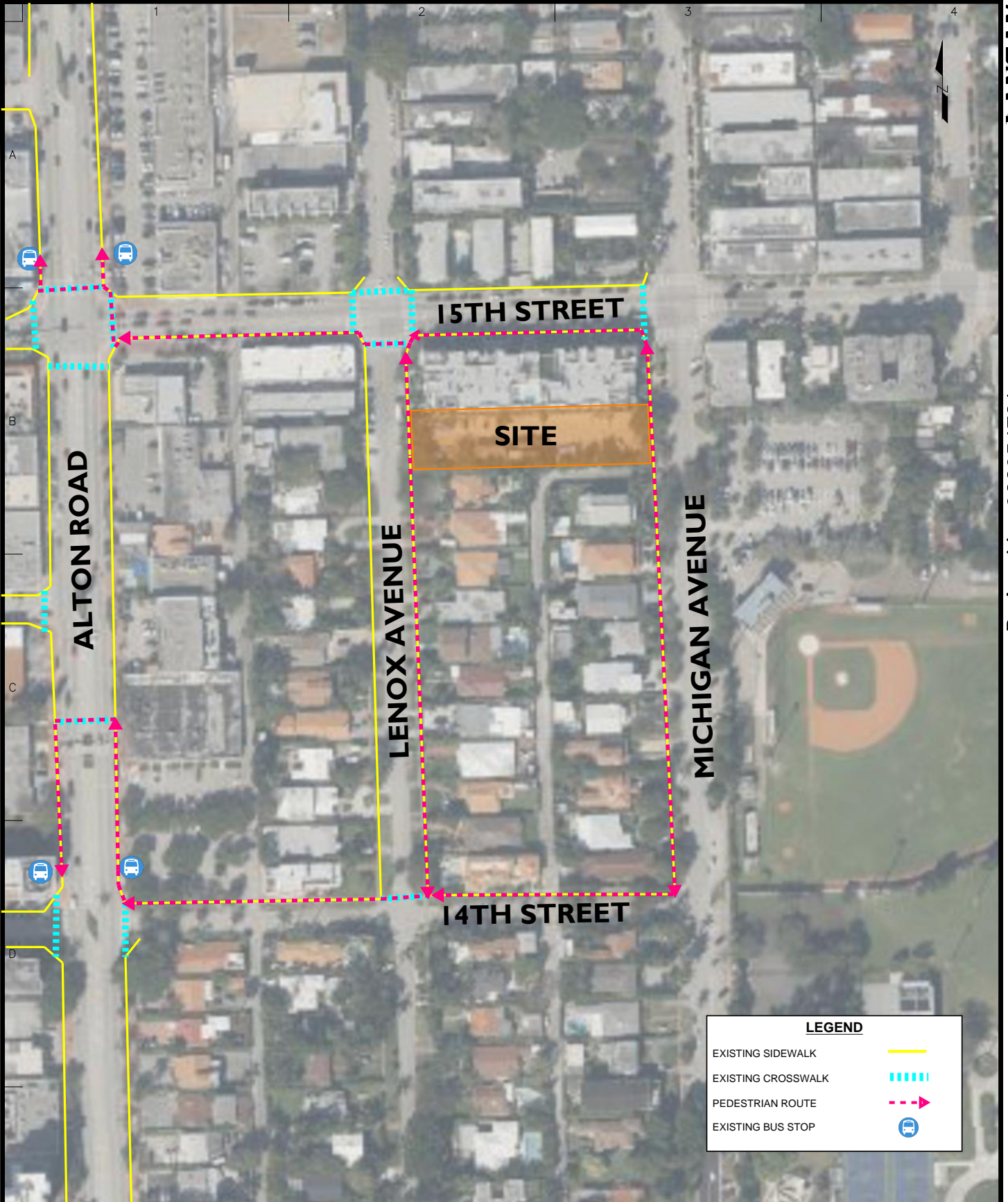
Drawing Title
PROJECT TRAFFIC TRIPS

Project No.
300354701
 Date
 Drawn By
 Checked By

Drawing No.
6
 Sheet 0 of 1



<p>LANGAN Langan Engineering and Environmental Services, Inc. 110 East Broward Boulevard, Suite 1500 Fort Lauderdale, FL 33301 T: 954.320.2100 F: 954.320.2101 www.langan.com</p>	Project	Drawing Title	Project No.	Drawing No.
	1440 MICHIGAN AVENUE	2028 BUILD VOLUMES	300354701	7
	MIAMI BEACH MIAMI-DADE COUNTY FLORIDA		Date	
			Drawn By	
			Checked By	Sheet 0 of 1



LANGAN
 Langan Engineering and Environmental Services, Inc.
 110 East Broward Boulevard, Suite 1500
 Fort Lauderdale, FL 33301
 T: 954.320.2100 F: 954.320.2101 www.langan.com

Project
1440 MICHIGAN AVENUE
 MIAMI BEACH
 MIAMI-DADE COUNTY FLORIDA

Drawing Title
PEDESTRIAN FIGURE

Project No.
300354701
 Date
 Drawn By
 Checked By

Drawing No.
8
 Sheet 0 of 1

APPENDIX B
SITE PLAN

MIAMI BEACH

Planning Department, 1700 Convention Center Drive, 2nd Floor
Miami Beach, Florida 33139, www.miamibeachfl.gov
305.673.7550

MULTIFAMILY - COMMERCIAL - ZONING DATA SHEET

Item	Project Information			
1	Address:	1440 Michigan Ave, Miami Beach FL 33139		
2	Board and File Numbers:			
3	Folio Number(s):	02-4203-009-6980 / Ocean Beach Add No 3, PB 2-81 LOTS 1 & 24 & 20 FT Alley LYG BET LOTS 1 & 24 BLK 93		
4	Year Constructed:	1999	Zoning District:	RM-1 Flamingo Park Overlay District
5	Based Flood Elevation:	8.56' NGVD	Grade Value in NGVD:	3.81 NGVD
6	Adjusted grade (Flood+Grade/2):	7.74' NGVD	Lot Area:	23,040 S.F. 0.52 Acres
7	Lot width:	71.94'	Lot Depth:	320.0'
8	Minimum Unit Size	550 SF	Average Unit Size:	994 SF
9	Existing use:	1713 Office Building	Proposed Use:	Low Density Multi Family Residential (RM-1)

Zoning Information/ Calculations	Maximum	Existing	Proposed	Deficiencies
10	Height	35' - 0"	N/A	35' - 0"
11	Number of Stories	3	N/A	3+understory
12	FAR	1.25 - 28,800 SF	N/A	1.25 = 28,797 SF
13	Gross Square Footage	N/A	N/A	28,798 SF
14	Square Footage by Use	N/A	N/A	N/A
15	Number of Units, Residential	N/A	N/A	23
16	Number of Units, Hotel	N/A	N/A	N/A
17	Number of Seats	N/A	N/A	N/A
18	Occupancy Load	Reference separate chart		

Setbacks	Required	Existing	Proposed	Deficiencies
At Grade (Parking/Residential)				
19	Front Setback - Michigan Ave	20' - 0" MIN.	N/A	20' - 0"
20	Front Setback - Lenox Ave	20' - 0" MIN.	N/A	20' - 0"
21	Side Setback - North	10' - 0" MIN.	N/A	10' - 0"
22	Side Setback - South	10' - 0" MIN.	N/A	10' - 0"

Pedestal (Level 2 to Level 4 - Roof)	Required	Existing	Proposed	Deficiencies
23	Front Setback - Michigan Ave	20' - 0" MIN.	N/A	30' - 3"
24	Front Setback - Lenox Ave	20' - 0" MIN.	N/A	25' - 1"
25	Side Setback -	10' - 0" MIN.	N/A	10' - 0"
26	Side Setback -	10' - 0" MIN.	N/A	10' - 0"

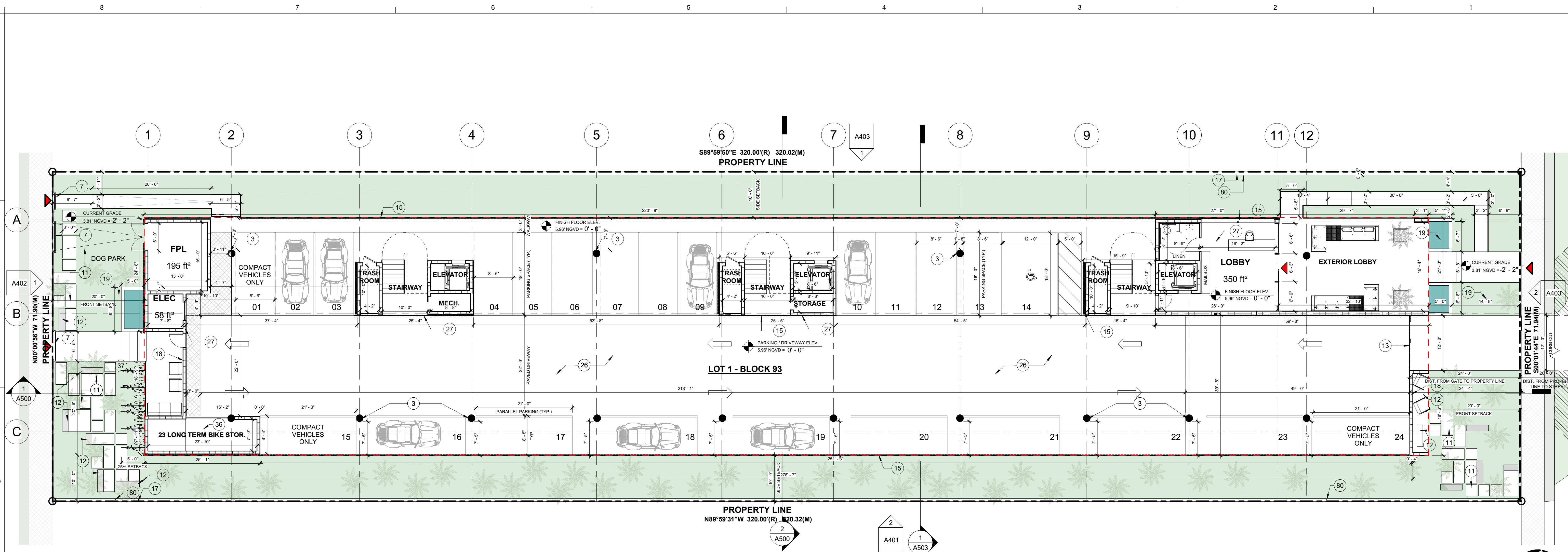
Parking	Required	Existing	Proposed	Deficiencies
27	Parking District	Parking Tier ___ Area ___	Parking Tier ___ Area ___	
28	Total # of Parking Spaces	1 space/unit = 23 spaces+ 10% guest spaces = 3 Grand Total = 26 P.S	N/A	24 p.s. + 2 alternative spaces*
29	# of Parking Spaces Required Per Use	same as above	N/A	same as above
30	Parking Space Dimensions	8.5 FT x 18 FT	N/A	8' - 6" x 18' - 0"
31	Parking Space Configurations (45°, 60°, 90°, parallel)	N/A	N/A	90° & Parallel
32	ADA Spaces	1	N/A	1
33	Tandem Spaces	N/A	N/A	N/A
34	Drive Aisle Width	18' - 0"	N/A	22' - 0"
35	Valet Drop Off and Pick Up	N/A	N/A	No Valet
36	Loading Zones and Trash Collection Areas	0	N/A	3 trash collection
37	Bicycle Racks (Reference Bike Rack Schedule)	3	N/A	39

Use (Not in List but included in 1333)	Required	Existing	Proposed	Deficiencies
38	Type of Use	1713 Office Building	Low Density Multi Family Residential (RM-1)	

39	Is This a Contributing Building?	No
40	Location Within a Local Historic District?	Yes
41	Future Crown of Non-State Road in NGVD 2025	

Notes: if not applicable write N/A. all other data/information may be required and presented like the above format.

ALL DESIGNS AND DRAWINGS HEREIN AND PRINTS ISSUED BY THE ARCHITECT ARE PROPERTY OF ARCHITECT AND SHALL NOT BE REUSED ON ANY OTHER LOCATION EXCEPT THE ONE FOR WHICH THEY WERE EXPRESSLY DESIGNED. IF THESE DRAWINGS OR ANY PART THEREOF IS REPRODUCED WITHOUT THE CONSENT OF THIS ARCHITECT, THE PERSON SO DOING WILL BE INDEBTED TO THE ARCHITECT FOR ITS FULL COMMISSION.



"OCEAN BEACH FLA. ADDITION No. 3"
P.B. 2 - PG. 81

UNDERSTORY FLOOR PLAN
3/32" = 1'-0"

KEYNOTES	
#	DESCRIPTION
3	STRUCTURAL COLUMN
7	ACCESS GATE
11	LANDSCAPE STEPPING STONES
12	EXTERIOR SEATING
13	NEW CUSTOM GARAGE DOOR W/ WOOD SLAT FINISH
15	CUSTOM WOODLIKE ALUMINUM SLAT SCREEN. SEE DETAILS ON SHEET A600.
17	4' FENCE ON TOP OF CMU PERIMETER WALL
19	WATER BASIN FEATUREKU
26	HYDROPAVERSA® PERMEABLE PAVING SYSTEM: COLOR GREEN 018 IN 5.91" x 11.81" x 2.17"
27	STRUCTURES BELOW THE FEMA BFE WILL BE WET FLOODPROOFED. PLEASE REFER TO SHEET A312 FOR DETAILS.
36	23 LONG TERM BIKE SPACES - WALL MOUNTED
37	16 SHORT TERM BIKE SPACES
80	3'-0" TALL 8" CMU PERIMETER WALL

FLOOR PLAN LEGEND	
	EXISTING CONCRETE BLOCK WALL
	EXISTING DRY WALL
	NEW CONCRETE BLOCK WALL
	NEW DRY WALL
	1HR FIRE RATED WALL
	2HR FIRE RATED WALL
	BATT INSULATION
	REINFORCED CONCRETE COLUMN - SEE STRUCTURAL DRWGS FOR DETAIL
	CEILING ABOVE
	3/12 DENOTES ROOF OR FLOOR SLOPE
	1.2 DENOTES GRADE ELEVATION
	DENOTES ELEVATION
	SECTION MARK DRAWING SHEET #
	ENLARGED MARK DRAWING SHEET #
	EXISTING TO BE REMOVED
	WALL TYPE
	WINDOW TAG
	DOOR TAG
	KEYNOTE
	EXTERIOR ELEVATION TAG
	INTERIOR ELEVATION TAG

FLOOR PLAN GENERAL NOTES	
SLAB: 1. ALL CONCRETE BLOCK WALLS SHALL BE RECESSED 3/4" IN CONCRETE SLAB 2. ALL EXTERIOR DOOR THRESHOLDS SHALL BE RECESSED 3/4" DEEP IN CONCRETE SLAB	
PARTITION INSULATION: 3. ALL INTERIOR WALLS SHALL BE PROVIDED WITH SOUND ATTENUATING BLANKETS INSULATION.	
POOL SAFETY: 4. ALL DOOR AND WINDOW SHALL BE ALARMED FOR POOL SAFETY ACCORDING TO FBC SECTION 424.2.17.1.9 5. POOL ALARM SHUNT BYPASS SWITCH	
METAL FRAMING: 6. CONTRACTOR TO PROVIDE 1 5/8" CHASE WALL WHERE NECESSARY IN CASE STRUCTURE IS NOT LEVELED OR PLUMBED (FIELD CONDITION)	
7. SOIL SHALL BE TREATED WITH TERMITES PROTECTION IN ACCORDANCE WITH FBCR 318. * WINDOWS MARKED WITH EGRESS SHALL COMPLY WITH THE REQUIREMENTS OF THE FBC SECTION 1005.4.4 FOR SECOND MEANS OF ESCAPE. PER SECTION 1005.4.4 CLEAR OPENING OF EGRESS WINDOW SHALL NOT BE LESS THAN 20" IN WIDTH. NOR LESS THAN 24" IN HEIGHT, AND SHALL BE A MIN TOTAL OF 5.7 SQUARE FEET IN CLEAR AREA. 5.0 SQUARE FEET ON GROUND FLOOR ONLY.	
SP #2: ALL LUMBER TO BE SOUTHERN PINE #2. IF IN CONTACT WITH CONCRETE, LUMBER TO BE PRESSURE TREATED	

ORIANCITY
DEVELOPING COMMUNITIES

JASON SHLANSKY,
B.A.R.C.H., C.G.C., OWNER.
JASON@SKYWERKDEV.COM

CGC # 1521802
954.703.9340
6950 CYPRESS RD
PLANTATION FL 33317

MIAMI BEACH APARTMENTS

1440 MICHIGAN AVE
MIAMI BEACH, FL 33139

SIGNATURE _____

DATE _____

REVISIONS		
NO.	BY	DATE

DRAWN BY Author

CHECKED BY Checker

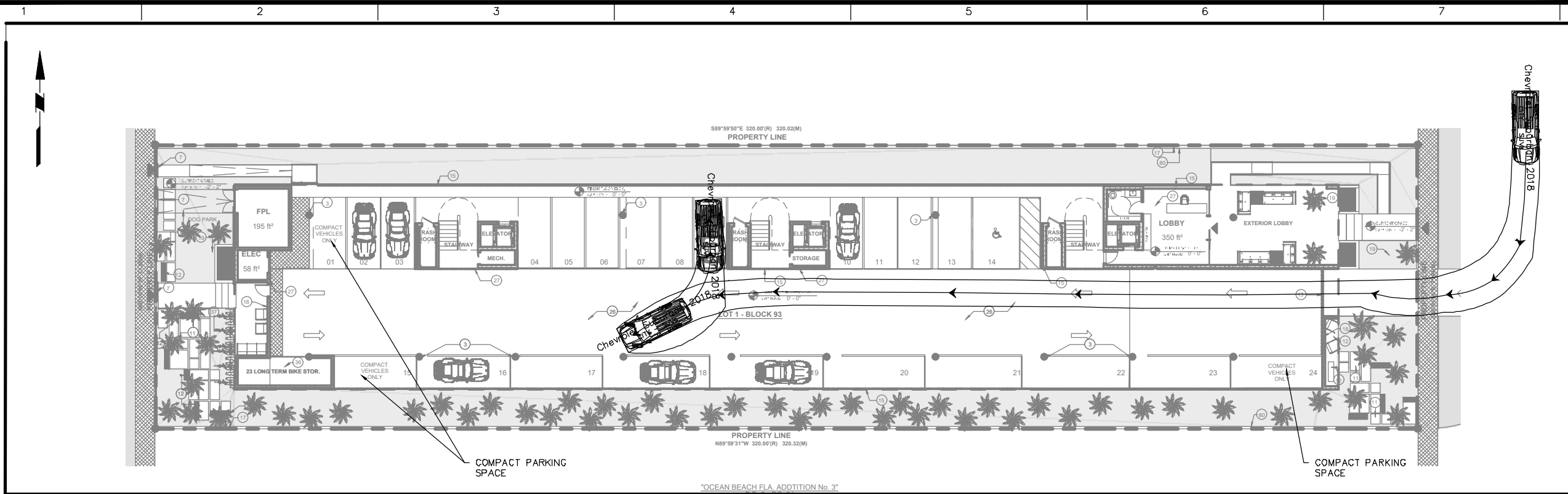
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SCALE AS NOTED IN DRAWING

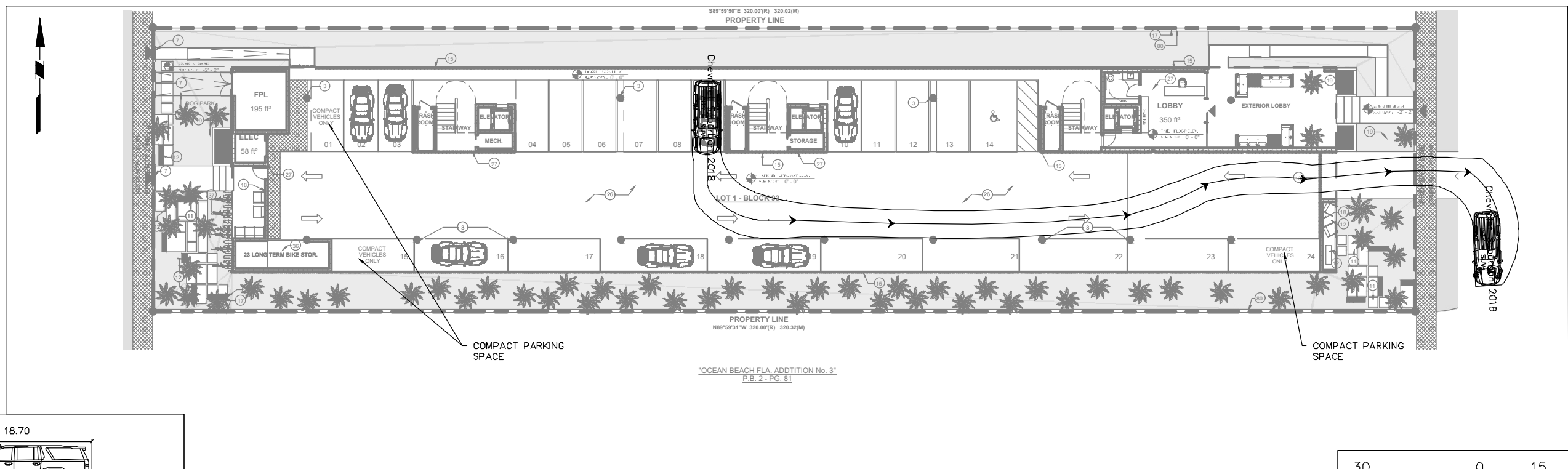
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UNDERSTORY FLOOR PLAN

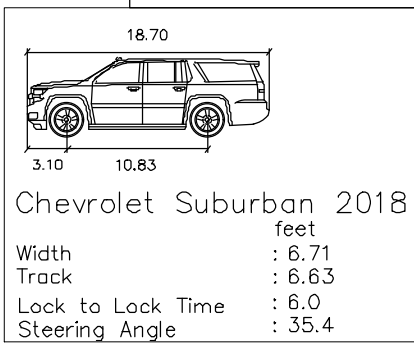
A300



INGRESS



EGRESS



Signature _____ Date _____

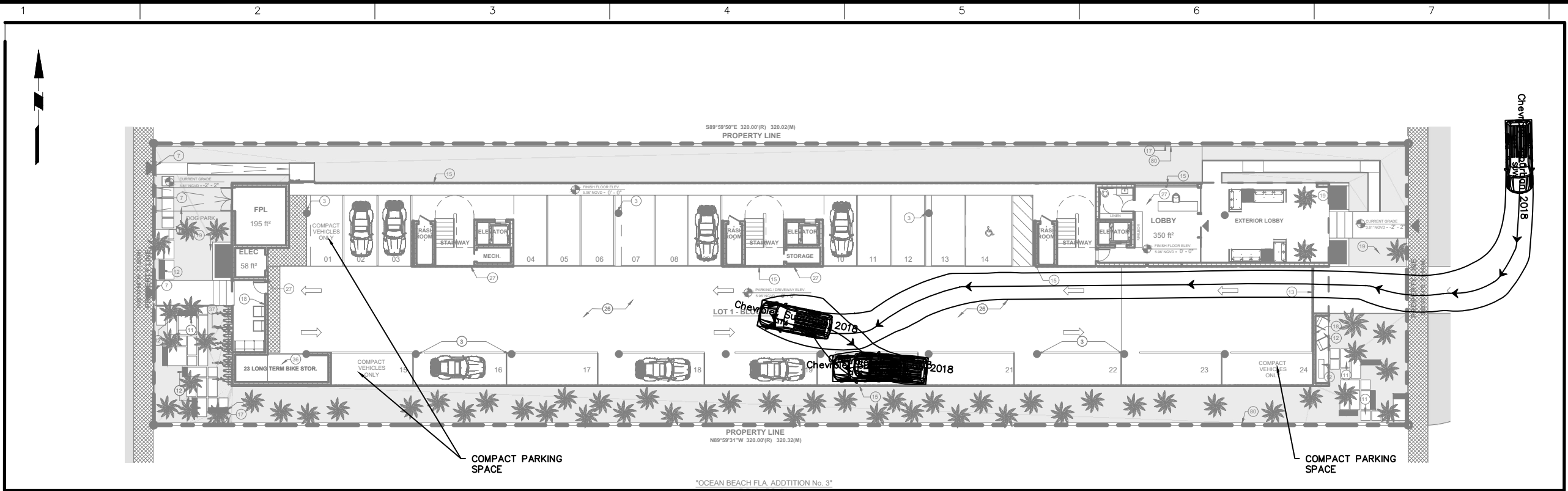
LANGAN
Langan Engineering and
Environmental Services, LLC.
122° Brickell Ave, Suite 1800
Miami, FL 33131
T: 786.264.7200 F: 786.264.7201 www.langan.com

Project
1440 MICHIGAN AVENUE
MIAMI BEACH
MIAMI-DADE COUNTY FLORIDA

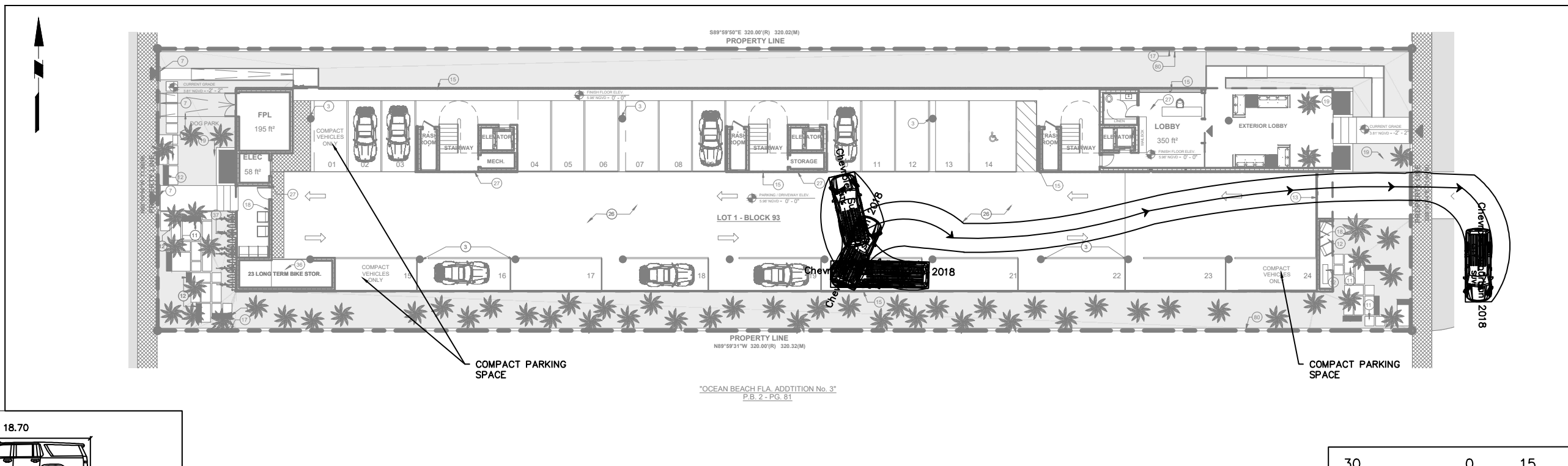
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TURNING MOVEMENTS

Project No.
300354701
Date
JUNE 2025
Drawn By
MF
Checked By
JG

Drawing No.
TM-1
Sheet of _____



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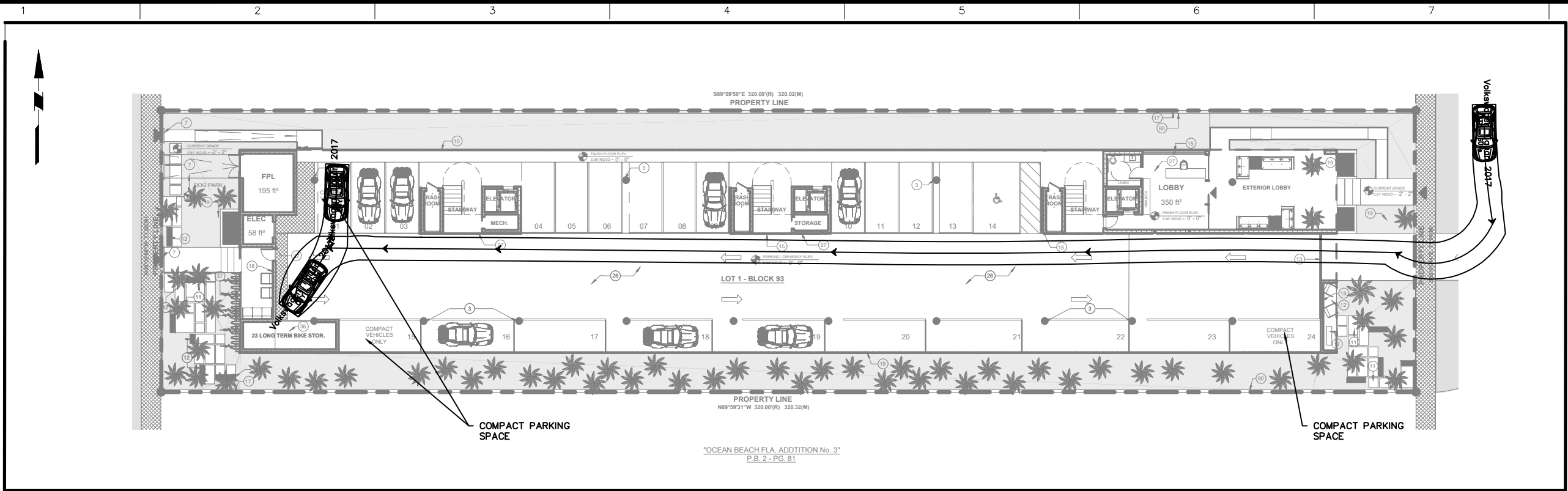


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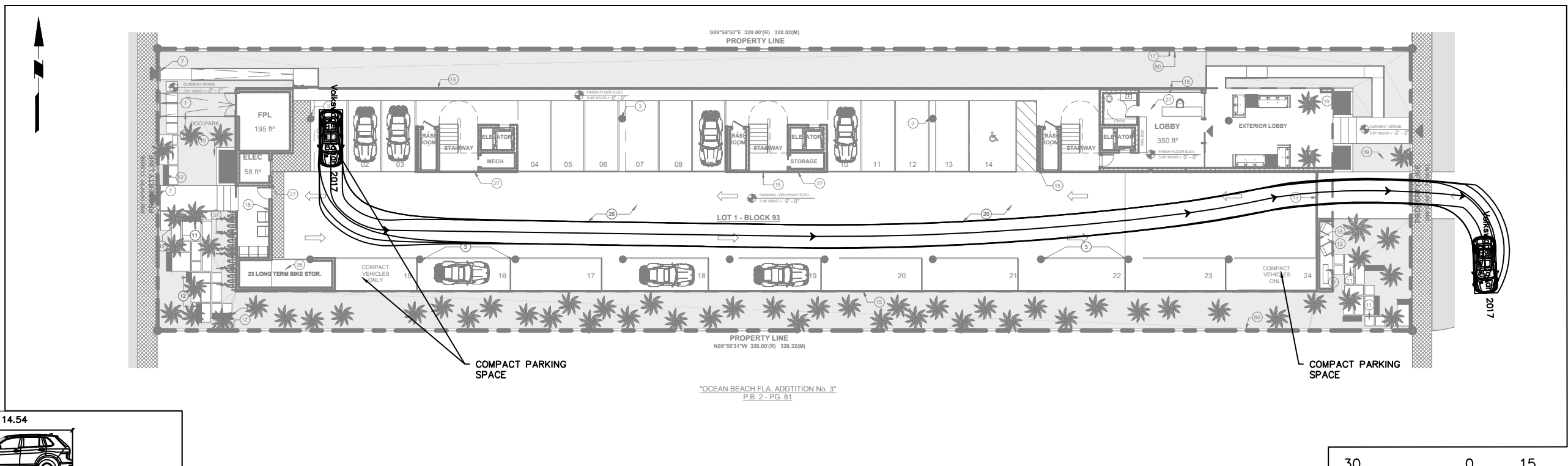
18.70	
3.10	10.83
Chevrolet Suburban 2018	
	feet
Width	: 6.71
Track	: 6.63
Lock to Lock Time	: 6.0
Steering Angle	: 35.4

Signature _____ Date _____

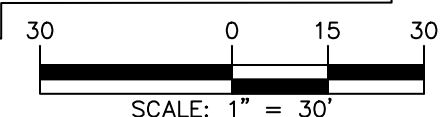
<p>LANGAN Langan Engineering and Environmental Services, LLC. 1221 Brickell Ave, Suite 1800 Miami, FL 33131 T: 786.264.7200 F: 786.264.7201 www.langan.com</p>	Project	1440 MICHIGAN AVENUE	Drawing Title	Project No.	Drawing No.
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				Date	
				JUNE 2025	
			Drawn By	MF	
			Checked By	JG	
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EGRESS



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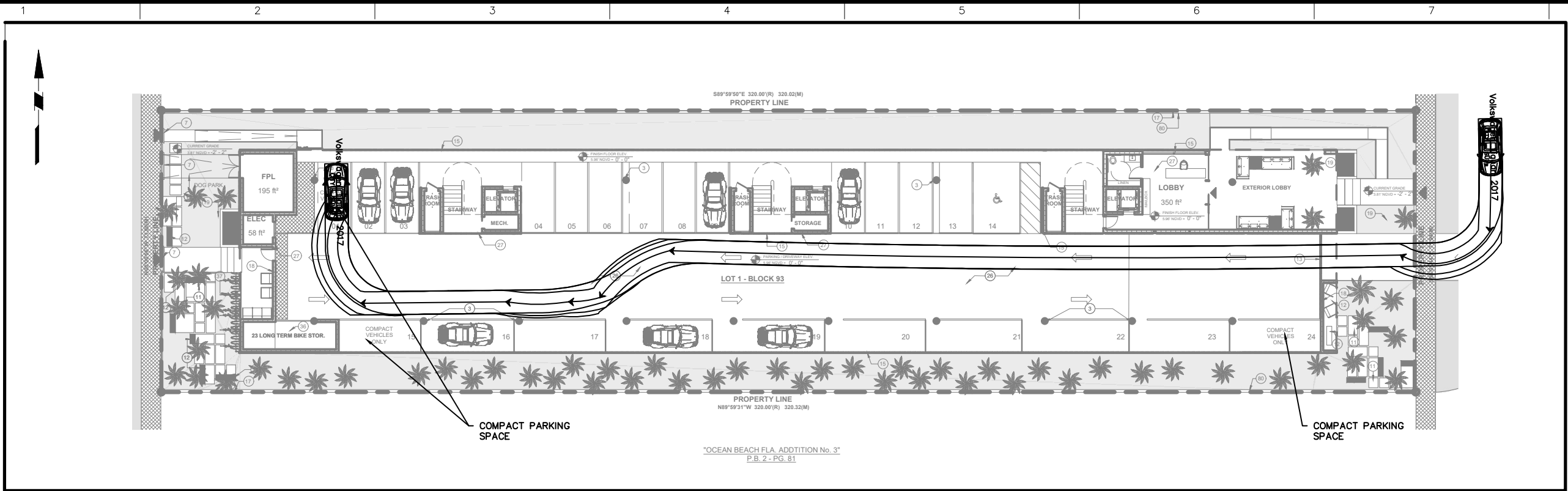
2.79 8.54

Volkswagen Tiguan 2017

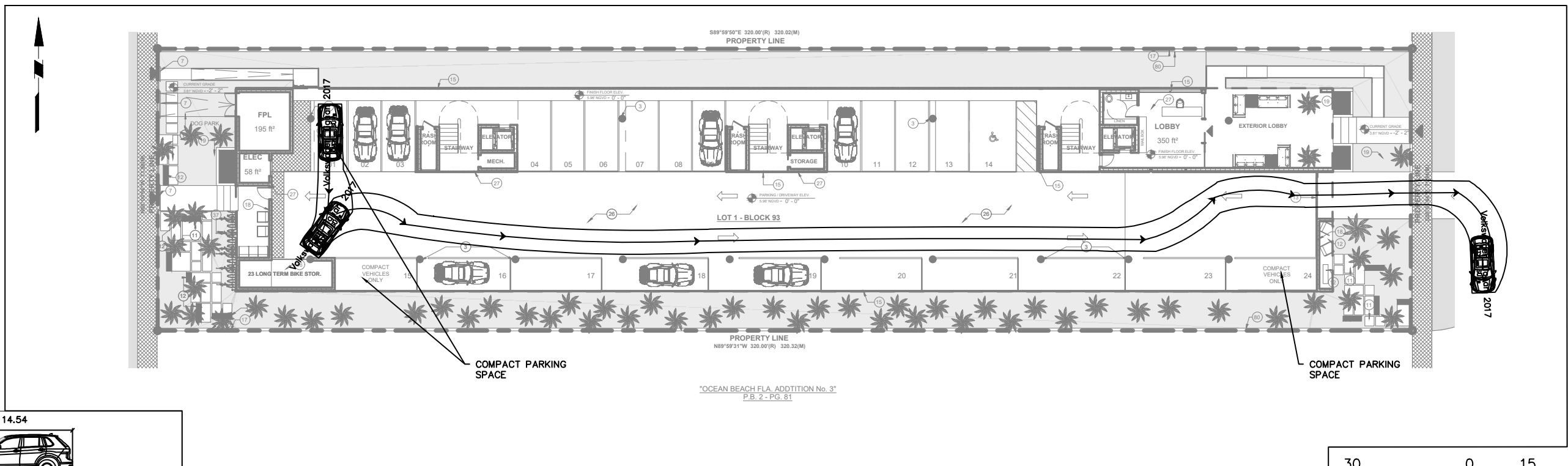
Width : 5.93 feet
Track : 5.86
Lock to Lock Time : 6.0
Steering Angle : 30.3

Signature _____ Date _____

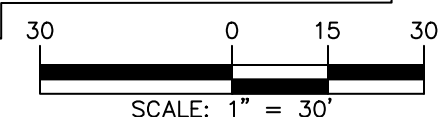
<p>LANGAN Langan Engineering and Environmental Services, LLC. 1221 Brickell Ave, Suite 1800 Miami, FL 33131 T: 786.264.7200 F: 786.264.7201 www.langan.com</p>	<p>Project 1440 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE COUNTY FLORIDA</p>	<p>Drawing Title TURNING MOVEMENTS</p>	Project No. 300354701	Drawing No. TM-3
			Date JUNE 2025	
			Checked By JG	Sheet of



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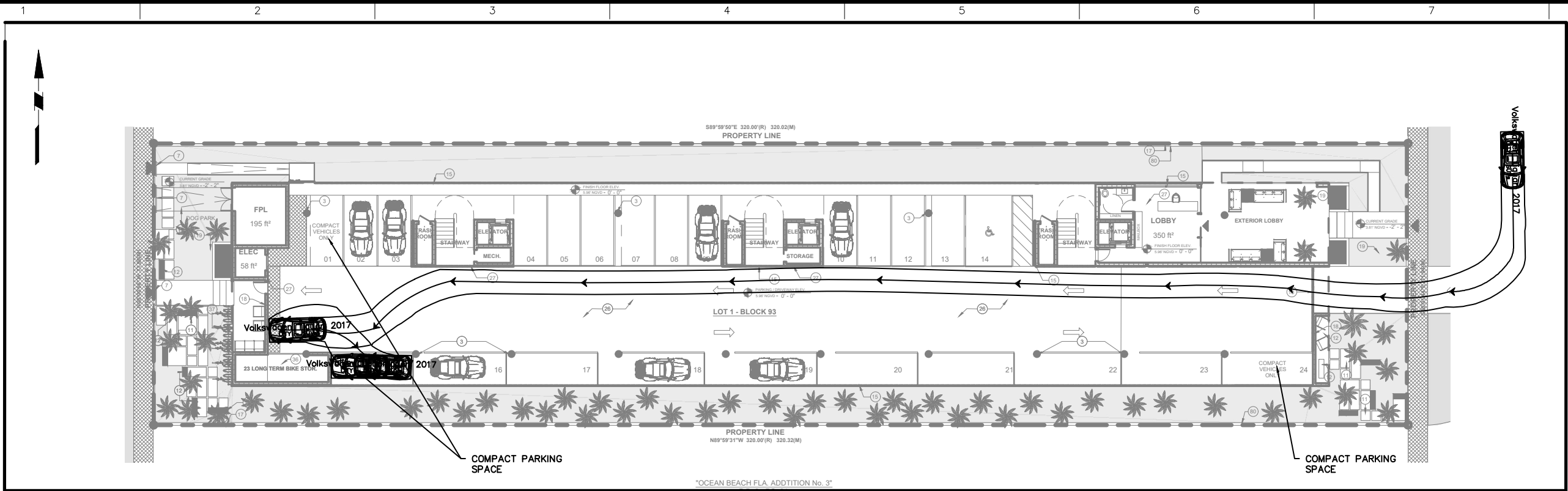
2.79 8.54

Volkswagen Tiguan 2017

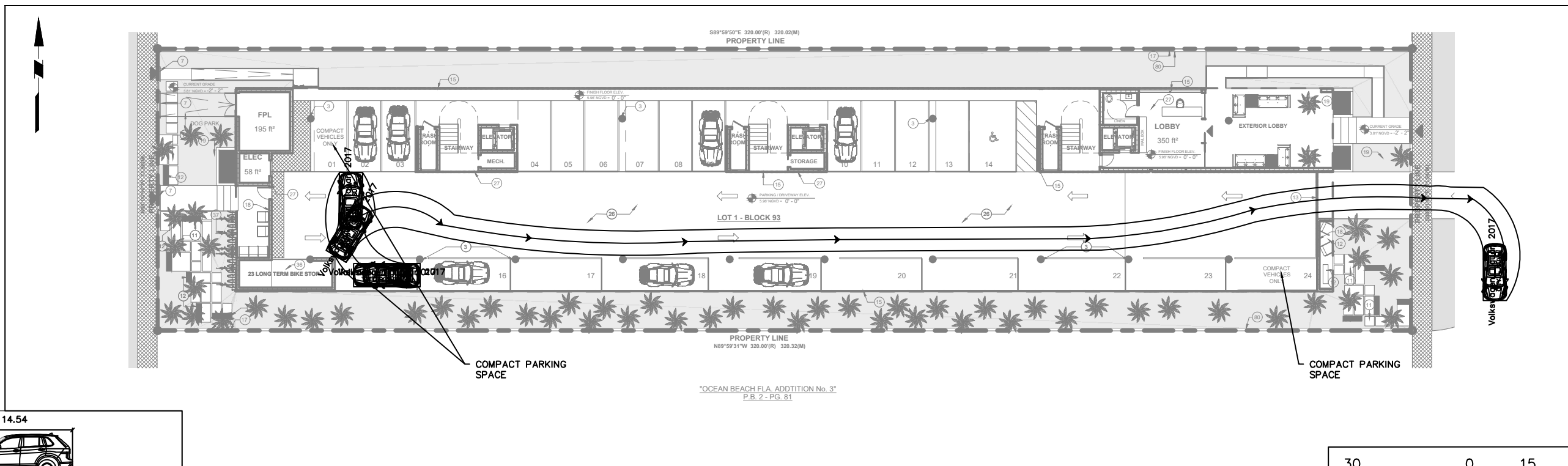
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Lock to Lock Time	: 6.0
Steering Angle	: 30.3

Signature _____ Date _____

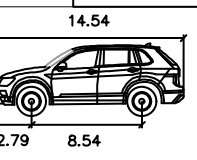
<p>LANGAN</p> <p>Langan Engineering and Environmental Services, LLC.</p> <p>1221 Brickell Ave, Suite 1800 Miami, FL 33131</p> <p>T: 786.264.7200 F: 786.264.7201 www.langan.com</p>	<p>Project</p> <p>1440 MICHIGAN AVENUE</p> <p>MIAMI BEACH MIAMI-DADE COUNTY FLORIDA</p>	<p>Drawing Title</p> <p>TURNING MOVEMENTS</p>	Project No.	Drawing No.
			300354701	
			Date	
			JUNE 2025	
			Drawn By	
			MF	
			Checked By	
			JG	
			Sheet	of



INGRESS



EGRESS



Volkswagen Tiguan 2017

Width	: 5.93
Track	: 5.86
Lock to Lock Time	: 6.0
Steering Angle	: 30.3

Signature _____ Date _____

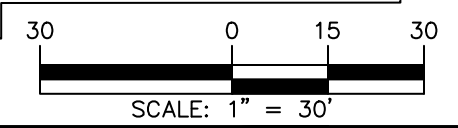
LANGAN
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 Miami, FL 33131
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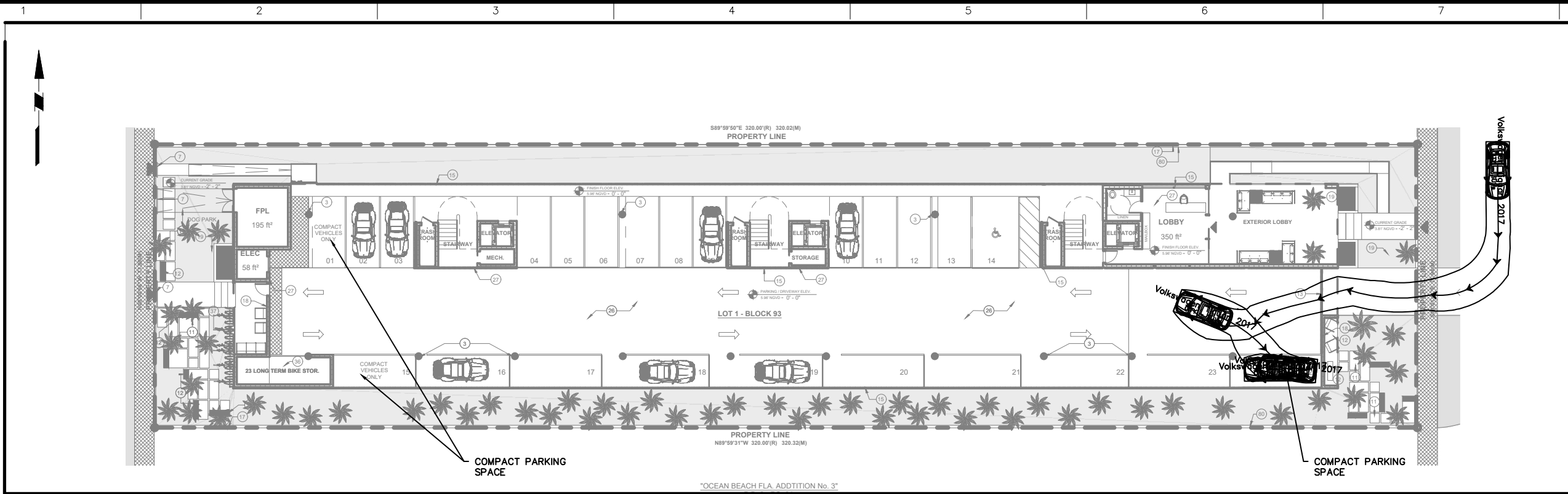
Project
1440 MICHIGAN AVENUE
 MIAMI BEACH
 MIAMI-DADE COUNTY FLORIDA

Drawing Title
TURNING MOVEMENTS

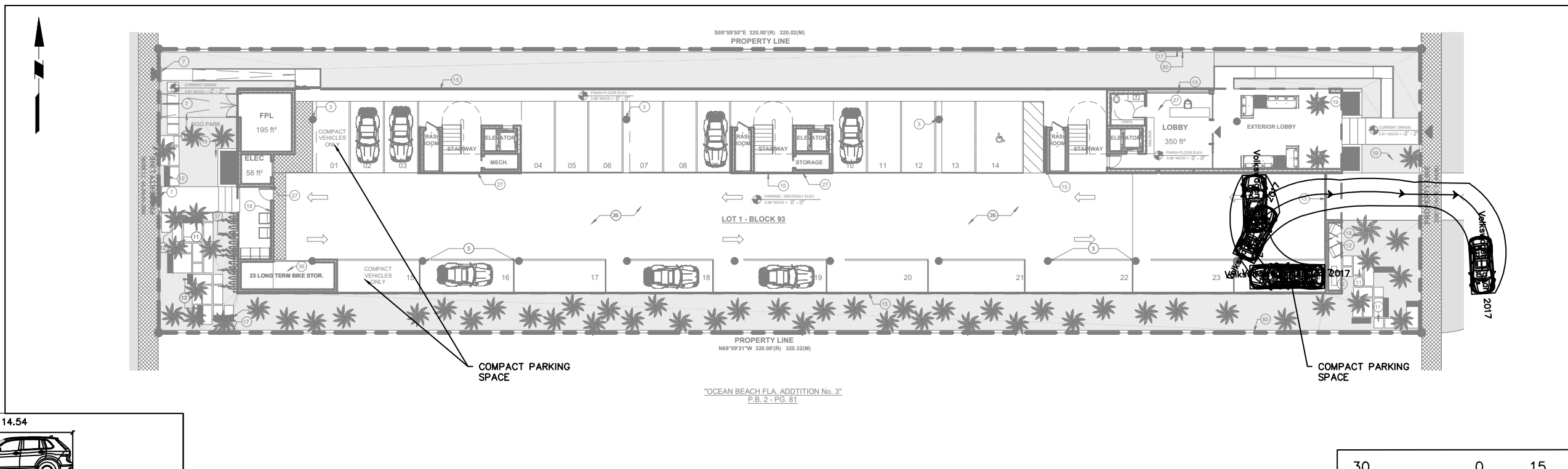
Project No. **300354701**
 Date **JUNE 2025**
 Drawn By **MF**
 Checked By **JG**

Drawing No. **TM-5**
 Sheet of _____

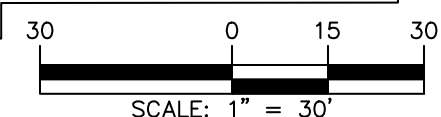




INGRESS



EGRESS



14.54

Volkswagen Tiguan 2017

feet

- Width : 5.93
- Track : 5.86
- Lock to Lock Time : 6.0
- Steering Angle : 30.3

Signature _____ Date _____

<p>LANGAN</p> <p>Langan Engineering and Environmental Services, LLC.</p> <p>1221 Brickell Ave, Suite 1800 Miami, FL 33131</p> <p>T: 786.264.7200 F: 786.264.7201 www.langan.com</p>	<p>Project</p> <p>1440 MICHIGAN AVENUE</p> <p>MIAMI BEACH MIAMI-DADE COUNTY FLORIDA</p>	<p>Drawing Title</p> <p>TURNING MOVEMENTS</p>	Project No.	Drawing No.
			300354701	
			Date	
			JUNE 2025	
			Drawn By	
			MF	
			Checked By	
			JG	
			Sheet of	



OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On: 11/07/2024

PROPERTY INFORMATION	
Folio	02-4203-009-6980
Property Address	1440 MICHIGAN AVE MIAMI BEACH, FL 33139-0000
Owner	QRIAR RENTAL MICHIGAN LLC
Mailing Address	1440 MICHIGAN AVE MIAMI BEACH, FL 33139
Primary Zone	3900 MULTI-FAMILY - 38-62 U/A
Primary Land Use	1713 OFFICE BUILDING - ONE STORY : OFFICE BUILDING
Beds / Baths /Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	456 Sq.Ft
Living Area	456 Sq.Ft
Adjusted Area	456 Sq.Ft
Lot Size	23,040 Sq.Ft
Year Built	1999



ASSESSMENT INFORMATION			
Year	2024	2023	2022
Land Value	\$5,299,200	\$4,838,400	\$1,580,219
Building Value	\$39,267	\$37,285	\$37,757
Extra Feature Value	\$60,437	\$60,648	\$60,859
Market Value	\$5,398,904	\$4,936,333	\$1,678,835
Assessed Value	\$2,031,389	\$1,846,718	\$1,678,835

TAXABLE VALUE INFORMATION			
Year	2024	2023	2022
COUNTY			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,031,389	\$1,846,718	\$1,678,835
SCHOOL BOARD			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$5,398,904	\$4,936,333	\$1,678,835
CITY			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,031,389	\$1,846,718	\$1,678,835
REGIONAL			
Exemption Value	\$0	\$0	\$0
Taxable Value	\$2,031,389	\$1,846,718	\$1,678,835

BENEFITS INFORMATION			
Benefit	Type	2024	2023 2022
Non-Homestead Cap	Assessment Reduction	\$3,367,515	\$3,089,615

Note: Not all benefits are applicable to all Taxable Values (i.e. County, School Board, City, Regional).

SHORT LEGAL DESCRIPTION
OCEAN BEACH ADD NO 3
PB 2-81
LOTS 1 & 24 & 20FT ALLEY LYG BET
LOTS 1 & 24 BLK 93
LOT SIZE 23040 SQ FT M/L

SALES INFORMATION			
Previous Sale	Price	OR Book-Page	Qualification Description
08/14/2024	\$5,250,000	34367-1425	Qual by exam of deed
02/21/2022	\$0	33039-0009	Corrective, tax or QCD; min consideration
11/18/2021	\$1,975,100	32879-0379	Utility companies
07/01/2011	\$0	29643-4646	Corrective, tax or QCD; min consideration

The Office of the Property Appraiser is continually editing and updating the tax roll. This website may not reflect the most current information on record. The Property Appraiser and Miami-Dade County assumes no liability, see full disclaimer and User Agreement at <http://www.miamidade.gov/info/disclaimer.asp>

APPENDIX C
METHODOLOGY

Revised: May 2025; December 2024; October 2024

Grant Webster
Transportation Planner
Transportation and Mobility Department
1700 Convention Center Drive, Miami Beach, Florida 33139

**Re: Traffic Analysis Methodology
1440 Michigan Avenue
Miami Beach, Florida
Langan Project No.: 300354701**

Dear Mr. Webster:

Langan Engineering and Environmental Services, LLC was retained to prepare a traffic-impact analysis for the 1440 Michigan Avenue multi-family residential development that is expected to be built by 2028. The site will comprise approximately 0.53-acres located south of 15th Street between Michigan Avenue and Lenox Avenue in Miami Beach, Florida. The proposed development comprises of 23 multifamily housing (low rise) residential units and will replace a surface parking lot. **Figure 1** below shows the site location. A copy of the proposed site plan is included in Attachment A. Please accept this letter as the traffic-analysis methodology for the proposed development.



Figure 1 – Site Aerial Photograph

Trip Generation

Trip generation will be based on information contained in the Institute of Transportation Engineer’s (ITE), Trip Generation Manual, 11th Edition. We used Land Use Code 220 – Multifamily Housing (Low Rise) to represent the expected number of trips that the project will generate. To provide a conservative analysis, we did not account for any multimodal reductions. Attachment B contains the trip-generation calculations and excerpts from the ITE manual. The proposed development is expected to generate 223 daily trips, 30 morning peak-hour trips, and 30 afternoon peak hour trips as summarized in **Table 1** below.

Table1 - Trip Generation Estimates

Use	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing (Low Rise)	23 DU	223	7	23	30	19	11	30

Data Collection

Morning and afternoon peak hour turning movement data will be collected on a typical weekday at the following intersections:

- 15th Street and Lenox Avenue (unsignalized)
- 15th Street and Michigan Avenue (unsignalized)
- 14th Street and Lenox Avenue (unsignalized)
- 14th Street and Michigan Avenue (unsignalized)

Data will be collected for four hours between 7:00 and 9:00 AM and between 4:00 and 6:00 PM and will be adjusted to reflect peak season traffic volumes using historical data from *Florida Department of Transportation (FDOT)*. We will coordinate with the City of Miami Beach to confirm the dates that the data collection activities can be performed.

Project Distribution

Project trip distribution will be based on the average cardinal distribution for Traffic Analysis Zone (TAZ) 647 of the Miami-Dade County 2045 Transportation Model. **Table 2** below shows the cardinal distribution based on a 2028 build out year. Attachment C contains the TAZ data.

Table 2 - Cardinal Distribution

Year	NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW
2015	18.20%	5.40%	5.90%	8.60%	3.50%	18.50%	18.70%	21.20%
2045	12.60%	5.20%	4.10%	4.60%	3.40%	24.80%	28.10%	17.30%
2028	15.77%	5.31%	5.12%	6.87%	3.46%	21.23%	22.77%	19.51%

Future Traffic

We will develop future traffic volumes by applying a compound growth rate to the collected traffic data. The growth rate will be based on FDOT historical data from traffic count stations near the project. A one-half percent annual growth rate will be used if a negative growth rate is determined. We will review the county’s platting database and include traffic from any approved but unbuilt projects. We will coordinate with the City of Miami Beach for the committed developments that need to be included as part of the study. We will also include any roadway improvements planned within the next three years.

Intersection Analysis

Intersection capacity analysis will be performed for the study intersection using software based on the Highway Capacity Manual methodology. The analysis will be performed for morning and afternoon peak-hour conditions using Highway Capacity Software (HCS). The analysis scenarios will include the existing (2024), no-build (2028 without the project), and build (2028 with project) conditions. Project driveways will be analyzed for the build conditions. We will provide tables in the appendices that summarize the LOS and delay for each intersection and intersection approaches for the existing, no-build, and build conditions. Tables summarizing the LOS and delay for each intersection and intersection approaches for the existing, no-build, and build conditions will be included in the report appendices. HCS reports for the 95th percentile queue lengths and tables summarizing this information for all exclusive turn-lanes will also be included in the report appendices.

Parking Assessment

A detailed discussion about the proposed parking operations will be provided in the traffic study. In addition, a parking demand summary will be provided and the project's compliance with the city's requirements.

Gate Queuing Analysis

If gates are to be provided, we will prepare a queuing analysis for the proposed gate-controlled access points to the site directly accessing public right-of-way using the queuing-analysis methodology from *Transportation and Land Development* published by the ITE.

Maneuverability Analysis

We will perform a maneuverability analysis for the trash collection area and vehicle parking area using Auto Turn software. Any deficiencies related to the maneuverability, traffic flow, and vehicular conflicts will be documented in the traffic study. We will include a description of the trash collection around the parking area.

Multimodal Evaluation Analysis

We will provide a multimodal evaluation as part of the study and document the provided transit, pedestrian, and bicycle facilities near the project.

Transportation Demand Management and Control Measures

We will identify transportation control measures that the proposed development can implement to raise awareness of the available transportation modes in the area. We will also include Transportation Demand Management (TDM) strategies to reduce the impacts of the project traffic on the surrounding roadway network. Typical measures include promoting bicycling and walking, encourage car/vanpooling, and offering alternatives to the typical workday hours. The traffic study will discuss which TDM strategies the proposed development intends to implement.

Report

The study methodology, analysis and findings will be summarized in a report that will be signed and sealed by a Florida registered professional engineer. HCS LOS, queuing and signal-timing reports will be included in report's appendices.

If you have any questions regarding the information contained herein, please do not hesitate to contact me at (954) 320-2155.

Sincerely,

Langan Engineering and Environmental Services, LLC



Maximo G. Polanco, P.E.
Senior Project Manager



Joe Goldberg, P.E.
Project Engineer

MGP:mgp

Attachments

Attachment A – Site Plan

Attachment B – Trip Generation Data & ITE Excerpts

Attachment C – TAZ Data

FL Certificate of Authorization No. 6601

\\langan.com\data\MIA\data7\300354701\Project Data\Correspondence\Methodology\2025-05-12 1440 Michigan Avenue Traffic Methodology.docx

APPENDIX D
TRAFFIC, TAZ, CENSUS DATA & FDOT TABLES

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lenox Ave & 15th St
City: Miami Beach
Control: 4-Way Stop

Project ID: 24-140324-001
Date: 10/22/2024

Data - Total

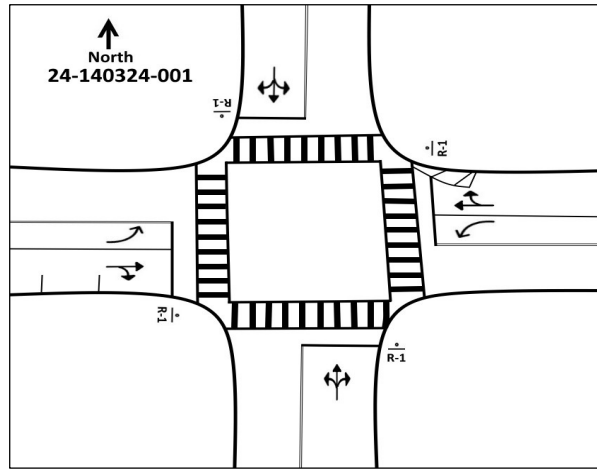
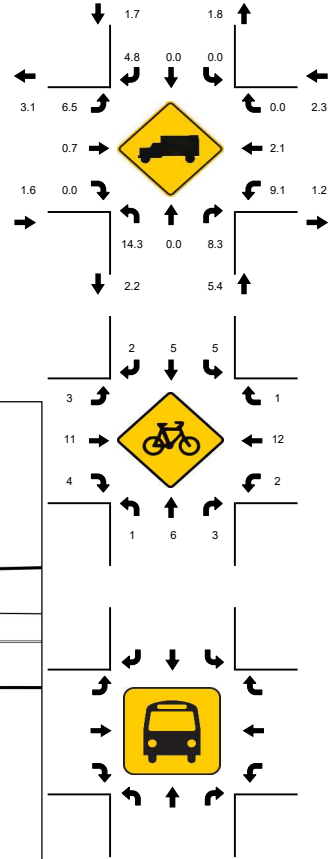
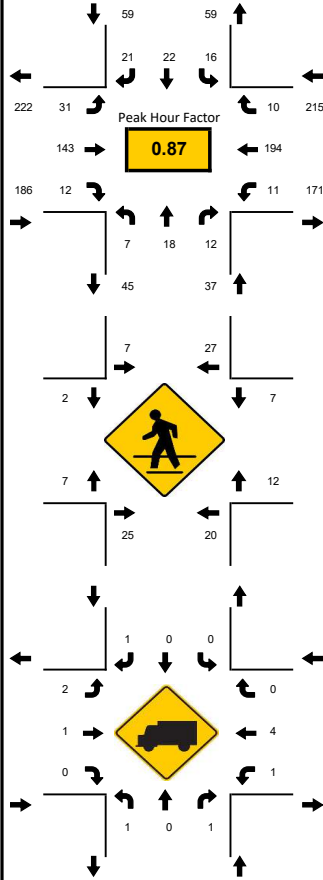
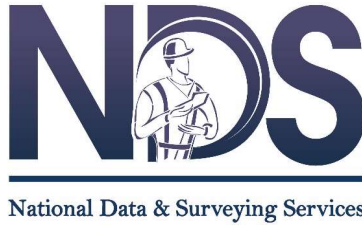
NS/EW Streets:	Lenox Ave				Lenox Ave				15th St				15th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	2	1	0	1	0	5	0	2	24	1	0	1	19	0	0	57
7:15 AM	2	0	1	0	1	2	2	0	0	25	0	0	2	21	0	0	56
7:30 AM	0	0	1	0	0	2	6	0	1	34	5	1	1	21	1	0	73
7:45 AM	1	3	1	0	2	0	3	0	2	44	3	0	0	33	4	0	96
8:00 AM	3	2	4	0	4	2	6	0	7	39	0	0	3	41	0	0	111
8:15 AM	0	3	4	0	3	2	6	0	5	36	3	1	2	51	3	0	119
8:30 AM	3	5	1	0	3	9	1	0	7	41	3	0	5	61	4	0	143
8:45 AM	1	8	3	0	6	9	8	0	10	27	6	1	1	41	3	0	124
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	11	23	16	0	20	26	37	0	34	270	21	3	15	288	15	0	779
	22.00%	46.00%	32.00%	0.00%	24.10%	31.33%	44.58%	0.00%	10.37%	82.32%	6.40%	0.91%	4.72%	90.57%	4.72%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	7	18	12	0	16	22	21	0	29	143	12	2	11	194	10	0	497
PEAK HR FACTOR :	0.583	0.563	0.750	0.000	0.667	0.611	0.656	0.000	0.725	0.872	0.500	0.500	0.550	0.795	0.625	0.000	0.869
	0.771				0.641				0.912				0.768				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	9	0	0	4	7	12	0	5	55	5	1	3	40	2	0	143
4:15 PM	2	9	3	0	3	9	10	0	7	50	1	0	4	34	5	0	137
4:30 PM	3	8	6	1	7	3	14	1	10	48	3	0	3	43	5	0	155
4:45 PM	1	11	4	0	7	10	15	0	9	46	4	0	5	51	7	0	170
5:00 PM	5	10	4	0	5	4	21	0	8	46	10	0	7	46	3	0	169
5:15 PM	1	5	5	0	9	4	19	0	6	58	5	0	2	55	8	0	177
5:30 PM	1	11	6	0	4	15	10	0	9	49	10	0	7	52	2	0	176
5:45 PM	1	6	7	0	3	9	14	0	5	48	7	0	3	32	2	0	137
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	14	69	35	1	42	61	115	1	59	400	45	1	34	353	34	0	1264
	11.76%	57.98%	29.41%	0.84%	19.18%	27.85%	52.51%	0.46%	11.68%	79.21%	8.91%	0.20%	8.08%	83.85%	8.08%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	8	37	19	0	25	33	65	0	32	199	29	0	21	204	20	0	692
PEAK HR FACTOR :	0.400	0.841	0.792	0.000	0.694	0.550	0.774	0.000	0.889	0.858	0.725	0.000	0.750	0.927	0.625	0.000	0.977
	0.842				0.961				0.942				0.942				

LOCATION: Lenox Ave & 15th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-001
 DATE: Tue, Oct 22, 2024

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:30 AM - 08:45 AM

Peak Hour Factor
0.87

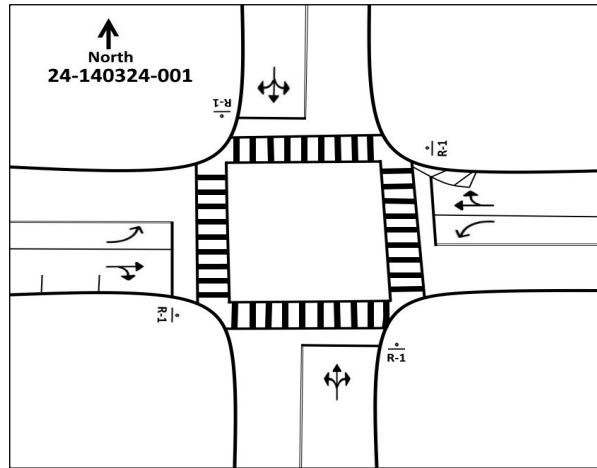
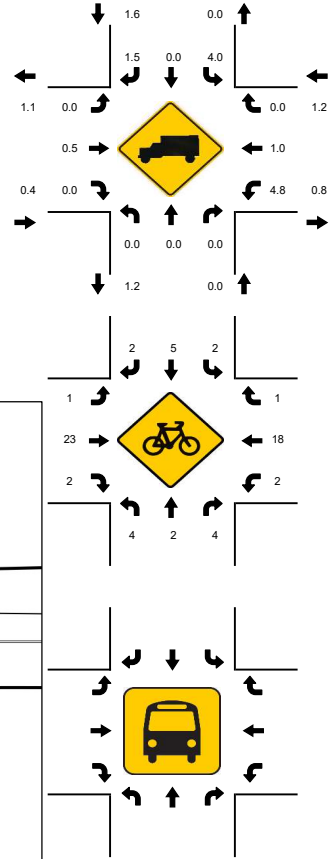
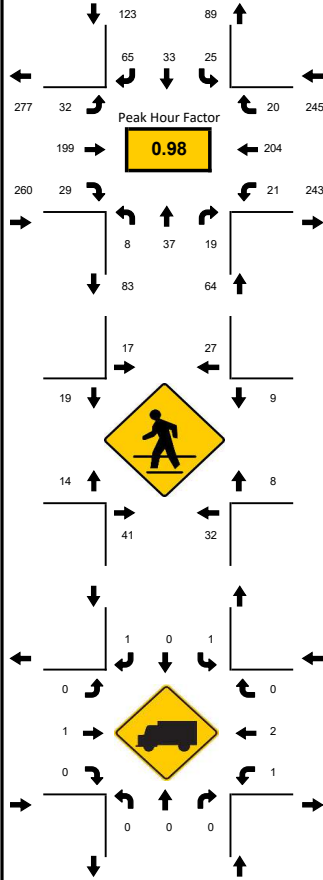
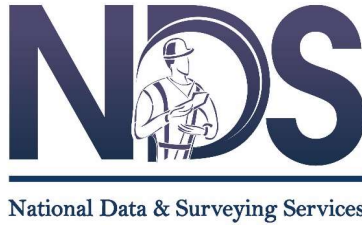


15-Min Count Period Beginning At	Lenox Ave Northbound					Lenox Ave Southbound					15th St Eastbound					15th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	1	2	1	0		1	0	5	0		2	24	1	0		1	19	0	0		57	282
7:15 AM	2	0	1	0		1	2	2	0		0	25	0	0		2	21	0	0		56	336
7:30 AM	0	0	1	0		0	2	6	0		1	34	5	1		1	21	1	0		73	399
7:45 AM	1	3	1	0		2	0	3	0		2	44	3	0		0	33	4	0		96	469
8:00 AM	3	2	4	0		4	2	6	0		7	39	0	0		3	41	0	0		111	497
8:15 AM	0	3	4	0		3	2	6	0		5	36	3	1		2	51	3	0		119	386
8:30 AM	3	5	1	0		3	9	1	0		7	41	3	0		5	61	4	0		143	267
8:45 AM	1	8	3	0		6	9	8	0		10	27	6	1		1	41	3	0		124	124
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*			
All Vehicles	12	32	16	0		24	36	32	0		40	164	24	4		20	244	16	0		664	
Heavy Trucks	4	0	4	0		0	0	4	0		4	4	0	4		4	8	0	0		32	
Pedestrians		72					44					20					36				172	
Bicycles	4	12	8	0		8	12	4	0		8	12	12	0		8	16	4	0		108	
Buses																						
Stopped Buses																						

LOCATION: Lenox Ave & 15th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-001
 DATE: Tue, Oct 22, 2024

Peak-Hour: 04:45 PM - 05:45 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



15-Min Count Period Beginning At	Lenox Ave Northbound					Lenox Ave Southbound					15th St Eastbound					15th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	9	0	0		4	7	12	0		5	55	5	1		3	40	2	0		143	605
4:15 PM	2	9	3	0		3	9	10	0		7	50	1	0		4	34	5	0		137	631
4:30 PM	3	8	6	1		7	3	14	1		10	48	3	0		3	43	5	0		155	671
4:45 PM	1	11	4	0		7	10	15	0		9	46	4	0		5	51	7	0		170	692
5:00 PM	5	10	4	0		5	4	21	0		8	46	10	0		7	46	3	0		169	659
5:15 PM	1	5	5	0		9	4	19	0		6	58	5	0		2	55	8	0		177	490
5:30 PM	1	11	6	0		4	15	10	0		9	49	10	0		7	52	2	0		176	313
5:45 PM	1	6	7	0		3	9	14	0		5	48	7	0		3	32	2	0		137	137
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	20	44	24	0		36	60	84	0		36	232	40	0		28	220	32	0		856	
Heavy Trucks	0	0	0	0		4	0	4	0		0	4	0	0		4	4	0	0		20	
Pedestrians		92					56					44					28				220	
Bicycles	8	4	8	0		4	12	4	0		4	32	4	0		8	24	4	0		116	
Buses																						
Stopped Buses																						

National Data & Surveying Services

Intersection Turning Movement Count

Location: Michigan Ave & 15th St
City: Miami Beach
Control: 4-Way Stop

Project ID: 24-140324-002
Date: 10/22/2024

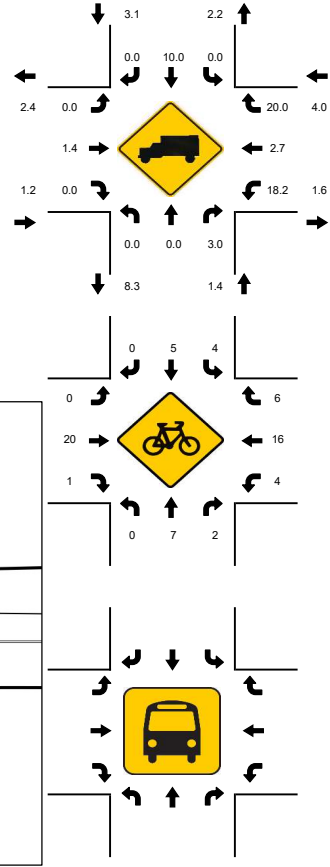
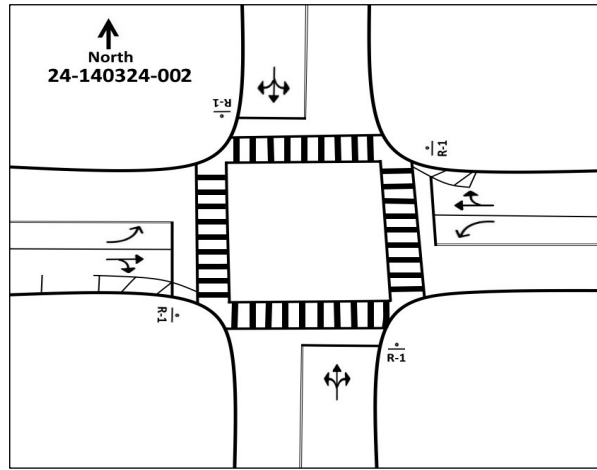
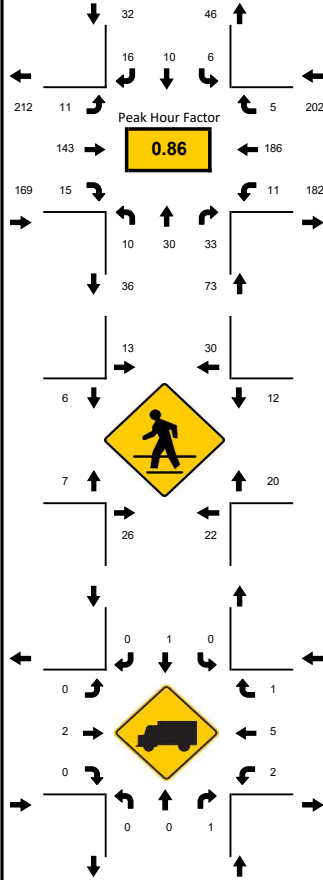
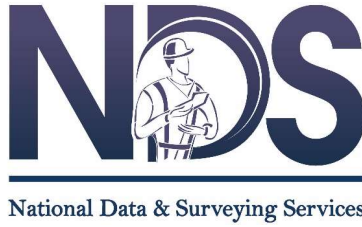
Data - Total

NS/EW Streets:	Michigan Ave				Michigan Ave				15th St				15th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	3	3	0	1	1	4	0	4	21	2	0	0	16	2	0					57
7:15 AM	2	3	6	0	1	2	0	0	1	26	0	0	0	21	0	0					62
7:30 AM	3	1	2	0	1	1	2	0	6	27	0	0	4	17	1	0					65
7:45 AM	1	4	4	0	2	2	0	0	0	46	2	0	2	35	3	0					101
8:00 AM	2	4	7	0	1	0	2	0	3	38	2	0	4	41	0	0					104
8:15 AM	3	9	11	0	2	3	2	0	4	38	4	0	2	50	2	0					130
8:30 AM	2	9	7	0	0	3	6	0	2	38	6	0	2	61	2	0					138
8:45 AM	3	8	8	0	3	4	6	0	2	29	3	0	3	34	1	0					104
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	15.24%	39.05%	45.71%	0.00%	22.45%	32.65%	44.90%	0.00%	7.24%	86.51%	6.25%	0.00%	5.61%	90.76%	3.63%	0.00%					761
PEAK HR :	08:00 AM - 09:00 AM																TOTAL				
PEAK HR VOL :	10	30	33	0	6	10	16	0	11	143	15	0	11	186	5	0					476
PEAK HR FACTOR :	0.833	0.833	0.750	0.000	0.500	0.625	0.667	0.000	0.688	0.941	0.625	0.000	0.688	0.762	0.625	0.000					0.862
	0.793				0.615				0.918				0.777								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	4	13	19	1	1	1	4	0	6	49	4	0	6	36	4	0					148
4:15 PM	3	15	12	0	6	7	2	0	4	48	2	0	3	41	4	0					147
4:30 PM	1	18	12	0	8	8	4	0	3	54	3	0	8	47	4	0					170
4:45 PM	4	22	17	0	3	7	3	0	4	49	5	0	7	53	3	0					177
5:00 PM	3	20	16	0	4	9	7	0	4	48	5	0	7	45	4	0					172
5:15 PM	1	15	19	0	3	8	2	0	6	61	1	0	6	62	5	0					189
5:30 PM	5	17	21	0	5	10	8	0	8	50	6	0	4	46	1	0					181
5:45 PM	3	18	14	0	2	9	2	0	5	46	4	0	9	32	2	0					146
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	8.19%	47.10%	44.37%	0.34%	26.02%	47.97%	26.02%	0.00%	8.42%	85.26%	6.32%	0.00%	11.39%	82.46%	6.15%	0.00%					1330
PEAK HR :	04:45 PM - 05:45 PM																TOTAL				
PEAK HR VOL :	13	74	73	0	15	34	20	0	22	208	17	0	24	206	13	0					719
PEAK HR FACTOR :	0.650	0.841	0.869	0.000	0.750	0.850	0.625	0.000	0.688	0.852	0.708	0.000	0.857	0.831	0.650	0.000					0.951
	0.930				0.750				0.908				0.832								

LOCATION: Michigan Ave & 15th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-002
 DATE: Tue, Oct 22, 2024

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:30 AM - 08:45 AM

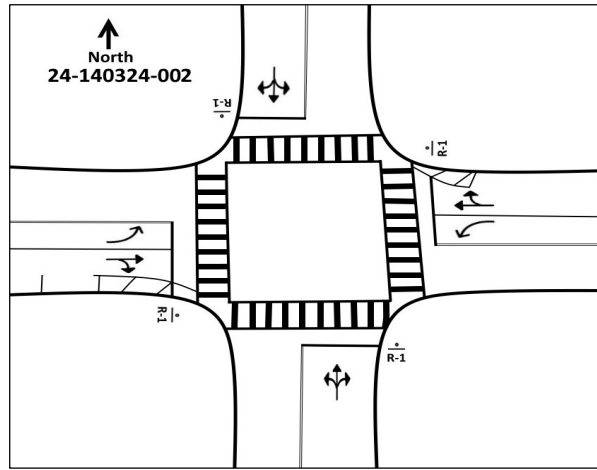
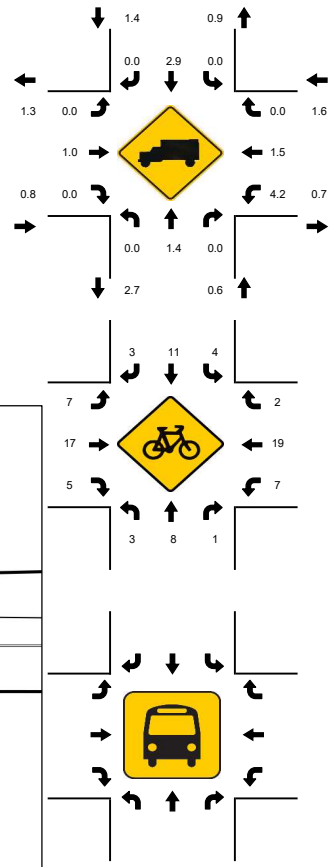
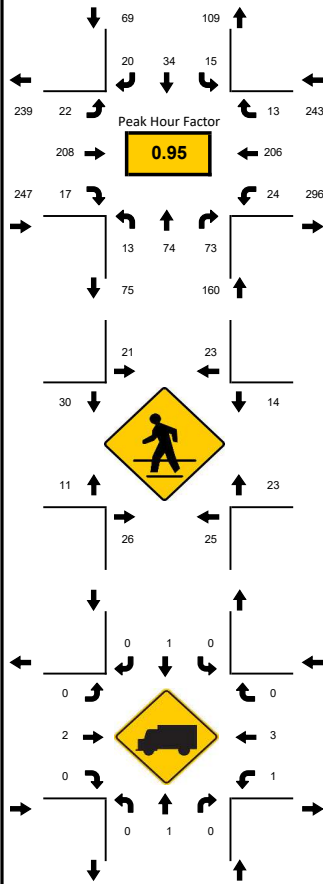
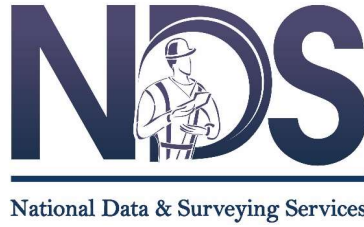


15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					15th St Eastbound					15th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	3	3	0		1	1	4	0		4	21	2	0		0	16	2	0		57	285
7:15 AM	2	3	6	0		1	2	0	0		1	26	0	0		0	21	0	0		62	332
7:30 AM	3	1	2	0		1	1	2	0		6	27	0	0		4	17	1	0		65	400
7:45 AM	1	4	4	0		2	2	0	0		0	46	2	0		2	35	3	0		101	473
8:00 AM	2	4	7	0		1	0	2	0		3	38	2	0		4	41	0	0		104	476
8:15 AM	3	9	11	0		2	3	2	0		4	38	4	0		2	50	2	0		130	372
8:30 AM	2	9	7	0		0	3	6	0		2	38	6	0		2	61	2	0		138	242
8:45 AM	3	8	8	0		3	4	6	0		2	29	3	0		3	34	1	0		104	104
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	12	36	44	0		12	16	24	0		16	152	24	0		16	244	8	0		604	
Heavy Trucks	0	0	4	0		0	4	0	0		0	4	0	0		4	12	4	0		32	
Pedestrians		76					64					16					48				204	
Bicycles	0	12	4	0		8	12	0	0		0	36	4	0		8	36	12	0		132	
Buses																						
Stopped Buses																						

LOCATION: Michigan Ave & 15th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-002
 DATE: Tue, Oct 22, 2024

Peak-Hour: 04:45 PM - 05:45 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					15th St Eastbound					15th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	4	13	19	1		1	1	4	0		6	49	4	0		6	36	4	0		148	642
4:15 PM	3	15	12	0		6	7	2	0		4	48	2	0		3	41	4	0		147	666
4:30 PM	1	18	12	0		8	8	4	0		3	54	3	0		8	47	4	0		170	708
4:45 PM	4	22	17	0		3	7	3	0		4	49	5	0		7	53	3	0		177	719
5:00 PM	3	20	16	0		4	9	7	0		4	48	5	0		7	45	4	0		172	688
5:15 PM	1	15	19	0		3	8	2	0		6	61	1	0		6	62	5	0		189	516
5:30 PM	5	17	21	0		5	10	8	0		8	50	6	0		4	46	1	0		181	327
5:45 PM	3	18	14	0		2	9	2	0		5	46	4	0		9	32	2	0		146	146
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	20	88	84	0		20	40	32	0		32	244	24	0		28	248	20	0		880	
Heavy Trucks	0	4	0	0		0	4	0	0		0	4	0	0		4	8	0	0		24	
Pedestrians		68					68					60					52				248	
Bicycles	12	12	4	0		4	16	8	4		8	24	8	0		20	24	4	0		144	
Buses																						
Stopped Buses																						

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lenox Ave & 14th St
City: Miami Beach
Control: 4-Way Stop

Project ID: 24-140324-003
Date: 10/22/2024

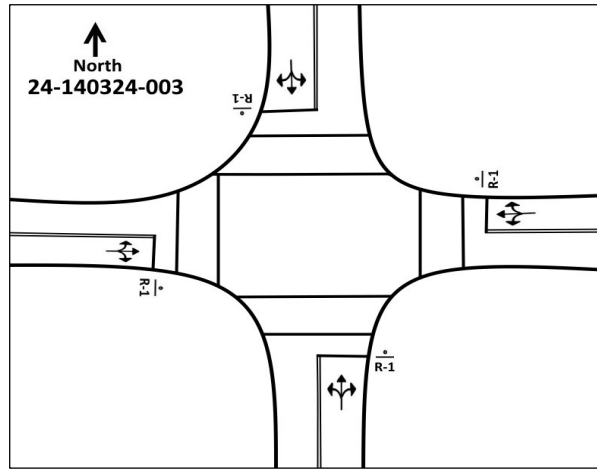
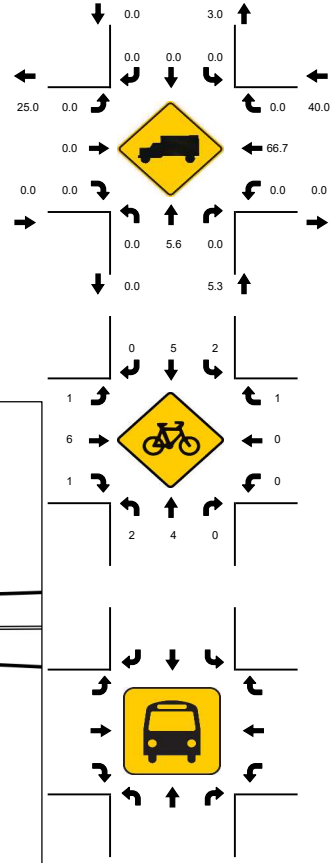
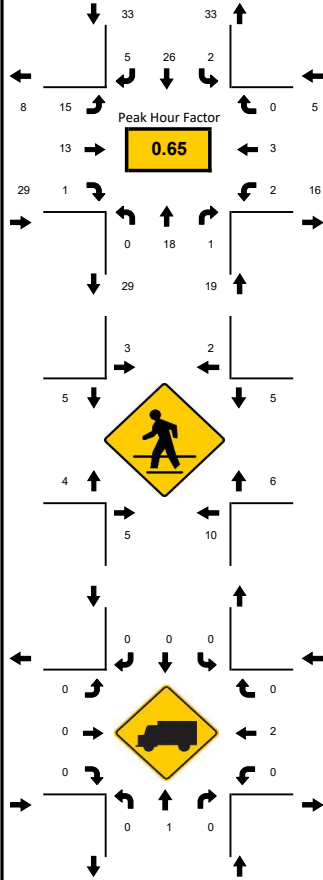
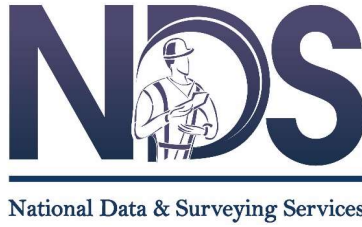
Data - Total

NS/EW Streets:	Lenox Ave				Lenox Ave				14th St				14th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	2	0	0	0	3	0	0	1	0	1	0	0	1	0	0					8
7:15 AM	0	3	0	0	0	2	3	0	3	1	0	0	0	2	0	0					14
7:30 AM	1	1	0	0	0	4	0	0	1	5	4	0	1	0	0	0					17
7:45 AM	0	1	0	0	0	0	3	0	2	3	0	0	0	0	0	0					9
8:00 AM	0	1	1	0	0	6	2	0	1	3	1	0	1	1	0	0					17
8:15 AM	0	4	0	0	0	7	1	0	3	4	0	0	0	0	0	0					19
8:30 AM	0	3	0	0	1	3	1	0	5	3	0	0	0	1	0	0					17
8:45 AM	0	10	0	0	1	10	1	0	6	3	0	0	1	1	0	0					33
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	1	25	1	0	2	35	11	0	22	22	6	0	3	6	0	0					134
	3.70%	92.59%	3.70%	0.00%	4.17%	72.92%	22.92%	0.00%	44.00%	44.00%	12.00%	0.00%	33.33%	66.67%	0.00%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL				
PEAK HR VOL :	0	18	1	0	2	26	5	0	15	13	1	0	2	3	0	0					86
PEAK HR FACTOR :	0.000	0.450	0.250	0.000	0.500	0.650	0.625	0.000	0.625	0.813	0.250	0.000	0.500	0.750	0.000	0.000					0.652
	0.475				0.688				0.806				0.625								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	2	8	1	0	0	10	6	0	8	7	4	0	1	2	0	0					49
4:15 PM	0	7	0	0	0	6	7	0	4	6	3	0	2	1	1	0					37
4:30 PM	1	3	1	0	2	11	3	0	5	17	0	0	0	0	0	0					43
4:45 PM	1	9	1	1	1	8	4	0	7	11	2	0	2	2	0	0					49
5:00 PM	0	8	1	0	0	7	7	0	9	11	6	0	0	1	0	0					50
5:15 PM	4	10	1	0	2	14	6	0	6	10	4	0	1	3	0	0					61
5:30 PM	0	9	1	0	1	17	3	0	7	16	7	0	1	2	1	0					65
5:45 PM	2	6	1	0	1	10	2	0	10	15	1	0	2	1	0	0					51
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	10	60	7	1	7	83	38	0	56	93	27	0	9	12	2	0					405
	12.82%	76.92%	8.97%	1.28%	5.47%	64.84%	29.69%	0.00%	31.82%	52.84%	15.34%	0.00%	39.13%	52.17%	8.70%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL				
PEAK HR VOL :	6	33	4	0	4	48	18	0	32	52	18	0	4	7	1	0					227
PEAK HR FACTOR :	0.375	0.825	1.000	0.000	0.500	0.706	0.643	0.000	0.800	0.813	0.643	0.000	0.500	0.583	0.250	0.000					0.873
	0.717				0.795				0.850				0.750								

LOCATION: Lenox Ave & 14th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-003
 DATE: Tue, Oct 22, 2024

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:45 AM - 09:00 AM

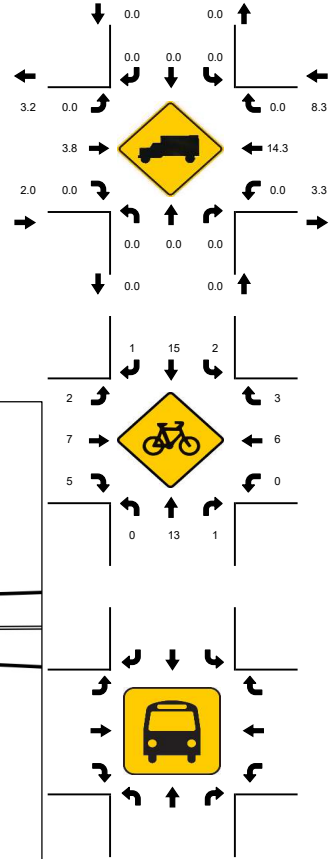
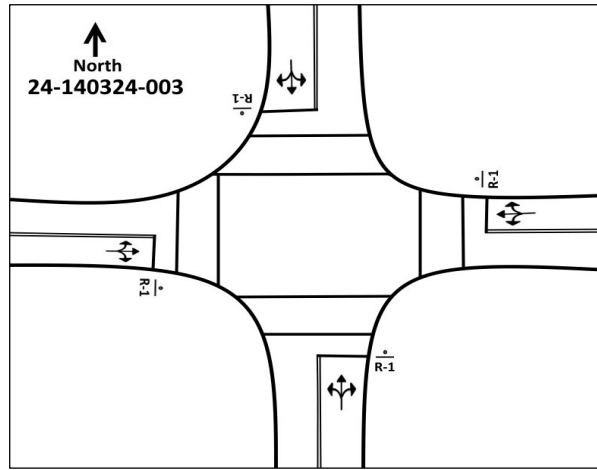
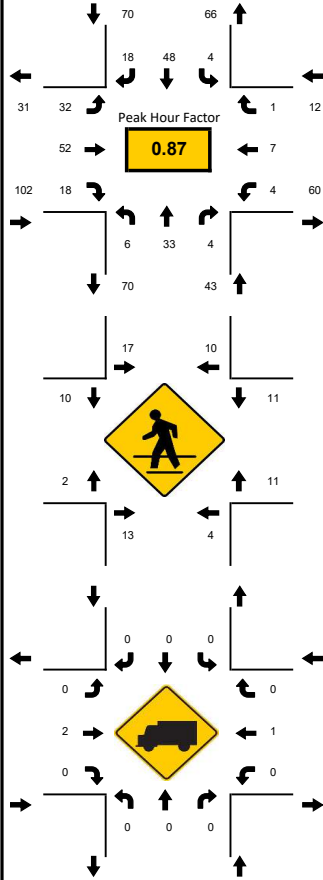
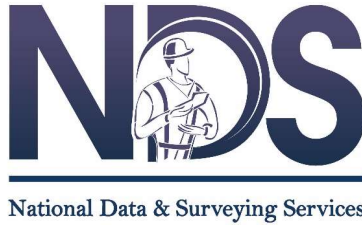


15-Min Count Period Beginning At	Lenox Ave Northbound					Lenox Ave Southbound					14th St Eastbound					14th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	2	0	0	0	0	3	0	0	0	1	0	1	0	0	0	1	0	0	0	8	48
7:15 AM	0	3	0	0	0	0	2	3	0	0	3	1	0	0	0	0	2	0	0	0	14	57
7:30 AM	1	1	0	0	0	0	4	0	0	0	1	5	4	0	0	1	0	0	0	0	17	62
7:45 AM	0	1	0	0	0	0	0	3	0	0	2	3	0	0	0	0	0	0	0	0	9	62
8:00 AM	0	1	1	0	0	0	6	2	0	0	1	3	1	0	0	1	1	0	0	0	17	86
8:15 AM	0	4	0	0	0	0	7	1	0	0	3	4	0	0	0	0	0	0	0	0	19	69
8:30 AM	0	3	0	0	0	1	3	1	0	0	5	3	0	0	0	0	1	0	0	0	17	50
8:45 AM	0	10	0	0	0	1	10	1	0	0	6	3	0	0	0	1	1	0	0	0	33	33
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	40	4	0	0	4	40	8	0	0	24	16	4	0	0	4	4	0	0	0	148	
Heavy Trucks	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	
Pedestrians		24					8					16					16				64	
Bicycles	4	8	0	0	0	8	12	0	0	0	4	12	4	0	0	0	0	4	0	0	56	
Buses																						
Stopped Buses																						

LOCATION: Lenox Ave & 14th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-003
 DATE: Tue, Oct 22, 2024

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:30 PM - 05:45 PM



15-Min Count Period Beginning At	Lenox Ave Northbound					Lenox Ave Southbound					14th St Eastbound					14th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	2	8	1	0		0	10	6	0		8	7	4	0		1	2	0	0		49	178
4:15 PM	0	7	0	0		0	6	7	0		4	6	3	0		2	1	1	0		37	179
4:30 PM	1	3	1	0		2	11	3	0		5	17	0	0		0	0	0	0		43	203
4:45 PM	1	9	1	1		1	8	4	0		7	11	2	0		2	2	0	0		49	225
5:00 PM	0	8	1	0		0	7	7	0		9	11	6	0		0	1	0	0		50	227
5:15 PM	4	10	1	0		2	14	6	0		6	10	4	0		1	3	0	0		61	177
5:30 PM	0	9	1	0		1	17	3	0		7	16	7	0		1	2	1	0		65	116
5:45 PM	2	6	1	0		1	10	2	0		10	15	1	0		2	1	0	0		51	51
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	16	40	4	0		8	68	28	0		40	64	28	0		8	12	4	0		320	
Heavy Trucks	0	0	0	0		0	0	0	0		0	4	0	0		0	4	0	0		8	
Pedestrians		28					68					20					32				148	
Bicycles	0	20	4	0		8	20	4	0		4	12	12	0		0	8	8	0		100	
Buses																						
Stopped Buses																						

National Data & Surveying Services

Intersection Turning Movement Count

Location: Michigan Ave & 14th St
City: Miami Beach
Control: 1-Way Stop(EB)

Project ID: 24-140324-004
Date: 10/22/2024

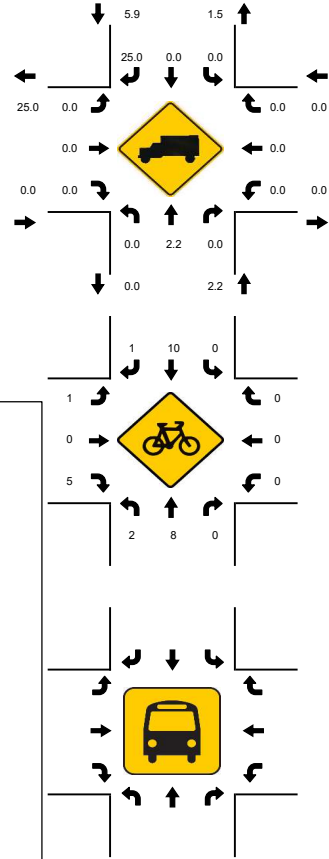
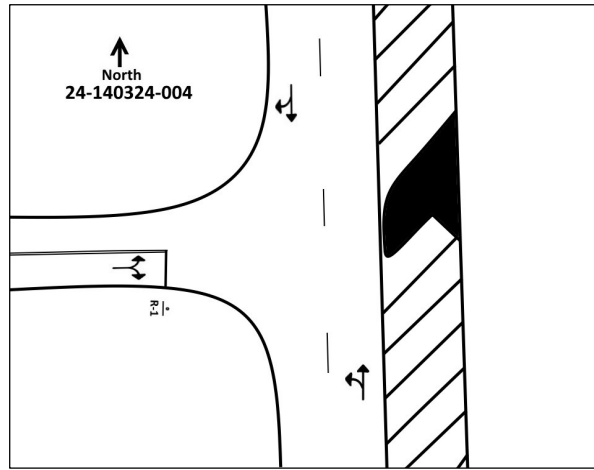
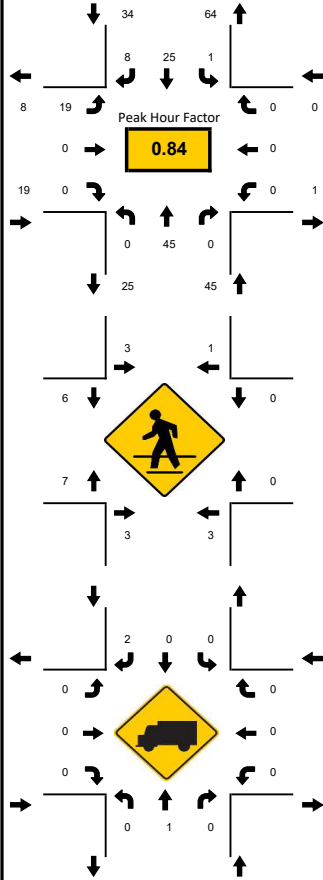
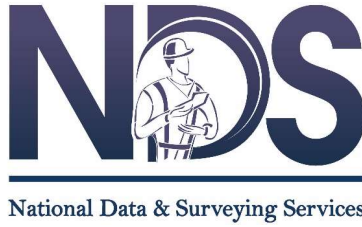
Data - Total

NS/EW Streets:	Michigan Ave				Michigan Ave				14th St				14th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	9
7:15 AM	0	6	0	0	0	3	0	0	5	0	1	0	0	0	0	0	15
7:30 AM	0	3	0	0	0	3	0	0	2	0	0	0	0	0	0	0	8
7:45 AM	0	2	0	0	0	4	1	0	4	0	0	0	0	0	0	0	11
8:00 AM	0	9	0	0	0	6	1	0	5	0	0	0	0	0	0	0	21
8:15 AM	0	12	0	0	0	6	1	0	4	0	0	0	0	0	0	0	23
8:30 AM	0	13	0	0	0	5	2	0	5	0	0	0	0	0	0	0	25
8:45 AM	0	11	0	0	0	8	4	1	5	0	0	0	0	0	0	0	29
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	56	0	0	0	37	11	1	34	0	1	0	0	0	0	0	141
	1.75%	98.25%	0.00%	0.00%	0.00%	75.51%	22.45%	2.04%	97.14%	0.00%	2.86%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	45	0	0	0	25	8	1	19	0	0	0	0	0	0	0	98
PEAK HR FACTOR :	0.000	0.865	0.000	0.000	0.000	0.781	0.500	0.250	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.845
	0.865				0.654				0.950								
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU		
4:00 PM	0	20	0	0	0	8	3	0	15	0	2	0	0	0	0	0	48
4:15 PM	0	14	0	0	0	12	3	0	13	0	0	0	0	0	0	0	42
4:30 PM	0	24	0	0	0	16	2	0	13	0	1	0	0	0	0	0	56
4:45 PM	2	31	0	0	0	14	2	0	9	0	2	0	0	0	0	0	60
5:00 PM	1	26	0	0	0	14	5	0	11	0	3	0	0	0	0	0	60
5:15 PM	0	24	0	0	0	15	5	0	11	0	1	0	0	0	0	0	56
5:30 PM	2	25	0	0	0	17	3	0	19	0	1	0	0	0	0	0	67
5:45 PM	0	22	0	0	0	16	3	0	14	0	1	0	0	0	0	0	56
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	5	186	0	0	0	112	26	0	105	0	11	0	0	0	0	0	445
	2.62%	97.38%	0.00%	0.00%	0.00%	81.16%	18.84%	0.00%	90.52%	0.00%	9.48%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	106	0	0	0	60	15	0	50	0	7	0	0	0	0	0	243
PEAK HR FACTOR :	0.625	0.855	0.000	0.000	0.000	0.882	0.750	0.000	0.658	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.907
	0.841				0.938				0.713								

LOCATION: Michigan Ave & 14th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-004
 DATE: Tue, Oct 22, 2024

Peak-Hour: 08:00 AM - 09:00 AM
 Peak 15-Minute: 08:45 AM - 09:00 AM

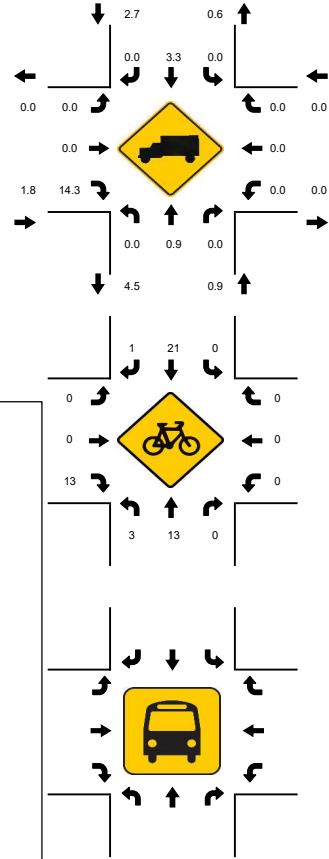
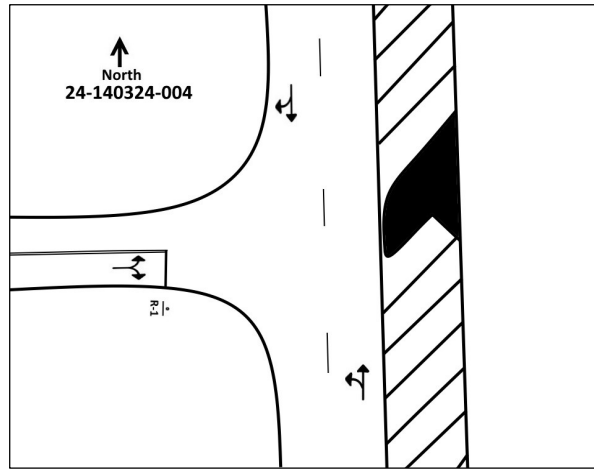
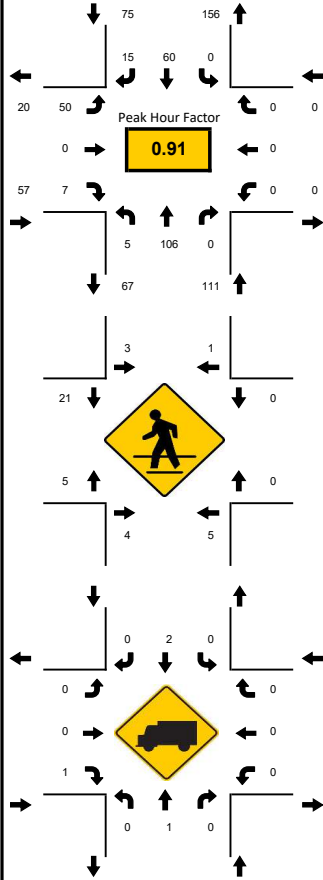
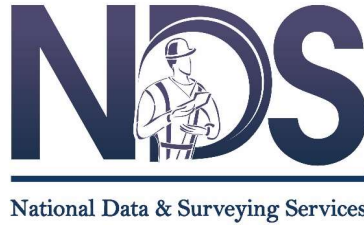


15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					14th St Eastbound					14th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	1	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	0	0	9	43
7:15 AM	0	6	0	0	0	0	3	0	0	0	5	0	1	0	0	0	0	0	0	0	15	55
7:30 AM	0	3	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	8	63
7:45 AM	0	2	0	0	0	0	4	1	0	0	4	0	0	0	0	0	0	0	0	0	11	80
8:00 AM	0	9	0	0	0	0	6	1	0	0	5	0	0	0	0	0	0	0	0	0	21	98
8:15 AM	0	12	0	0	0	0	6	1	0	0	4	0	0	0	0	0	0	0	0	0	23	77
8:30 AM	0	13	0	0	0	0	5	2	0	0	5	0	0	0	0	0	0	0	0	0	25	54
8:45 AM	0	11	0	0	0	0	8	4	1	0	5	0	0	0	0	0	0	0	0	0	29	29
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	52	0	0	0	0	32	16	4	0	20	0	0	0	0	0	0	0	0	0	124	
Heavy Trucks	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	
Pedestrians		8					8					24					0				40	
Bicycles	4	12	0	0	0	0	16	4	0	0	4	0	8	0	0	0	0	0	0	0	48	
Buses																						
Stopped Buses																						

LOCATION: Michigan Ave & 14th St
 CITY/STATE: Miami Beach, FL

PROJECT ID: 24-140324-004
 DATE: Tue, Oct 22, 2024

Peak-Hour: 04:45 PM - 05:45 PM
 Peak 15-Minute: 05:30 PM - 05:45 PM



15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					14th St Eastbound					14th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	20	0	0	0	0	8	3	0	0	15	0	2	0	0	0	0	0	0	0	48	206
4:15 PM	0	14	0	0	0	0	12	3	0	0	13	0	0	0	0	0	0	0	0	0	42	218
4:30 PM	0	24	0	0	0	0	16	2	0	0	13	0	1	0	0	0	0	0	0	0	56	232
4:45 PM	2	31	0	0	0	0	14	2	0	0	9	0	2	0	0	0	0	0	0	0	60	243
5:00 PM	1	26	0	0	0	0	14	5	0	0	11	0	3	0	0	0	0	0	0	0	60	239
5:15 PM	0	24	0	0	0	0	15	5	0	0	11	0	1	0	0	0	0	0	0	0	56	179
5:30 PM	2	25	0	0	0	0	17	3	0	0	19	0	1	0	0	0	0	0	0	0	67	123
5:45 PM	0	22	0	0	0	0	16	3	0	0	14	0	1	0	0	0	0	0	0	0	56	56
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	8	124	0	0	0	0	68	20	0	0	76	0	12	0	0	0	0	0	0	0	308	
Heavy Trucks	0	4	0	0	0	0	8	0	0	0	0	0	4	0	0	0	0	0	0	0	16	
Pedestrians		20					8					32					0				60	
Bicycles	8	20	0	0	0	0	32	4	0	0	0	0	24	0	0	0	0	0	0	0	88	
Buses																						
Stopped Buses																						

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

WEEK	DATES	SF	MOCF: 0.95 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

04-MAR-2025 16:32:53

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**GROWTH RATE CALCULATION
1440 MICHIGAN AVENUE**

Roadway	FDOT Site	10 Year Linear Trend	10 Year Exponential Trend	10 Year Decaying Trend
MERIDIAN AVE, 200 FT S OF 14 ST	8416	-4.20%	-5.30%	-4.75%
11TH ST, 200' EAST OF MERIDIAN CT	8532	-0.99%	-1.00%	-1.60%
15 ST, 200' EAST OF JEFFERSON AVE	8566	0.38%	0.28%	-0.63%
Average Annual Growth Rate		-1.60%	-2.01%	-2.33%

Used 0.5% Growth Rate

Table 3b - 2015 to 2045 SERPM Traffic Volumes Growth

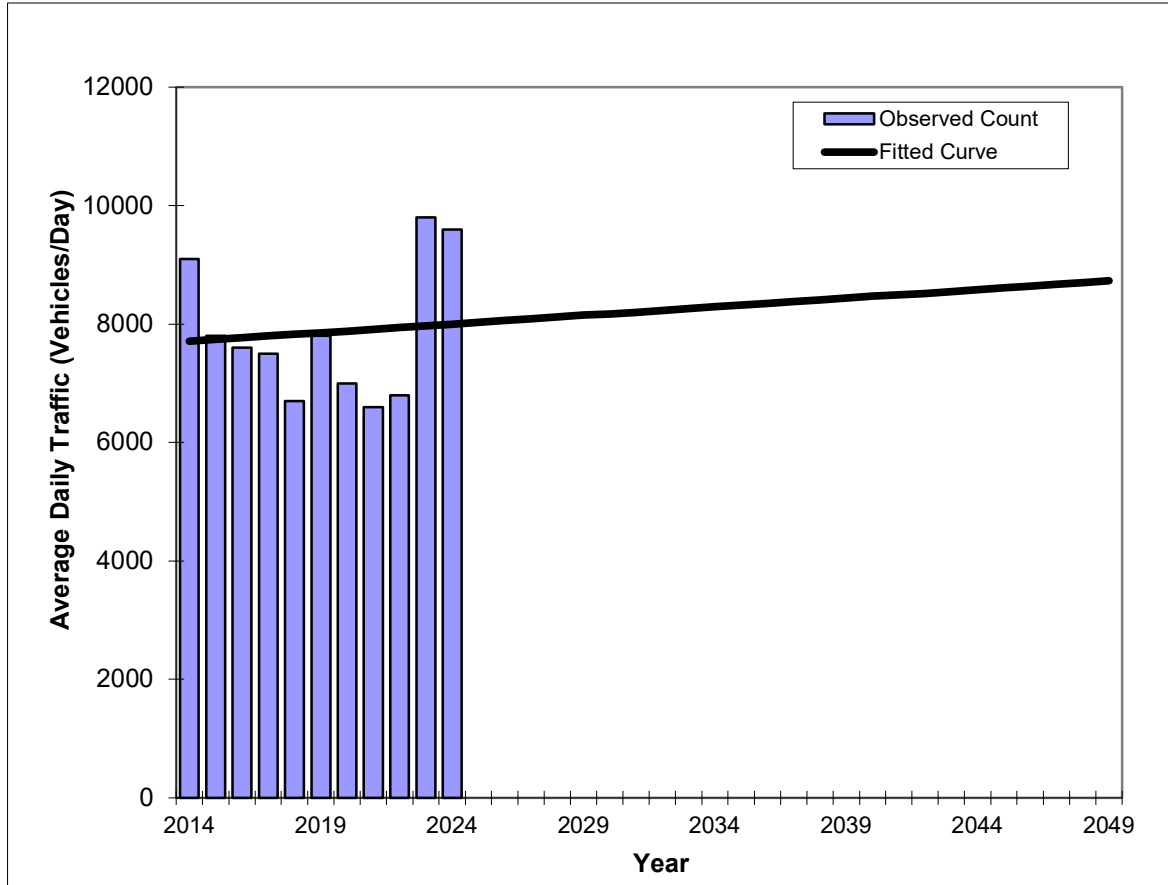
Roadway	FDOT Site	2015	2045
VENETIAN WY	-	7,553	10,900
ALTON RD AND 15TH ST	-	38,886	43,800
ALTON RD AND 3RD ST	-	19,747	21,800
Total		66,186	76,500
Annual Growth Rate		0.48%	

Traffic Trends - V2023

-- 15 ST, 200' EAST OF JEFFERSON AVE (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878566
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	9,100	7,710
2015	7,800	7,740
2016	7,600	7,770
2017	7,500	7,800
2018	6,700	7,830
2019	7,800	7,850
2020	7,000	7,880
2021	6,600	7,910
2022	6,800	7,940
2023	9,800	7,970
2024	9,600	8,000
2028 Opening Year Trend		
2028	N/A	8,120
2039 Interim Year Trend		
2039	N/A	8,440
2049 Design Year Trend		
2049	N/A	8,730
FSUTMS Forecasts/Trends		

Annual Trend Increase:	29
Trend R-squared:	1.07%
Trend Annual Historic Growth Rate:	0.38%
Trend Growth Rate (2024 to Design Year)	0.37%
Printed:	5/12/2025
Linear Growth Option	

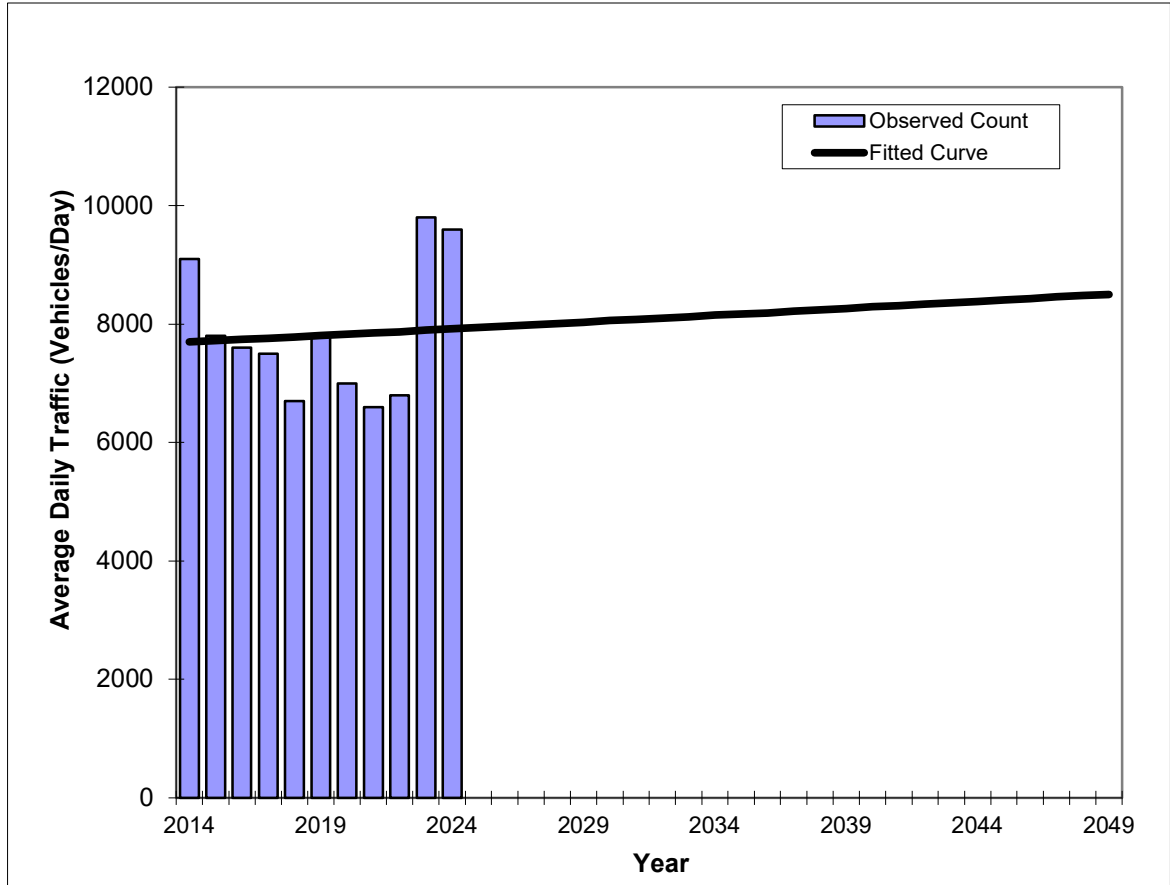
*Axle-Adjusted

Traffic Trends - V2023

-- 15 ST, 200' EAST OF JEFFERSON AVE (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878566
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	9,100	7,700
2015	7,800	7,720
2016	7,600	7,740
2017	7,500	7,760
2018	6,700	7,780
2019	7,800	7,810
2020	7,000	7,830
2021	6,600	7,850
2022	6,800	7,870
2023	9,800	7,900
2024	9,600	7,920
2028 Opening Year Trend		
2028	N/A	8,010
2039 Interim Year Trend		
2039	N/A	8,260
2049 Design Year Trend		
2049	N/A	8,500
FSUTMS Forecasts/Trends		

Trend R-squared:	0.67%
Compounded Annual Historic Growth Rate:	0.28%
Compounded Growth Rate (2024 to Design Year)	0.28%
Printed:	5/12/2025
Exponential Growth Option	

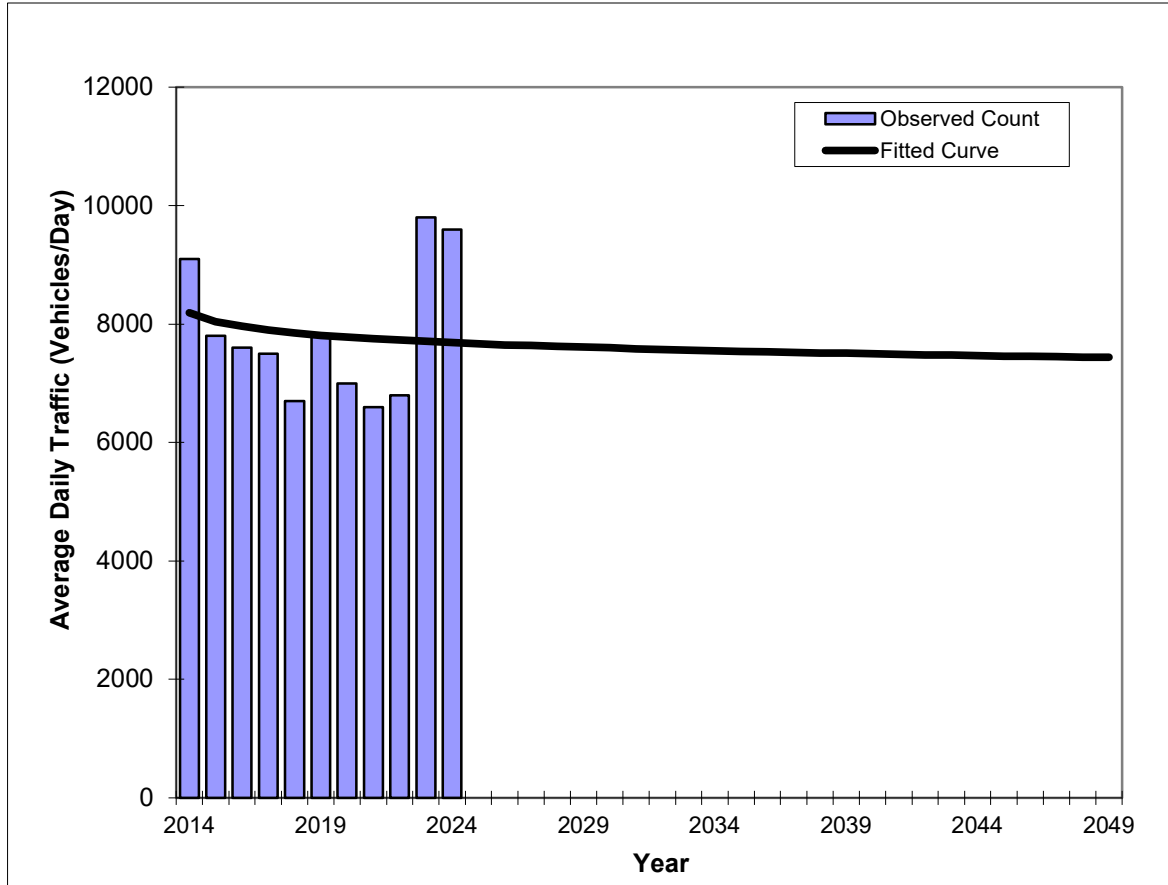
*Axle-Adjusted

Traffic Trends - V2023

-- 15 ST, 200' EAST OF JEFFERSON AVE (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878566
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	9,100	8,190
2015	7,800	8,040
2016	7,600	7,960
2017	7,500	7,900
2018	6,700	7,850
2019	7,800	7,810
2020	7,000	7,780
2021	6,600	7,750
2022	6,800	7,730
2023	9,800	7,710
2024	9,600	7,690
2028 Opening Year Trend		
2028	N/A	7,620
2039 Interim Year Trend		
2039	N/A	7,510
2049 Design Year Trend		
2049	N/A	7,440
FSUTMS Forecasts/Trends		

Trend R-squared:	2.78%
Compounded Annual Historic Growth Rate:	-0.63%
Compounded Growth Rate (2024 to Design Year):	-0.13%
Printed:	5/12/2025
Decaying Exponential Growth Option	

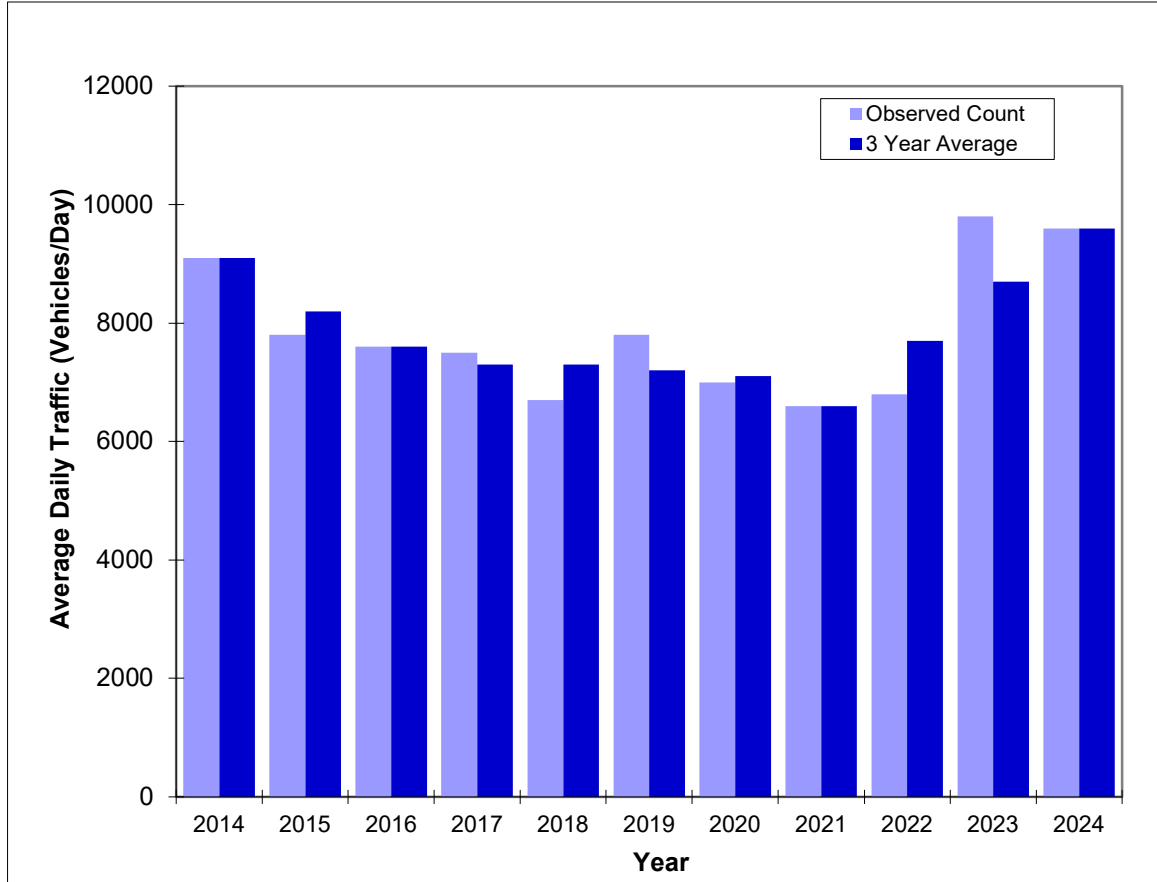
*Axle-Adjusted

Traffic Trends - V2023

-- 15 ST, 200' EAST OF JEFFERSON AVE (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878566
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	3 Yr Avg
2014	9,100	9,100
2015	7,800	8,200
2016	7,600	7,600
2017	7,500	7,300
2018	6,700	7,300
2019	7,800	7,200
2020	7,000	7,100
2021	6,600	6,600
2022	6,800	7,700
2023	9,800	8,700
2024	9,600	9,600

Actual AADT vs 3 Year Average

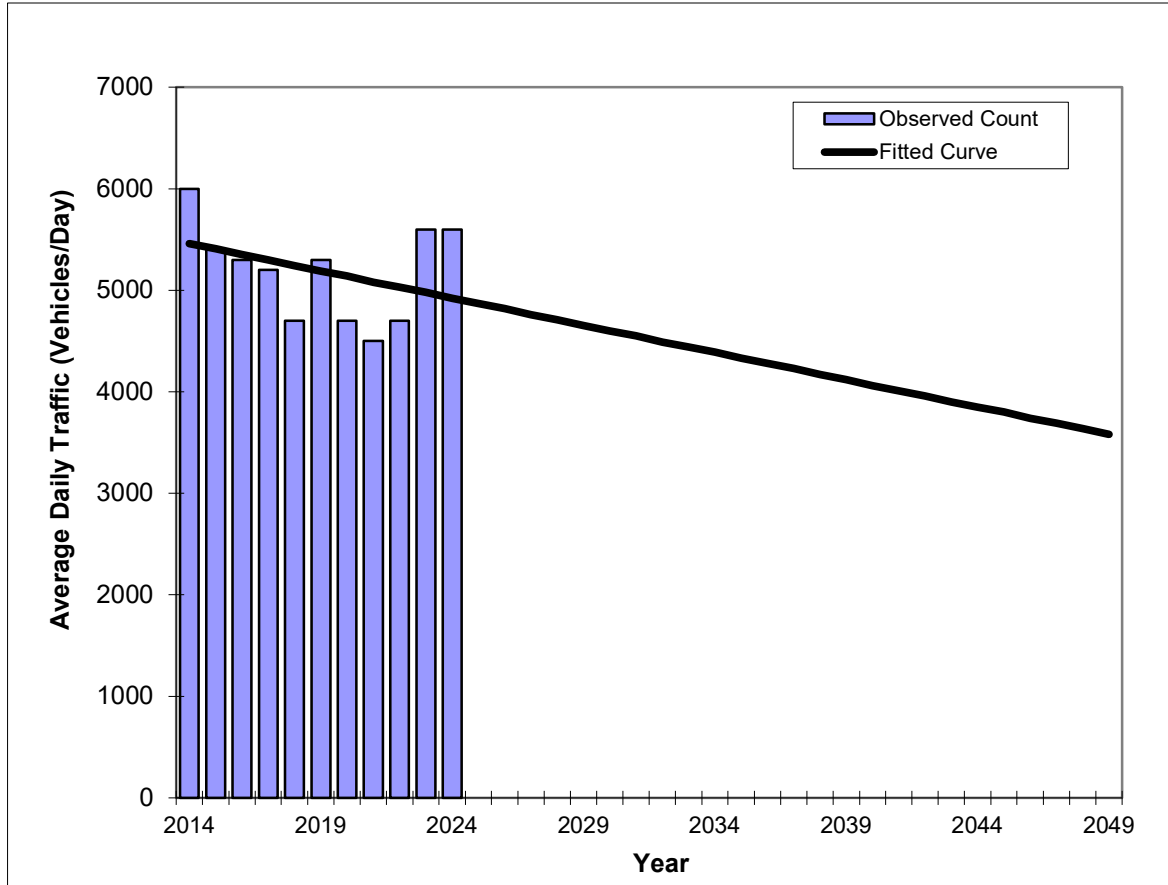
*Axle-Adjusted

Traffic Trends - V2023

-- 11TH ST, 200' EAST OF MERIDIAN CT (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878532
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	6,000	5,460
2015	5,400	5,410
2016	5,300	5,350
2017	5,200	5,300
2018	4,700	5,240
2019	5,300	5,190
2020	4,700	5,140
2021	4,500	5,080
2022	4,700	5,030
2023	5,600	4,980
2024	5,600	4,920
2028 Opening Year Trend		
2028	N/A	4,710
2039 Interim Year Trend		
2039	N/A	4,120
2049 Design Year Trend		
2049	N/A	3,580
FSUTMS Forecasts/Trends		

Annual Trend Decrease:	54
Trend R-squared:	17.30%
Trend Annual Historic Growth Rate:	-0.99%
Trend Growth Rate (2024 to Design Year):	-1.09%
Printed:	5/12/2025
Linear Growth Option	

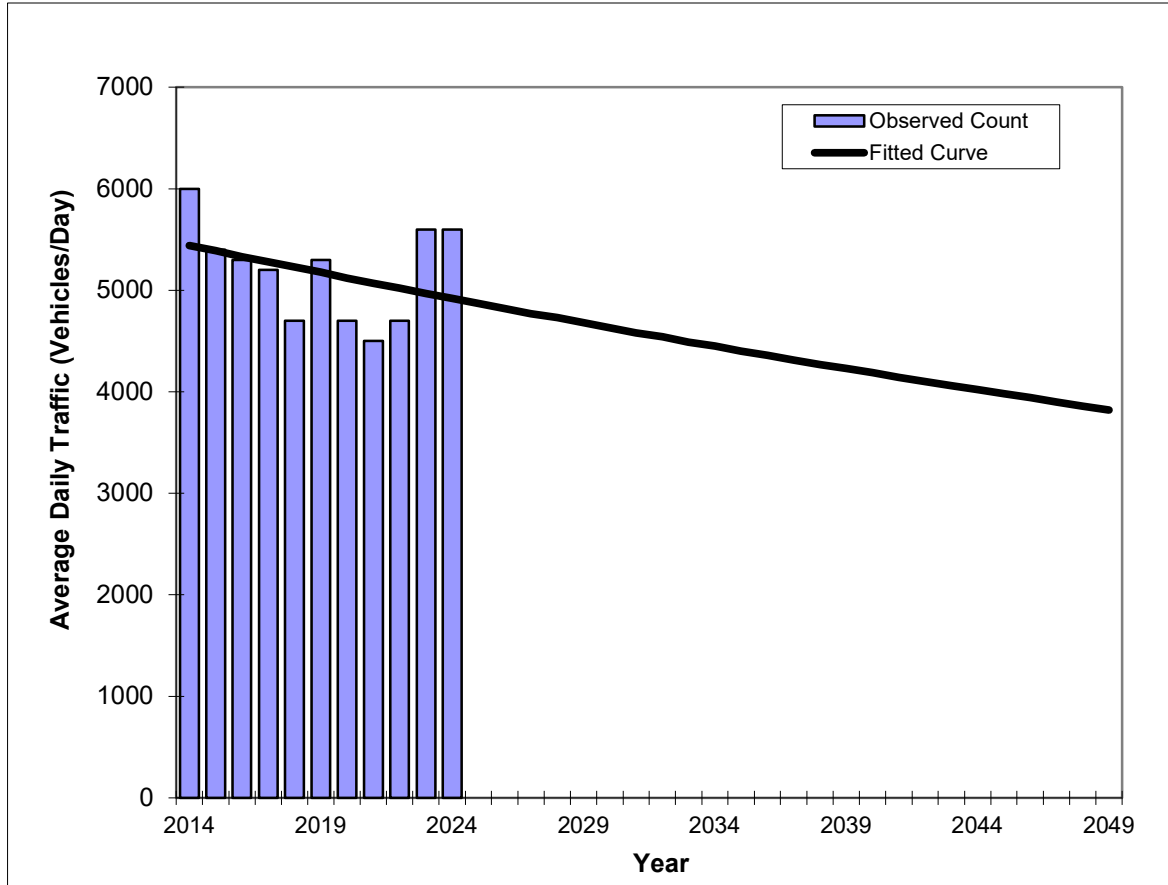
*Axle-Adjusted

Traffic Trends - V2023

-- 11TH ST, 200' EAST OF MERIDIAN CT (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878532
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	6,000	5,440
2015	5,400	5,390
2016	5,300	5,330
2017	5,200	5,280
2018	4,700	5,230
2019	5,300	5,180
2020	4,700	5,120
2021	4,500	5,070
2022	4,700	5,020
2023	5,600	4,970
2024	5,600	4,920
2028 Opening Year Trend		
2028	N/A	4,730
2039 Interim Year Trend		
2039	N/A	4,230
2049 Design Year Trend		
2049	N/A	3,820
FSUTMS Forecasts/Trends		

Trend R-squared:	16.75%
Compounded Annual Historic Growth Rate:	-1.00%
Compounded Growth Rate (2024 to Design Year):	-1.01%
Printed:	5/12/2025
Exponential Growth Option	

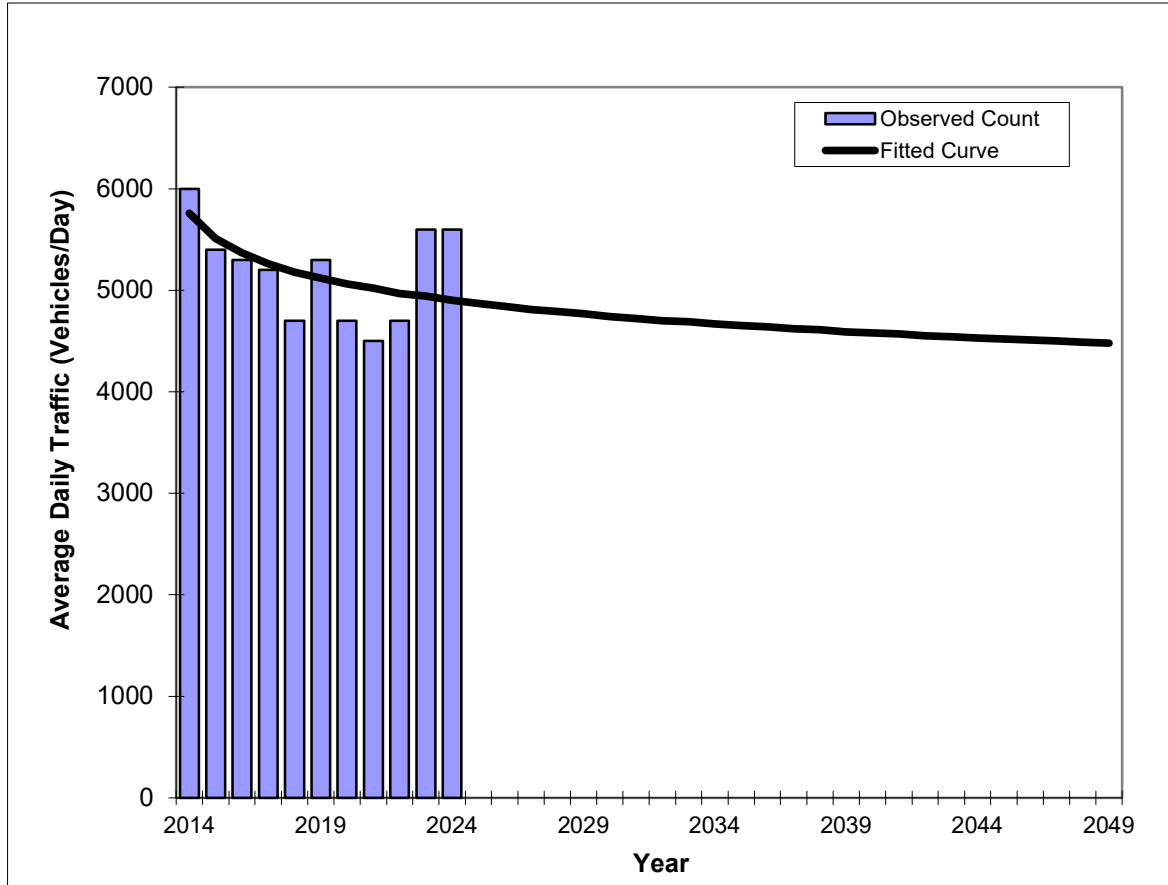
*Axle-Adjusted

Traffic Trends - V2023

-- 11TH ST, 200' EAST OF MERIDIAN CT (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878532
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	6,000	5,760
2015	5,400	5,510
2016	5,300	5,370
2017	5,200	5,260
2018	4,700	5,180
2019	5,300	5,120
2020	4,700	5,060
2021	4,500	5,020
2022	4,700	4,970
2023	5,600	4,940
2024	5,600	4,900
2028 Opening Year Trend		
2028	N/A	4,790
2039 Interim Year Trend		
2039	N/A	4,590
2049 Design Year Trend		
2049	N/A	4,480
FSUTMS Forecasts/Trends		

Trend R-squared:	39.18%
Compounded Annual Historic Growth Rate:	-1.60%
Compounded Growth Rate (2024 to Design Year):	-0.36%
Printed:	5/12/2025
Decaying Exponential Growth Option	

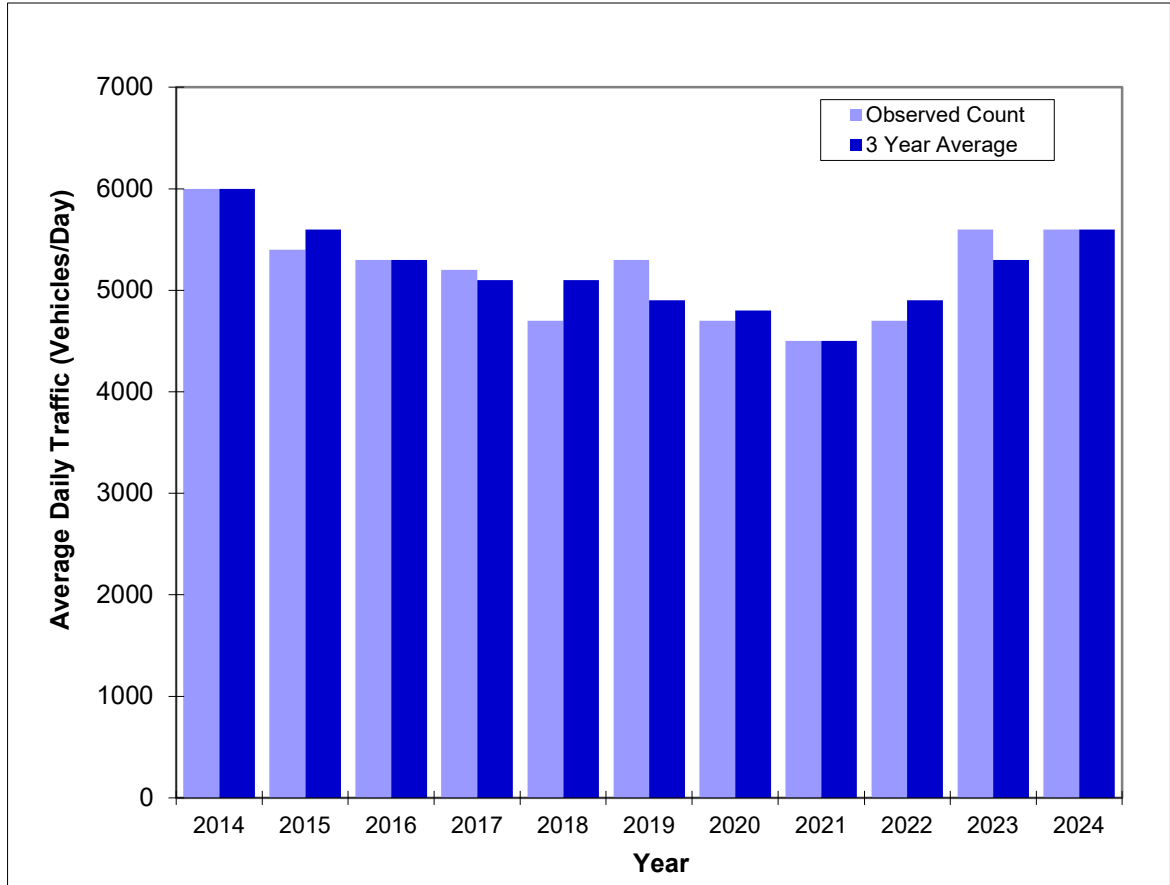
*Axle-Adjusted

Traffic Trends - V2023

-- 11TH ST, 200' EAST OF MERIDIAN CT (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878532
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	3 Yr Avg
2014	6,000	6,000
2015	5,400	5,600
2016	5,300	5,300
2017	5,200	5,100
2018	4,700	5,100
2019	5,300	4,900
2020	4,700	4,800
2021	4,500	4,500
2022	4,700	4,900
2023	5,600	5,300
2024	5,600	5,600

Actual AADT vs 3 Year Average

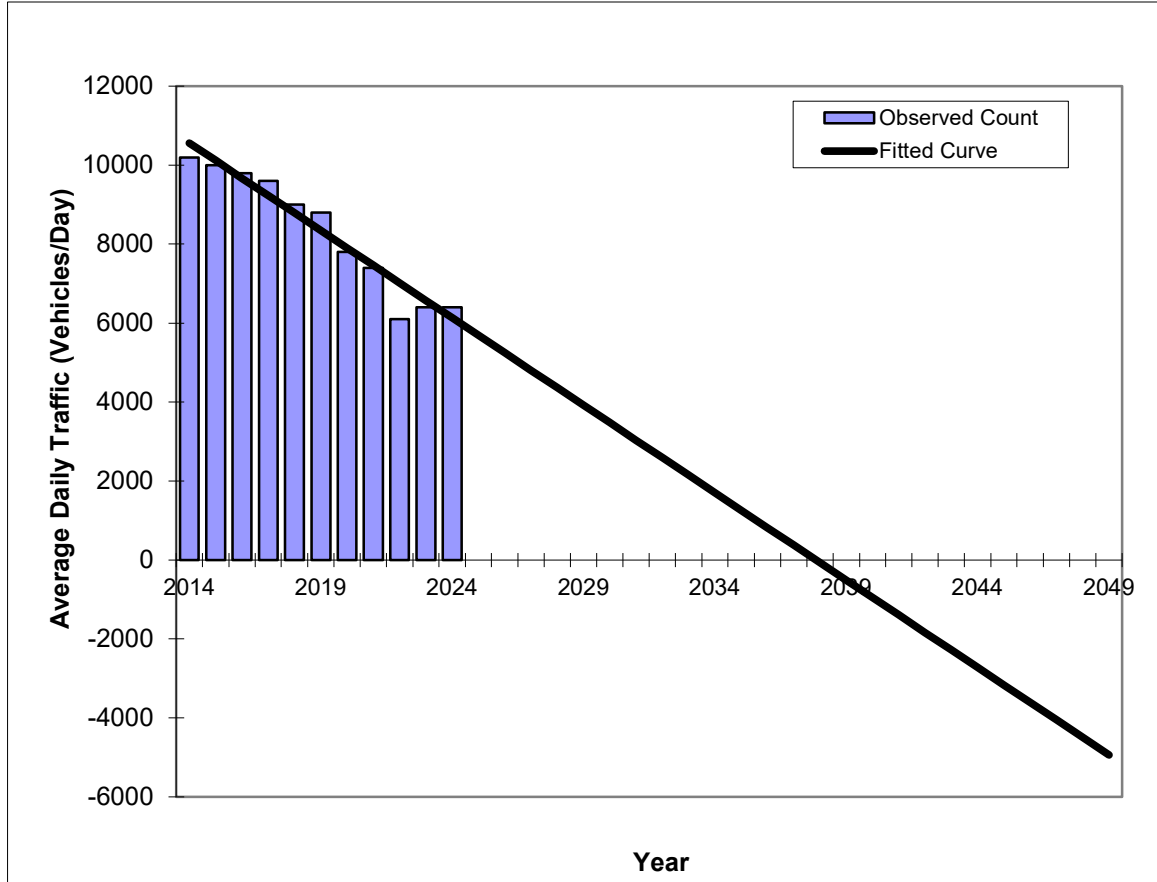
*Axle-Adjusted

Traffic Trends - V2023

-- MERIDIAN AVE, 200 FT S OF 14 ST (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878416
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	10,200	10,560
2015	10,000	10,120
2016	9,800	9,670
2017	9,600	9,230
2018	9,000	8,790
2019	8,800	8,350
2020	7,800	7,900
2021	7,400	7,460
2022	6,100	7,020
2023	6,400	6,570
2024	6,400	6,130
2028 Opening Year Trend		
2028	N/A	4,360
2039 Interim Year Trend		
2039	N/A	-510
2049 Design Year Trend		
2049	N/A	-4,940
FSUTMS Forecasts/Trends		

Annual Trend Decrease:	443
Trend R-squared:	96.91%
Trend Annual Historic Growth Rate:	-4.20%
Trend Growth Rate (2024 to Design Year)	-7.22%
Printed:	5/12/2025
Linear Growth Option	

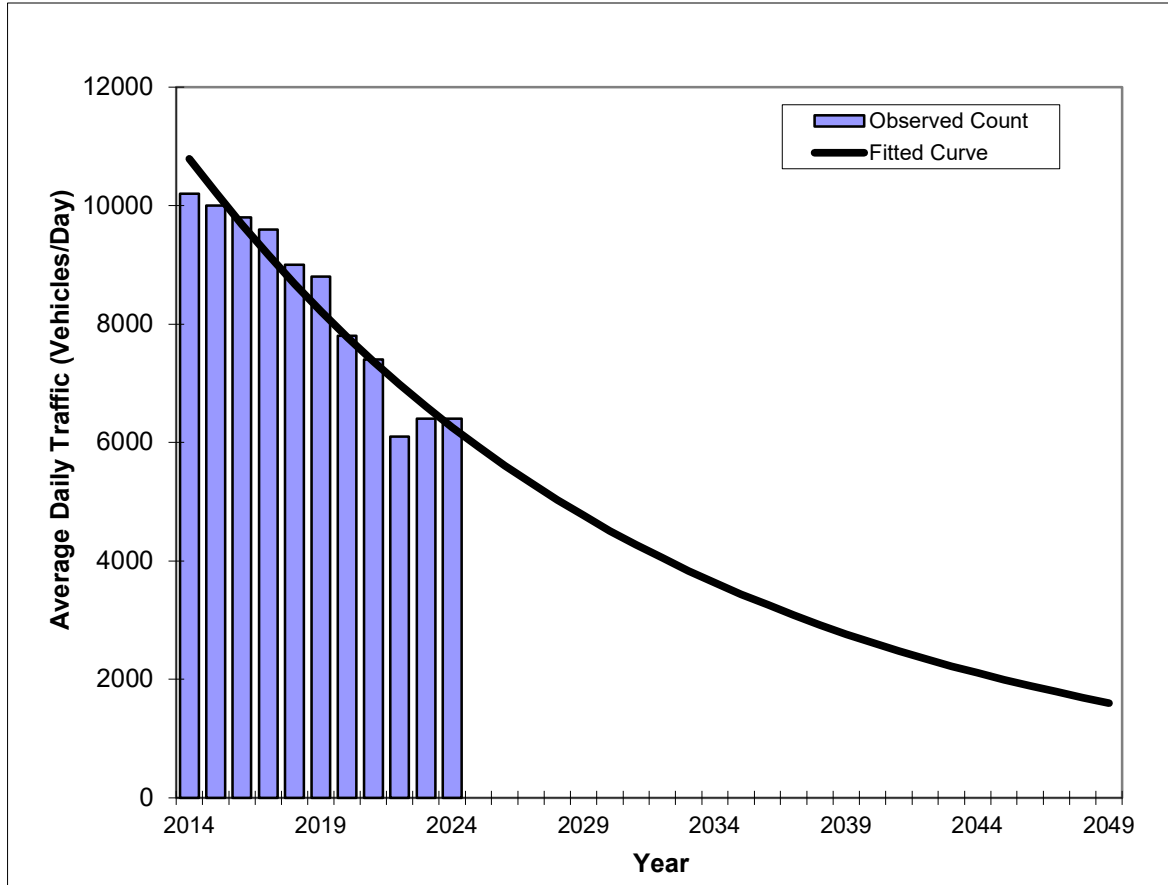
*Axle-Adjusted

Traffic Trends - V2023

-- MERIDIAN AVE, 200 FT S OF 14 ST (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878416
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	10,200	10,790
2015	10,000	10,220
2016	9,800	9,680
2017	9,600	9,170
2018	9,000	8,680
2019	8,800	8,220
2020	7,800	7,780
2021	7,400	7,370
2022	6,100	6,980
2023	6,400	6,610
2024	6,400	6,260
2028 Opening Year Trend		
2028	N/A	5,030
2039 Interim Year Trend		
2039	N/A	2,760
2049 Design Year Trend		
2049	N/A	1,600
FSUTMS Forecasts/Trends		

Trend R-squared:	95.56%
Compounded Annual Historic Growth Rate:	-5.30%
Compounded Growth Rate (2024 to Design Year)	-5.31%
Printed:	5/12/2025
Exponential Growth Option	

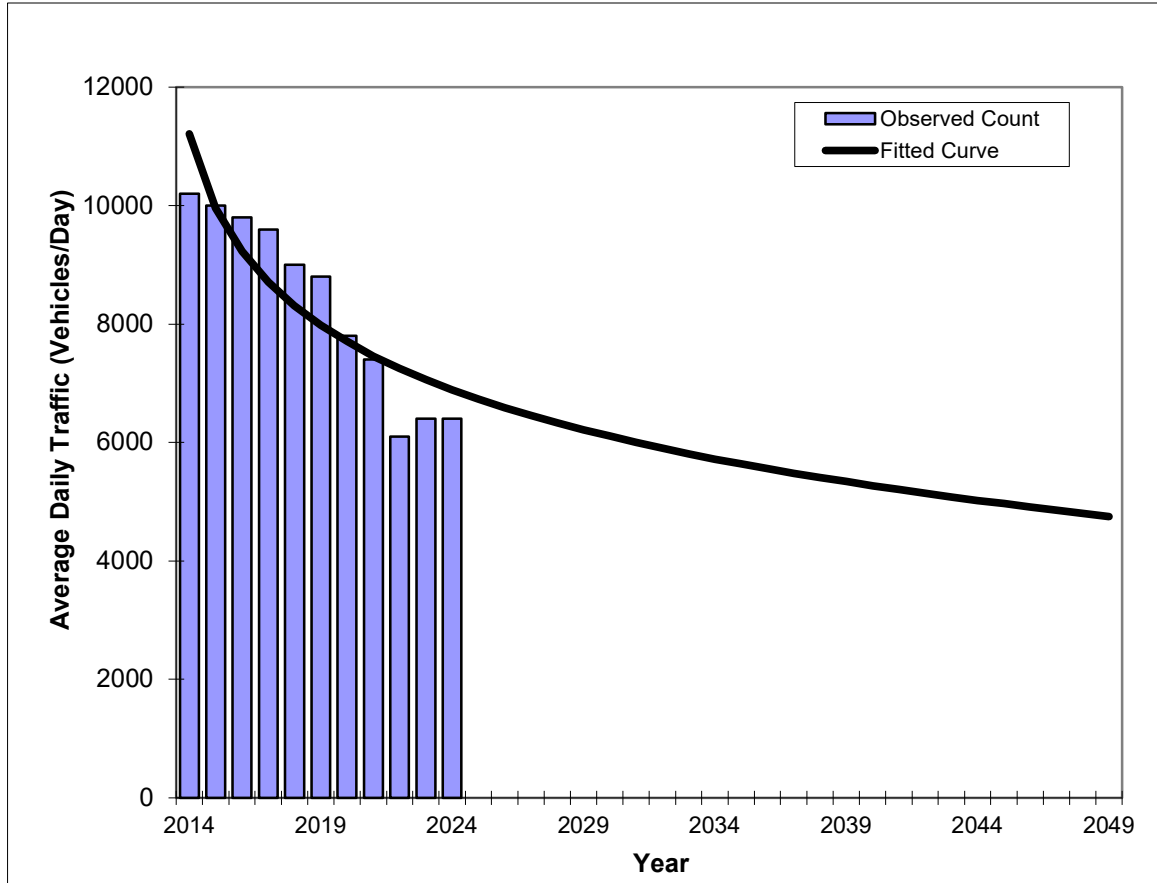
*Axle-Adjusted

Traffic Trends - V2023

-- MERIDIAN AVE, 200 FT S OF 14 ST (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878416
Roadway:	



Year	Traffic (ADT/AADT)	
	Count*	Trend
2014	10,200	11,210
2015	10,000	9,960
2016	9,800	9,230
2017	9,600	8,710
2018	9,000	8,310
2019	8,800	7,980
2020	7,800	7,710
2021	7,400	7,460
2022	6,100	7,250
2023	6,400	7,060
2024	6,400	6,890
2028 Opening Year Trend		
2028	N/A	6,330
2039 Interim Year Trend		
2039	N/A	5,340
2049 Design Year Trend		
2049	N/A	4,750
FSUTMS Forecasts/Trends		

Trend R-squared:	81.15%
Compounded Annual Historic Growth Rate:	-4.75%
Compounded Growth Rate (2024 to Design Year):	-1.48%
Printed:	5/12/2025
Decaying Exponential Growth Option	

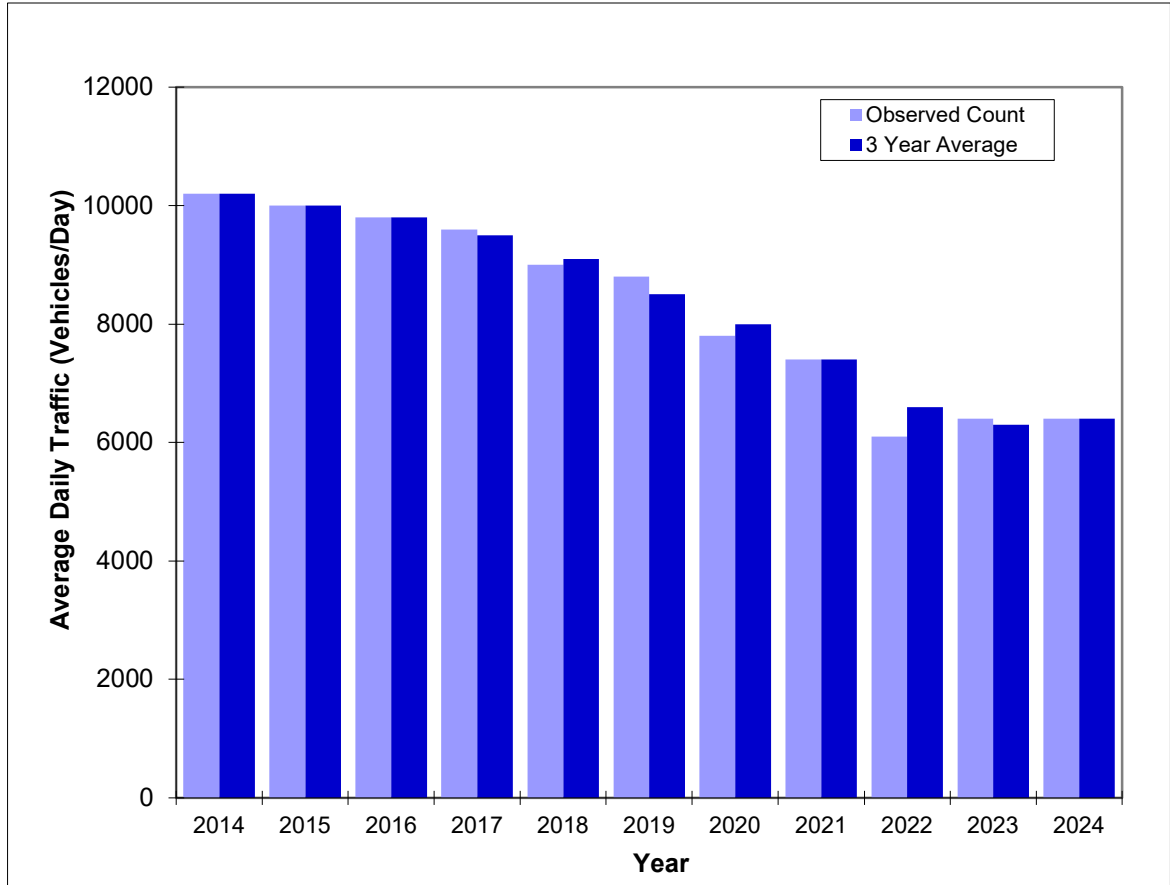
*Axle-Adjusted

Traffic Trends - V2023

-- MERIDIAN AVE, 200 FT S OF 14 ST (2011 OFF SYSTEM CYCLE)

FM #	1234
Location	1

County:	Miami-Dade (87)
Station #:	878416
Roadway:	

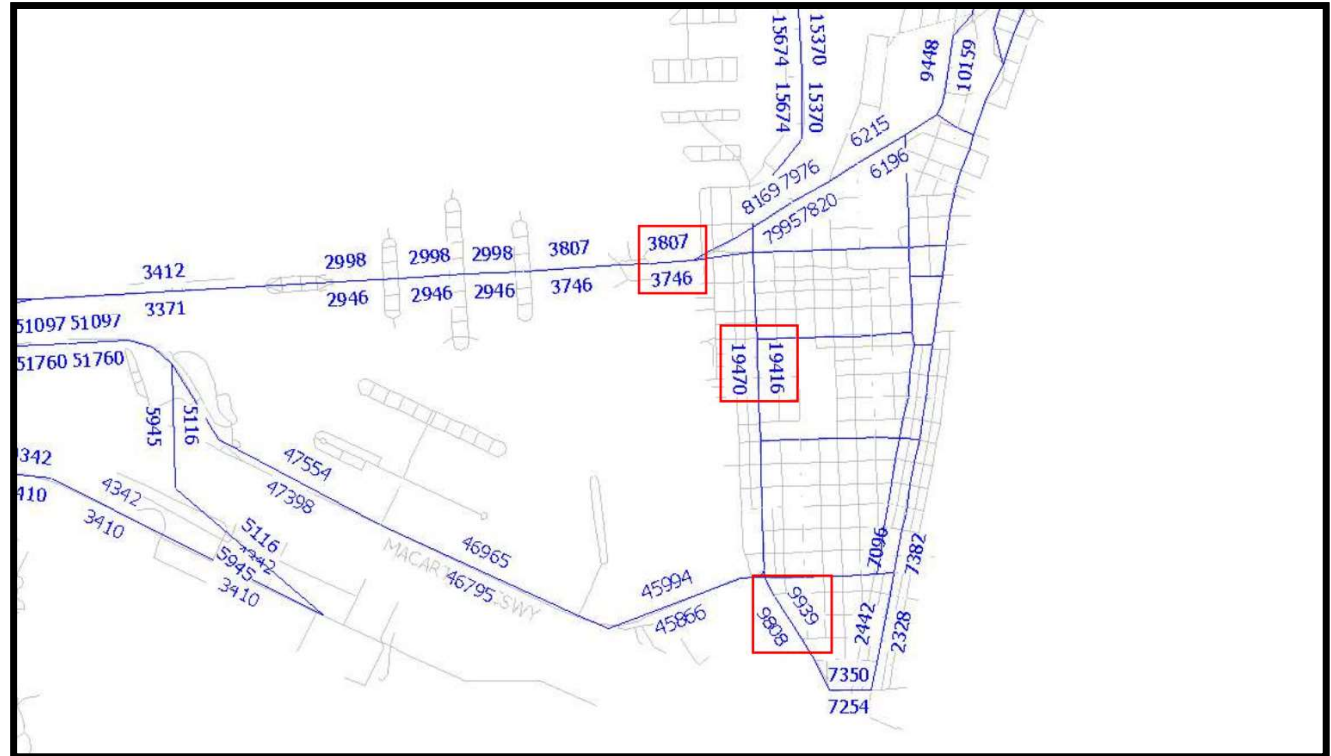


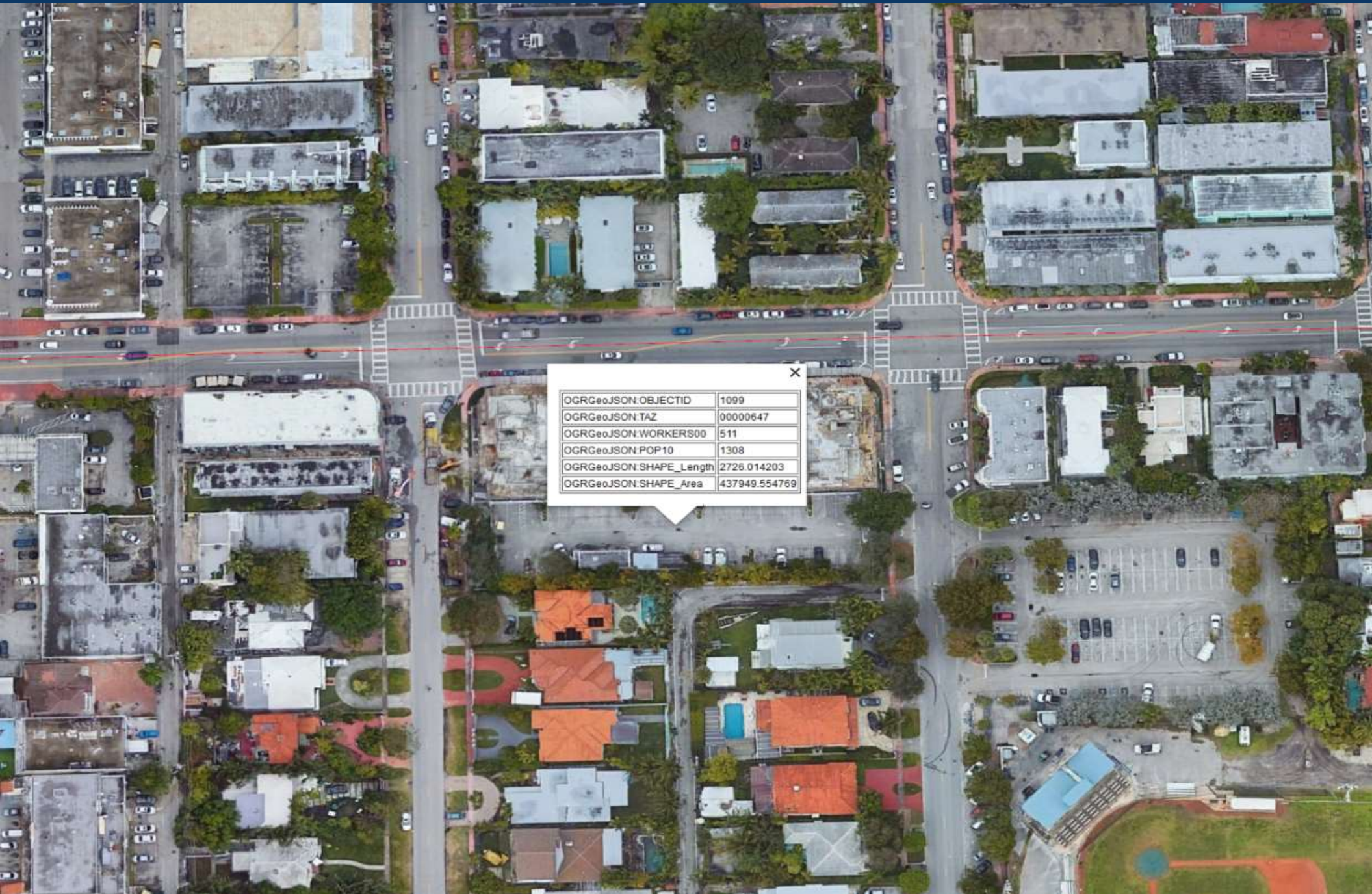
Year	Traffic (ADT/AADT)	
	Count*	3 Yr Avg
2014	10,200	10,200
2015	10,000	10,000
2016	9,800	9,800
2017	9,600	9,500
2018	9,000	9,100
2019	8,800	8,500
2020	7,800	8,000
2021	7,400	7,400
2022	6,100	6,600
2023	6,400	6,300
2024	6,400	6,400

Actual AADT vs 3 Year Average

*Axle-Adjusted

2015 SERPM Traffic Volume





Traffic Analysis Zones 2015

Miami-Dade 2015 Base Year Direction Trip Distribution Summary											
TAZ of Origin		Trips / Percent	Cardinal Directions								Total Trips
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
625	3525	Trips	610	160	-	557	431	1,317	679	1,035	4,961
625	3525	Percent	12.7	3.3	-	11.6	9.0	27.5	14.2	21.6	
626	3526	Trips	122	-	-	-	2,090	2,277	1,198	2,942	9,399
626	3526	Percent	1.4	-	-	-	24.2	26.4	13.9	34.1	
627	3527	Trips	279	-	-	-	2,051	2,578	845	1,965	8,061
627	3527	Percent	3.6	-	-	-	26.6	33.4	11.0	25.5	
628	3528	Trips	298	-	49	79	984	902	332	679	3,579
628	3528	Percent	9.0	-	1.5	2.4	29.6	27.2	10.0	20.5	
629	3529	Trips	1,374	549	344	1,656	1,708	3,707	1,668	2,101	14,261
629	3529	Percent	10.5	4.2	2.6	12.6	13.0	28.3	12.7	16.0	
630	3530	Trips	952	-	210	347	1,696	2,375	794	1,114	8,135
630	3530	Percent	12.7	-	2.8	4.6	22.7	31.7	10.6	14.9	
631	3531	Trips	255	-	-	-	1,215	1,471	440	1,030	4,651
631	3531	Percent	5.8	-	-	-	27.6	33.4	10.0	23.4	
632	3532	Trips	309	-	-	-	1,242	1,751	750	635	4,880
632	3532	Percent	6.6	-	-	-	26.5	37.4	16.0	13.5	
633	3533	Trips	310	-	-	-	1,181	1,428	750	730	4,590
633	3533	Percent	7.0	-	-	-	26.9	32.5	17.1	16.6	
634	3534	Trips	1,502	112	240	837	1,718	1,928	976	1,727	9,998
634	3534	Percent	16.6	1.2	2.7	9.3	19.0	21.3	10.8	19.1	
635	3535	Trips	779	-	-	-	2,021	1,994	952	1,411	8,010
635	3535	Percent	10.9	-	-	-	28.2	27.9	13.3	19.7	
636	3536	Trips	1,041	-	-	686	1,152	2,072	911	1,071	7,384
636	3536	Percent	15.0	-	-	9.9	16.6	29.9	13.1	15.4	
637	3537	Trips	323	31	87	217	126	601	303	290	1,987
637	3537	Percent	16.4	1.6	4.4	11.0	6.4	30.4	15.3	14.7	
638	3538	Trips	152	35	87	86	114	218	162	126	999
638	3538	Percent	15.5	3.6	8.9	8.7	11.6	22.3	16.5	12.9	
639	3539	Trips	825	281	277	1,089	131	1,364	796	599	5,721
639	3539	Percent	15.4	5.2	5.2	20.3	2.4	25.4	14.9	11.2	
640	3540	Trips	344	247	868	104	43	685	405	274	3,053
640	3540	Percent	11.6	8.3	29.2	3.5	1.5	23.1	13.6	9.2	
641	3541	Trips	1,051	1,714	291	723	309	1,572	1,188	916	8,356
641	3541	Percent	13.5	22.1	3.7	9.3	4.0	20.3	15.3	11.8	
642	3542	Trips	1,849	1,404	115	1,263	457	2,697	1,962	1,518	12,299
642	3542	Percent	16.4	12.5	1.0	11.2	4.1	23.9	17.4	13.5	
643	3543	Trips	1,747	551	-	965	479	2,595	1,554	1,715	10,383
643	3543	Percent	18.2	5.7	-	10.1	5.0	27.0	16.2	17.9	
644	3544	Trips	2,022	-	-	-	2,250	4,141	2,585	2,646	15,224
644	3544	Percent	14.8	-	-	-	16.5	30.4	19.0	19.4	
645	3545	Trips	1,268	-	-	-	907	1,498	1,720	1,351	7,018
645	3545	Percent	18.8	-	-	-	13.5	22.2	25.5	20.0	
646	3546	Trips	986	-	156	520	250	1,081	1,094	1,181	5,470
646	3546	Percent	18.7	-	3.0	9.9	4.7	20.5	20.8	22.4	
647	3547	Trips	350	103	114	165	66	354	359	408	1,979
647	3547	Percent	18.2	5.4	5.9	8.6	3.5	18.5	18.7	21.2	
648	3548	Trips	1,027	434	254	401	48	903	1,001	514	4,747
648	3548	Percent	22.4	9.5	5.5	8.8	1.0	19.7	21.9	11.2	
649	3549	Trips	754	192	184	230	41	612	743	427	3,320
649	3549	Percent	23.7	6.0	5.8	7.2	1.3	19.2	23.3	13.4	
650	3550	Trips	45	80	104	0	14	155	304	133	850
650	3550	Percent	5.4	9.6	12.4	0.0	1.6	18.5	36.5	16.0	

Miami-Dade 2045 Cost Feasible Plan Direction Trip Distribution Summary											
TAZ of Origin		Trips / Percent	Cardinal Directions								Total Trips
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
625	3525	Trips	515	114	-	541	802	1,791	829	1,096	5,972
625	3525	Percent	9.1	2.0	-	9.5	14.1	31.5	14.6	19.3	
626	3526	Trips	66	-	-	-	2,417	3,260	1,417	2,993	11,237
626	3526	Percent	0.7	-	-	-	23.8	32.1	14.0	29.5	
627	3527	Trips	174	-	-	-	2,276	3,212	1,138	1,885	9,055
627	3527	Percent	2.0	-	-	-	26.2	37.0	13.1	21.7	
628	3528	Trips	238	-	23	101	1,053	1,266	390	660	4,028
628	3528	Percent	6.4	-	0.6	2.7	28.2	33.9	10.5	17.7	
629	3529	Trips	1,686	621	373	1,692	1,801	6,032	2,362	2,490	18,425
629	3529	Percent	9.9	3.6	2.2	9.9	10.6	35.4	13.9	14.6	
630	3530	Trips	888	-	326	303	1,717	3,876	1,515	1,553	11,277
630	3530	Percent	8.7	-	3.2	3.0	16.9	38.1	14.9	15.3	
631	3531	Trips	296	-	-	-	1,351	2,360	838	1,324	6,591
631	3531	Percent	4.8	-	-	-	21.9	38.3	13.6	21.5	
632	3532	Trips	343	-	-	-	1,500	2,647	1,390	1,098	7,499
632	3532	Percent	4.9	-	-	-	21.5	37.9	19.9	15.7	
633	3533	Trips	368	-	-	-	1,052	1,986	859	841	5,391
633	3533	Percent	7.2	-	-	-	20.6	38.9	16.8	16.5	
634	3534	Trips	1,404	80	149	773	1,637	2,733	1,332	1,712	10,593
634	3534	Percent	14.3	0.8	1.5	7.9	16.7	27.8	13.6	17.4	
635	3535	Trips	566	-	-	-	1,311	2,266	1,228	1,254	7,246
635	3535	Percent	8.5	-	-	-	19.8	34.2	18.5	18.9	
636	3536	Trips	1,066	-	-	607	978	3,045	1,398	1,193	8,805
636	3536	Percent	12.9	-	-	7.3	11.8	36.8	16.9	14.4	
637	3537	Trips	468	44	144	315	198	868	501	309	2,865
637	3537	Percent	16.5	1.6	5.1	11.1	6.9	30.5	17.6	10.9	
638	3538	Trips	127	33	78	94	79	401	285	185	1,342
638	3538	Percent	9.9	2.6	6.1	7.3	6.2	31.3	22.2	14.5	
639	3539	Trips	944	303	253	1,068	176	2,395	1,085	905	7,569
639	3539	Percent	13.2	4.3	3.6	15.0	2.5	33.6	15.2	12.7	
640	3540	Trips	119	74	216	10	30	177	136	147	1,166
640	3540	Percent	13.1	8.2	23.7	1.1	3.4	19.4	14.9	16.2	
641	3541	Trips	1,145	1,056	206	569	242	2,378	1,724	1,142	9,066
641	3541	Percent	13.5	12.5	2.4	6.7	2.9	28.1	20.4	13.5	
642	3542	Trips	1,701	1,196	113	964	433	3,470	2,140	1,631	12,324
642	3542	Percent	14.6	10.3	1.0	8.3	3.7	29.8	18.4	14.0	
643	3543	Trips	1,884	580	-	1,133	631	3,768	2,190	2,157	13,183
643	3543	Percent	15.3	4.7	-	9.2	5.1	30.5	17.7	17.5	
644	3544	Trips	1,948	-	-	-	2,227	5,534	3,264	3,082	17,780
644	3544	Percent	12.1	-	-	-	13.9	34.5	20.3	19.2	
645	3545	Trips	1,314	-	-	-	844	1,661	2,170	1,703	8,075
645	3545	Percent	17.1	-	-	-	11.0	21.6	28.2	22.1	
646	3546	Trips	1,025	-	125	496	263	1,741	1,656	1,299	6,976
646	3546	Percent	15.5	-	1.9	7.5	4.0	26.4	25.1	19.7	
647	3547	Trips	296	122	96	109	79	582	661	405	2,490
647	3547	Percent	12.6	5.2	4.1	4.6	3.4	24.8	28.1	17.3	
648	3548	Trips	943	278	128	313	73	1,525	1,351	576	5,397
648	3548	Percent	18.2	5.4	2.5	6.0	1.4	29.4	26.0	11.1	
649	3549	Trips	643	120	121	216	43	873	952	508	3,661
649	3549	Percent	18.5	3.4	3.5	6.2	1.3	25.1	27.4	14.6	
650	3550	Trips	60	71	65	8	14	279	312	136	969
650	3550	Percent	6.4	7.5	6.9	0.9	1.5	29.5	33.0	14.4	

APPENDIX E
INTERSECTION VOLUME SPREADSHEETS

APPENDIX F
INTERSECTION CAPACITY REPORTS

AM (PM) Volumes

Intersection	Road	Direction	Movement	2024 Existing Peak Hour Traffic Volumes	2028 No Build Peak Hour Traffic Volumes	Project Traffic Distributions	Project Traffic Trips	2028 Build Peak Hour Traffic Volumes
(1) 15 Street & Lenox Avenue	15 Street	Eastbound	EBL	33 (34)	34 (35)			34 (35)
			EBT	153 (213)	156 (217)	32%	2 (6)	158 (223)
			EBR	13 (31)	13 (32)			13 (32)
		Approach	199 (278)	203 (284)	32%	2 (6)	205 (290)	
		Westbound	WBL	12 (22)	12 (22)			12 (22)
			WBT	208 (218)	212 (222)	(32%)	7 (4)	219 (226)
	WBR		11 (21)	11 (21)	(10%)	3 (1)	14 (22)	
	Approach	231 (261)	235 (265)	(42%)	10 (5)	245 (270)		
	Lenox Avenue	Northbound	NBL	7 (9)	7 (9)			7 (9)
			NBT	19 (40)	19 (41)			19 (41)
			NBR	13 (20)	13 (20)			13 (20)
		Approach	39 (69)	39 (70)			39 (70)	
		Southbound	SBL	17 (27)	17 (28)	10%	1 (2)	18 (30)
			SBT	24 (35)	24 (36)			24 (36)
SBR	22 (70)		22 (71)			22 (71)		
Approach	63 (132)	63 (135)	10%	1 (2)	64 (137)			
(2) 15 Street & Michigan Avenue	15 Street	Eastbound	EBL	12 (24)	12 (24)			12 (24)
			EBT	153 (223)	156 (227)			156 (227)
			EBR	16 (18)	16 (18)	42%	3 (8)	19 (26)
		Approach	181 (265)	184 (269)	42%	3 (8)	187 (277)	
		Westbound	WBL	12 (26)	12 (27)	15%	1 (3)	13 (30)
			WBT	199 (220)	203 (224)			203 (224)
	WBR		5 (14)	5 (14)			5 (14)	
	Approach	216 (260)	220 (265)	15%	1 (3)	221 (268)		
	Michigan Avenue	Northbound	NBL	11 (14)	11 (14)	(42%)	10 (5)	21 (19)
			NBT	32 (79)	33 (81)	(6%)	1 (1)	34 (82)
			NBR	35 (78)	36 (80)	(15%)	3 (1)	39 (81)
		Approach	78 (171)	80 (175)	(63%)	14 (7)	94 (182)	
		Southbound	SBL	6 (16)	6 (16)			6 (16)
			SBT	11 (36)	11 (37)	6%	0 (1)	11 (38)
SBR	17 (21)		17 (21)			17 (21)		
Approach	34 (73)	34 (74)	6%	0 (1)	34 (75)			
(3) 14 Street & Lenox Avenue	14 Street	Eastbound	EBL	16 (31)	16 (32)			16 (32)
			EBT	14 (51)	14 (52)	32%	2 (6)	16 (58)
			EBR	1 (20)	1 (20)			1 (20)
		Approach	31 (102)	31 (104)	32%	2 (6)	33 (110)	
		Westbound	WBL	2 (4)	2 (4)			2 (4)
			WBT	3 (9)	3 (9)			3 (9)
	WBR		0 (1)	0 (1)			0 (1)	
	Approach	5 (14)	5 (14)			5 (14)		
	Lenox Avenue	Northbound	NBL	0 (6)	0 (6)			0 (6)
			NBT	19 (39)	19 (40)			19 (40)
			NBR	1 (4)	1 (4)			1 (4)
		Approach	20 (49)	20 (50)			20 (50)	
		Southbound	SBL	2 (4)	2 (4)			2 (4)
			SBT	28 (49)	29 (50)			29 (50)
SBR	5 (21)		5 (21)			5 (21)		
Approach	35 (74)	36 (75)			36 (75)			
(4) 14 Street & Michigan Avenue	14 Street	Eastbound	EBL	20 (54)	20 (55)	32%	2 (6)	22 (61)
			EBT	0 (0)	0 (0)			0 (0)
			EBR	0 (7)	0 (7)			0 (7)
		Approach	20 (61)	20 (62)	32%	2 (6)	22 (68)	
		Westbound	WBL	0 (0)	0 (0)			0 (0)
			WBT	0 (0)	0 (0)			0 (0)
	WBR		0 (0)	0 (0)			0 (0)	
	Approach	0 (0)	0 (0)			0 (0)		
	Michigan Avenue	Northbound	NBL	0 (5)	0 (5)			0 (5)
			NBT	48 (113)	49 (115)	5%	1 (1)	50 (116)
			NBR	0 (0)	0 (0)			0 (0)
		Approach	48 (118)	49 (120)	5%	1 (1)	50 (121)	
		Southbound	SBL	0 (0)	0 (0)			0 (0)
			SBT	27 (64)	28 (65)	(37%)	9 (4)	37 (69)
SBR	9 (16)		9 (16)			9 (16)		
Approach	36 (80)	37 (81)	(37%)	9 (4)	46 (85)			

EXISTING CONDITIONS

Table 1.1 -2024 Existing Intersection Capacity Analysis Summary

Location	Time	Level of Service ^[1]							
		(1) 15 Street & Lenox Avenue		(2) 15 Street & Michigan Avenue		(3) 14 Street & Lenox Avenue		(4) 14 Street & Michigan Avenue	
		Unsignalized		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EB Approach	AM	A	9.3	A	9.4	A	7.3	A	9.3
	PM	B	10.8	B	11.6	A	7.8	A	10.0
WBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WB Approach	AM	B	10.1	A	9.9	A	8.3		
	PM	B	10.9	B	11.4	A	7.6		
NBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
NBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
NBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
NB Approach	AM	A	8.5	A	8.4	A	7.2		
	PM	A	9.0	B	10.1	A	7.6		
SBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SB Approach	AM	A	8.5	A	8.2	A	7.2		
	PM	A	9.4	A	9.3	A	7.5		
Overall	AM	A	9.5	A	9.4	A	7.3	A	9.3
	PM	B	10.4	B	11.0	A	7.7	A	10.0

[1] Delay is average delay per vehicle in seconds
 [2] Approach operates under Free-flow conditions



Table 1.2 -2024 Existing Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lengths (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile
(1) 15 Street & Lenox Avenue	AM	105	5	[N/A]	[N/A]	115	3	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM	105	5			115	3										
(2) 15 Street & Michigan Avenue	AM	110	3	[N/A]	[N/A]	105	3	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM	110	3			105	3										
(3) 14 Street & Lenox Avenue	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM	[N/A]	[N/A]			[N/A]	[N/A]										
(4) 14 Street & Michigan Avenue	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM	[N/A]	[N/A]			[N/A]	[N/A]										

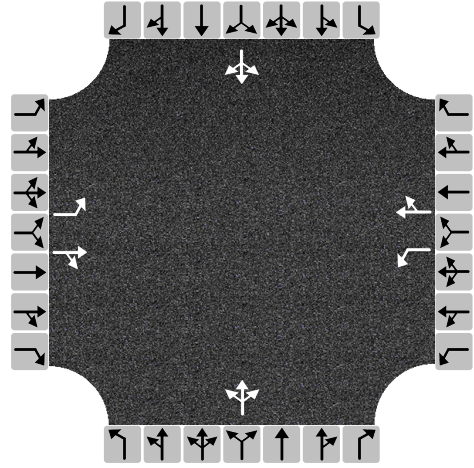
95th percentile volume exceeds capacity, queue may be longer.
 m Volume for 95th percentile queue is metered by upstream signal.

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	33	153	13	12	208	11	7	19	13	17	24	22
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	180		13	238		42			68		
Percent Heavy Vehicles	3	3		9	3		14			5		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.032	0.160		0.012	0.212		0.038			0.061		
Final Departure Headway, h _d (s)	5.57	5.02		5.65	5.01		5.18			5.00		
Final Degree of Utilization, x	0.056	0.251		0.020	0.331		0.061			0.095		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.27	2.72		3.35	2.71		3.18			3.00		

Capacity, Delay and Level of Service

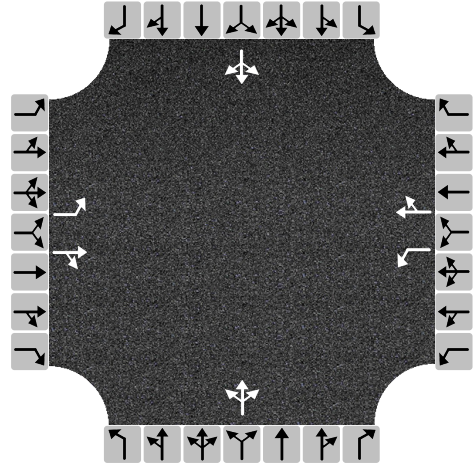
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	180		13	238		42			68		
Capacity (veh/h)	646	718		637	718		694			720		
95% Queue Length, Q ₉₅ (veh)	0.2	1.0		0.1	1.5		0.2			0.3		
95% Queue Length, Q ₉₅ (ft)	5.1	25.6		2.7	38.4		5.6			7.8		
Control Delay (s/veh)	8.6	9.4		8.5	10.2		8.5			8.5		
Level of Service, LOS	A	A		A	B		A			A		
Approach Delay (s/veh) LOS	9.3	A		10.1	B		8.5	A		8.5	A	
Intersection Delay (s/veh) LOS	9.5						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	12	153	16	12	199	5	11	32	35	6	11	17
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	184		13	222		85			37		
Percent Heavy Vehicles	3	3		18	3		3			10		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.012	0.163		0.012	0.197		0.075			0.033		
Final Departure Headway, h _d (s)	5.58	5.01		5.80	5.02		4.80			4.96		
Final Degree of Utilization, x	0.020	0.256		0.021	0.309		0.113			0.051		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.28	2.71		3.50	2.72		2.80			2.96		

Capacity, Delay and Level of Service

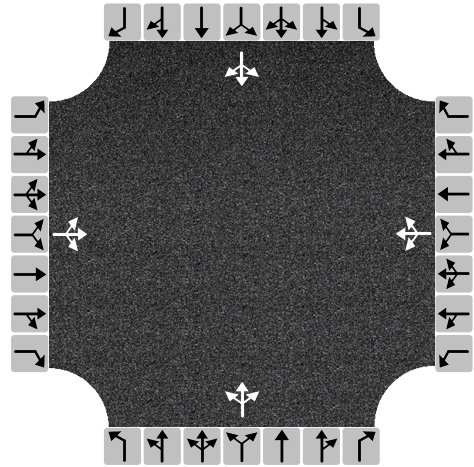
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	184		13	222		85			37		
Capacity (veh/h)	646	719		621	717		751			726		
95% Queue Length, Q ₉₅ (veh)	0.1	1.0		0.1	1.3		0.4			0.2		
95% Queue Length, Q ₉₅ (ft)	2.6	25.6		2.9	33.3		10.2			5.4		
Control Delay (s/veh)	8.4	9.4		8.6	10.0		8.4			8.2		
Level of Service, LOS	A	A		A	A		A			A		
Approach Delay (s/veh) LOS	9.4	A		9.9	A		8.4	A		8.2	A	
Intersection Delay (s/veh) LOS	9.4						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	16	14	1	2	3	0	0	19	1	2	28	5
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	34			5			22			38		
Percent Heavy Vehicles	3			67			6			3		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.030			0.005			0.019			0.034		
Final Departure Headway, h_d (s)	4.17			5.28			4.10			3.99		
Final Degree of Utilization, x	0.039			0.008			0.025			0.042		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.17			3.28			2.10			1.99		

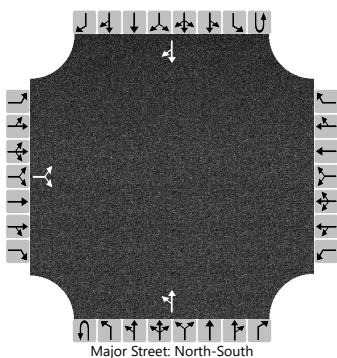
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	34			5			22			38		
Capacity (veh/h)	863			682			879			903		
95% Queue Length, Q_{95} (veh)	0.1			0.0			0.1			0.1		
95% Queue Length, Q_{95} (ft)	2.6			0.0			2.6			2.6		
Control Delay (s/veh)	7.3			8.3			7.2			7.2		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.3		A	8.3		A	7.2		A	7.2		A
Intersection Delay (s/veh) LOS	7.3						A					

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MF	Intersection	14 Street & Michigan Ave
Agency/Co.	LANGAN	Jurisdiction	Miami Beach
Date Performed	5/14/2025	East/West Street	14 Street
Analysis Year	2024	North/South Street	Michigan Avenue
Time Analyzed	AM Peak Hour - Existing	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	1440 Michigan Avenue		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		20		0						0	48					27	9
Percent Heavy Vehicles (%)		3		3						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage					Left Only												1

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1							
Critical Headway (sec)		6.43		6.23						4.13							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.53		3.33						2.23							

Delay, Queue Length, and Level of Service

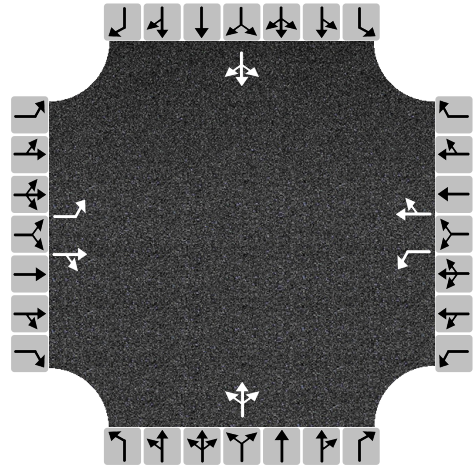
Flow Rate, v (veh/h)			22							0							
Capacity, c (veh/h)			862							1564							
v/c Ratio			0.03							0.00							
95% Queue Length, Q ₉₅ (veh)			0.1							0.0							
95% Queue Length, Q ₉₅ (ft)			2.6							0.0							
Control Delay (s/veh)			9.3							7.3	0.0						
Level of Service (LOS)			A							A	A						
Approach Delay (s/veh)		9.3								0.0							
Approach LOS		A								A							

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.98

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	34	213	31	22	218	21	9	40	20	27	35	70
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	35	249		22	244		70			135		
Percent Heavy Vehicles	3	3		5	3		3			4		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.031	0.221		0.020	0.217		0.063			0.120		
Final Departure Headway, h _d (s)	5.91	5.32		5.96	5.36		5.38			5.16		
Final Degree of Utilization, x	0.057	0.368		0.037	0.363		0.105			0.193		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.61	3.02		3.66	3.06		3.38			3.16		

Capacity, Delay and Level of Service

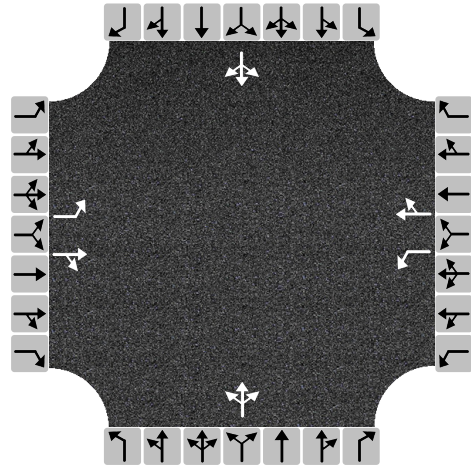
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	35	249		22	244		70			135		
Capacity (veh/h)	609	677		604	671		669			698		
95% Queue Length, Q ₉₅ (veh)	0.2	1.7		0.1	1.7		0.4			0.7		
95% Queue Length, Q ₉₅ (ft)	5.1	43.5		2.6	43.5		10.2			18.1		
Control Delay (s/veh)	9.0	11.1		8.9	11.1		9.0			9.4		
Level of Service, LOS	A	B		A	B		A			A		
Approach Delay (s/veh) LOS	10.8	B		10.9	B		9.0	A		9.4	A	
Intersection Delay (s/veh) LOS	10.4						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	24	223	18	26	220	14	14	79	78	16	36	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	254		27	246		180			77		
Percent Heavy Vehicles	3	3		4	3		3			3		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.022	0.225		0.024	0.219		0.160			0.068		
Final Departure Headway, h _d (s)	6.13	5.57		6.15	5.59		5.26			5.59		
Final Degree of Utilization, x	0.043	0.393		0.047	0.382		0.263			0.119		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.83	3.27		3.85	3.29		3.26			3.59		

Capacity, Delay and Level of Service

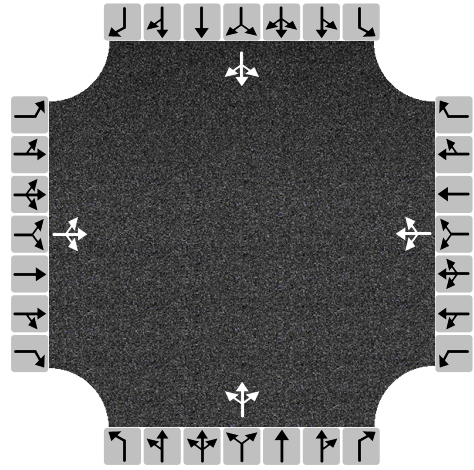
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	254		27	246		180			77		
Capacity (veh/h)	587	646		585	644		684			645		
95% Queue Length, Q ₉₅ (veh)	0.1	1.9		0.1	1.8		1.1			0.4		
95% Queue Length, Q ₉₅ (ft)	2.6	48.6		2.6	46.1		28.2			10.2		
Control Delay (s/veh)	9.1	11.8		9.2	11.7		10.1			9.3		
Level of Service, LOS	A	B		A	B		B			A		
Approach Delay (s/veh) LOS	11.6	B		11.4	B		10.1	B		9.3	A	
Intersection Delay (s/veh) LOS	11.0						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Existing
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	31	51	20	4	9	1	6	39	4	4	49	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	111			15			53			80		
Percent Heavy Vehicles	3			14			3			3		
Initial Departure Headway, h _d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.099			0.014			0.047			0.071		
Final Departure Headway, h _d (s)	4.20			4.56			4.29			4.13		
Final Degree of Utilization, x	0.129			0.019			0.063			0.092		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t _s (s)	2.20			2.56			2.29			2.13		

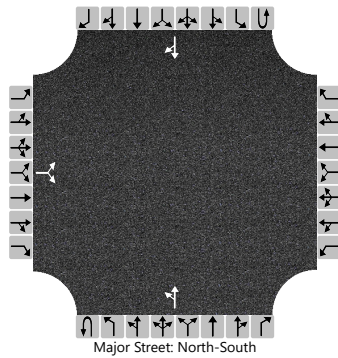
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	111			15			53			80		
Capacity (veh/h)	857			790			839			872		
95% Queue Length, Q ₉₅ (veh)	0.4			0.1			0.2			0.3		
95% Queue Length, Q ₉₅ (ft)	10.2			2.8			5.1			7.7		
Control Delay (s/veh)	7.8			7.6			7.6			7.5		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.8		A	7.6		A	7.6		A	7.5		A
Intersection Delay (s/veh) LOS	7.7						A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MF	Intersection	14 Street & Michigan Ave				
Agency/Co.	LANGAN	Jurisdiction	Miami Beach				
Date Performed	5/14/2025	East/West Street	14 Street				
Analysis Year	2024	North/South Street	Michigan Avenue				
Time Analyzed	PM Peak Hour - Existing	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	1440 Michigan Avenue						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		54		7						5	113				64	16
Percent Heavy Vehicles (%)		3		14						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage				Left Only									1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.34						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.43						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			66							5						
Capacity, c (veh/h)			784							1503						
v/c Ratio			0.08							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
95% Queue Length, Q ₉₅ (ft)			7.8							0.0						
Control Delay (s/veh)			10.0							7.4	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.0								0.3						
Approach LOS		B								A						

FUTURE NO BUILD CONDITIONS

Table 2.1 - 2028 No Build Intersection Capacity Analysis Summary

Location	Time	Level of Service ^[1]							
		(1) 15 Street & Lenox Avenue		(2) 15 Street & Michigan Avenue		(3) 14 Street & Lenox Avenue		(4) 14 Street & Michigan Avenue	
		Unsignalized		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
EB Approach	AM	A	9.3	A	9.4	A	7.3	A	9.3
	PM	B	11.0	B	11.7	A	7.9	A	10.0
WBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
WB Approach	AM	B	10.2	A	10.0	A	8.3		
	PM	B	11.0	B	11.6	A	7.7		
NBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM								
NBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
NBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
NB Approach	AM	A	8.5	A	8.4	A	7.2		
	PM	A	9.1	B	10.2	A	7.6		
SBL	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SBT	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SBR	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[2]
	PM								
SB Approach	AM	A	8.5	A	8.3	A	7.2		
	PM	A	9.5	A	9.4	A	7.6		
Overall	AM	A	9.5	A	9.4	A	7.3	A	9.3
	PM	B	10.5	B	11.1	A	7.7	A	10.0

[1] Delay is average delay per vehicle in seconds
 [2] Approach operates under Free-flow conditions



Table 2.2 - 2028 No Build Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lengths (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile
(1) 15 Street & Lenox Avenue	AM	105	5	[N/A]	[N/A]	115	3	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM		5				3										
(2) 15 Street & Michigan Avenue	AM	110	3	[N/A]	[N/A]	105	3	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM		3				3										
(3) 14 Street & Lenox Avenue	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM																
(4) 14 Street & Michigan Avenue	AM	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
	PM																

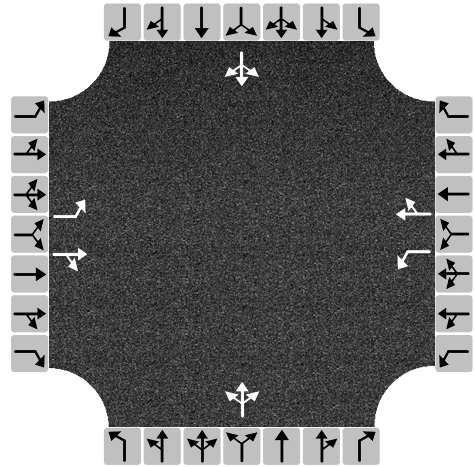
95th percentile volume exceeds capacity, queue may be longer.
 m Volume for 95th percentile queue is metered by upstream signal.

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	34	156	13	12	212	11	7	19	13	17	24	22
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	37	184		13	242		42			68		
Percent Heavy Vehicles	3	3		9	3		14			5		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.033	0.163		0.012	0.215		0.038			0.061		
Final Departure Headway, h _d (s)	5.58	5.02		5.66	5.02		5.20			5.02		
Final Degree of Utilization, x	0.057	0.256		0.020	0.338		0.061			0.095		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.28	2.72		3.36	2.72		3.20			3.02		

Capacity, Delay and Level of Service

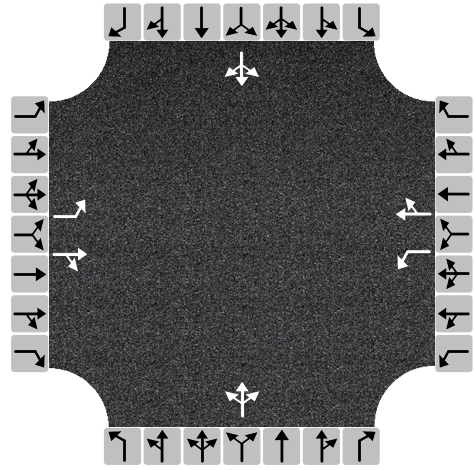
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	37	184		13	242		42			68		
Capacity (veh/h)	645	717		636	717		692			717		
95% Queue Length, Q ₉₅ (veh)	0.2	1.0		0.1	1.5		0.2			0.3		
95% Queue Length, Q ₉₅ (ft)	5.1	25.6		2.7	38.4		5.6			7.8		
Control Delay (s/veh)	8.6	9.4		8.5	10.3		8.5			8.5		
Level of Service, LOS	A	A		A	B		A			A		
Approach Delay (s/veh) LOS	9.3	A		10.2	B		8.5	A		8.5	A	
Intersection Delay (s/veh) LOS	9.5						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	12	156	16	12	203	5	11	33	36	6	11	17
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	187		13	226		87			37		
Percent Heavy Vehicles	3	3		18	3		3			10		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.012	0.166		0.012	0.201		0.077			0.033		
Final Departure Headway, h _d (s)	5.59	5.02		5.81	5.03		4.81			4.99		
Final Degree of Utilization, x	0.020	0.261		0.021	0.316		0.116			0.051		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.29	2.72		3.51	2.73		2.81			2.99		

Capacity, Delay and Level of Service

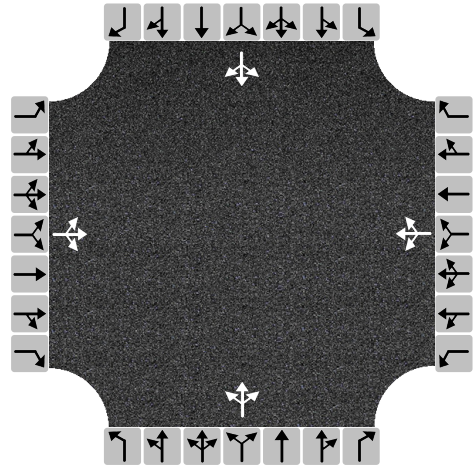
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	187		13	226		87			37		
Capacity (veh/h)	644	717		620	715		748			722		
95% Queue Length, Q ₉₅ (veh)	0.1	1.0		0.1	1.4		0.4			0.2		
95% Queue Length, Q ₉₅ (ft)	2.6	25.6		2.9	35.8		10.2			5.4		
Control Delay (s/veh)	8.4	9.5		8.6	10.0		8.4			8.3		
Level of Service, LOS	A	A		A	B		A			A		
Approach Delay (s/veh) LOS	9.4	A		10.0	A		8.4	A		8.3	A	
Intersection Delay (s/veh) LOS	9.4						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	16	14	1	2	3	0	0	19	1	2	29	5
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	34			5			22			39		
Percent Heavy Vehicles	3			67			6			3		
Initial Departure Headway, h _d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.030			0.005			0.019			0.035		
Final Departure Headway, h _d (s)	4.17			5.28			4.10			3.99		
Final Degree of Utilization, x	0.039			0.008			0.025			0.043		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t _s (s)	2.17			3.28			2.10			1.99		

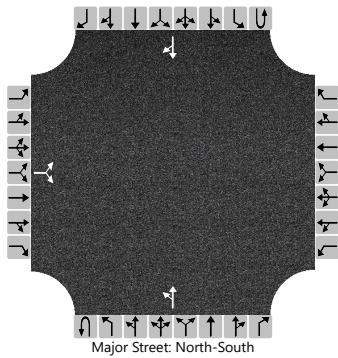
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	34			5			22			39		
Capacity (veh/h)	863			681			878			902		
95% Queue Length, Q ₉₅ (veh)	0.1			0.0			0.1			0.1		
95% Queue Length, Q ₉₅ (ft)	2.6			0.0			2.6			2.6		
Control Delay (s/veh)	7.3			8.3			7.2			7.2		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.3		A	8.3		A	7.2		A	7.2		A
Intersection Delay (s/veh) LOS	7.3						A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MF	Intersection	14 Street & Michigan Ave				
Agency/Co.	LANGAN	Jurisdiction	Miami Beach				
Date Performed	5/14/2025	East/West Street	14 Street				
Analysis Year	2028	North/South Street	Michigan Avenue				
Time Analyzed	AM Peak Hour - No Build	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	1440 Michigan Avenue						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		20		0						0	49					28
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

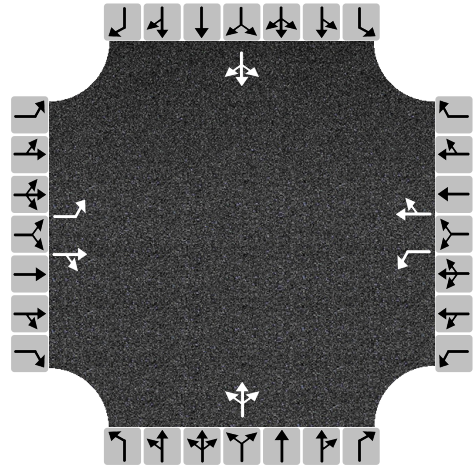
Flow Rate, v (veh/h)			22							0							
Capacity, c (veh/h)			860							1563							
v/c Ratio			0.03							0.00							
95% Queue Length, Q ₉₅ (veh)			0.1							0.0							
95% Queue Length, Q ₉₅ (ft)			2.6							0.0							
Control Delay (s/veh)			9.3							7.3	0.0						
Level of Service (LOS)			A							A	A						
Approach Delay (s/veh)		9.3								0.0							
Approach LOS		A								A							

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.98

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	35	217	32	22	222	21	9	41	20	28	36	71
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	254		22	248		71			138		
Percent Heavy Vehicles	3	3		5	3		3			4		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.032	0.226		0.020	0.220		0.063			0.122		
Final Departure Headway, h _d (s)	5.93	5.34		5.99	5.39		5.42			5.19		
Final Degree of Utilization, x	0.059	0.377		0.037	0.371		0.108			0.199		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.63	3.04		3.69	3.09		3.42			3.19		

Capacity, Delay and Level of Service

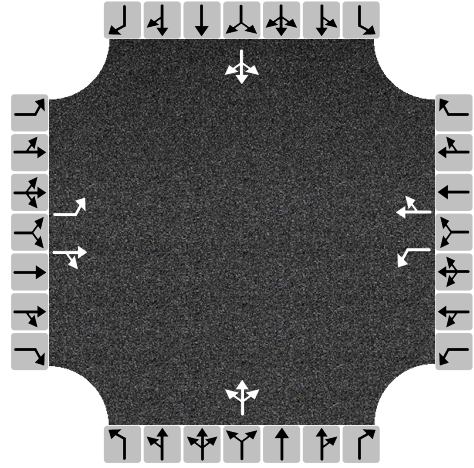
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	254		22	248		71			138		
Capacity (veh/h)	607	674		601	668		664			693		
95% Queue Length, Q ₉₅ (veh)	0.2	1.8		0.1	1.7		0.4			0.7		
95% Queue Length, Q ₉₅ (ft)	5.1	46.1		2.6	43.5		10.2			18.1		
Control Delay (s/veh)	9.0	11.2		8.9	11.2		9.1			9.5		
Level of Service, LOS	A	B		A	B		A			A		
Approach Delay (s/veh) LOS	11.0	B		11.0	B		9.1	A		9.5	A	
Intersection Delay (s/veh) LOS	10.5						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	24	227	18	27	224	14	14	81	80	16	37	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	258		28	251		184			78		
Percent Heavy Vehicles	3	3		4	3		3			3		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.022	0.229		0.025	0.223		0.164			0.069		
Final Departure Headway, h _d (s)	6.16	5.60		6.18	5.62		5.29			5.63		
Final Degree of Utilization, x	0.043	0.401		0.049	0.391		0.271			0.122		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.86	3.30		3.88	3.32		3.29			3.63		

Capacity, Delay and Level of Service

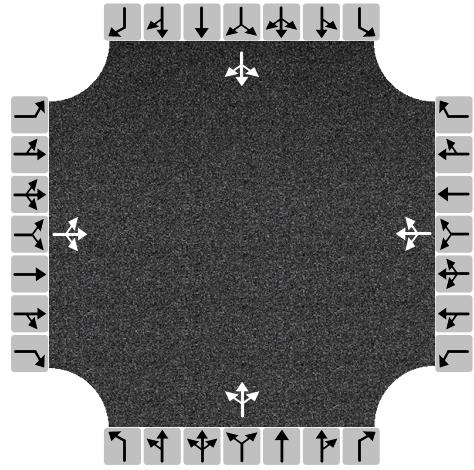
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	258		28	251		184			78		
Capacity (veh/h)	584	643		582	641		680			640		
95% Queue Length, Q ₉₅ (veh)	0.1	1.9		0.2	1.9		1.1			0.4		
95% Queue Length, Q ₉₅ (ft)	2.6	48.6		5.2	48.6		28.2			10.2		
Control Delay (s/veh)	9.1	12.0		9.2	11.9		10.2			9.4		
Level of Service, LOS	A	B		A	B		B			A		
Approach Delay (s/veh) LOS	11.7	B		11.6	B		10.2	B		9.4	A	
Intersection Delay (s/veh) LOS	11.1						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - No Build
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	32	52	20	4	9	1	6	40	4	4	50	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	113			15			54			82		
Percent Heavy Vehicles	3			14			3			3		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.100			0.014			0.048			0.072		
Final Departure Headway, h_d (s)	4.21			4.57			4.30			4.14		
Final Degree of Utilization, x	0.132			0.019			0.065			0.094		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.21			2.57			2.30			2.14		

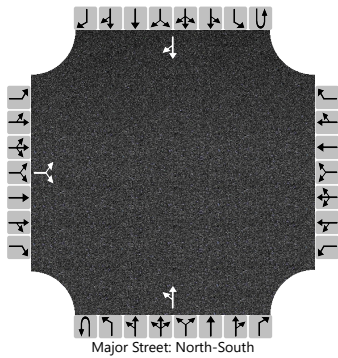
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	113			15			54			82		
Capacity (veh/h)	855			788			838			870		
95% Queue Length, Q_{95} (veh)	0.5			0.1			0.2			0.3		
95% Queue Length, Q_{95} (ft)	12.8			2.8			5.1			7.7		
Control Delay (s/veh)	7.9			7.7			7.6			7.6		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.9		A	7.7		A	7.6		A	7.6		A
Intersection Delay (s/veh) LOS	7.7						A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MF	Intersection	14 Street & Michigan Ave				
Agency/Co.	LANGAN	Jurisdiction	Miami Beach				
Date Performed	5/14/2025	East/West Street	14 Street				
Analysis Year	2025	North/South Street	Michigan Avenue				
Time Analyzed	PM Peak Hour - No Build	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	1440 Michigan Avenue						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		55		7						5	115				65	16
Percent Heavy Vehicles (%)		3		14						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage				Left Only									1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.34						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.43						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			67							5						
Capacity, c (veh/h)			782							1501						
v/c Ratio			0.09							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
95% Queue Length, Q ₉₅ (ft)			7.8							0.0						
Control Delay (s/veh)			10.0							7.4	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.0								0.3						
Approach LOS		B								A						

FUTURE BUILD CONDITIONS

Table 5.1 - 2028 Build Intersection Capacity Analysis Summary

Location	Time	Level of Service ^[1]							
		(1) 15 Street & Lenox Avenue		(2) 15 Street & Michigan Avenue		(3) 14 Street & Lenox Avenue		(4) 14 Street & Michigan Avenue	
		Unsignalized		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EBL	AM								
	PM								
EBT	AM	[N/A]		[N/A]		[N/A]		[N/A]	
	PM								
EBR	AM								
	PM								
EB Approach	AM	A	9.4	A	9.5	A	7.3	A	9.3
	PM	B	11.1	B	12.0	A	7.9	B	10.1
WBL	AM								
	PM								
WBT	AM	[N/A]		[N/A]		[N/A]		[N/A]	
	PM								
WBR	AM								
	PM								
WB Approach	AM	B	10.3	B	10.1	A	8.3		
	PM	B	11.2	B	11.7	A	7.7		
NBL	AM								
	PM								
NBT	AM	[N/A]		[N/A]		[N/A]		[2]	
	PM								
NBR	AM								
	PM								
NB Approach	AM	A	8.6	A	8.6	A	7.2		
	PM	A	9.1	B	10.5	A	7.6		
SBL	AM								
	PM								
SBT	AM	[N/A]		[N/A]		[N/A]		[2]	
	PM								
SBR	AM								
	PM								
SB Approach	AM	A	8.6	A	8.3	A	7.2		
	PM	A	9.6	A	9.5	A	7.6		
Overall	AM	A	9.6	A	9.5	A	7.3	A	9.3
	PM	B	10.7	B	11.3	A	7.7	B	10.1

[1] Delay is average delay per vehicle in seconds

[2] Approach operates under Free-flow conditions



Table 5.2 -2028 Build Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lengths (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile	Storage (ft)	95 th %tile
(1) 15 Street & Lenox Avenue	AM	105	5	[N/A]		115	3	[N/A]		[N/A]		[N/A]		[N/A]		[N/A]	
	PM		5				3										
(2) 15 Street & Michigan Avenue	AM	110	3	[N/A]		105	3	[N/A]		[N/A]		[N/A]		[N/A]		[N/A]	
	PM		3				5										
(3) 14 Street & Lenox Avenue	AM	[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]	
	PM																
(4) 14 Street & Michigan Avenue	AM	[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]		[N/A]	
	PM																

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

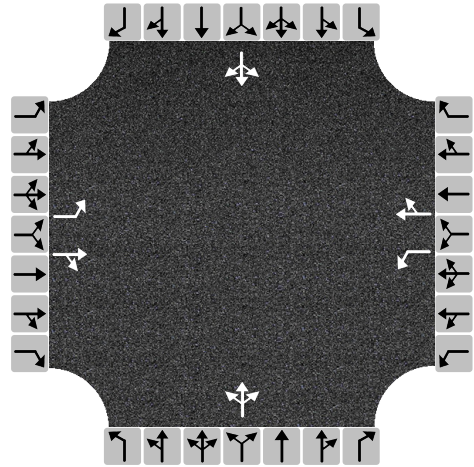
m Volume for 95th percentile queue is metered by upstream signal.

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	34	158	13	12	219	14	7	19	13	18	24	22
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	37	186		13	253		42			70		
Percent Heavy Vehicles	3	3		9	3		14			5		
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.033	0.165		0.012	0.225		0.038			0.062		
Final Departure Headway, h_d (s)	5.59	5.04		5.66	5.02		5.24			5.06		
Final Degree of Utilization, x	0.057	0.260		0.021	0.353		0.062			0.098		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	3.29	2.74		3.36	2.72		3.24			3.06		

Capacity, Delay and Level of Service

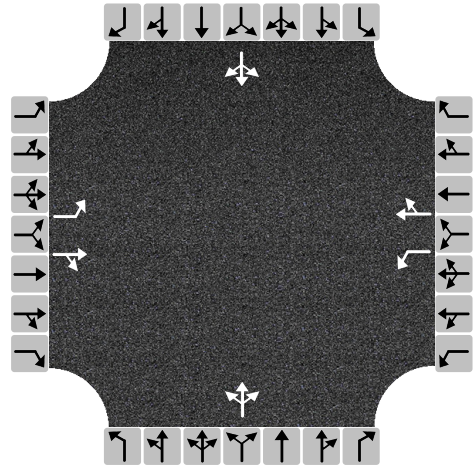
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	37	186		13	253		42			70		
Capacity (veh/h)	644	715		636	717		687			712		
95% Queue Length, Q_{95} (veh)	0.2	1.0		0.1	1.6		0.2			0.3		
95% Queue Length, Q_{95} (ft)	5.1	25.6		2.7	41.0		5.6			7.8		
Control Delay (s/veh)	8.6	9.5		8.5	10.4		8.6			8.6		
Level of Service, LOS	A	A		A	B		A			A		
Approach Delay (s/veh) LOS	9.4	A		10.3	B		8.6	A		8.6	A	
Intersection Delay (s/veh) LOS	9.6						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	12	156	19	13	203	5	21	34	39	6	11	17
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	190		14	226		102			37		
Percent Heavy Vehicles	3	3		18	3		3			10		
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.012	0.169		0.013	0.201		0.091			0.033		
Final Departure Headway, h_d (s)	5.64	5.06		5.86	5.09		4.87			5.03		
Final Degree of Utilization, x	0.020	0.267		0.023	0.319		0.138			0.052		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	3.34	2.76		3.56	2.79		2.87			3.03		

Capacity, Delay and Level of Service

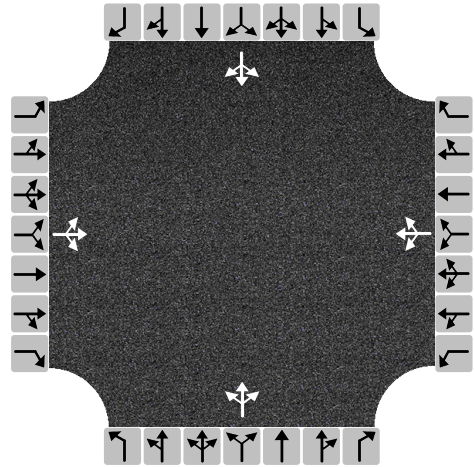
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	13	190		14	226		102			37		
Capacity (veh/h)	638	711		614	708		739			716		
95% Queue Length, Q_{95} (veh)	0.1	1.1		0.1	1.4		0.5			0.2		
95% Queue Length, Q_{95} (ft)	2.6	28.2		2.9	35.8		12.8			5.4		
Control Delay (s/veh)	8.5	9.6		8.7	10.2		8.6			8.3		
Level of Service, LOS	A	A		A	B		A			A		
Approach Delay (s/veh) LOS	9.5	A		10.1	B		8.6	A		8.3	A	
Intersection Delay (s/veh) LOS	9.5						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	16	16	1	2	3	0	0	19	1	2	29	5
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	36			5			22			39		
Percent Heavy Vehicles	3			67			6			3		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.032			0.005			0.019			0.035		
Final Departure Headway, h_d (s)	4.17			5.29			4.10			3.99		
Final Degree of Utilization, x	0.042			0.008			0.025			0.043		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.17			3.29			2.10			1.99		

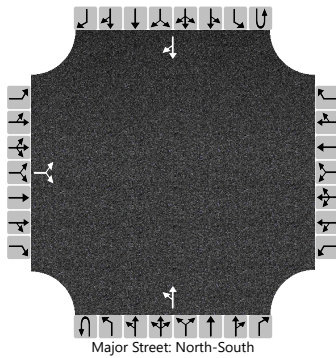
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	36			5			22			39		
Capacity (veh/h)	864			681			877			901		
95% Queue Length, Q_{95} (veh)	0.1			0.0			0.1			0.1		
95% Queue Length, Q_{95} (ft)	2.6			0.0			2.6			2.6		
Control Delay (s/veh)	7.3			8.3			7.2			7.2		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.3		A	8.3		A	7.2		A	7.2		A
Intersection Delay (s/veh) LOS	7.3						A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MF	Intersection	14 Street & Michigan Ave				
Agency/Co.	LANGAN	Jurisdiction	Miami Beach				
Date Performed	5/14/2025	East/West Street	14 Street				
Analysis Year	2028	North/South Street	Michigan Avenue				
Time Analyzed	AM Peak Hour - Build	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	1440 Michigan Avenue						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		22		0						0	50					37
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage				Left Only									1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

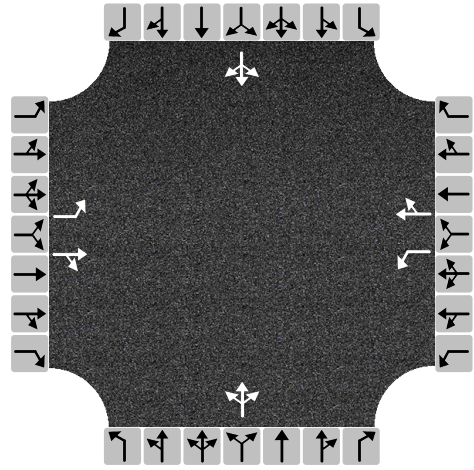
Flow Rate, v (veh/h)			24							0						
Capacity, c (veh/h)			852							1550						
v/c Ratio			0.03							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
95% Queue Length, Q ₉₅ (ft)			2.6							0.0						
Control Delay (s/veh)			9.3							7.3	0.0					
Level of Service (LOS)			A							A	A					
Approach Delay (s/veh)		9.3								0.0						
Approach LOS		A								A						

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.98

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	35	223	32	22	226	22	9	41	20	30	36	71
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	260		22	253		71			140		
Percent Heavy Vehicles	3	3		5	3		3			4		
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.032	0.231		0.020	0.225		0.063			0.124		
Final Departure Headway, h _d (s)	5.95	5.36		6.01	5.41		5.46			5.23		
Final Degree of Utilization, x	0.059	0.387		0.037	0.380		0.108			0.203		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t _s (s)	3.65	3.06		3.71	3.11		3.46			3.23		

Capacity, Delay and Level of Service

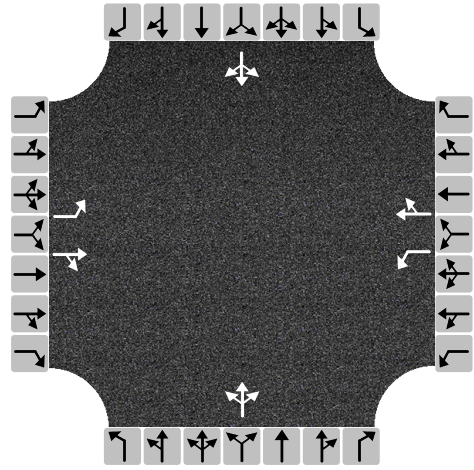
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	260		22	253		71			140		
Capacity (veh/h)	605	672		599	666		659			688		
95% Queue Length, Q ₉₅ (veh)	0.2	1.8		0.1	1.8		0.4			0.8		
95% Queue Length, Q ₉₅ (ft)	5.1	46.1		2.6	46.1		10.2			20.6		
Control Delay (s/veh)	9.0	11.4		8.9	11.4		9.1			9.6		
Level of Service, LOS	A	B		A	B		A			A		
Approach Delay (s/veh) LOS	11.1	B		11.2	B		9.1	A		9.6	A	
Intersection Delay (s/veh) LOS	10.7						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	15 Street & Michigan Aven
Jurisdiction	Miami Beach
East/West Street	15 Street
North/South Street	Michigan Avenue
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	24	227	26	30	224	14	19	82	81	16	38	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	266		32	251		192			79		
Percent Heavy Vehicles	3	3		4	3		3			3		
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.022	0.237		0.028	0.223		0.170			0.070		
Final Departure Headway, h_d (s)	6.20	5.63		6.23	5.67		5.34			5.68		
Final Degree of Utilization, x	0.044	0.416		0.055	0.394		0.284			0.125		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	3.90	3.33		3.93	3.37		3.34			3.68		

Capacity, Delay and Level of Service

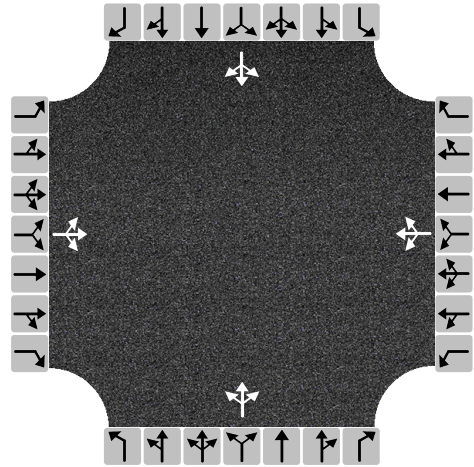
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	L	TR		L	TR		LTR			LTR		
Flow Rate, v (veh/h)	25	266		32	251		192			79		
Capacity (veh/h)	580	640		578	635		674			633		
95% Queue Length, Q_{95} (veh)	0.1	2.0		0.2	1.9		1.2			0.4		
95% Queue Length, Q_{95} (ft)	2.6	51.2		5.2	48.6		30.7			10.2		
Control Delay (s/veh)	9.2	12.3		9.3	12.0		10.5			9.5		
Level of Service, LOS	A	B		A	B		B			A		
Approach Delay (s/veh) LOS	12.0	B		11.7	B		10.5	B		9.5	A	
Intersection Delay (s/veh) LOS	11.3						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	MF
Agency/Co.	LANGAN
Date Performed	5/14/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour - Build
Project Description	1440 Michigan Avenue
Intersection	14 Street & Lenox Avenue
Jurisdiction	Miami Beach
East/West Street	14 Street
North/South Street	Lenox Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	32	58	20	4	9	1	6	40	4	4	50	21
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	120			15			54			82		
Percent Heavy Vehicles	3			14			3			3		
Initial Departure Headway, h _d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.106			0.014			0.048			0.072		
Final Departure Headway, h _d (s)	4.21			4.57			4.31			4.15		
Final Degree of Utilization, x	0.140			0.019			0.065			0.094		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t _s (s)	2.21			2.57			2.31			2.15		

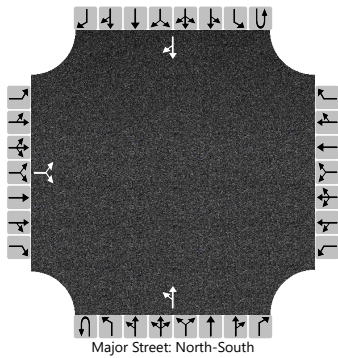
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	120			15			54			82		
Capacity (veh/h)	854			787			835			867		
95% Queue Length, Q ₉₅ (veh)	0.5			0.1			0.2			0.3		
95% Queue Length, Q ₉₅ (ft)	12.8			2.8			5.1			7.7		
Control Delay (s/veh)	7.9			7.7			7.6			7.6		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) LOS	7.9		A	7.7		A	7.6		A	7.6		A
Intersection Delay (s/veh) LOS	7.7						A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MF	Intersection	14 Street & Michigan Ave				
Agency/Co.	LANGAN	Jurisdiction	Miami Beach				
Date Performed	5/14/2025	East/West Street	14 Street				
Analysis Year	2028	North/South Street	Michigan Avenue				
Time Analyzed	PM Peak Hour - Build	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	1440 Michigan Avenue						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		61		7						5	116					69
Percent Heavy Vehicles (%)		3		14						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage					Left Only											1

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.34						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.43						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			74							5						
Capacity, c (veh/h)			777							1496						
v/c Ratio			0.10							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
95% Queue Length, Q ₉₅ (ft)			7.7							0.0						
Control Delay (s/veh)			10.1							7.4	0.0					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.1								0.3						
Approach LOS		B								A						