TRAFFIC IMPACT ANALYSIS

Pier Park
Miami-Dade County
Miami Beach, Florida

Prepared For:

Gardiner & Theobald, Inc
One Alhambra Plaza
Coral Gables, Florida 33134

Prepared By:

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

Maximo G Polanco

Digitally signed by Maximo G Polanco
DN: CN=Maximo G Polanco, dnQualifier=A01410D000001959 65DA6810019D15E, O=LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES INC, C=US
Reason: I have reviewed this document
Date: 2025.11.07 10:40:44-05'00'

MAXIMO G. POLANCO
LICENSE
No. 91355
STATE OF FLORIDA
PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Maximo Polanco, PE on the date adjacent to the seal.

Signature must be verified on any electronic copies.

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

Eric Schwarz, P.E., LEED AP
Senior Principal

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EXECUTIVE SUMMARY

Langan Engineering & Environmental Services, LLC was retained to prepare a traffic-impact analysis for the proposed Pier Park beach club redevelopment. The 4.16-acre site is located east of Ocean Drive between 1st Street and South Pointe Drive in Miami Beach, Florida. The site is currently occupied by Nikki Beach Club, which consists of a 23,243-square-foot building and a surface-level parking lot. The northern portion of the lot is publicly accessible, while the southern portion is reserved exclusively for club use. The redevelopment will maintain the existing surface level parking lot available for public use and will redevelop the site with a new 84,297 square feet beach club establishment with an expected completion date of 2028. We analyzed the three intersections that are expected to the most impacted by the proposed redevelopment for the build conditions during Friday morning, Friday evening, and Saturday evening peak hours. The peak-hour traffic-impact analyses with the proposed development's impacts in yielded the following results:

- All study intersections are expected to operate at Level of Service (LOS) "C" or better during the Friday and Saturday peak hours with the development's impacts.
- The expected traffic volumes from the proposed development do not warrant the need for exclusive turn lanes at the existing driveway connection to the Ocean Drive.
- The proposed development will not have gate-controlled access.
- The valet operation will not cause entering traffic to back into the adjacent public roadways with a minimum of 13 parking attendants to serve expected demand.
- 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 11 Friday morning peak hour, 135 Friday evening peak hour, and 161 Saturday evening peak hour net-new trips.

1.0 INTRODUCTION

Langan was retained to prepare this impact-analysis report for the proposed Pier Park beach club redevelopment that is expected to be built by 2028. The 4.16-acre site is located east of Ocean Drive between 1st Street and South Pointe Drive in Miami Beach, Florida. The redevelopment will comprise the construction of a two-story building with 84,297 square feet of beach club use. Additionally, the site will maintain the existing surface level parking lot that is available for public use (72 parking spaces) and redevelop the southern portion of the parking lot to include 93 underground parking spaces for a total of 165 parking spaces.

We analyzed three stop-sign controlled intersections for the 2028 build conditions during the morning and evening peak hours. We found that all study 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 parcels (Folio Nos.: 02-4203-012-0011, 02-4203-012-0012, and 02-4203-012-0010). The proposed development will maintain its access through the existing two-way full-access driveway connections to Ocean Drive. The north driveway connects to the public parking portion of the parking lot, while the south driveway connects to the Pier Park development's parking lot. Internally, removable cones are present to separate the two parking uses from interacting with each other. 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 Friday morning (7 to 9 AM), Friday evening (6 to 8 PM), and Saturday evening (7 to 9 PM) peak-hour vehicle turning-movement volumes at the following study intersections:
    - Collins Avenue and South Pointe Drive (unsignalized)
    - Ocean Drive and 1st Street (unsignalized)
    - Ocean Drive and South Pointe Drive (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 existing driveway volumes of the existing beach club establishment, as the Institute of Transportation Engineers (ITE) trip generation rates does not provide a comparable land use for this type of establishment.
- 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 FDOT 10-year linear growth rate trend generated the highest growth rate of 2.65%, which was used as the representative growth rate for the analysis.
- 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 Friday morning, Friday evening, and Saturday evening peak-hour intersection-capacity analyses for the following conditions at the study intersections: 2025 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.
- Performed queuing analysis for the proposed valet operation based on ITE queuing methodology and data collected at a similar site.

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

Collins Avenue

Collins Avenue is a two-lane, undivided, north-south, city-maintained, major collector roadway with a 25 MPH posted speed limit. On-street parking is observed on both sides of the road in proximity to the site.

Ocean Drive

Ocean Drive is a two-lane, undivided, north-south, city-maintained, local roadway with a 25 MPH posted speed limit. On-street parking is observed on both sides of the road in proximity to the site. Additionally, dedicated bicycle lanes are observed in both the northbound and southbound directions.

1st Street

1st Street is a two-lane, undivided, east-west, city-maintained, local roadway with a 25 MPH posted speed limit. On-street parking is observed on both sides of the road in proximity to the site.

South Pointe Drive

South Pointe Drive is a four-lane, divided, east-west, city-maintained, major collector roadway with a 25 MPH posted speed limit. On-street parking is observed on both sides of the road in proximity to the site. Additionally, dedicated bicycle lanes are observed in both the eastbound and westbound directions.

2.2 Traffic Counts and Volumes

Traffic-volume data was collected on Friday, August 15, 2025, from 7:00 to 9:00 AM and 6:00 to 8:00 PM and on Saturday, August 16, 2025, from 7:00 to 9:00 PM. We applied FDOT's season adjustment factors (1.07) to convert the traffic data into peak-season volumes We analyzed the intersection capacity analysis based on the peak hour of each intersection to provide a worst-case scenario analysis. **Figure 3** illustrates the existing weekday Friday morning, Friday evening, and Saturday evening peak-hour traffic volumes. Appendix D contains the traffic data and seasonal-adjustment factors.

2.3 Intersection Capacity Analysis (Level of Service)

We conducted 2025 existing-conditions capacity analyses for the study intersections using HCS software. We found the study intersections are operating at LOS C or better during the Friday morning, Friday evening, and Saturday evening 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 - 2025 Existing Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	Friday AM Peak Hour		Friday PM Peak Hour		Saturday PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) Collins Avenue & South Pointe Drive	Unsignalized	EB	A	8.1	A	10.0	B	11.6
		WB	A	7.7	A	9.0	A	10.0
		NB	A	8.1	A	9.3	A	9.9
		SB	A	7.6	A	9.1	A	9.8
(2) Ocean Drive & 1st Street	Unsignalized	EB	A	9.1	B	13.8	C	15.8
		WB	A	8.8	B	14.7	C	18.4
(3) Ocean Drive & South Pointe Drive	Unsignalized	EB	A	7.8	A	9.9	B	11.8
		WB	A	7.5	A	8.8	B	10.3
		NB	A	7.6	A	9.0	A	9.8
		SB	A	7.6	A	9.3	B	11.3

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 the City of Miami Beach Active Projects list and found one roadway improvement in the City of Miami Beach Active Projects, which is the First Street & South Point Stormwater Improvements. The proposed project plans to redevelop First Street with an improved drainage system and raise the roadway for future flooding. We confirmed that this project would not impact the roadway circulation for our proposed development. Appendix D includes excerpts from the First Street & South Point Stormwater Improvements plan.

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 2025 volumes. We compared the ten-year linear-trend growth rate (2.65%) to the 2015 to 2045 SERPM Traffic Volume growth rate (0.32%) and determined that the 10-year linear-trend growth rate is the higher growth and would be used for the analysis. 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 at LOS C or better during the Friday morning, Friday evening, and Saturday evening 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	Friday AM Peak Hour		Friday PM Peak Hour		Saturday PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) Collins Avenue & South Pointe Drive	Unsignalized	EB	A	8.1	B	10.4	B	12.3
		WB	A	7.7	A	9.2	B	10.4
		NB	A	8.1	A	9.5	B	10.2
		SB	A	7.6	A	9.3	B	10.2
(2) Ocean Drive & 1st Street	Unsignalized	EB	A	9.1	B	14.5	C	17.1
		WB	A	8.9	C	15.3	C	19.8
(3) Ocean Drive & South Pointe Drive	Unsignalized	EB	A	7.9	B	10.2	B	12.5
		WB	A	7.5	A	9.0	B	10.9
		NB	A	7.7	A	9.2	B	10.1
		SB	A	7.6	A	9.7	B	12.1

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

To estimate the expected trip generation for the proposed development, we conducted a data-driven analysis using existing conditions at the site, which is currently occupied by Nikki Beach Club. We collected peak-hour driveway volume counts at the primary access point to quantify the actual peak-hour traffic generated by the existing use.

Given that the proposed development is expected to operate with a similar land use type and trip characteristics, we adopted an empirical scaling approach. Specifically, we calculated the ratio of the proposed development's gross floor area to that of the existing facility (23,243 square feet). This ratio was then applied to the observed driveway volumes to proportionally estimate the trip generation of the proposed use.

Based on this trip generation analysis we estimated that the proposed redevelopment is expected to generate 11 Friday morning peak-hour, 135 Friday evening peak-hour, and 161 Saturday evening peak-hour net-new trips. **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	Friday Morning Peak Hour			Friday Afternoon Peak Hour			Saturday Afternoon Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Existing Uses										
Beach Club	23,243 SF	3	1	4	14	38	51	21	41	61
Proposed Uses										
Beach Club	84,297 SF	12	3	15	50	136	187	76	147	223
Net New Trips		**9**	**2**	**11**	**36**	**98**	**135**	**55**	**106**	**161**

** Based on collected data at Nikki Beach Club*

5.2 Trip Distribution

We determined the directional distribution of site-generated trips based on the cardinal distribution data for TAZ 659 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	20.30%	0.00%	0.00%	0.00%	2.20%	15.40%	29.50%	32.70%
2045	19.10%	0.00%	0.00%	0.00%	2.50%	17.10%	35.50%	25.80%
2028	**19.78%**	**0.00%**	**0.00%**	**0.00%**	**2.33%**	**16.14%**	**32.10%**	**29.71%**

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 Friday morning, Friday evening, and Saturday evening peak hours with 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	Friday AM Peak Hour		Friday PM Peak Hour		Saturday PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
(1) Collins Avenue & South Pointe Drive	Unsignalized	EB	A	8.2	B	10.7	B	13.0
		WB	A	7.7	A	9.6	B	11.1
		NB	A	8.1	A	9.6	B	10.3
		SB	A	7.6	A	9.5	B	10.4
(2) Ocean Drive & 1st Street	Unsignalized	EB	A	9.1	B	14.5	C	17.7
		WB	A	8.9	C	16.2	C	20.8
(3) Ocean Drive & South Pointe Drive	Unsignalized	EB	A	7.9	B	10.8	B	13.6
		WB	A	7.6	A	9.3	B	11.5
		NB	A	7.7	A	9.4	B	10.5
		SB	A	7.6	B	10.5	B	13.8
(4) Ocean Drive & Project Driveway	Unsignalized	WB	A	8.3	B	10.3	B	12.0

5.4 Driveway Volumes and Turn Lane Analysis

We analyzed the development's proposed driveway connection to Ocean Drive and found it will operate at LOS B or better during the morning and evening peak hours for the 2028 build conditions as shown in Table 5. The driveway will operate as a full access 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 Ocean Drive 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, and the turn lanes warrant analysis worksheets.

6.0 VALET OPERATIONS

We prepared a queuing analysis for the proposed development's valet operation to ensure that it will not cause entering traffic to back onto the adjacent public roadway (Ocean Drive). The valet-parking station will be located adjacent to the building entrance with an on-site vehicle-stacking area for eight (8) vehicles and direct access to the surface parking lot area. All guests will be required to utilize valet services, eliminating the need for self-parking on-site.

The queueing analysis followed the methodology outlined in *Transportation and Land Development* by the Institute of Transportation Engineers (ITE), which uses hourly vehicle arrival rates and service times to estimate 95th percentile queue lengths, representing conditions expected to occur 95% of the time. Peak-hour trip generation estimates, summarized in Table 3, were used to determine vehicle arrival rates:

- Friday Morning Peak Hour: 15 trips (12 inbound, 3 outbound)
- Friday Afternoon Peak Hour: 187 trips (50 inbound, 136 outbound)
- Saturday Afternoon Peak Hour: 223 trips (76 inbound, 147 outbound)

Valet service times were estimated based on operational logistics and site layout:

- Drop-off: 2.81 minutes
- Pick-up: 2.96 minutes

These durations include the time for the valet attendant to receive or return the vehicle, drive to/from the furthest parking stall, and return to the valet station.

To accommodate peak demand, the analysis determined that a minimum of 13 valet attendants will be required to manage vehicle flow efficiently. The stacking area was designed using a conversion factor of 25 feet per queued vehicle, ensuring sufficient linear space for expected queue lengths.

In addition to the primary on-site valet area, a contingency plan has been established to accommodate overflow demand. This includes access to additional parking spaces at 49 Collins Avenue. However, this is subject to change pending the developer's availability to secure all required agreements.

Table 6 summarizes the results of the queueing analysis, which indicates that the 95th percentile queue lengths are not expected to exceed two vehicles, well within the capacity of the on-site stacking area. Supporting documentation, including service time calculations, ITE methodology excerpts, and the concession agreement for overflow parking, is provided in **Appendices H** and **I**. The valet booth and stacking layout are illustrated in Appendix B.

Table 6 - Queuing Analysis Summary

Entrance	**Storage Capacity** (feet)	**95th Percentile Queue Length**		**Exceeds Capacity?**
		Vehicles	**Feet**	
Friday AM	200	1	25	**NO**
Friday PM	200	3	75	**NO**
Saturday PM	200	4	100	**NO**

7.0 MODES OF TRANSPORTATION

The site abuts 1st Street, Ocean Drive and South Pointe Drive providing sidewalks along the frontages of the site. The proposed development is approximately a four-minute walk to the nearest bus station (Route 14) located north of the intersection of 1st Street and Washington Avenue. Citibike serves the Miami Beach neighborhood, with a docking station located adjacent to the site on the east side of Ocean Drive between the north and south driveways. Appendix D contains a copy of the transit route maps. **Figure 9** shows the pedestrian access to the site.

8.0 TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

The site abuts Ocean Drive, 1st Street, and South Pointe Drive. The proposed development is approximately a four-minute walk to the nearest bus station (Route 14) located at the intersection of 1st Street and Washington Avenue. Citibike serves the City of Miami Beach, with a docking station adjacent to the site along Ocean Drive between the north and south driveways. 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 7** summarizes the proposed TDM strategies.

Table 7 - Proposed TDM Strategies

Action	Details
Employee Survey	Conduct surveys to assess current employee commute patterns, identify preferences, and inform targeted TDM initiatives.
Education, Marketing, and Outreach	Provide new employees with informational packets and/or personalized consultations highlighting sustainable travel options (e.g., transit, biking).
Bicycle Facilities	Install on-site bicycle racks accessible to both employees and visitors to encourage active transportation.
Valet Operation	Implement a full-service valet system for all guests, with a designated stacking area and overflow capacity to manage peak demand efficiently.
Overflow Parking	Secure access to additional parking spaces to accommodate overflow demand during peak periods.
Travel Mapping	Make transit route maps, schedules, and multimodal travel information available on-site for employees and visitors.
Loading Area	Designate specific loading/unloading timeframes to minimize conflicts with peak-hour traffic and improve site circulation.

9.0 TRASH COLLECTION OPERATIONS

The proposed development will accommodate off-street trash collection along the northeast side of the property, ensuring that refuse vehicles can safely enter and exit the site without disrupting public traffic flow. Trash trucks will maneuver within the site to access designated dumpster locations, as illustrated in the truck turning plans provided in Appendix B.

Trash collection will be coordinated with the Miami-Dade County Department of Solid Waste, and managed by on-site personnel to ensure operations occur within approved timeframes and avoid conflicts with peak traffic periods.

10.0 PARKING MANUEVERABILITY ANALYSIS

A comprehensive maneuverability analysis was conducted within the proposed parking areas to confirm that vehicles can safely circulate within the site. The analysis demonstrates that a Chevrolet Suburban-sized vehicles can navigate the internal drive aisles without conflict, supporting the functionality of the proposed parking layout. The public parking lot located to the north of the site will remain unchanged, with operations continuing under existing conditions.

Additionally, turning movement diagrams were performed for an SU-30 design vehicle, representing a typical service truck. The results confirm that the SU-30 vehicle can safely enter and exit the site to access the loading area without requiring reverse movements into the public right-of-way, thereby maintaining safe and efficient site access. All vehicle maneuverability diagrams and turning templates are included in Appendix B.

11.0 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 25 long term bicycle spaces and can reduce their required parking by **five (5)** 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 20 short term bicycle spaces and reduce their required parking by **four (4)** parking spaces.
- Scooter, moped, and motorcycle parking: The minimum off-street parking requirements may be reduced by one off-street parking space for every three scooters, moped, or motorcycle parking space provided off-street, not to exceed 15 percent of the off-street parking spaces that would otherwise be required.
    - Per this reduction, the development will provide 15 scooter parking spaces and reduce their required parking by **five (5)** parking spaces.
- Showers: The minimum off-street parking requirements for nonresidential uses that provide showers and changing facilities for bicyclist may be reduced by two off-street parking spaces for each separate shower facility up to a maximum of eight parking spaces.
    - Per this reduction, the development will provide eight (8) showers and reduce their required parking by **eight (8)** parking spaces.
- Drop-off and loading zone for transportation and compensation vehicles: The minimum off-street parking requirements may be reduced by a ratio of three off-street parking spaces for every one curb side drop off stall. Developments over 50,000 square feet may increase their drop off area to a maximum of three drop-off stalls for a maximum reduction of nine off-street parking spaces.
    - Per this reduction, the development will provide three (3) drop-off and loading zones and reduce their required parking by **nine (9)** parking spaces.

Without any reductions applied, the site would be required to provide 232 on-site parking spaces. From the 232, the developer has agreed to pay a fee in lieu of parking to reduce the required by 123 parking spaces, which results in 109 parking spaces required. However, based on the parking reductions described above, the development can reduce their required parking by 31 spaces through the inclusion of 25 long-term bicycle parking spaces, 20 short-term bicycle parking spaces, 15 scooter parking spaces, eight (8) showers, and nine (9) drop-off zones. As such, the required private parking reduces to 78 spaces. The proposed development will provide 93 private parking spaces, as well as maintain the 72 public parking spaces, for a total of 165 parking spaces. **Appendix J** contains the Miami Beach Parking Code.

12.0 CONCLUSIONS

Langan performed a traffic-impact analysis for the Pier Park beach club development expected to be completed by 2028. The analysis shows the following results:

- All study intersections are expected to operate with a Level of Service "C" or better with the proposed development's impacts.
- The existing driveway connection to Ocean Drive is expected to operate at LOS B or better during the development's peak-hours.
- The expected traffic volumes from the proposed redevelopment do not warrant the need for exclusive turn lanes at the driveway connection to Ocean Drive.
- The proposed development will not have gate-controlled access.
- The valet operation will not cause entering traffic to back into the adjacent public roadways with a minimum of 13 parking attendants to serve expected demand.
- The development will promote the use of different modes of transportation through the implementation of several TDM strategies.

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APPENDIX A
FIGURES

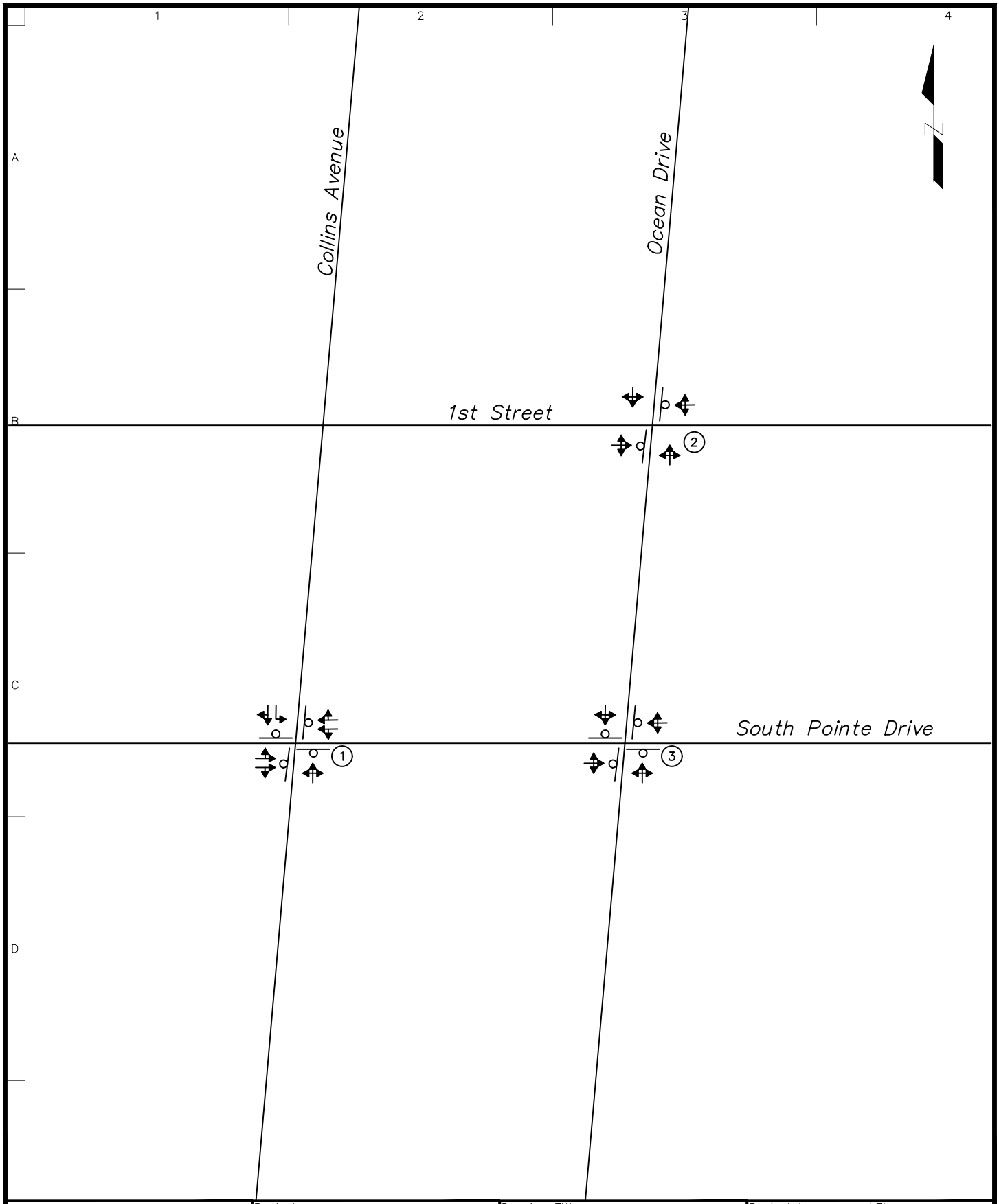


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Project No. 330163501

LANGAN Langan Engineering and Environmental Services, Inc. 1221 Brickell Ave, Suite 1800 Miami, FL 33131 P: 786.264.7200 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project **PIER PARK** MIAMI BEACH MIAMI-DADE FLORIDA	Drawing Title **SITE LOCATION MAP**	Project No. 330163501 Date OCTOBER 2025 Drawn By LTA Checked By JCG	Figure 1

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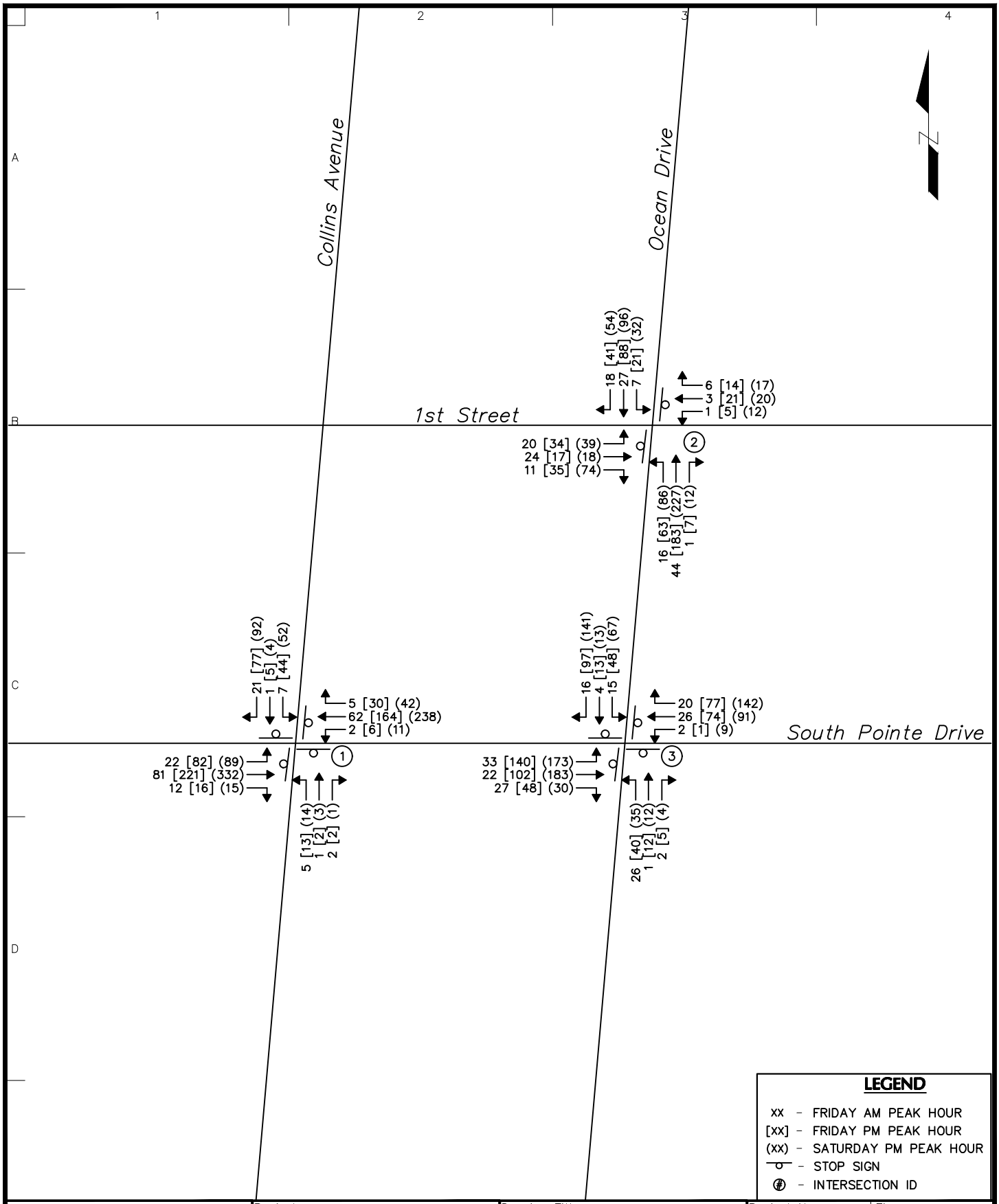
LANGAN Langan Engineering and Environmental Services, Inc. 1221 Brickell Ave, Suite 1800 Miami, FL 33131 P: 786.264.7200 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project PIER PARK MIAMI-DADE MIAMI BEACH FLORIDA	Drawing Title LANES CONFIGURATION	Project No. 330163501 Date OCTOBER 2025 Drawn By LTA Checked By JCG	Figure 2

LANGAN

Project No. 330163501

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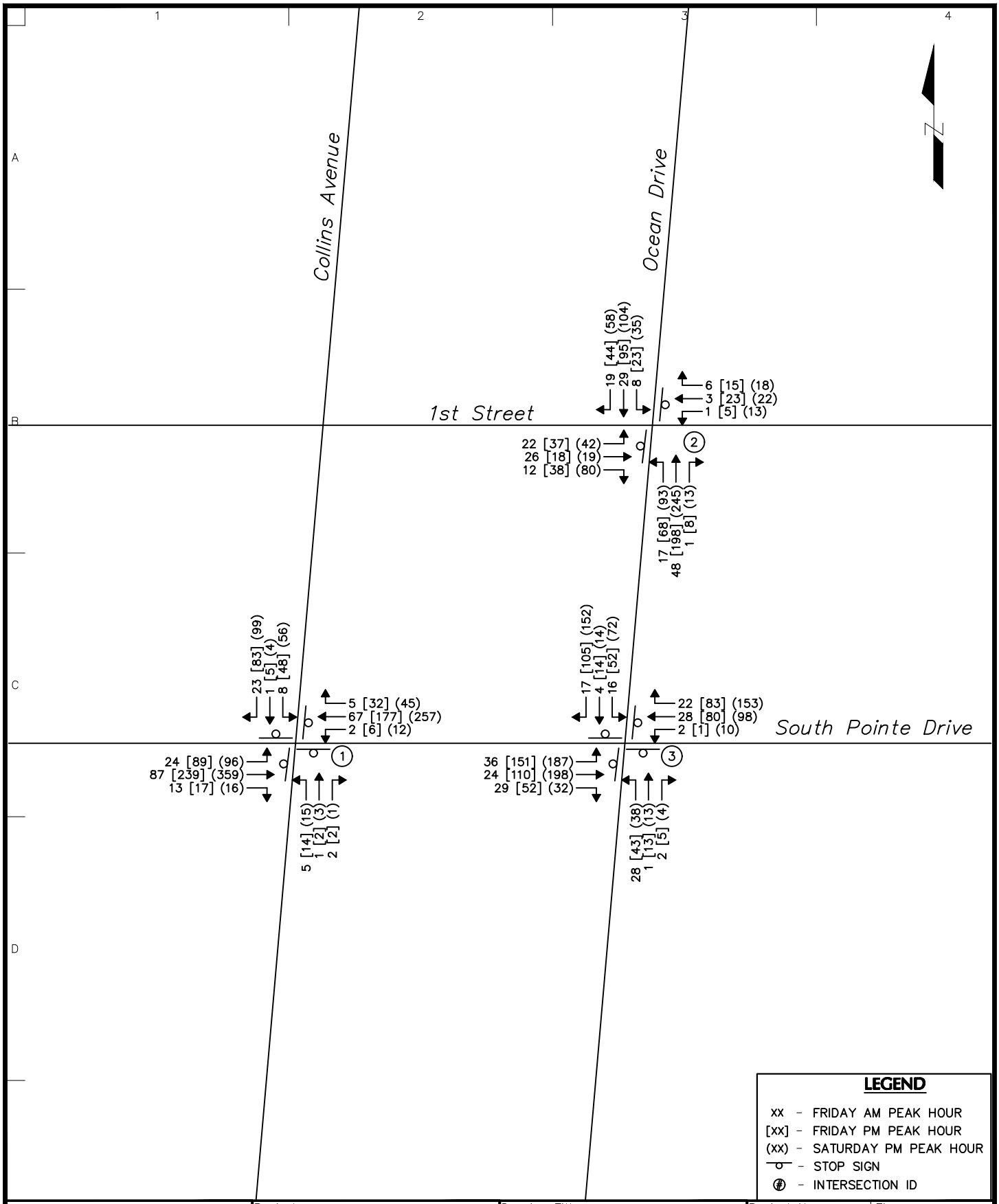
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Project No. 330163501

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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	Drawing Title	Project No.	Figure
PIER PARK MIAMI-DADE MIAMI BEACH FLORIDA	2025 EXISTING VOLUMES	330163501	3
		Date: OCTOBER 2025	
		Drawn By: LTA	
		Checked By: JCG	

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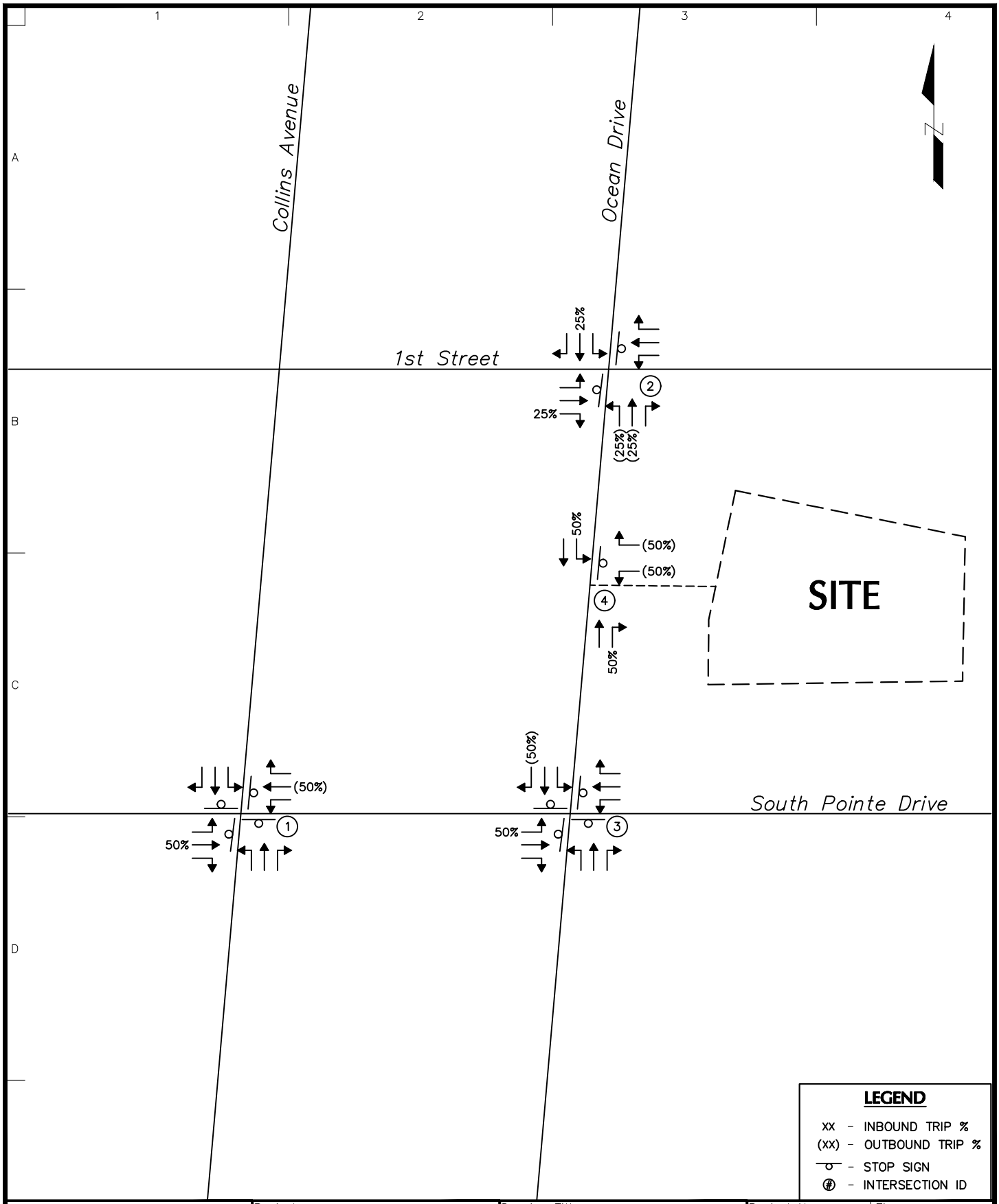
Project No. 330163501

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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	PIER PARK
	MIAMI-DADE MIAMI BEACH FLORIDA
Drawing Title	2028 NO BUILD VOLUMES
Project No.	330163501
Date	OCTOBER 2025
Drawn By	LTA
Checked By	JCG
Figure	4

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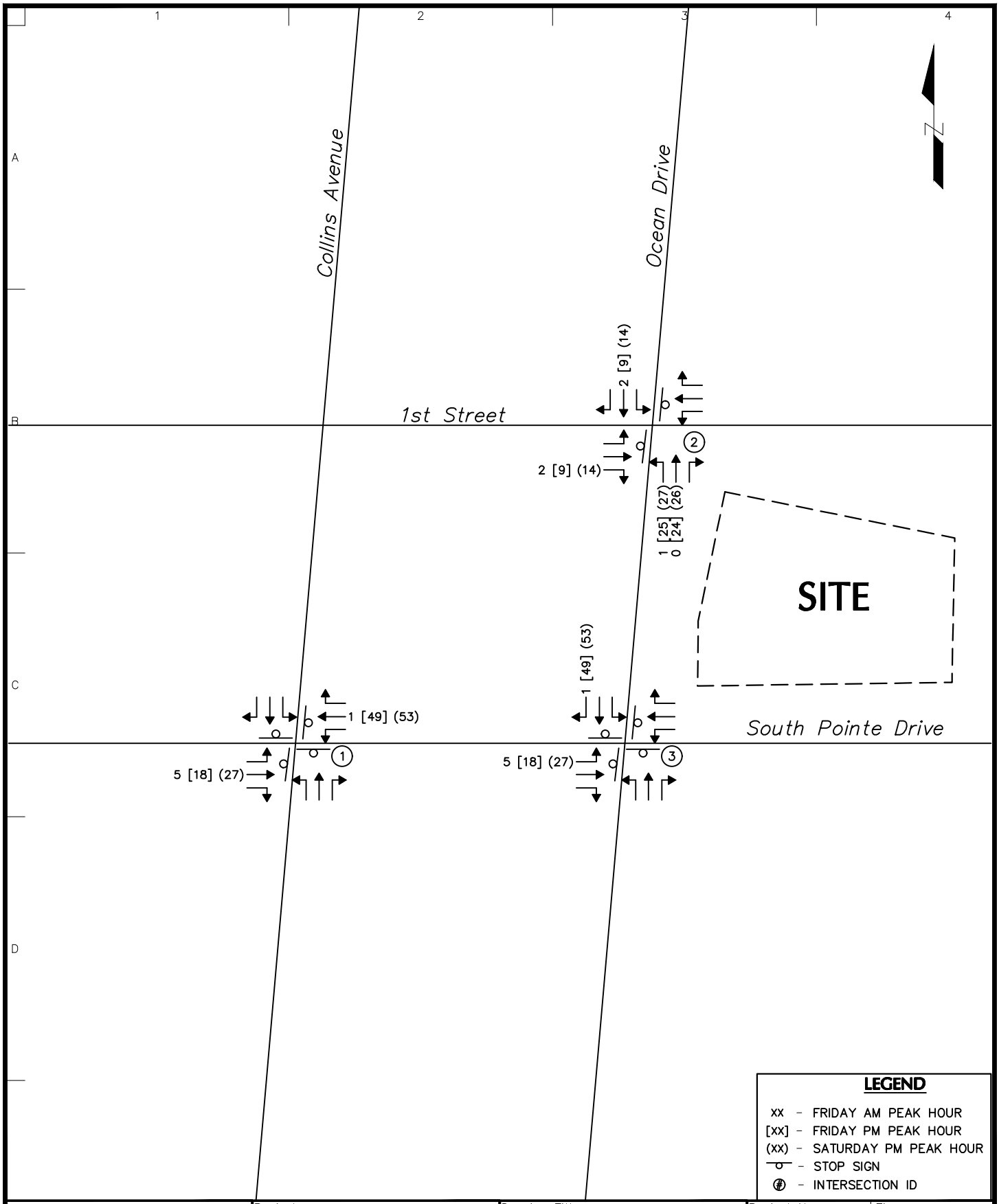
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Project No. 330163501

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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	PIER PARK MIAMI-DADE MIAMI BEACH FLORIDA
Drawing Title	SITE TRIP DISTRIBUTION
Project No.	330163501
Date	OCTOBER 2025
Drawn By	LTA
Checked By	JCG
Figure	5

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LEGEND

- xx – FRIDAY AM PEAK HOUR
- [xx] – FRIDAY PM PEAK HOUR
- (xx) – SATURDAY PM PEAK HOUR
- STOP SIGN
- # – INTERSECTION ID

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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project: PIER PARK
MIAMI-DADE MIAMI BEACH FLORIDA

Drawing Title: SITE TRIP ASSIGNMENT

Project No. 330163501
Date OCTOBER 2025
Drawn By LTA
Checked By JCG

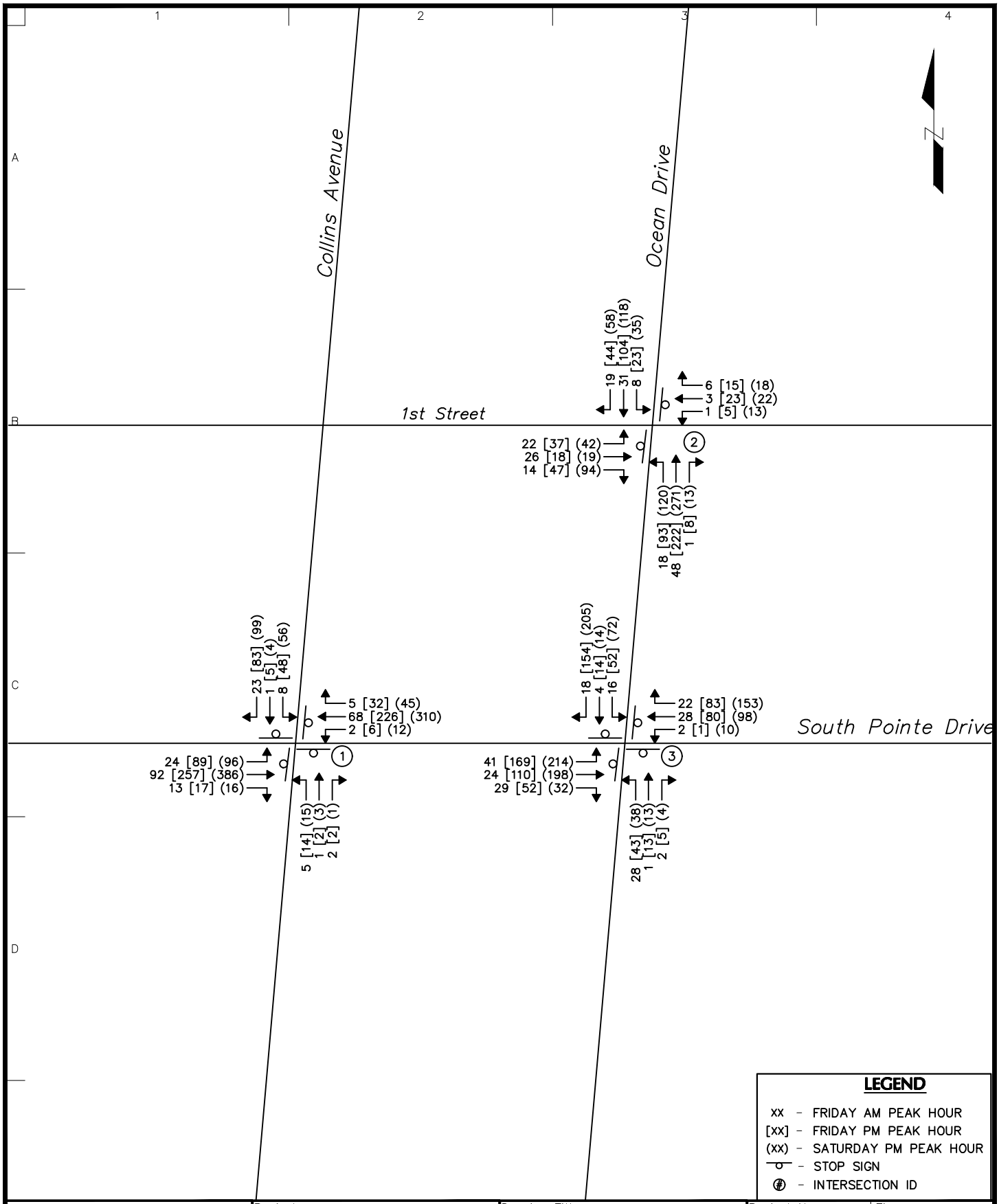
Figure 6

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Project No. 330163501

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- [xx] – FRIDAY PM PEAK HOUR
- (xx) – SATURDAY PM PEAK HOUR
- STOP SIGN
- # – INTERSECTION ID

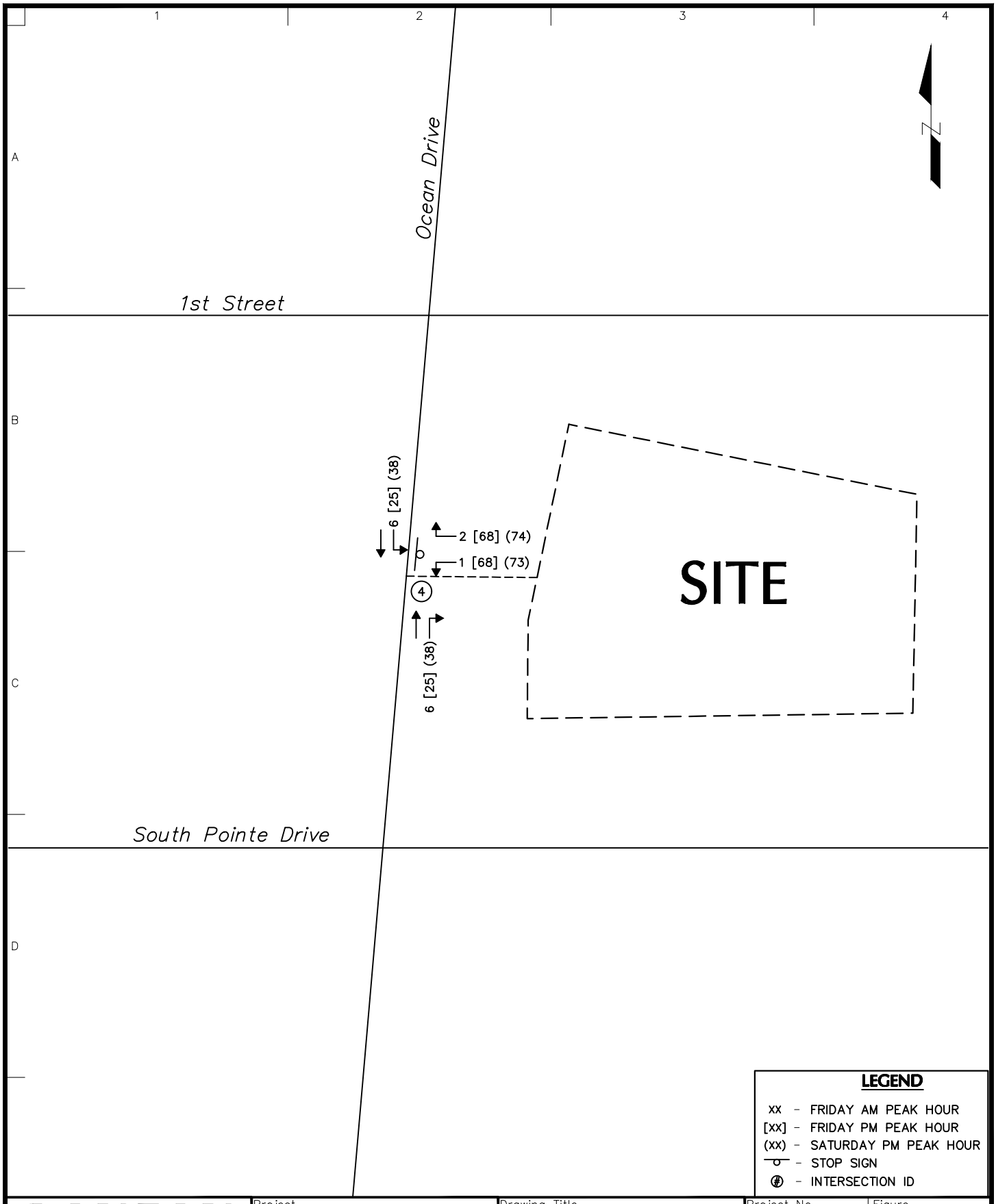
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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	PIER PARK MIAMI-DADE MIAMI BEACH FLORIDA
Drawing Title	2028 BUILD VOLUMES
Project No.	330163501
Date	OCTOBER 2025
Drawn By	LTA
Checked By	JCG
Figure	7

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Project No. 330163501

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- [xx] - FRIDAY PM PEAK HOUR
- (xx) - SATURDAY PM PEAK HOUR
- —o— - STOP SIGN
- (#) - INTERSECTION ID

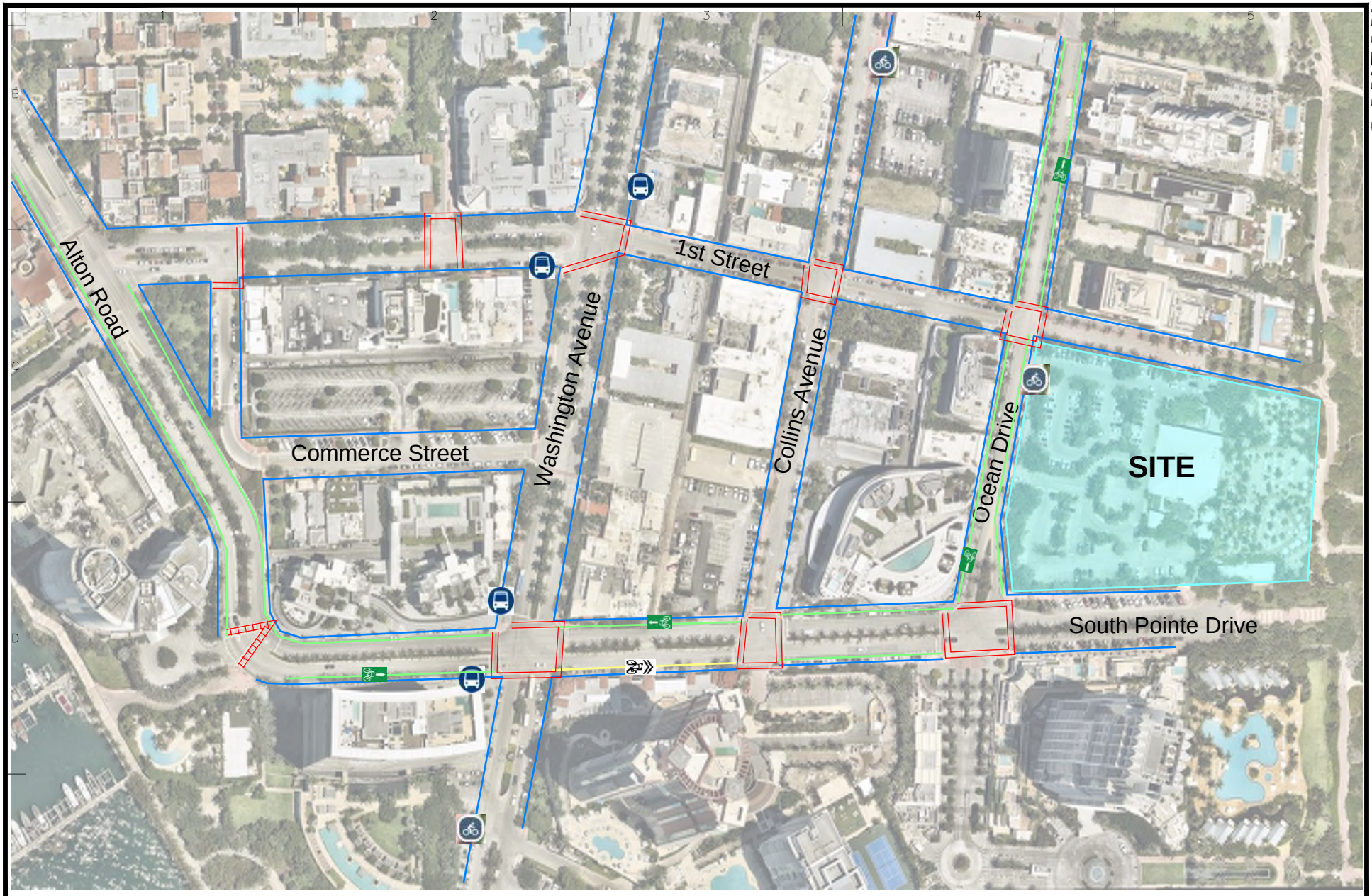
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Langan Engineering and Environmental Services, Inc.
1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	PIER PARK MIAMI-DADE MIAMI BEACH FLORIDA
Drawing Title	DRIVEWAY VOLUMES
Project No.	330163501
Date	OCTOBER 2025
Drawn By	LTA
Checked By	JCG
Figure	8

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Project No. 330163501

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LEGEND

- Crosswalks
- Sidewalks
- Bus Stop
- Bike Lanes
- Sharrows
- Citibikes

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1221 Brickell Ave, Suite 1800
Miami, FL 33131
P: 786.264.7200 F: 786.264.7201 www.langan.com
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	PIER PARK MIAMI BEACH MIAMI DADE FLORIDA
Drawing Title	PEDESTRIAN FIGURE
Project No.	330163501
Date	August 2025
Drawn By	LTA
Checked By	JCG
Figure	9

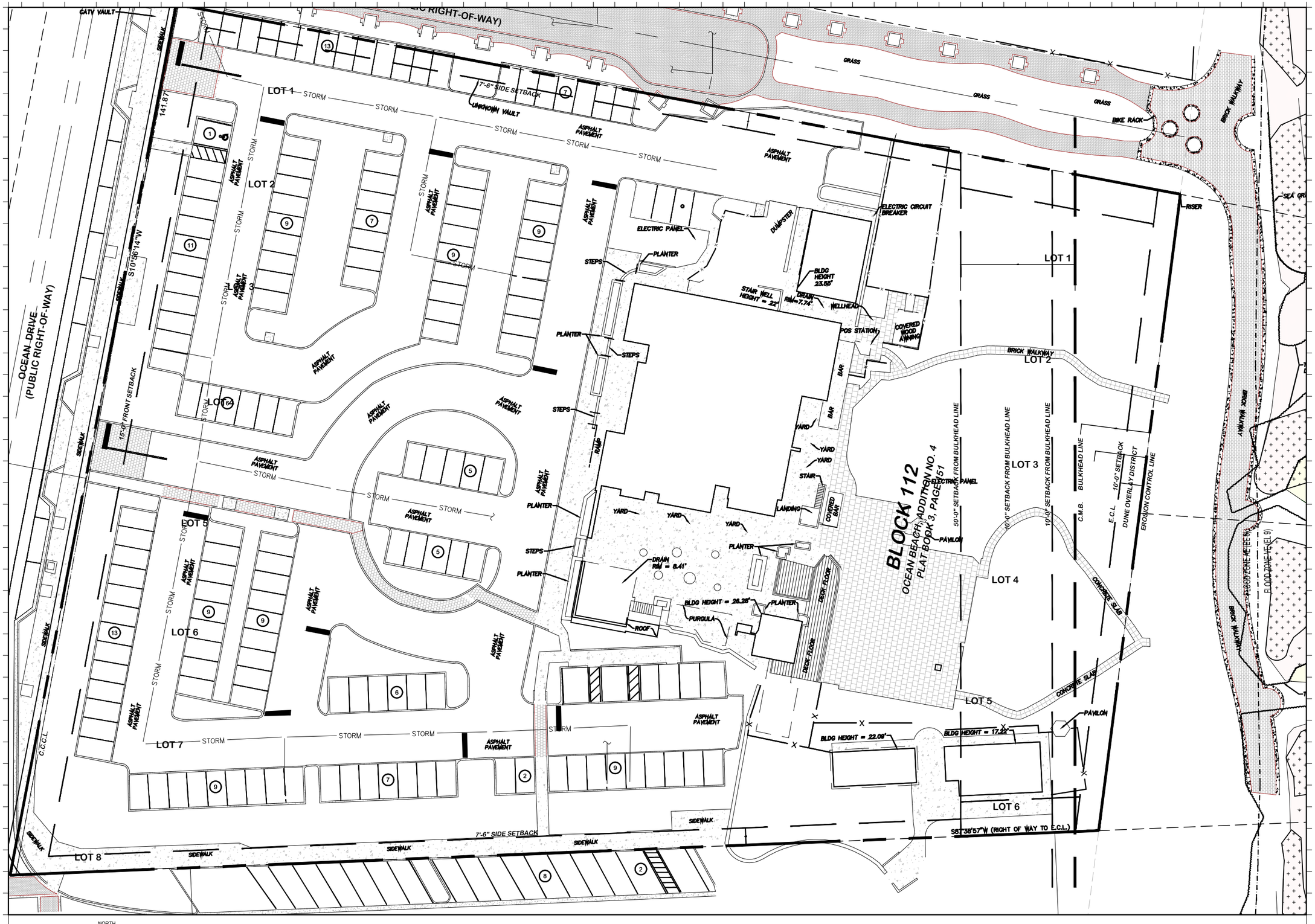
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Project No. 330163501

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APPENDIX B
SITE PLAN



NORTH

1 PROPERTY SURVEY
SCALE: 1" = 40'-0"

Rev.	Date	Rev.	Date

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PLANNING BOARD

1st SUBMITTAL

PIER PARK

ONE OCEAN DRIVE
MIAMI BEACH, FLORIDA. 33139

Owner:
Name Major Food Group. LLC
Address 4100 NE 1st Avenue, Suite 300
Address Miami FL 33137 | USA
Tel: +1(585) 414 1908
Email will@majorfood.com

INTERIOR DESIGNER:
Name Bishop Design
Address 7520 NE 4th Ct, Unit 102
Address Miami FL 33138 | USA
Tel: +1(305) 546 1122
Email info@wearebishopdesign.com

MEP ENGINEER:
Name Donolli Associates Engineering
Address 4607 North Meridian Avenue
Address Miami Beach, Florida 33140 USA
Tel: +1(305) 607 4925
Email

STRUCTURAL ENGINEER:
Name YHCE
Address 99 NW 27 Ave
Address Miami FL 33125 | USA
Tel: +1(305) 969 9423
Email yh@yhengineering.com

LANDSCAPE ARCHITECT:
Name Enea Landscape Architecture, Inc.
Address 7636 NE 4th Court, Suite 102
Address Miami FL 33138 | USA
Tel: +1(305) 576 6702
Email info.miami@enea.ch

CIVIL ENGINEER:
Name Langan
Address 1221 Brickell Avenue, Suite 1800
Address Miami FL 33131 | USA
Tel: Tel: +1(786) 264 7200
Email Fax: +1(786) 264 7201

ARCHITECT:
Kobi Karp Architecture and Interior Design, Inc.
571 NW 28th Street
Miami, Florida 33127 USA
Tel: +1(305) 573 1818
Fax: +1(305) 573 3766

ONE OCEAN DRIVE
PROPERTY SURVEY

Date	07/30/2025	Sheet No.	A0.02
Scale	AS NOTED		
Project	2521		

MIAMIBEACH

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

MULTIFAMILY - COMMERCIAL - ZONING DATA SHEET

ITEM #	Zoning Information			
1	Address:	1 OCEAN DRIVE		
2	Board and File numbers:			
3	Folio number(s):	0242030120010 & 0242030120011		
4	Year constructed:	1988	Zoning District:	**GU (Adjacent to RPS-4 & CPS-1)**
5	Overlay Districts	Oceanfront Overlay		FAR: **2.00**
		Dune Preservation Overlay		
6	Flood Zone:	AE		
7	Base Flood Elevation:	8.0' NGVD	6.44' NAVD	
8	Design Flood Elevation:	10.0' NGVD	7.44' NAVD	
9	Min. Wave Crest Elevation:	9000	375	
10	Lot Area:	3.49 ACRES	**152,332 SF**	
11	Lot Width:	VARIES (AVG. 333')	Lot Depth:	VARIES (AVG. 458')
12	Minimum Unit Size	N/A	Average Unit Size:	N/A
13	Existing Use:	COMMERCIAL / RESTAURANT	Proposed Use:	COMMERCIAL / RESTAURANT
14				

		ALLOWED	EXISTING	PROPOSED	
	Height #				
15	Architectural District-New Construction	65'		65'-0"	
	Number of Stories	N/A	2 STORIES	2 STORIES	
16	FAR ##	**304,664 SF**	**23,243 SF**	**24,000 SF**	
17	Gross Square Footage	N/A	N/A		
18	Square Footage by use	N/A	N/A		
19	WELLNESS & SPA LOCKER ROOMS	N/A	N/A	1 SPACE/300SF	
20	Number of Units Hotel	N/A	N/A	N/A	
21	Number of Seats	N/A	N/A	938	
22	Occupancy Load	N/A	N/A	1,162	
23	OUTDOOR CAFE DINING 01				
	At-Grade Parking Lot				
24	Front Setback (OCEAN DRIVE):	N/A	N/A	N/A	
25	Side Setback (SOUTH POINT DRIVE):	N/A	N/A	N/A	
26	Side Setback (FIRST STREET):	N/A	N/A	N/A	
27	Rear Setback (East):	N/A	N/A	N/A	
	Subterranean/ Pedestal and tower			**Sub. / Pedestal and Tower**	
28	Front Setback (OCEAN DRIVE):	15'-0"	N/A	117'-5"	
29	Side Setback (SOUTH POINT DRIVE):	7'-6"	N/A	7'-6"	
30	Side Setback (FIRST STREET):	7'-6"	N/A	7'-6"	
31	Rear Setback (East):	50'-0" (FROM BULKHEAD)	N/A	63'-6" (FROM BULKHEAD)	
	See Survey for existing conditions				
	PARKING DISTRICT No 1	**REQUIRED PRIVATE**	**EXISTING**	**PROPOSED PRIVATE**	
28	Parking District No 7				
29	Total # of parking spaces	**109**	**72 CITY REQUIRED**	**93**	
31	Valet Drop off and pick up		ON SITE	ON SITE	
32	Loading zones and Trash collection are	2	ON SITE	2	
33	Bike Racks	2 SHORT TERM & 2 LONG TERM	N/A	20 Short Term + 25 Long Term	**-9**
34	Scooter Parking	N/A	N/A	15	**-5**
	Shower Facilities	N/A	N/A	8	**-8**
35	Drop off for transportation & Compensation Vehicles	N/A	N/A	3	**-9**
36	Is this a contributing building?		N/A		
37	Located within a Local Historic District?		N/A		
	Notes: If not applicable write N/A				



TIER 1 PARKING REQUIREMENTS & O.C.C.

BEACH AREA

AREA / USE	SQFT	SEATS	PARKING REQ.	TOTAL
BEACH AREA	N/A	1000	N/A	0
SUBTOTAL BEACH				0

UNDERSTORY & REAR YARD

AREA / USE	SQFT	SEATS	PARKING REQ.	MIN. REQ.
MALE CHANGING	1,200	N/A	N/A	0
FEMALE CHANGING	1,200	N/A	N/A	0
BOH/LOADING/TRASH/SERV.	10,537	N/A	N/A	0
EXISTING TOILETS	480	N/A	N/A	0
EXISTING TOILETS (RELOCATED)	480	N/A	N/A	0
BIKE STORAGE	1,177	N/A	N/A	0
BEACH CLUB POOL AREA 02	28,000	380	PER CODE	95
BEACH CLUB CAFÉ AREA 03	10,000	100	BEACH FRONT CAFÉ	0
SADELLES BEACH FRONT CAFÉ 04	794	60 SEATS	BEACH FRONT CAFÉ	0
CABANAs	N/A	12	1 SPACE PER 2 CABANA	6
PARKING	41,672	N/A	N/A	
SUBTOTAL UNDERSTORY	95,540			6.00

LEVEL 1

AREA	SQFT	SEATS	PARKING REQ.	MIN. REQ.
RESTAURANT - 01	5,289	240	1 SPACE / 4 SEATS	60
OUTDOOR CAFE DINING 01	6,308	110	PER CODE	28
KITCHEN - BOH 01	5,345	N/A	1 STORIES	0
MEMBER'S LOUNGE 05	6,957	N/A	1 SPACE/250 SF	28
WELLNESS & SPA LOCKER ROOMS 06	2,977	N/A	1 SPACE/250 SF	12
KID'S CLUB 07	1,052	N/A	N/A	0
BEACH CLUB OFFICE	460	N/A	N/A	0
RETAIL 08	807	N/A	1/300	3
KITCHEN - BOH	1,234	N/A	N/A	0
SUBTOTAL LEVEL 1	30,429			103
FEE IN LIEU OF PARKING				123
GRAND TOTAL:	125,969			109

PUBLIC PARKING REQUIRED	PRIVATE PARKING CODE COMPLIANCE	TOTAL PARKING		
72	93	165		

Rev. | Date | Rev. | Date

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PB25-0792/
DRB25-1146

1st SUBMITTAL

PIER PARK

ONE OCEAN DRIVE
MIAMI BEACH, FLORIDA. 33139

Owner:
Name Major Food Group. LLC
Address 4100 NE 1st Avenue. Suite 300
Address Miami FL 33137 | USA
Tel: +1(585) 414 1908
Email will@majorfood.com

INTERIOR DESIGNER:
Name Bishop Design
Address 7520 NE 4th Ct, Unit 102
Address Miami FL 33138 | USA
Tel: +1(305) 546 1122
Email info@wearebishopdesign.com

MEP ENGINEER:
Name Donolli Associates Engineering
Address 4607 North Meridian Avenue
Address Miami Beach, Florida 33140 USA
Tel: +1(305) 607 4925
Email

STRUCTURAL ENGINEER:
Name YHCE
Address 99 NW 27 Ave
Address Miami FL 33125 | USA
Tel: +1(305) 969 9423
Email yh@yhengineering.com

LANDSCAPE ARCHITECT:
Name Enea Landscape Architecture, Inc.
Address 7636 NE 4th Court, Suite 102
Address Miami FL 33138 | USA
Tel: +1(305) 576 6702
Email info.miami@enea.ch

CIVIL ENGINEER:
Name Langan
Address 1221 Brickell Avenue, Suite 1800
Address Miami FL 33131 | USA
Tel: +1(786) 264 7200
Fax: +1(786) 264 7201

ARCHITECT:
Kobi Karp Architecture and Interior Design, Inc.
571 NW 28th Street
Miami, Florida 33127 USA
Tel: +1(305) 573 1818
Fax: +1(305) 573 3766

Digitally signed by Kobi Karp
Date: 2025.10.18 12:40:23-04'00'

ONE OCEAN DRIVE
PROJECT ZONING DATA

Date	10/19/2025	Sheet No. A0.02
Scale	AS NOTED	
Project	2521	

10/18/2025



NORTH

1 PARKING EXHIBIT

SCALE: 1" = 40'-0"

Rev.	Date	Rev.	Date

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Fax: +1(305) 573 3766

Digitally signed by Kobi Karp
Date: 2025.10.18 12:40:28-04'00'

ONE OCEAN DRIVE
PARKING EXHIBIT

Date	10/19/2025	Sheet No.	A0.03
Scale	AS NOTED		
Project	2521		



NORTH

1 PROPOSED SITE PLAN
SCALE: 1" = 60'-0"

LEGAL DESCRIPTION:

OCEAN BEACH ADDN NO 4 PB 3-151 LOTS 3 THRU 5 BLK 112 AS DESCRIBED IN RIDER TO LEASE BETWEEN THE CITY OF MIAMI BEACH PENRODS RESTAURANT

Rev.	Date	Rev.	Date

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Email info@wearebishopdesign.com

MEP ENGINEER:
Name Donolli Associates Engineering
Address 4607 North Meridian Avenue
Address Miami Beach, Florida 33140 USA
Tel: +1(305) 607 4925
Email

STRUCTURAL ENGINEER:
Name YHCE
Address 99 NW 27 Ave
Address Miami FL 33125 | USA
Tel: +1(305) 969 9423
Email yh@yhengineering.com

LANDSCAPE ARCHITECT:
Name Enea Landscape Architecture, Inc.
Address 7636 NE 4th Court, Suite 102
Address Miami FL 33138 | USA
Tel: +1(305) 576 6702
Email info.miami@enea.ch

CIVIL ENGINEER:
Name Langan
Address 1221 Brickell Avenue, Suite 1800
Address Miami FL 33131 | USA
Tel: Tel: +1(786) 264 7200
Email Fax: +1(786) 264 7201

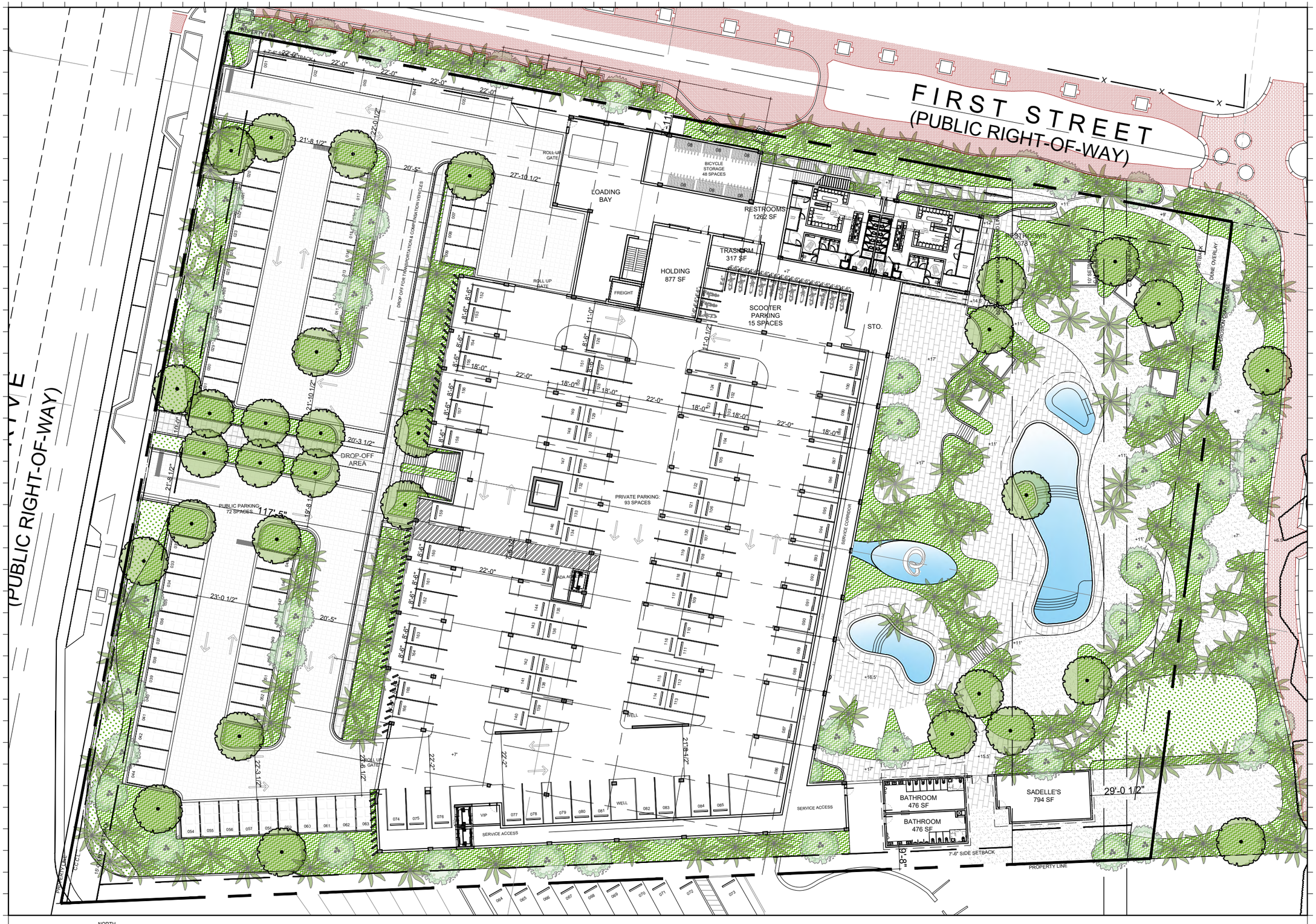
ARCHITECT:
Kobi Karp Architecture and Interior Design, Inc.
571 NW 28th Street
Miami, Florida 33127 USA
Tel: +1(305) 573 1818
Fax: +1(305) 573 3766

Digitally signed by Kobi Karp
Date: 2025.10.18 12:40:56-04'00'

KOBI KARP

PROPOSED SITE PLAN

Date	10/19/2025	Sheet No.	A2.00
Scale	AS NOTED		
Project	2521		



NORTH

1 UNERSTORY LEVEL FLOOR PLAN
SCALE: 1" = 40'-0"

Rev.	Date	Rev.	Date

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Tel: +1(305) 546 1122
Email info@wearebishopdesign.com

MEP ENGINEER:
Name Donoli Associates Engineering
Address 4607 North Meridian Avenue
Address Miami Beach, Florida 33140 USA
Tel: +1(305) 607 4925
Email

STRUCTURAL ENGINEER:
Name YHCE
Address 99 NW 27 Ave
Address Miami FL 33125 | USA
Tel: +1(305) 969 9423
Email yh@yhengineering.com

LANDSCAPE ARCHITECT:
Name Enea Landscape Architecture, Inc.
Address 7636 NE 4th Court, Suite 102
Address Miami FL 33138 | USA
Tel: +1(305) 576 6702
Email info.miami@enea.ch

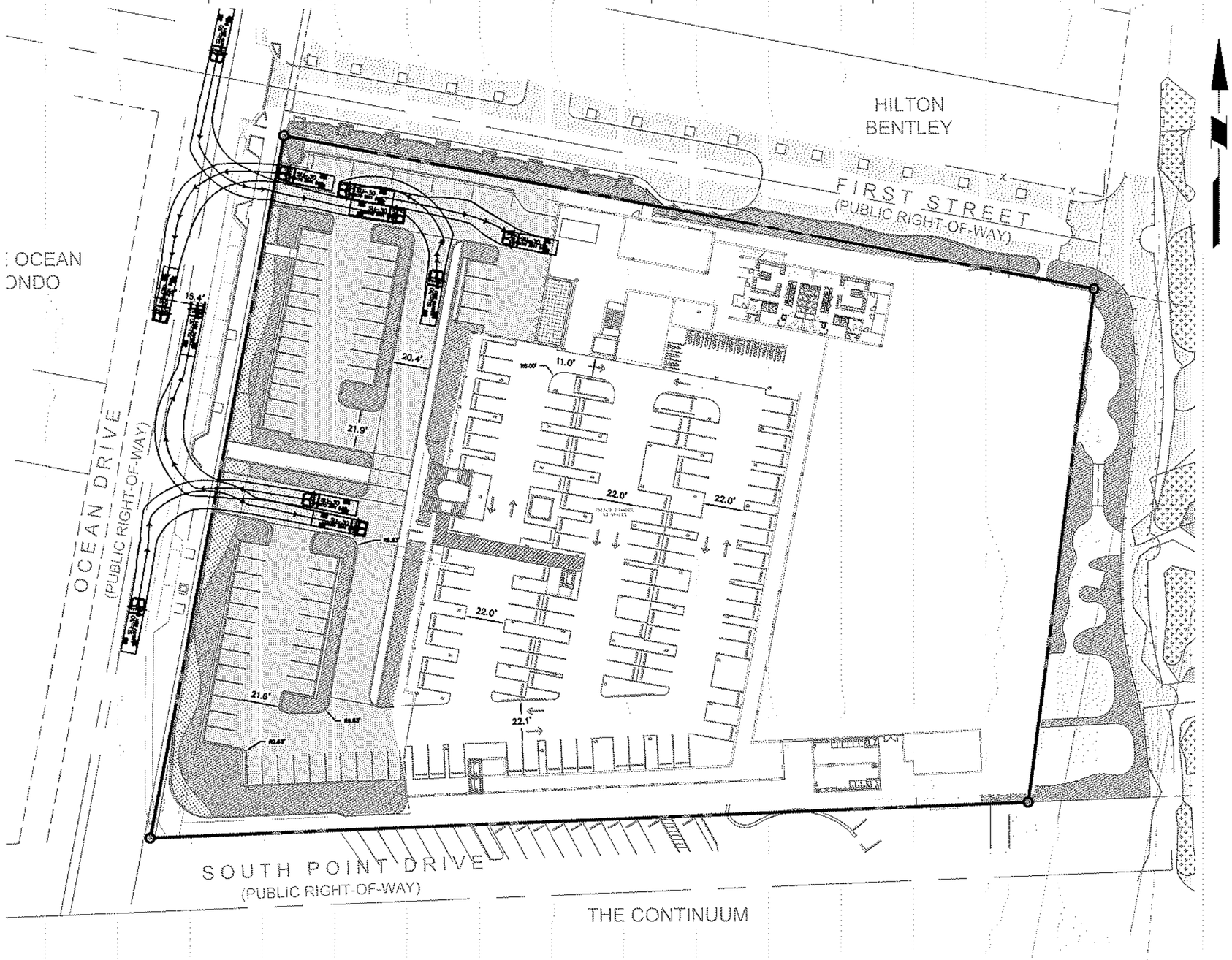
CIVIL ENGINEER:
Name Langan
Address 1221 Brickell Avenue, Suite 1800
Address Miami FL 33131 | USA
Tel: Tel: +1(786) 264 7200
Email Fax: +1(786) 264 7201

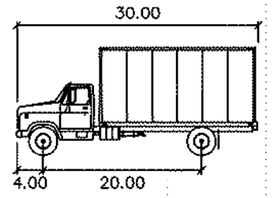
ARCHITECT:
Kobi Karp Architecture and Interior Design, Inc.
571 NW 28th Street
Miami, Florida 33127 USA
Tel: +1(305) 573 1818
Fax: +1(305) 573 3766

Digitally signed by Kobi Karp
Date: 2025.10.18 12:41:07-04'00'

UNDERSTORY LEVEL
OVERALL FLOOR PLAN

Date	10/19/2025	Sheet No.
Scale	AS NOTED	A3.00
Project	2521	





SU-30

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

60 0 20 40 60

SCALE: 1" = 60'

LANGAN

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

Project: PIER PARK
MIAMI BEACH
MIAMI-DADE COUNTY FLORIDA

Drawing Title: VEHICLE CIRCULATION PLAN

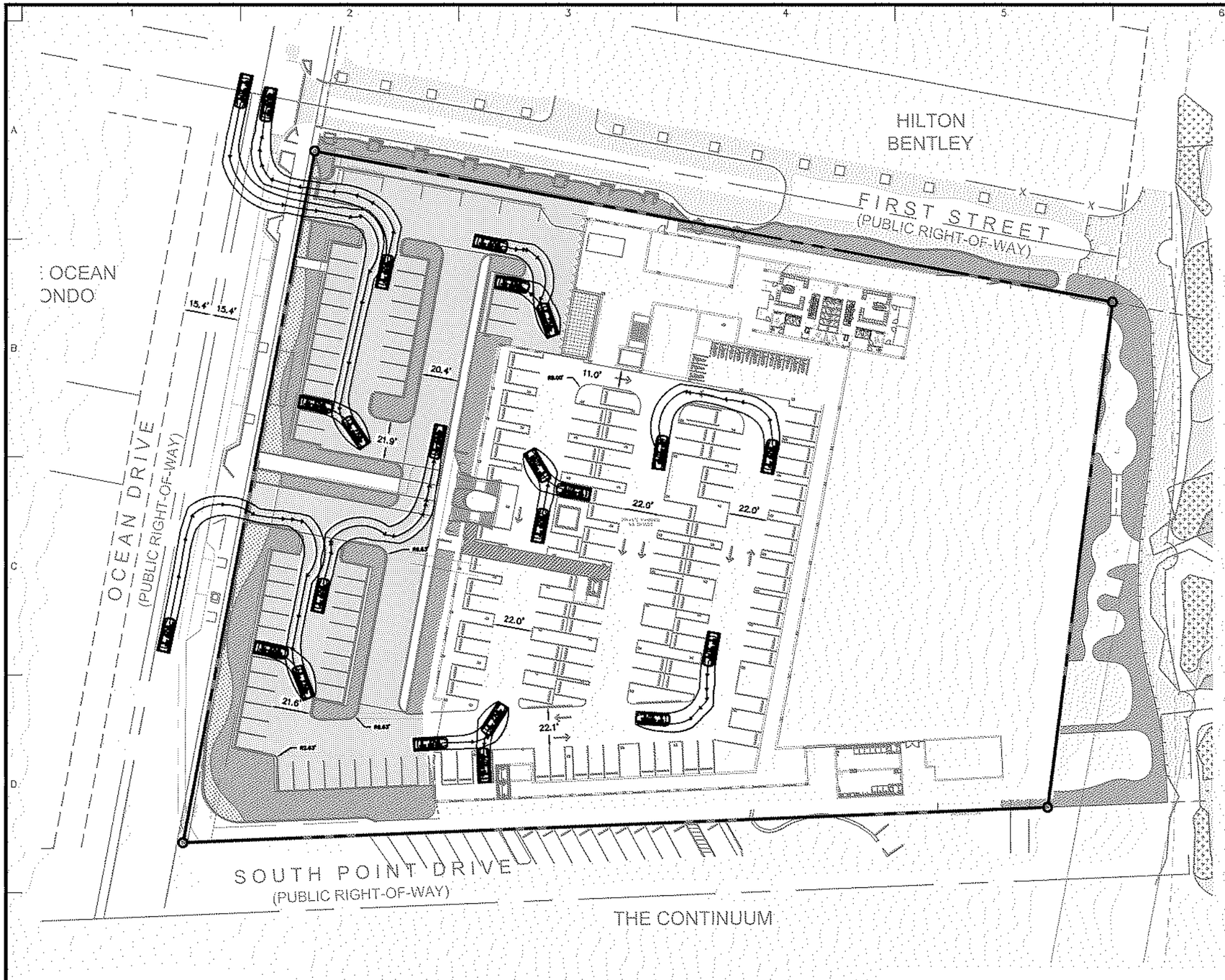
Project No. 330163501
Date 09/02/2025
Drawn By CU
Checked By MPC

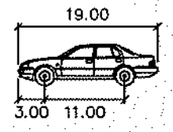
Drawing No. FIG-01
Sheet 0 of 1

Project No. 330163501

© 2025 Langan

Date: 11/4/2025 Time: 17:27 User: jpallin Style Table: Langan.stb Layout: FIG-01 Document Code: 330163501-0202-DP102-0103





P

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

60 0 20 40 60

SCALE: 1" = 60'

LANGAN

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110 East Broward Boulevard, Suite 1500
Fort Lauderdale, FL 33301
T: 954.320.2100 F: 954.320.2101 www.langan.com

Project: PIER PARK
MIAMI BEACH
MIAMI-DADE COUNTY FLORIDA

Drawing Title: VEHICLE CIRCULATION PLAN

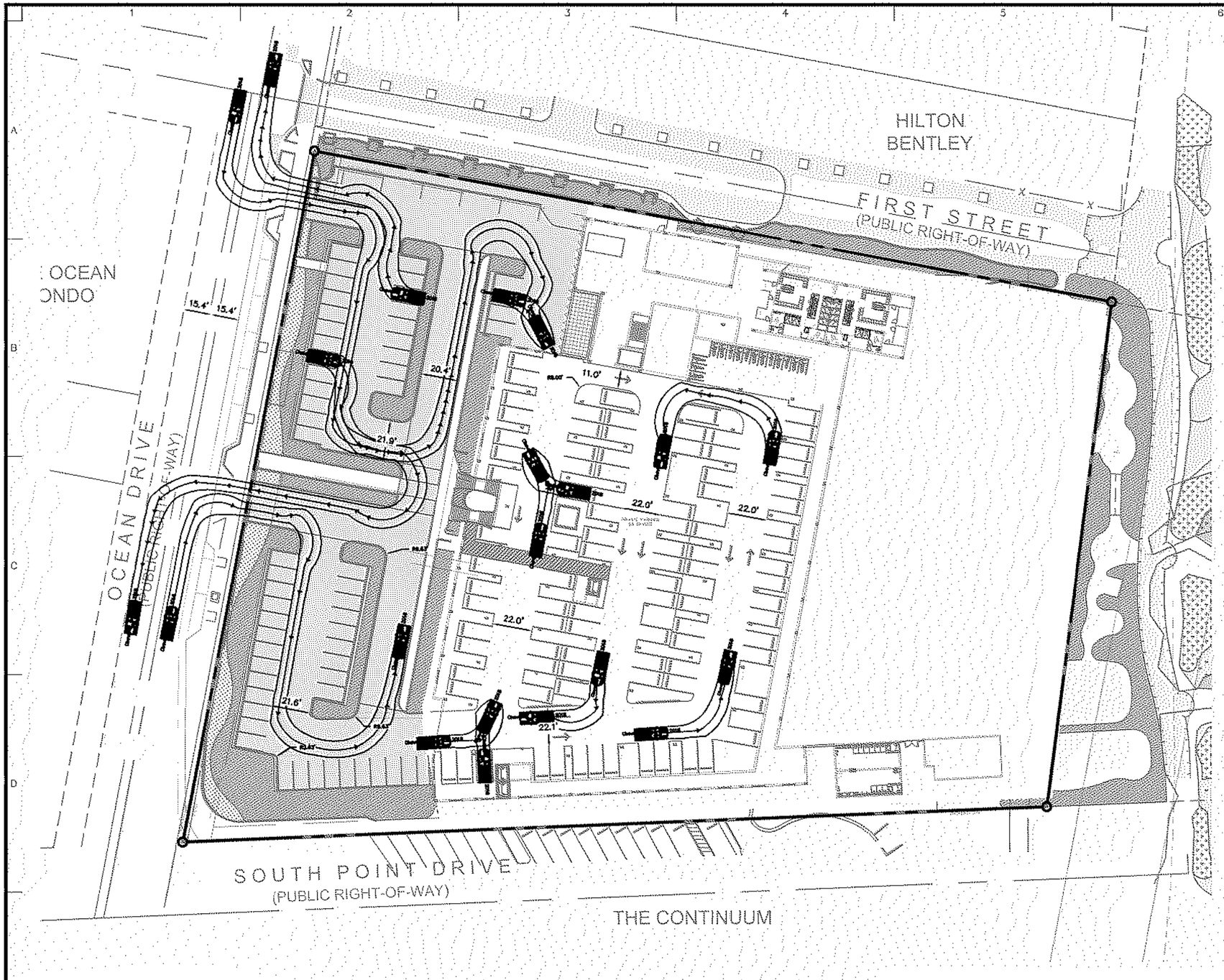
Project No. 330163501
Date 09/02/2025
Drawn By CU
Checked By MPC

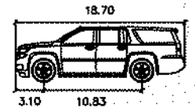
Drawing No. FIG-02
Sheet 0 of 1

Project No. 330163501

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Date: 11/4/2025 Time: 17:28 User: jpallin Style Table: Langan.stb Layout: FIG-02 Document Code: 330163501-0202-CP102-0103





Chevrolet Suburban 2018

	feet
Width	: 6.71
Track	: 6.63
Lock to Lock Time	: 6.0
Steering Angle	: 35.4

LANGAN

Project No. 330163501

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

Project
PIER PARK
MIAMI BEACH
MIAMI-DADE COUNTY FLORIDA

Drawing Title
VEHICLE CIRCULATION PLAN

Project No. 330163501
Date 09/02/2025
Drawn By CU
Checked By MPC

Drawing No.
FIG-01
Sheet 0 of 1

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Date: 11/4/2025 Time: 17:29 User: jpallin Style Table: Langan.stb Layout: FIG-03 Document Code: 330163501-0202-CP102-0103

PROPERTY APPRAISER OF MIAMI-DADE COUNTY

Summary Report

Generated On: 07/01/2025

PROPERTY INFORMATION

Folio	02-4203-012-0011
Property Address	1 OCEAN DR MIAMI BEACH, FL 33139-7321
Owner	PENROD BROTHERS INC
Mailing Address	1 OCEAN DR MIAMI BEACH, FL 33139-7321
Primary Zone	8000 COMMUNITY FACILITIES
Primary Land Use	2117 RESTAURANT OR CAFETERIA : COMMERCIAL - TOTAL VALUE
Beds / Baths /Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	
Living Area	
Adjusted Area	23,086 Sq.Ft
Lot Size	0 Sq.Ft
Year Built	1988



ASSESSMENT INFORMATION

Year	2025	2024	2023
Land Value	$0	$0	$0
Building Value	$0	$0	$0
Extra Feature Value	$0	$0	$0
Market Value	$1,145,000	$1,000,000	$1,000,000
Assessed Value	$1,100,000	$1,000,000	$1,000,000

BENEFITS INFORMATION

Benefit	Type	2025	2024	2023
Non-Homestead Cap	Assessment Reduction	$45,000		

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

SHORT LEGAL DESCRIPTION

OCEAN BEACH ADDN NO 4
PB 3-151
LOTS 3 THRU 5 BLK 112
AS DESCRIBED IN RIDER TO LEASE
BETWEEN THE CITY OF MIAMI BEACH

TAXABLE VALUE INFORMATION

Year	2025	2024	2023
COUNTY			
Exemption Value	$0	$0	$0
Taxable Value	$1,100,000	$1,000,000	$1,000,000
SCHOOL BOARD			
Exemption Value	$0	$0	$0
Taxable Value	$1,145,000	$1,000,000	$1,000,000
CITY			
Exemption Value	$0	$0	$0
Taxable Value	$1,100,000	$1,000,000	$1,000,000
REGIONAL			
Exemption Value	$0	$0	$0
Taxable Value	$1,100,000	$1,000,000	$1,000,000

SALES INFORMATION

Previous Sale	Price	OR Book-Page	Qualification Description

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

PROPERTY APPRAISER OF MIAMI-DADE COUNTY

Summary Report

Generated On: 07/01/2025

PROPERTY INFORMATION

Folio	02-4203-012-0012
Property Address	0 , FL
Owner	CITY OF MIAMI BEACH , PENRODS RESTAURANT LESSEE
Mailing Address	1700 CONVENTION CENTER DR MIAMI BEACH, FL 33139-1819
Primary Zone	8000 COMMUNITY FACILITIES
Primary Land Use	8080 VACANT GOVERNMENTAL : VACANT LAND - GOVERNMENTAL
Beds / Baths /Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0 Sq.Ft
Living Area	0 Sq.Ft
Adjusted Area	0 Sq.Ft
Lot Size	19,752 Sq.Ft
Year Built	0



ASSESSMENT INFORMATION

Year	2025	2024	2023
Land Value	$987,600	$987,600	$987,600
Building Value	$0	$0	$0
Extra Feature Value	$0	$0	$0
Market Value	$987,600	$987,600	$987,600
Assessed Value	$987,600	$987,600	$987,600

BENEFITS INFORMATION

Benefit	Type	2025	2024	2023

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

SHORT LEGAL DESCRIPTION

OCEAN BEACH ADDN NO 4

PB 3-151

LOTS 1 THRU 8 BLK 112

AS DESCRIBED IN RIDER TO LEASE

BETWEEN THE CITY OF MIAMI BEACH

TAXABLE VALUE INFORMATION

Year	2025	2024	2023
COUNTY			
Exemption Value	$0	$0	$0
Taxable Value	$987,600	$987,600	$987,600
SCHOOL BOARD			
Exemption Value	$0	$0	$0
Taxable Value	$987,600	$987,600	$987,600
CITY			
Exemption Value	$0	$0	$0
Taxable Value	$987,600	$987,600	$987,600
REGIONAL			
Exemption Value	$0	$0	$0
Taxable Value	$987,600	$987,600	$987,600

SALES INFORMATION

Previous Sale	Price	OR Book-Page	Qualification Description

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

PROPERTY APPRAISER OF MIAMI-DADE COUNTY

Summary Report

Generated On: 07/01/2025

PROPERTY INFORMATION

Folio	02-4203-012-0010
Property Address	0 , FL
Owner	CITY OF MIAMI BEACH
Mailing Address	1700 CONVENTION CENTER DR MIAMI BEACH, FL 33139-1819
Primary Zone	8000 COMMUNITY FACILITIES
Primary Land Use	7065 VACANT LAND - INSTITUTIONAL : PARKING LOT
Beds / Baths /Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0 Sq.Ft
Living Area	0 Sq.Ft
Adjusted Area	0 Sq.Ft
Lot Size	138,248 Sq.Ft
Year Built	0



ASSESSMENT INFORMATION

Year	2025	2024	2023
Land Value	$6,912,400	$6,912,400	$6,912,400
Building Value	$0	$0	$0
Extra Feature Value	$0	$0	$0
Market Value	$6,912,400	$6,912,400	$6,912,400
Assessed Value	$6,912,400	$6,912,400	$6,912,400

BENEFITS INFORMATION

Benefit	Type	2025	2024	2023
Municipal	Exemption	$6,912,400	$6,912,400	$6,912,400

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

SHORT LEGAL DESCRIPTION

OCEAN BEACH ADDN NO 4 PB 3-151

LOTS 1-2-3-4-5-6-7 & 8 BLK 112

LESS PORTION LEASED TO PENRODS

RESTAURANT

TAXABLE VALUE INFORMATION

Year	2025	2024	2023
COUNTY			
Exemption Value	$6,912,400	$6,912,400	$6,912,400
Taxable Value	$0	$0	$0
SCHOOL BOARD			
Exemption Value	$6,912,400	$6,912,400	$6,912,400
Taxable Value	$0	$0	$0
CITY			
Exemption Value	$6,912,400	$6,912,400	$6,912,400
Taxable Value	$0	$0	$0
REGIONAL			
Exemption Value	$6,912,400	$6,912,400	$6,912,400
Taxable Value	$0	$0	$0

SALES INFORMATION

Previous Sale	Price	OR Book-Page	Qualification Description

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

October 2025

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

Re: Traffic Analysis Methodology
Pier Park
Miami Beach, Florida
Langan Project No.: 330163501

Dear Mr. Webster:

Langan Engineering and Environmental Services, LLC was retained to prepare a traffic-impact analysis for the Pier Park development that is expected to be built by 2028. The site will comprise approximately 3.5-acres located east of Ocean Drive, between 1st Street and South Pointe Drive in Miami Beach, Florida. The proposed development comprises of 49,147 square feet (SF) of social club with restaurant uses and will replace an existing 23,243 SF social club with restaurant uses. **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

The proposed development is planned as a comparable use to the existing development on site, which is a social club with restaurant uses. Due to the unique characteristics of the site, and without a comparable ITE land use code, we will collect existing driveway volumes at the existing Nikki Beach establishment to estimate the proposed development's trip generation. We will collect the driveway volumes during the morning and evening peak hours on a typical Friday as well as the evening peak hours on a typical Saturday. We will separate the public parking driveway from the Nikki Beach driveway to better understand the existing public parking and social club trip generation.

Data Collection

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

- 1st Street and Ocean Drive (unsignalized)
- South Pointe Drive and Collins Avenue (unsignalized)
- South Pointe Drive and Ocean Drive (unsignalized)

Data will be collected for four hours between 7:00 and 9:00 AM and between 6:00 and 8:00 PM on a typical Friday and will be collected between 7:00 and 9:00 PM on a typical Saturday and will be adjusted to reflect peak season traffic volumes using historical data from the 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) 659 of the Miami-Dade County 2045 Transportation Model. **Table 2** below shows the cardinal distribution based on a 2028 build out year. **Attachment B** contains the TAZ data.

Table 2 - Cardinal Distribution

Year	NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW
2015	20.30%	0.00%	0.00%	0.00%	2.20%	15.40%	29.50%	32.70%
2045	19.10%	0.00%	0.00%	0.00%	2.50%	17.10%	35.50%	25.80%
2028	**19.78%**	**0.00%**	**0.00%**	**0.00%**	**2.33%**	**16.14%**	**32.10%**	**29.71%**

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 Friday morning and evening and Saturday evening peak-hour conditions using Highway Capacity Software (HCS).

The analysis scenarios will include the existing (2025), 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%tile 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.

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

Valet Operations Analysis
If valet is to be provided, we will prepare a queuing analysis for the proposed valet operation following the queueing-analysis methodology from *Transportation and Land Development* published by the ITE. The analysis will determine the number of valet-attendants needed to serve the expected traffic demand. Additionally, we will include a figure that shows the traffic circulation, and the valet parking routes to and from the vehicle drop-off/pick-up area.

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 – TAZ Data

FL Certificate of Authorization No. 6601

\\langan.com\data\FTL\data5\330163501\Project Data\Correspondence\Methodology\2025-10-07 Pier Park Traffic Methodology.docx

APPENDIX D
TRAFFIC, TAZ, CENSUS DATA & FDOT TABLES

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-001
Date: 8/15/2025

Data - Total

NS/EW Streets:	Collins Ave/Portofino Tower				Collins Ave/Portofino Tower				South Pointe Dr				South Pointe Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 AM	4	0	3	0	0	1	4	0	5	23	3	0	0	10	0	0	53
7:15 AM	4	1	0	0	3	0	2	0	4	14	3	1	0	13	1	0	46
7:30 AM	3	0	0	0	3	0	4	0	7	19	1	2	0	7	0	1	47
7:45 AM	2	0	0	0	3	0	6	0	5	16	1	3	0	11	2	0	49
8:00 AM	2	0	0	0	2	1	5	1	6	15	1	1	0	16	0	0	50
8:15 AM	2	0	0	0	2	0	5	0	6	18	3	0	0	12	2	1	51
8:30 AM	0	0	1	0	0	0	7	0	4	19	4	0	0	16	3	1	55
8:45 AM	1	1	1	0	2	0	3	0	1	24	3	3	0	14	0	0	53
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	2	5	0	15	2	36	1	38	148	19	10	0	99	8	3	404
APPROACH %'s :	72.00%	8.00%	20.00%	0.00%	27.78%	3.70%	66.67%	1.85%	17.67%	68.84%	8.84%	4.65%	0.00%	90.00%	7.27%	2.73%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	5	1	2	0	6	1	20	1	17	76	11	4	0	58	5	2	209
PEAK HR FACTOR :	0.625	0.250	0.500	0.000	0.750	0.250	0.714	0.250	0.708	0.792	0.688	0.333	0.000	0.906	0.417	0.500	0.950
	0.667				0.778				0.871				0.813				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
6:00 PM	3	2	0	0	11	1	6	0	9	42	6	6	0	34	7	1	128
6:15 PM	2	1	0	0	9	0	8	0	9	61	4	3	0	45	6	2	150
6:30 PM	2	0	2	0	6	1	7	0	9	47	6	11	0	31	9	0	131
6:45 PM	4	0	1	0	8	1	21	0	18	54	1	4	1	28	5	0	146
7:00 PM	3	0	0	0	12	2	10	0	15	61	3	6	1	59	9	0	181
7:15 PM	3	2	1	0	9	2	21	0	15	38	2	3	0	23	7	0	126
7:30 PM	2	0	0	0	13	0	25	1	14	52	4	7	2	41	5	1	167
7:45 PM	4	0	1	0	6	1	16	0	11	56	6	6	0	30	7	2	146
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	23	5	5	0	74	8	114	1	100	411	32	46	4	291	55	6	1175
APPROACH %'s :	69.70%	15.15%	15.15%	0.00%	37.56%	4.06%	57.87%	0.51%	16.98%	69.78%	5.43%	7.81%	1.12%	81.74%	15.45%	1.69%	
PEAK HR :	07:00 PM - 08:00 PM																TOTAL
PEAK HR VOL :	12	2	2	0	40	5	72	1	55	207	15	22	3	153	28	3	620
PEAK HR FACTOR :	0.750	0.250	0.500	0.000	0.769	0.625	0.720	0.250	0.917	0.848	0.625	0.786	0.375	0.648	0.778	0.375	0.856
	0.667				0.756				0.879				0.678				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-001
Date: 8/15/2025

Data - HT

NS/EW Streets:	Collins Ave/Portofino Tower				Collins Ave/Portofino Tower				South Pointe Dr				South Pointe Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	2	2	0	1	0	0	0	0	5
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	2	3	0	0	0	3	0	0	8
8:15 AM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	3	0	8	5	0	1	0	6	2	0	27
APPROACH %'s :					40.00%	0.00%	60.00%	0.00%	57.14%	35.71%	0.00%	7.14%	0.00%	75.00%	25.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	1	0	4	3	0	0	0	4	2	0	16
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.250	0.000	0.000	0.000	0.333	0.250	0.000	0.500
					0.250				0.350				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
6:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:45 PM	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	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	3	1	0	0	0	1	0	0	5
APPROACH %'s :									75.00%	25.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:00 PM - 08:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.375
									0.500				0.250				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach

Project ID: 25-570086-001
Date: 8/15/2025

Data - Pedestrians (Crosswalks)

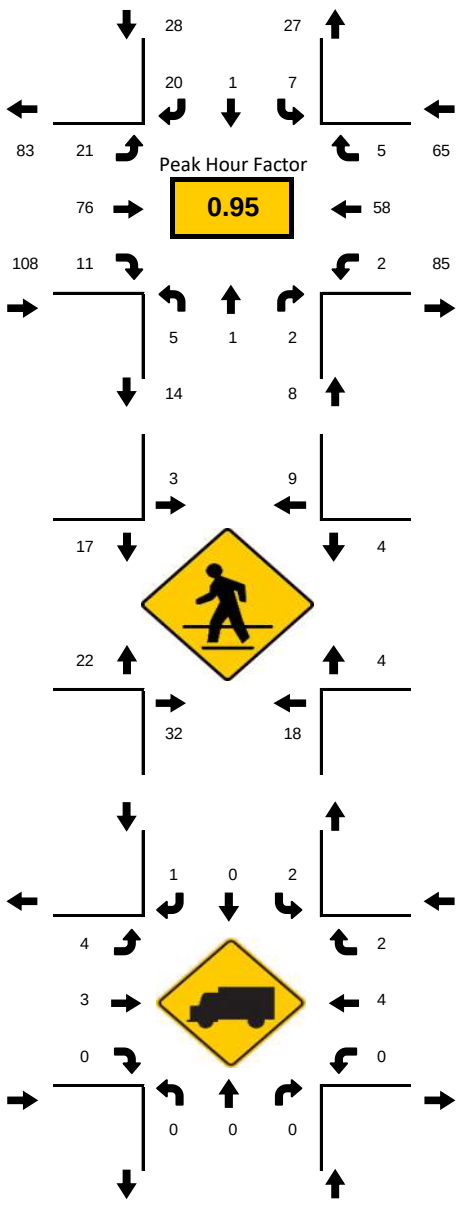
NS/EW Streets:	Collins Ave/Portofino Tower		Collins Ave/Portofino Tower		South Pointe Dr		South Pointe Dr		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	3	0	0	0	1	0	5
7:15 AM	1	1	1	0	1	0	0	0	4
7:30 AM	1	3	3	2	0	1	2	1	13
7:45 AM	5	1	5	2	0	0	2	3	18
8:00 AM	1	6	6	5	2	1	4	1	26
8:15 AM	0	0	18	1	0	1	3	11	34
8:30 AM	2	2	3	9	0	0	12	2	30
8:45 AM	0	1	5	3	2	2	3	3	19
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	10	15	44	22	5	5	27	21	149
APPROACH %'s :	40.00%	60.00%	66.67%	33.33%	50.00%	50.00%	56.25%	43.75%	
PEAK HR :	**08:00 AM - 09:00 AM**		11:00 AM						TOTAL
PEAK HR VOL :	3	9	32	18	4	4	22	17	109
PEAK HR FACTOR :	0.375	0.375	0.444	0.500	0.500	0.500	0.458	0.386	0.801
	0.429		0.658		0.500		0.696		

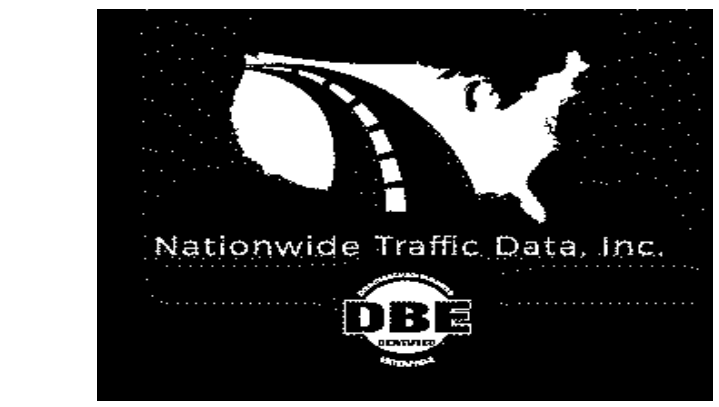
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 PM	1	8	8	21	0	1	8	4	51
6:15 PM	2	8	13	8	1	4	2	2	40
6:30 PM	0	2	8	14	0	0	8	6	38
6:45 PM	8	7	12	9	5	5	8	9	63
7:00 PM	6	2	18	6	10	0	0	6	48
7:15 PM	6	9	10	12	0	3	6	10	56
7:30 PM	5	5	16	12	0	1	11	15	65
7:45 PM	2	4	8	9	0	6	8	3	40
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	30	45	93	91	16	20	51	55	401
APPROACH %'s :	40.00%	60.00%	50.54%	49.46%	44.44%	55.56%	48.11%	51.89%	
PEAK HR :	**07:00 PM - 08:00 PM**		7:00 PM						TOTAL
PEAK HR VOL :	19	20	52	39	10	10	25	34	209
PEAK HR FACTOR :	0.792	0.556	0.722	0.813	0.250	0.417	0.568	0.567	0.804
	0.650		0.813		0.500		0.567		

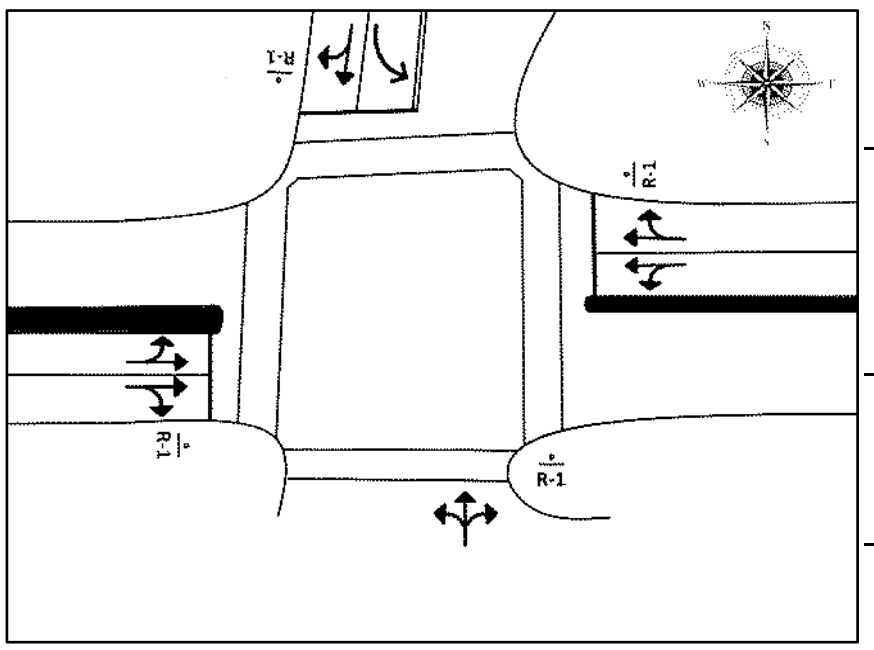
LOCATION: Collins Ave/Portofino Tower & South Pointe Dr
CITY/STATE: Miami Beach, FL

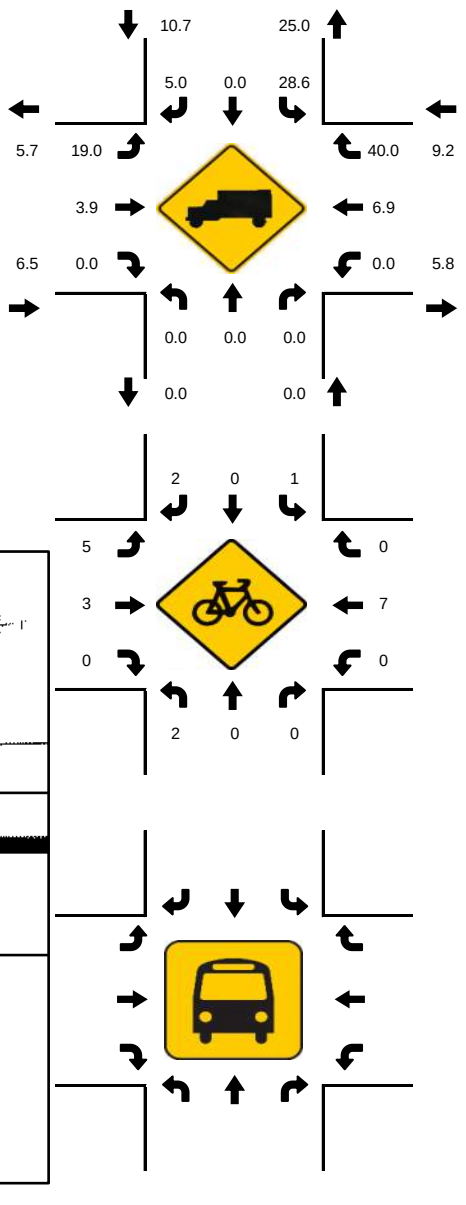
PROJECT ID: 25-570086-001
DATE: Fri, Aug 15, 2025

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







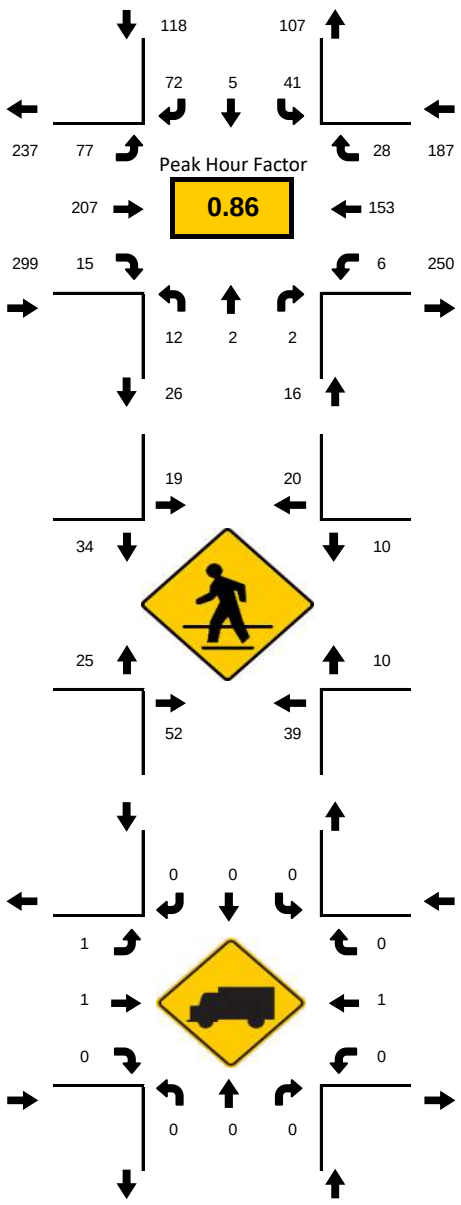


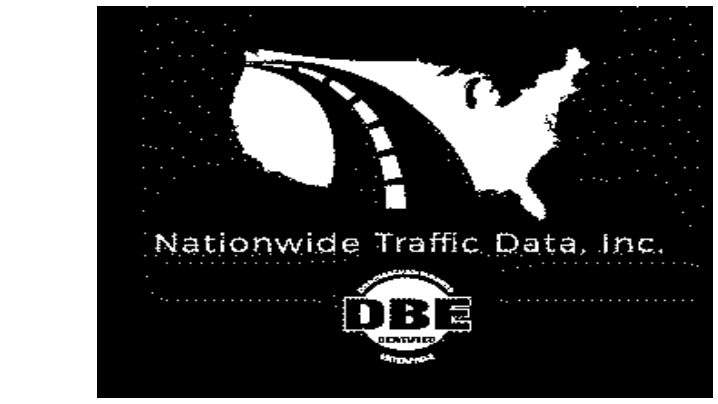
15-Min Count Period Beginning At	Collins Ave/Portofino Tower Northbound					Collins Ave/Portofino Tower Southbound					South Pointe Dr Eastbound					South Pointe Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	4	0	3	0		0	1	4	0		5	23	3	0		0	10	0	0		53	195
7:15 AM	4	1	0	0		3	0	2	0		4	14	3	1		0	13	1	0		46	192
7:30 AM	3	0	0	0		3	0	4	0		7	19	1	2		0	7	0	1		47	197
7:45 AM	2	0	0	0		3	0	6	0		5	16	1	3		0	11	2	0		49	205
8:00 AM	2	0	0	0		2	1	5	1		6	15	1	1		0	16	0	0		50	209
8:15 AM	2	0	0	0		2	0	5	0		6	18	3	0		0	12	2	1		51	159
8:30 AM	0	0	1	0		0	0	7	0		4	19	4	0		0	16	3	1		55	108
8:45 AM	1	1	1	0		2	0	3	0		1	24	3	3		0	14	0	0		53	53
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	4	4	0		8	4	28	4		24	96	16	12		0	64	12	4		**288**	
Heavy Trucks	0	0	0	0		8	0	4	0		8	12	0	0		0	12	8	0		**52**	
Pedestrians		76					28					56					16				**176**	
Bicycles	4	0	0	0		4	0	4	0		8	8	0	4		0	12	0	0		**40**	
Buses																						
Stopped Buses																						

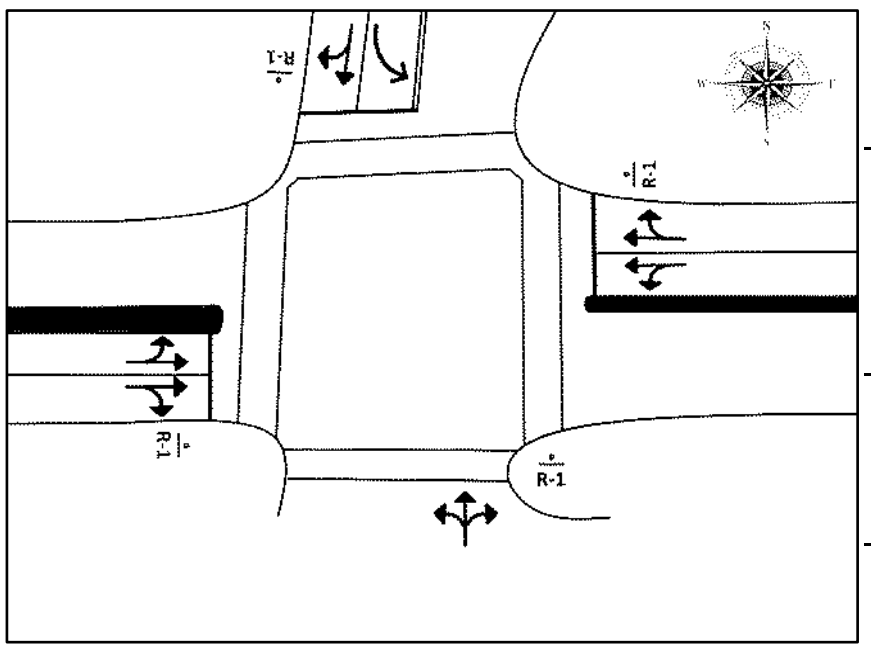
LOCATION: Collins Ave/Portofino Tower & South Pointe Dr
CITY/STATE: Miami Beach, FL

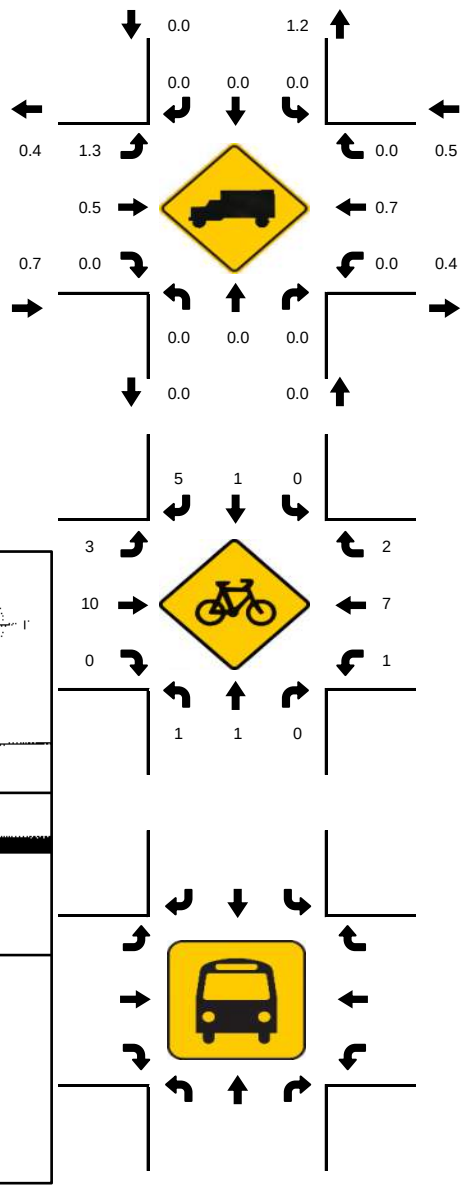
PROJECT ID: 25-570086-001
DATE: Fri, Aug 15, 2025

Peak-Hour: 07:00 PM - 08:00 PM
Peak 15-Minute: 07:00 PM - 07:15 PM









15-Min Count Period Beginning At	Collins Ave/Portofino Tower Northbound					Collins Ave/Portofino Tower Southbound					South Pointe Dr Eastbound					South Pointe Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
6:00 PM	3	2	0	0		11	1	6	0		9	42	6	6		0	34	7	1		128	555
6:15 PM	2	1	0	0		9	0	8	0		9	61	4	3		0	45	6	2		150	608
6:30 PM	2	0	2	0		6	1	7	0		9	47	6	11		0	31	9	0		131	584
6:45 PM	4	0	1	0		8	1	21	0		18	54	1	4		1	28	5	0		146	620
7:00 PM	3	0	0	0		12	2	10	0		15	61	3	6		1	59	9	0		181	620
7:15 PM	3	2	1	0		9	2	21	0		15	38	2	3		0	23	7	0		126	439
7:30 PM	2	0	0	0		13	0	25	1		14	52	4	7		2	41	5	1		167	313
7:45 PM	4	0	1	0		6	1	16	0		11	56	6	6		0	30	7	2		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	16	8	4	0		52	8	100	4		60	244	24	28		8	236	36	8		**836**	
Heavy Trucks	0	0	0	0		0	0	0	0		4	4	0	0		0	4	0	0		**12**	
Pedestrians		112					60					104					40				**316**	
Bicycles	4	4	0	0		0	4	8	0		8	16	0	0		4	16	4	0		**68**	
Buses																						
Stopped Buses																						

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach
Control: 2-Way Stop(EB/WB)

Project ID: 25-570086-002
Date: 8/15/2025

Data - Total

NS/EW Streets:	Ocean Dr				Ocean Dr				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	2	6	1	0	5	2	4	0	1	7	2	0	1	1	1	0	33
7:15 AM	0	5	0	0	0	8	0	0	1	3	2	0	0	2	0	0	21
7:30 AM	3	7	5	0	2	3	2	0	1	0	2	0	0	3	1	0	29
7:45 AM	1	8	1	0	1	9	3	0	6	6	2	0	0	0	2	0	39
8:00 AM	5	13	0	0	4	4	7	0	4	7	4	0	0	1	1	0	50
8:15 AM	5	10	0	0	1	8	2	0	8	5	0	0	1	2	1	0	43
8:30 AM	4	10	0	0	1	4	5	0	1	4	4	0	0	0	2	0	35
8:45 AM	6	2	0	0	1	2	4	0	2	3	7	0	1	1	0	0	29
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	26	61	7	0	15	40	27	0	24	35	23	0	3	10	8	0	279
APPROACH %'s :	27.66%	64.89%	7.45%	0.00%	18.29%	48.78%	32.93%	0.00%	29.27%	42.68%	28.05%	0.00%	14.29%	47.62%	38.10%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	15	41	1	0	7	25	17	0	19	22	10	0	1	3	6	0	167
PEAK HR FACTOR :	0.750	0.788	0.250	0.000	0.438	0.694	0.607	0.000	0.594	0.786	0.625	0.000	0.250	0.375	0.750	0.000	0.835
	0.792				0.817				0.850				0.625				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
6:00 PM	5	35	3	0	4	18	8	0	6	2	10	0	2	8	2	0	103
6:15 PM	16	33	1	0	3	14	3	0	4	1	10	2	4	8	1	0	100
6:30 PM	8	43	0	0	1	19	7	0	4	3	9	0	1	8	4	0	107
6:45 PM	7	42	2	0	3	16	8	0	7	1	16	0	2	4	0	0	108
7:00 PM	20	46	0	0	3	23	10	0	9	4	9	0	2	7	4	0	137
7:15 PM	10	39	2	0	5	15	13	0	7	3	8	0	1	2	4	0	109
7:30 PM	15	40	5	0	6	30	9	0	6	6	10	0	0	8	5	0	140
7:45 PM	14	46	0	0	6	14	6	0	10	3	6	0	2	3	0	0	110
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	95	324	13	0	31	149	64	0	53	23	78	2	14	48	20	0	914
APPROACH %'s :	21.99%	75.00%	3.01%	0.00%	12.70%	61.07%	26.23%	0.00%	33.97%	14.74%	50.00%	1.28%	17.07%	58.54%	24.39%	0.00%	
PEAK HR :	07:00 PM - 08:00 PM																TOTAL
PEAK HR VOL :	59	171	7	0	20	82	38	0	32	16	33	0	5	20	13	0	496
PEAK HR FACTOR :	0.738	0.929	0.350	0.000	0.833	0.683	0.731	0.000	0.800	0.667	0.825	0.000	0.625	0.625	0.650	0.000	0.886
	0.898				0.778				0.920				0.731				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach
Control: 2-Way Stop(EB/WB)

Project ID: 25-570086-002
Date: 8/15/2025

Data - HT

NS/EW Streets:	Ocean Dr				Ocean Dr				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
7:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
8:00 AM	1	1	0	0	1	1	1	0	2	0	1	0	0	0	0	0	8
8:15 AM	1	2	0	0	0	1	1	0	2	0	0	0	0	0	0	0	7
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3
8:45 AM	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	3	0	0	1	7	4	0	6	1	2	0	0	0	2	0	29
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	8.33%	58.33%	33.33%	0.00%	66.67%	11.11%	22.22%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	2	3	0	0	1	3	3	0	5	1	1	0	0	0	1	0	20
PEAK HR FACTOR :	0.500	0.375	0.000	0.000	0.250	0.750	0.750	0.000	0.625	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.625
	0.417				0.583				0.583				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
6:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 PM	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	TOTAL
TOTAL VOLUMES :	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	4
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:00 PM - 08:00 PM																TOTAL
PEAK HR VOL :	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.500																

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach

Project ID: 25-570086-002
Date: 8/15/2025

Data - Pedestrians (Crosswalks)

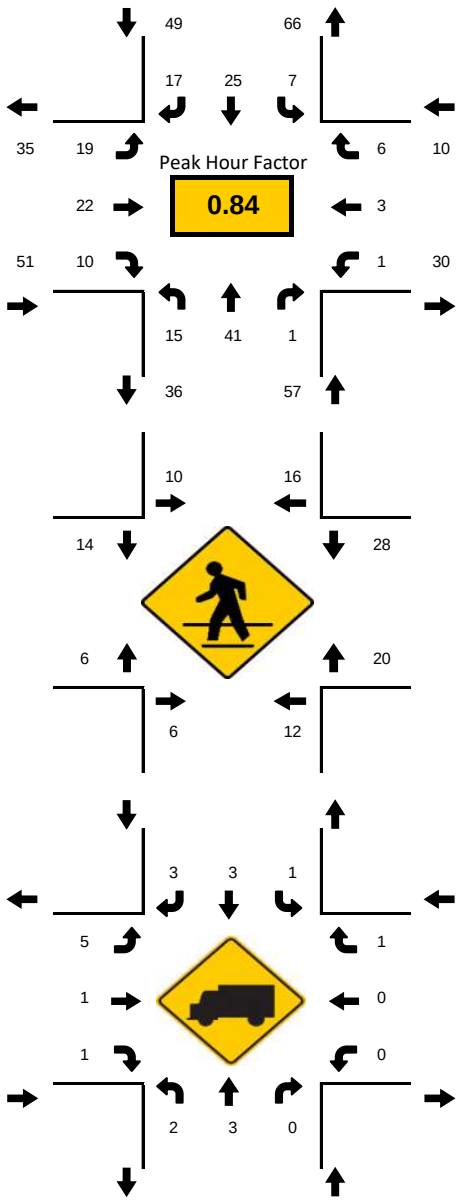
NS/EW Streets:	Ocean Dr		Ocean Dr		1st St		1st St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	2	0	3	5	3	0	0	14
7:15 AM	2	1	0	0	7	2	1	2	15
7:30 AM	4	1	2	4	5	3	0	1	20
7:45 AM	3	0	0	5	8	8	1	7	32
8:00 AM	1	7	5	1	4	2	2	5	27
8:15 AM	6	5	0	0	6	9	3	1	30
8:30 AM	0	4	1	6	2	9	0	1	23
8:45 AM	5	7	0	2	10	12	0	2	38
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	22	27	8	21	47	48	7	19	199
APPROACH %'s :	44.90%	55.10%	27.59%	72.41%	49.47%	50.53%	26.92%	73.08%	
PEAK HR :	07:45 AM - 08:45 AM		7:45 AM		7:45 AM		7:45 AM		TOTAL
PEAK HR VOL :	10	16	6	12	20	28	6	14	112
PEAK HR FACTOR :	0.417	0.571	0.300	0.500	0.625	0.778	0.500	0.500	0.875
	0.591		0.643		0.750		0.625		

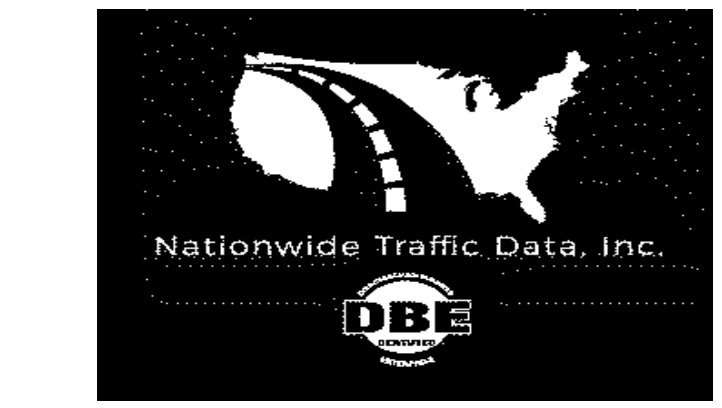
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 PM	12	6	3	13	25	14	15	15	103
6:15 PM	11	4	9	8	14	9	12	12	79
6:30 PM	8	3	17	2	12	11	4	13	70
6:45 PM	8	9	9	2	24	18	5	15	90
7:00 PM	15	10	2	0	34	9	3	11	84
7:15 PM	11	16	8	6	35	8	9	8	101
7:30 PM	15	18	6	7	22	11	12	12	103
7:45 PM	24	20	9	24	47	22	17	10	173
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	104	86	63	62	213	102	77	96	803
APPROACH %'s :	54.74%	45.26%	50.40%	49.60%	67.62%	32.38%	44.51%	55.49%	
PEAK HR :	07:00 PM - 08:00 PM		7:00 PM		7:00 PM		7:00 PM		TOTAL
PEAK HR VOL :	65	64	25	37	138	50	41	41	461
PEAK HR FACTOR :	0.677	0.800	0.694	0.385	0.734	0.568	0.603	0.854	0.666
	0.733		0.470		0.681		0.759		

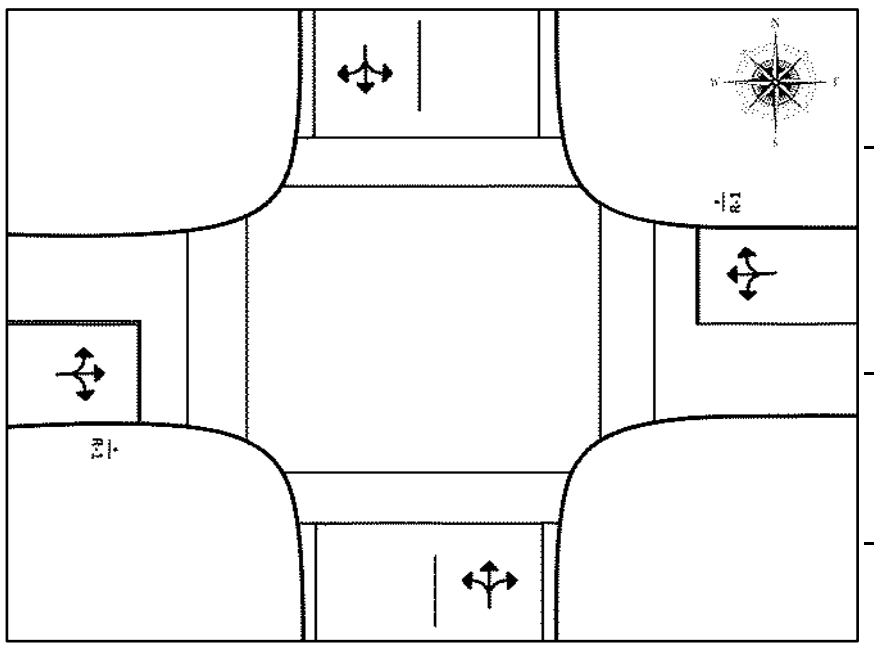
LOCATION: Ocean Dr & 1st St
CITY/STATE: Miami Beach, FL

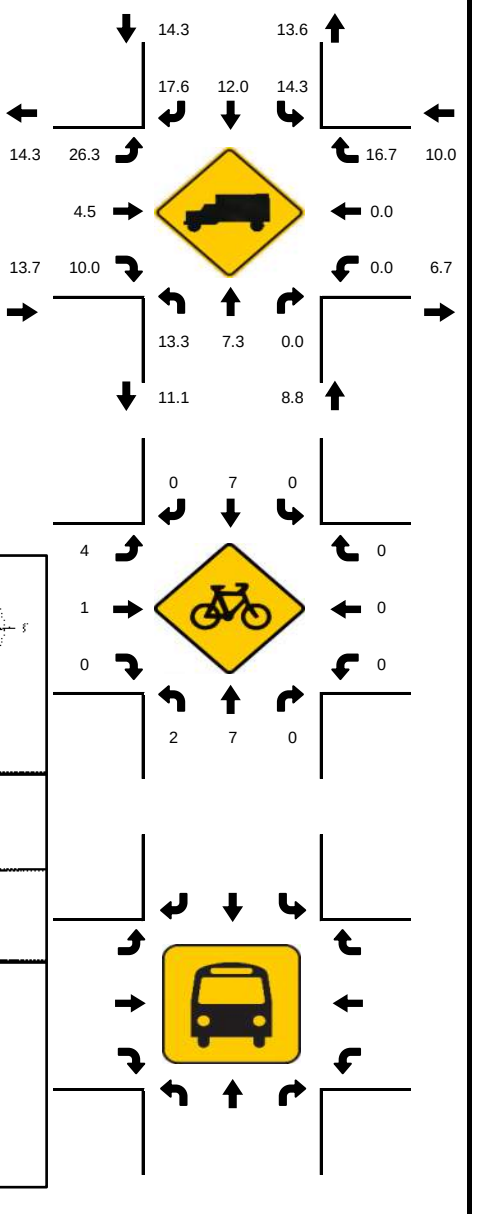
PROJECT ID: 25-570086-002
DATE: Fri, Aug 15, 2025

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







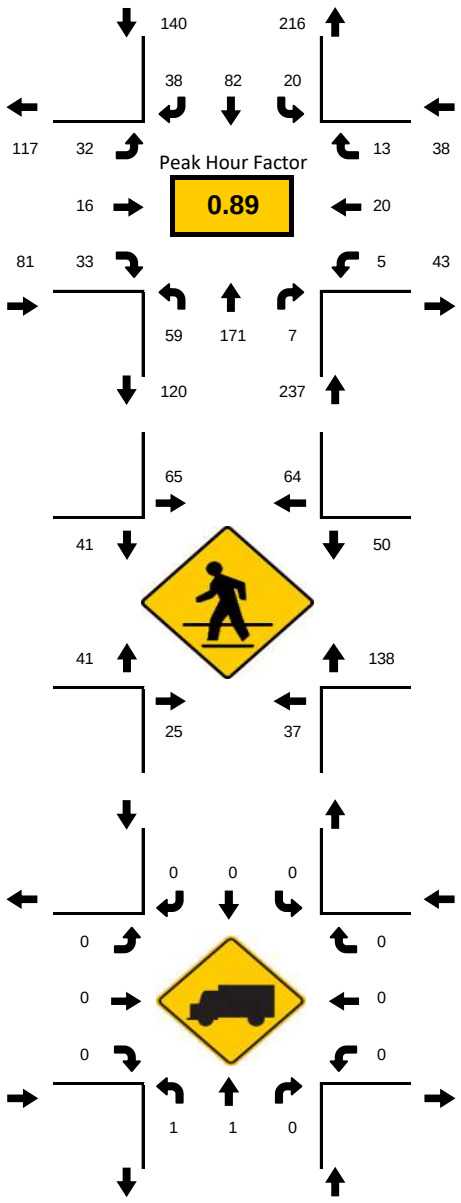


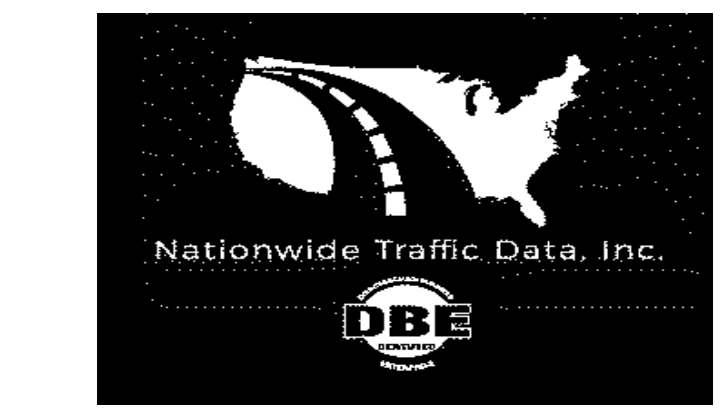
15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					1st St Eastbound					1st St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	2	6	1	0		5	2	4	0		1	7	2	0		1	1	1	0		33	122
7:15 AM	0	5	0	0		0	8	0	0		1	3	2	0		0	2	0	0		21	139
7:30 AM	3	7	5	0		2	3	2	0		1	0	2	0		0	3	1	0		29	161
7:45 AM	1	8	1	0		1	9	3	0		6	6	2	0		0	0	2	0		39	167
8:00 AM	5	13	0	0		4	4	7	0		4	7	4	0		0	1	1	0		50	157
8:15 AM	5	10	0	0		1	8	2	0		8	5	0	0		1	2	1	0		43	107
8:30 AM	4	10	0	0		1	4	5	0		1	4	4	0		0	0	2	0		35	64
8:45 AM	6	2	0	0		1	2	4	0		2	3	7	0		1	1	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	20	52	4	0		16	36	28	0		32	28	16	0		4	8	8	0		**252**	
Heavy Trucks	4	8	0	0		4	4	4	0		8	4	4	0		0	0	4	0		**44**	
Pedestrians		28					44					32					64				**168**	
Bicycles	4	20	0	0		0	20	0	0		8	4	0	0		0	0	0	0		**56**	
Buses																						
Stopped Buses																						

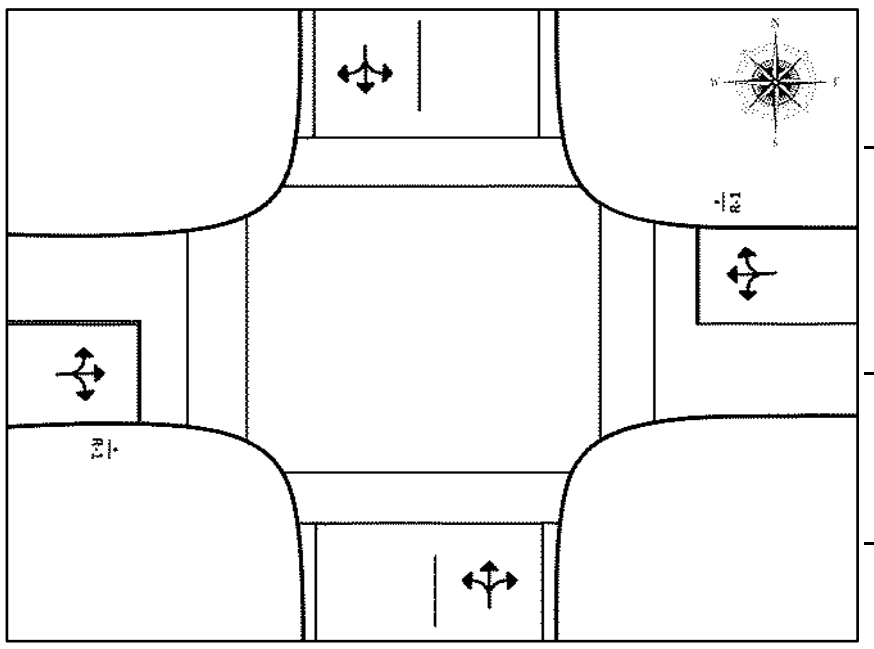
LOCATION: Ocean Dr & 1st St
CITY/STATE: Miami Beach, FL

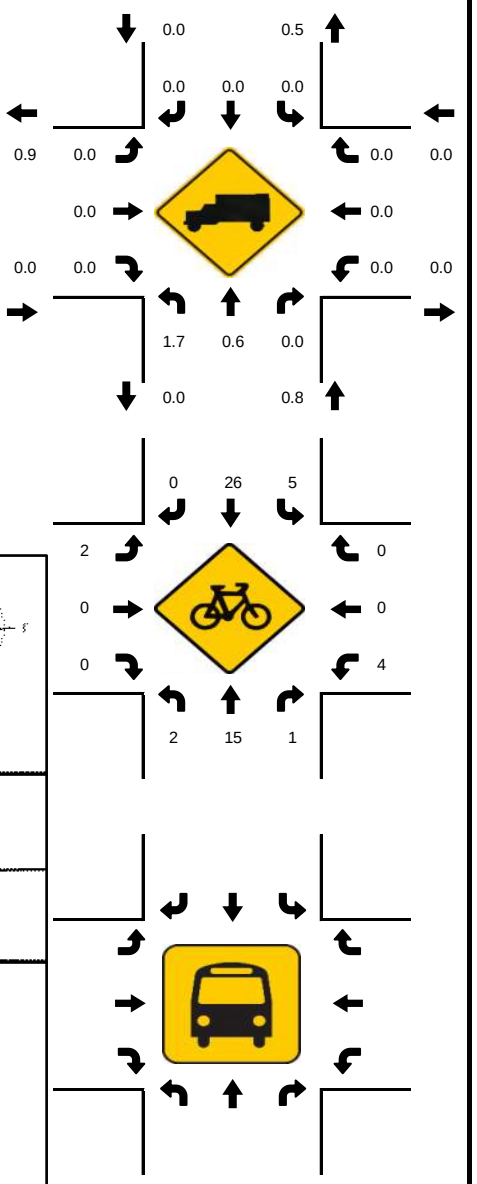
PROJECT ID: 25-570086-002
DATE: Fri, Aug 15, 2025

Peak-Hour: 07:00 PM - 08:00 PM
Peak 15-Minute: 07:30 PM - 07:45 PM









15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					1st St Eastbound					1st 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*		
6:00 PM	5	35	3	0		4	18	8	0		6	2	10	0		2	8	2	0		103	418
6:15 PM	16	33	1	0		3	14	3	0		4	1	10	2		4	8	1	0		100	452
6:30 PM	8	43	0	0		1	19	7	0		4	3	9	0		1	8	4	0		107	461
6:45 PM	7	42	2	0		3	16	8	0		7	1	16	0		2	4	0	0		108	494
7:00 PM	20	46	0	0		3	23	10	0		9	4	9	0		2	7	4	0		137	496
7:15 PM	10	39	2	0		5	15	13	0		7	3	8	0		1	2	4	0		109	359
7:30 PM	15	40	5	0		6	30	9	0		6	6	10	0		0	8	5	0		140	250
7:45 PM	14	46	0	0		6	14	6	0		10	3	6	0		2	3	0	0		110	110
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	80	184	20	0		24	120	52	0		40	24	40	0		8	32	20	0		**644**	
Heavy Trucks	4	4	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**8**	
Pedestrians		132					176					108					276				**692**	
Bicycles	4	20	4	0		20	40	0	0		8	0	0	0		8	0	0	0		**104**	
Buses																						
Stopped Buses																						

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-003
Date: 8/15/2025

Data - Total

NS/EW Streets:	Ocean Dr				Ocean Dr				South Pointe Dr				South Pointe Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 AM	3	1	1	0	1	1	4	0	10	7	8	0	0	2	3	0	41
7:15 AM	5	0	0	0	1	3	4	0	10	4	3	0	0	4	3	0	37
7:30 AM	6	2	0	0	1	1	1	0	9	5	5	1	0	1	3	1	36
7:45 AM	6	0	1	0	5	2	2	1	4	7	7	1	0	5	9	1	51
8:00 AM	7	1	1	0	1	1	0	0	8	3	5	1	0	9	1	0	38
8:15 AM	3	0	0	0	2	1	9	2	6	6	6	1	1	3	6	0	46
8:30 AM	8	0	0	0	3	0	4	0	9	5	7	1	0	7	3	0	47
8:45 AM	8	0	0	0	0	0	4	0	2	4	20	0	1	1	1	0	41
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	46	4	3	0	14	9	28	3	58	41	61	5	2	32	29	2	337
APPROACH %'s :	86.79%	7.55%	5.66%	0.00%	25.93%	16.67%	51.85%	5.56%	35.15%	24.85%	36.97%	3.03%	3.08%	49.23%	44.62%	3.08%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	24	1	2	0	11	4	15	3	27	21	25	4	1	24	19	1	182
PEAK HR FACTOR :	0.750	0.250	0.500	0.000	0.550	0.500	0.417	0.375	0.750	0.750	0.893	1.000	0.250	0.667	0.528	0.250	0.892
	0.750				0.589				0.875				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
6:00 PM	11	3	1	0	9	1	19	0	19	16	14	2	0	11	19	3	128
6:15 PM	8	0	3	0	8	2	24	1	26	22	16	6	0	14	19	0	149
6:30 PM	11	3	1	0	7	3	19	3	26	28	9	2	0	15	20	0	147
6:45 PM	1	5	1	0	10	3	21	2	28	21	8	2	0	12	16	1	131
7:00 PM	17	3	0	0	13	4	27	1	39	24	12	2	0	21	17	0	180
7:15 PM	4	4	1	0	8	1	12	0	22	17	4	4	0	9	19	0	105
7:30 PM	12	1	1	0	11	3	27	2	36	19	7	3	0	5	21	2	150
7:45 PM	4	1	0	0	5	2	12	3	33	23	5	6	0	16	19	2	131
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	68	20	8	0	71	19	161	12	229	170	75	27	0	103	150	8	1121
APPROACH %'s :	70.83%	20.83%	8.33%	0.00%	27.00%	7.22%	61.22%	4.56%	45.71%	33.93%	14.97%	5.39%	0.00%	39.46%	57.47%	3.07%	
PEAK HR :	06:15 PM - 07:15 PM																TOTAL
PEAK HR VOL :	37	11	5	0	38	12	91	7	119	95	45	12	0	62	72	1	607
PEAK HR FACTOR :	0.544	0.550	0.417	0.000	0.731	0.750	0.843	0.583	0.763	0.848	0.703	0.500	0.000	0.738	0.900	0.250	0.843
	0.663				0.822				0.880				0.888				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-003
Date: 8/15/2025

Data - HT

NS/EW Streets:	Ocean Dr				Ocean Dr				South Pointe Dr				South Pointe Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	0	2	0	0	1	0	2	0	0	6
8:15 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	1	0	4
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	4	1	4	0	1	2	0	3	1	0	18
APPROACH %'s :					28.57%	0.00%	57.14%	14.29%	57.14%	0.00%	14.29%	28.57%	0.00%	75.00%	25.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	1	1	4	0	0	1	0	3	1	0	13
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.250	0.250	0.500	0.000	0.000	0.250	0.000	0.375	0.250	0.000	0.542
						1.000				0.417				0.500			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 PM	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	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	06:15 PM - 07:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
							0.250										

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach

Project ID: 25-570086-003
Date: 8/15/2025

Data - Pedestrians (Crosswalks)

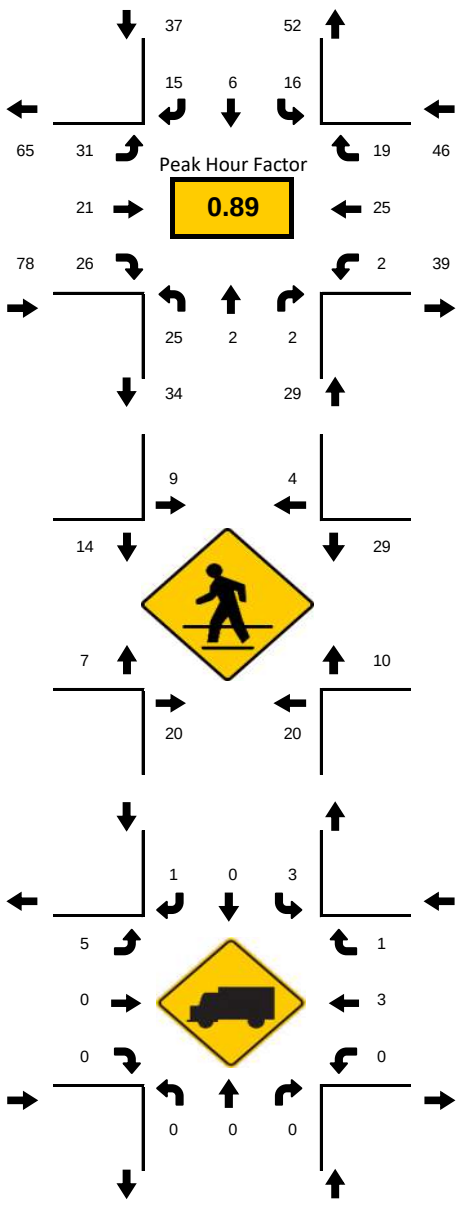
NS/EW Streets:	Ocean Dr		Ocean Dr		South Pointe Dr		South Pointe Dr		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	5	6	0	1	3	0	2	17
7:15 AM	0	2	2	1	5	4	0	1	15
7:30 AM	2	4	3	2	4	0	0	0	15
7:45 AM	6	2	4	6	2	7	1	8	36
8:00 AM	2	0	6	2	2	6	4	2	24
8:15 AM	1	0	6	3	3	9	2	4	28
8:30 AM	0	2	4	9	3	7	0	0	25
8:45 AM	1	4	2	0	7	14	0	1	29
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	12	19	33	23	27	50	7	18	189
APPROACH %'s :	38.71%	61.29%	58.93%	41.07%	35.06%	64.94%	28.00%	72.00%	
PEAK HR :	07:45 AM - 08:45 AM		7:45 AM - 8:45 AM		7:45 AM - 8:45 AM		7:45 AM - 8:45 AM		TOTAL
PEAK HR VOL :	9	4	20	20	10	29	7	14	113
PEAK HR FACTOR :	0.375	0.500	0.833	0.556	0.833	0.806	0.438	0.438	0.785
	0.406		0.769		0.813		0.583		

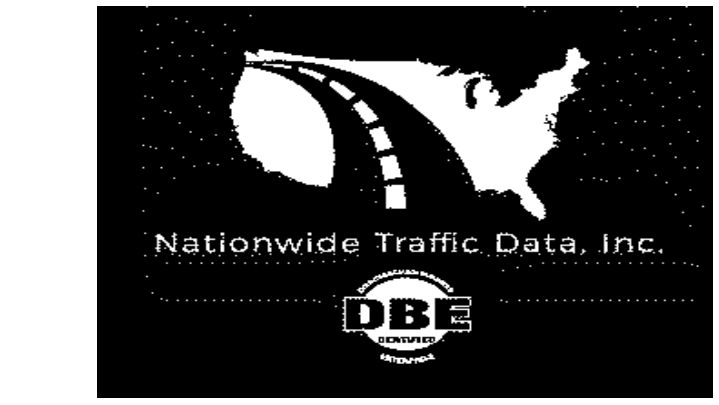
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 PM	0	2	8	23	24	12	3	10	82
6:15 PM	4	8	11	12	9	8	9	2	63
6:30 PM	0	0	8	11	11	9	3	7	49
6:45 PM	0	2	9	8	17	7	7	13	63
7:00 PM	8	1	12	15	9	10	3	8	66
7:15 PM	9	9	14	14	20	9	7	1	83
7:30 PM	5	10	12	10	14	11	7	14	83
7:45 PM	4	3	5	13	25	27	16	5	98
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	30	35	79	106	129	93	55	60	587
APPROACH %'s :	46.15%	53.85%	42.70%	57.30%	58.11%	41.89%	47.83%	52.17%	
PEAK HR :	06:15 PM - 07:15 PM		6:15 PM - 7:15 PM		6:15 PM - 7:15 PM		6:15 PM - 7:15 PM		TOTAL
PEAK HR VOL :	12	11	40	46	46	34	22	30	241
PEAK HR FACTOR :	0.375	0.344	0.833	0.767	0.676	0.850	0.611	0.577	0.913
	0.479		0.796		0.833		0.650		

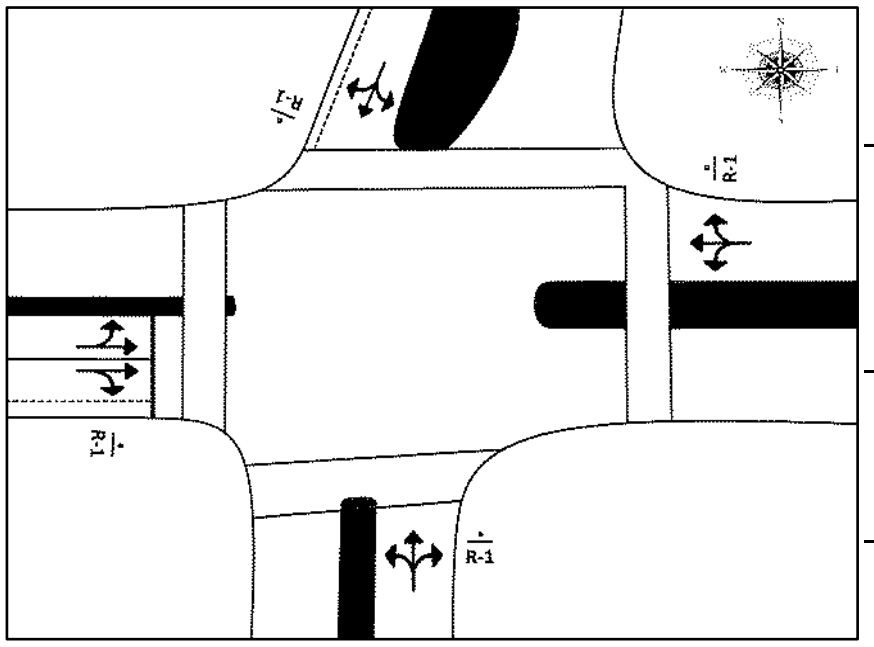
LOCATION: Ocean Dr & South Pointe Dr
CITY/STATE: Miami Beach, FL

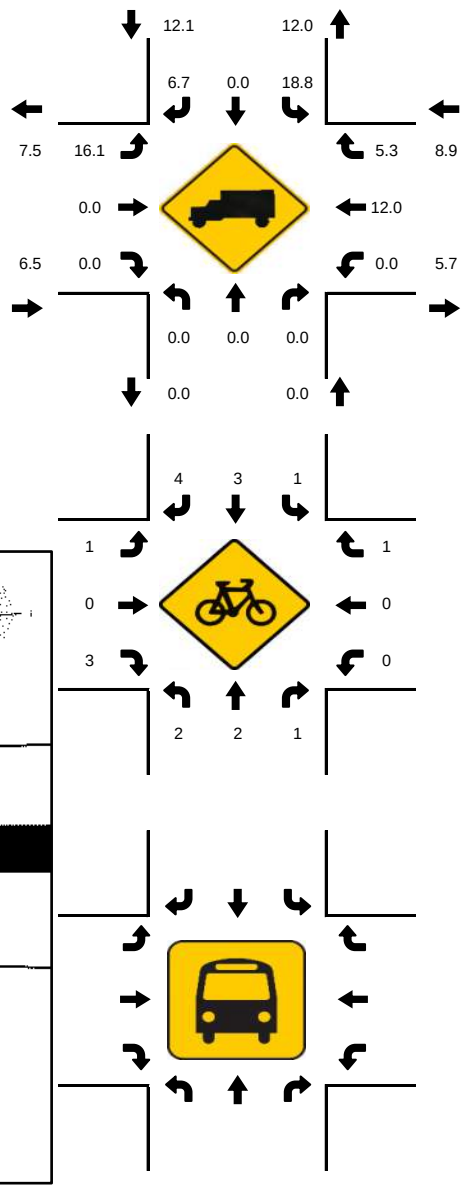
PROJECT ID: 25-570086-003
DATE: Fri, Aug 15, 2025

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







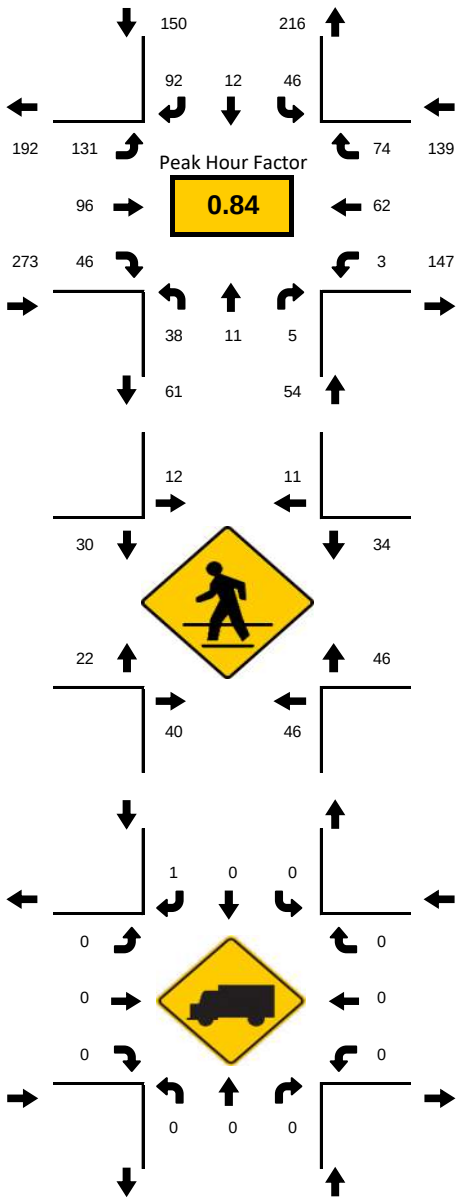


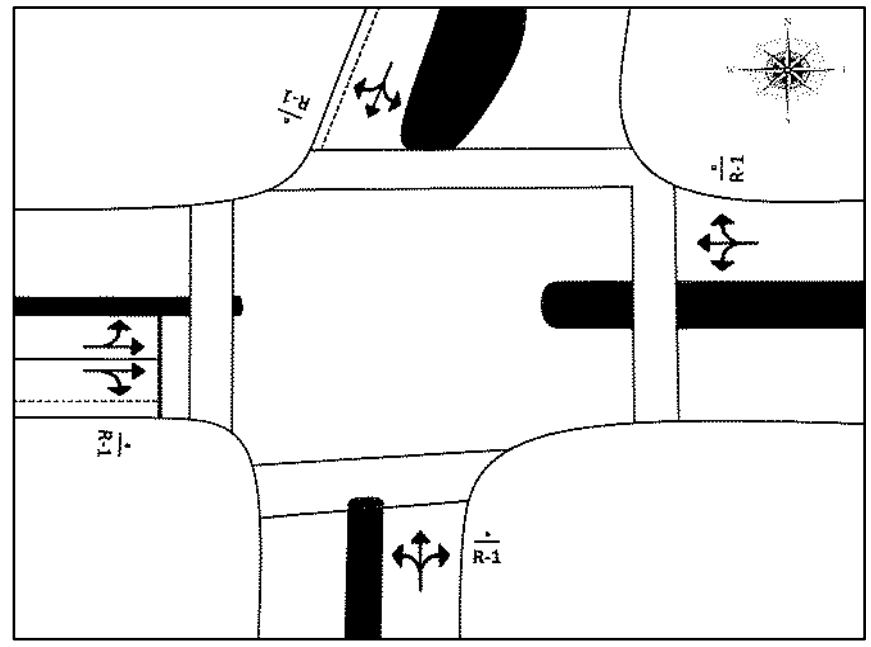
15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					South Pointe Dr Eastbound					South Pointe Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	3	1	1	0		1	1	4	0		10	7	8	0		1	2	3	0		42	167
7:15 AM	5	0	0	0		1	3	4	0		10	4	3	0		0	4	3	0		37	166
7:30 AM	6	2	0	0		1	1	1	0		9	5	5	1		0	1	3	1		36	178
7:45 AM	6	0	1	0		5	2	2	1		4	7	7	1		0	6	9	1		52	190
8:00 AM	8	1	1	0		2	2	0	0		8	3	5	1		0	9	1	0		41	182
8:15 AM	3	0	0	0		3	2	9	2		6	6	7	1		1	3	6	0		49	141
8:30 AM	8	1	0	0		3	0	4	0		9	5	7	1		0	7	3	0		48	92
8:45 AM	9	0	0	0		0	2	4	0		2	4	20	0		1	1	1	0		44	44
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	32	4	4	0		20	8	36	8		36	28	28	4		4	36	36	4		**288**	
Heavy Trucks	0	0	0	0		4	0	4	4		8	0	0	4		0	8	4	0		**28**	
Pedestrians		52					32					36					48				**168**	
Bicycles	4	4	4	0		0	8	12	4		4	0	8	0		0	0	4	0		**48**	
Buses																						
Stopped Buses																						

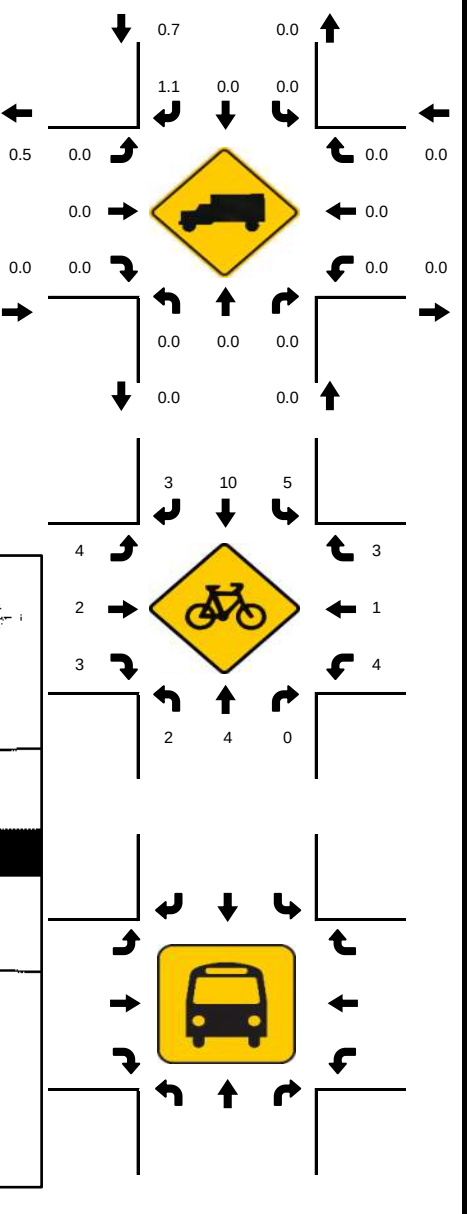
LOCATION: Ocean Dr & South Pointe Dr
CITY/STATE: Miami Beach, FL

PROJECT ID: 25-570086-003
DATE: Fri, Aug 15, 2025

Peak-Hour: 06:15 PM - 07:15 PM
Peak 15-Minute: 07:00 PM - 07:15 PM







15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					South Pointe Dr Eastbound					South Pointe Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
6:00 PM	11	3	2	1		9	1	19	0		19	17	14	2		0	11	19	3		131	566
6:15 PM	8	0	3	0		9	2	24	1		26	23	17	6		1	14	20	0		154	616
6:30 PM	11	3	1	1		7	3	19	3		26	28	9	2		1	15	20	0		149	574
6:45 PM	1	5	1	0		10	3	21	2		28	21	8	2		0	12	17	1		132	577
7:00 PM	17	3	0	0		13	4	28	1		39	24	12	2		0	21	17	0		181	576
7:15 PM	5	6	2	1		8	2	12	0		22	17	4	4		0	9	20	0		112	395
7:30 PM	12	1	1	0		11	4	27	2		36	19	7	3		1	5	21	2		152	283
7:45 PM	4	1	0	0		5	2	12	3		33	23	5	6		0	16	19	2		131	131
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	68	20	12	4		52	16	112	12		156	112	68	24		4	84	80	4		**828**	
Heavy Trucks	0	0	0	0		0	0	4	0		0	0	0	0		0	0	0	0		**4**	
Pedestrians		108					48					80					96				**332**	
Bicycles	4	16	0	0		16	20	4	4		12	4	12	0		8	4	4	0		**104**	
Buses																						
Stopped Buses																						

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-001
Date: 8/16/2025

Data - Total

NS/EW Streets:	Collins Ave/Portofino Tower				Collins Ave/Portofino Tower				South Pointe Dr				South Pointe Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 PM	2	0	0	0	8	1	12	0	16	80	1	2	2	46	9	3	182
7:15 PM	1	1	0	0	5	2	26	0	22	85	4	2	0	59	12	5	224
7:30 PM	5	0	0	0	14	0	24	0	13	66	5	4	0	59	10	0	200
7:45 PM	6	1	1	0	19	0	18	0	13	69	2	6	2	53	7	0	197
8:00 PM	1	1	0	0	11	2	18	0	20	90	3	3	0	51	10	3	213
8:15 PM	3	1	0	0	10	0	16	0	15	63	4	11	0	54	12	3	192
8:30 PM	3	2	1	0	10	1	18	0	15	50	2	6	2	48	5	3	166
8:45 PM	4	0	0	0	5	1	14	0	14	45	2	8	0	33	6	0	132
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	25	6	2	0	82	7	146	0	128	548	23	42	6	403	71	17	1506
APPROACH %'s :	75.76%	18.18%	6.06%	0.00%	34.89%	2.98%	62.13%	0.00%	17.27%	73.95%	3.10%	5.67%	1.21%	81.09%	14.29%	3.42%	
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	13	3	1	0	49	4	86	0	68	310	14	15	2	222	39	8	834
PEAK HR FACTOR :	0.542	0.750	0.250	0.000	0.645	0.500	0.827	0.000	0.773	0.861	0.700	0.625	0.250	0.941	0.813	0.400	0.931
	0.531				0.914				0.877				0.891				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-001
Date: 8/16/2025

Data - HT

NS/EW Streets:	Collins Ave/Portofino Tower				Collins Ave/Portofino Tower				South Pointe Dr				South Pointe Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
APPROACH %'s :									100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
										0.500							

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Collins Ave/Portofino Tower & South Pointe Dr
City: Miami Beach

Project ID: 25-570086-001
Date: 8/16/2025

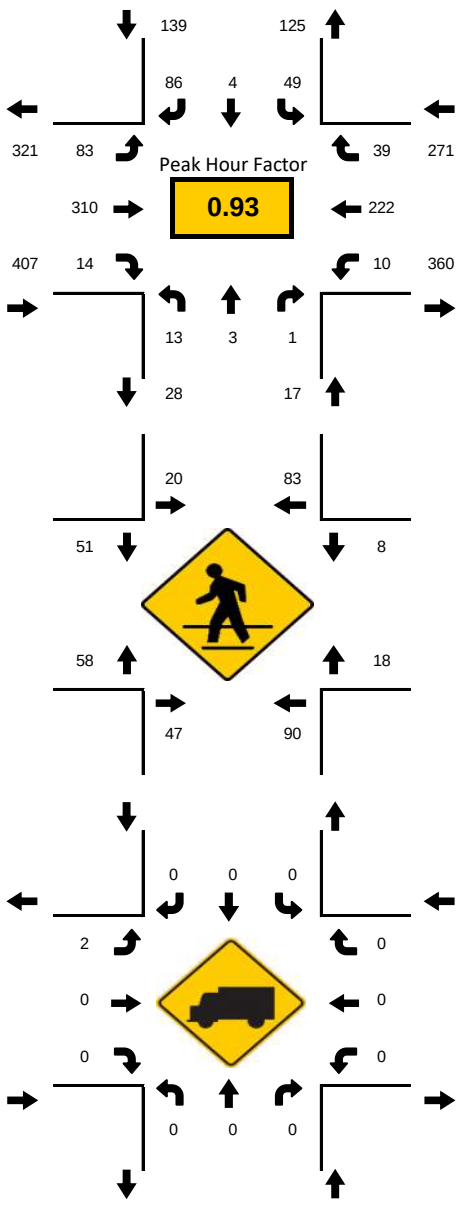
Data - Pedestrians (Crosswalks)

NS/EW Streets:	Collins Ave/Portofino Tower		Collins Ave/Portofino Tower		South Pointe Dr		South Pointe Dr		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 PM	8	8	8	19	2	0	7	6	58
7:15 PM	2	11	14	33	1	1	15	19	96
7:30 PM	1	39	16	28	12	2	22	15	135
7:45 PM	14	27	9	12	3	4	13	2	84
8:00 PM	3	6	8	17	2	1	8	15	60
8:15 PM	6	26	15	45	9	2	31	10	144
8:30 PM	1	18	25	33	3	1	12	6	99
8:45 PM	2	35	20	25	2	0	9	12	105
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	37	170	115	212	34	11	117	85	781
APPROACH %'s :	17.87%	82.13%	35.17%	64.83%	75.56%	24.44%	57.92%	42.08%	
PEAK HR :	**07:15 PM - 08:15 PM**								TOTAL
PEAK HR VOL :	20	83	47	90	18	8	58	51	375
PEAK HR FACTOR :	0.357	0.532	0.734	0.682	0.375	0.500	0.659	0.671	0.694
	0.628		0.729		0.464		0.736		

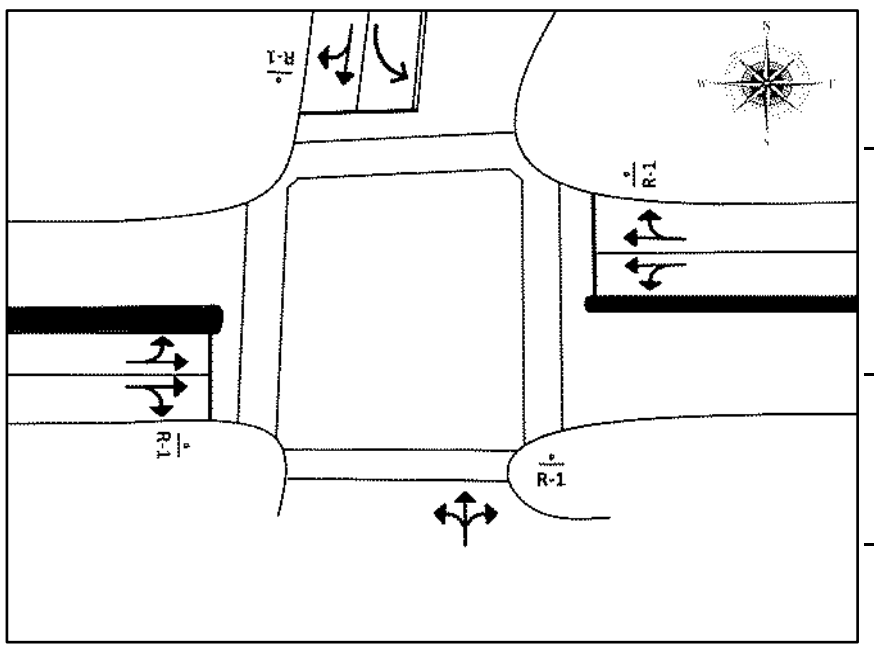
LOCATION: Collins Ave/Portofino Tower & South Pointe Dr
CITY/STATE: Miami Beach, FL

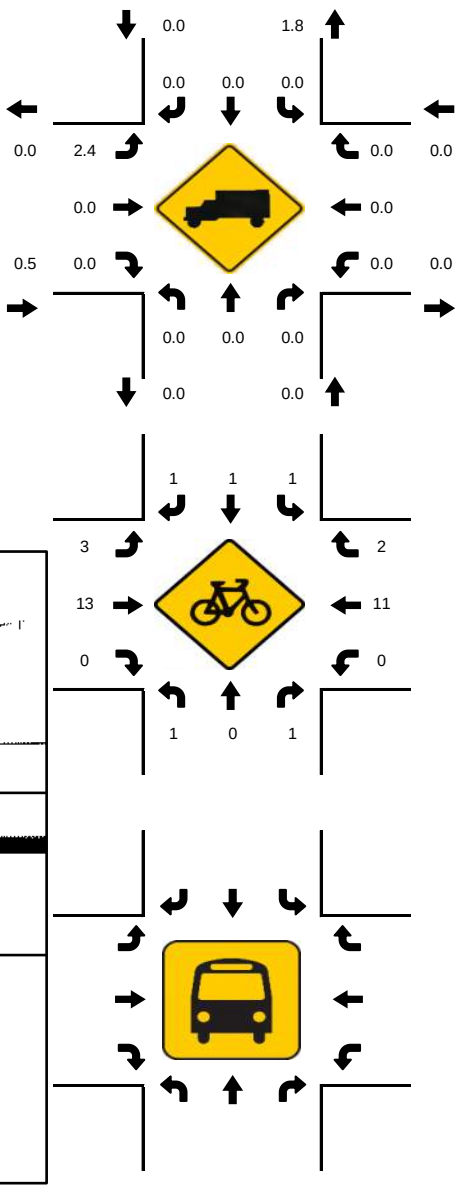
PROJECT ID: 25-570086-001
DATE: Sat, Aug 16, 2025

Peak-Hour: 07:15 PM - 08:15 PM
Peak 15-Minute: 07:15 PM - 07:30 PM









15-Min Count Period Beginning At	Collins Ave/Portofino Tower Northbound					Collins Ave/Portofino Tower Southbound					South Pointe Dr Eastbound					South Pointe Dr 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 PM	2	0	0	0		8	1	12	0		16	80	1	2		2	46	9	3		182	803
7:15 PM	1	1	0	0		5	2	26	0		22	85	4	2		0	59	12	5		224	834
7:30 PM	5	0	0	0		14	0	24	0		13	66	5	4		0	59	10	0		200	802
7:45 PM	6	1	1	0		19	0	18	0		13	69	2	6		2	53	7	0		197	768
8:00 PM	1	1	0	0		11	2	18	0		20	90	3	3		0	51	10	3		213	703
8:15 PM	3	1	0	0		10	0	16	0		15	63	4	11		0	54	12	3		192	490
8:30 PM	3	2	1	0		10	1	18	0		15	50	2	6		2	48	5	3		166	298
8:45 PM	4	0	0	0		5	1	14	0		14	45	2	8		0	33	6	0		132	132
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	24	4	4	0		76	8	104	0		88	360	20	24		8	236	48	20		**1024**	
Heavy Trucks	0	0	0	0		0	0	0	0		4	0	0	0		0	0	0	0		**4**	
Pedestrians		188					164					148					56				**556**	
Bicycles	4	0	4	0		4	4	4	0		8	24	0	4		0	24	8	0		**84**	
Buses																						
Stopped Buses																						

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach
Control: 2-Way Stop(EB/WB)

Project ID: 25-570086-002
Date: 8/16/2025

Data - Total

NS/EW Streets:	Ocean Dr				Ocean Dr				1st St				1st St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 PM	18	54	0	1	7	18	6	0	9	8	12	0	3	6	4	0	146
7:15 PM	19	67	2	0	2	34	8	0	11	4	22	0	2	5	4	0	180
7:30 PM	20	55	2	0	9	17	11	1	9	2	20	0	1	1	2	0	150
7:45 PM	23	34	1	1	9	17	15	0	9	2	10	0	1	5	4	0	131
8:00 PM	17	56	6	0	8	22	16	1	7	9	17	0	7	8	6	0	180
8:15 PM	17	43	4	0	4	29	12	2	10	5	8	1	3	3	6	0	147
8:30 PM	11	37	4	0	7	20	11	0	7	4	7	0	2	6	7	0	123
8:45 PM	13	33	1	0	5	10	14	0	11	4	3	0	0	7	8	0	109
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	138	379	20	2	51	167	93	4	73	38	99	1	19	41	41	0	1166
APPROACH %'s :	25.60%	70.32%	3.71%	0.37%	16.19%	53.02%	29.52%	1.27%	34.60%	18.01%	46.92%	0.47%	18.81%	40.59%	40.59%	0.00%	
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	79	212	11	1	28	90	50	2	36	17	69	0	11	19	16	0	641
PEAK HR FACTOR :	0.859	0.791	0.458	0.250	0.778	0.662	0.781	0.500	0.818	0.472	0.784	0.000	0.393	0.594	0.667	0.000	0.890
	0.861				0.904				0.824				0.548				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach
Control: 2-Way Stop(EB/WB)

Project ID: 25-570086-002
Date: 8/16/2025

Data - HT

NS/EW Streets:	Ocean Dr				Ocean Dr				1st St				1st St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	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	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & 1st St
City: Miami Beach

Project ID: 25-570086-002
Date: 8/16/2025

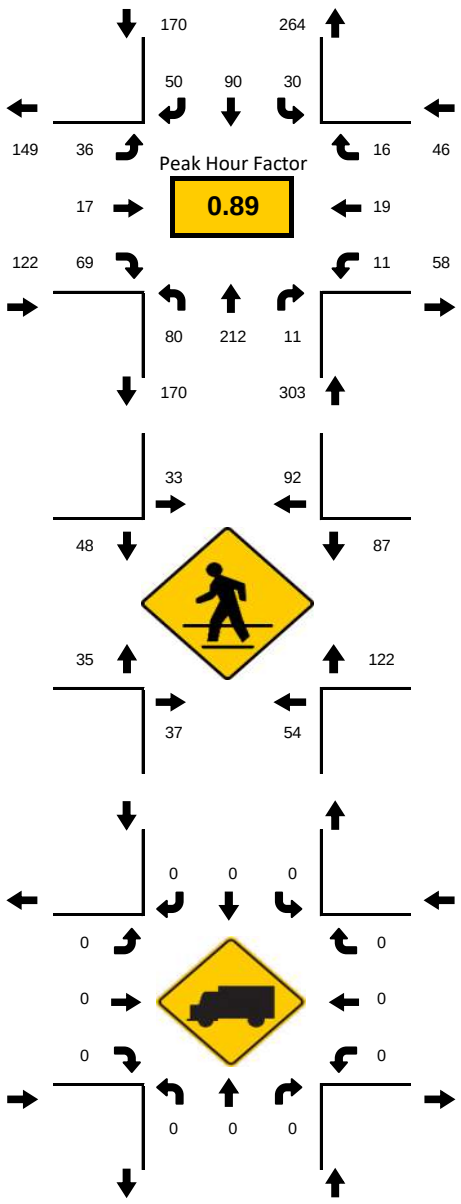
Data - Pedestrians (Crosswalks)

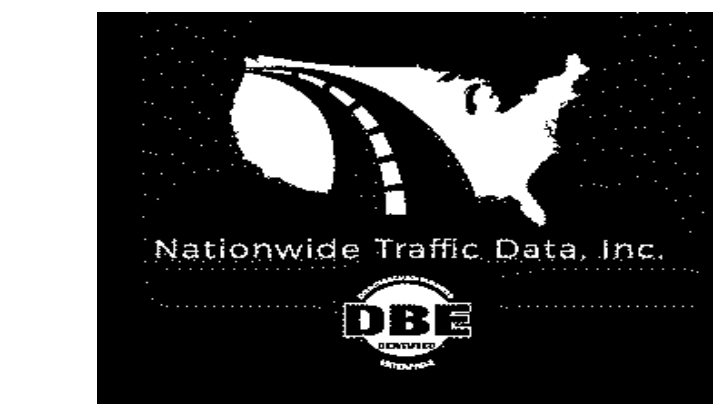
NS/EW Streets:	Ocean Dr		Ocean Dr		1st St		1st St		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 PM	16	10	9	12	39	18	12	24	140
7:15 PM	6	19	6	19	27	21	10	22	130
7:30 PM	10	16	12	8	32	31	7	6	122
7:45 PM	12	21	5	18	32	24	3	7	122
8:00 PM	5	36	14	9	31	11	15	13	134
8:15 PM	14	19	2	14	61	19	2	16	147
8:30 PM	16	20	8	4	67	24	19	7	165
8:45 PM	12	45	2	13	73	23	12	11	191
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	91	186	58	97	362	171	80	106	1151
APPROACH %'s :	32.85%	67.15%	37.42%	62.58%	67.92%	32.08%	43.01%	56.99%	
PEAK HR :	**07:15 PM - 08:15 PM**								TOTAL
PEAK HR VOL :	33	92	37	54	122	87	35	48	508
PEAK HR FACTOR :	0.688	0.639	0.661	0.711	0.953	0.702	0.583	0.545	0.948
	0.762		0.910		0.829		0.648		

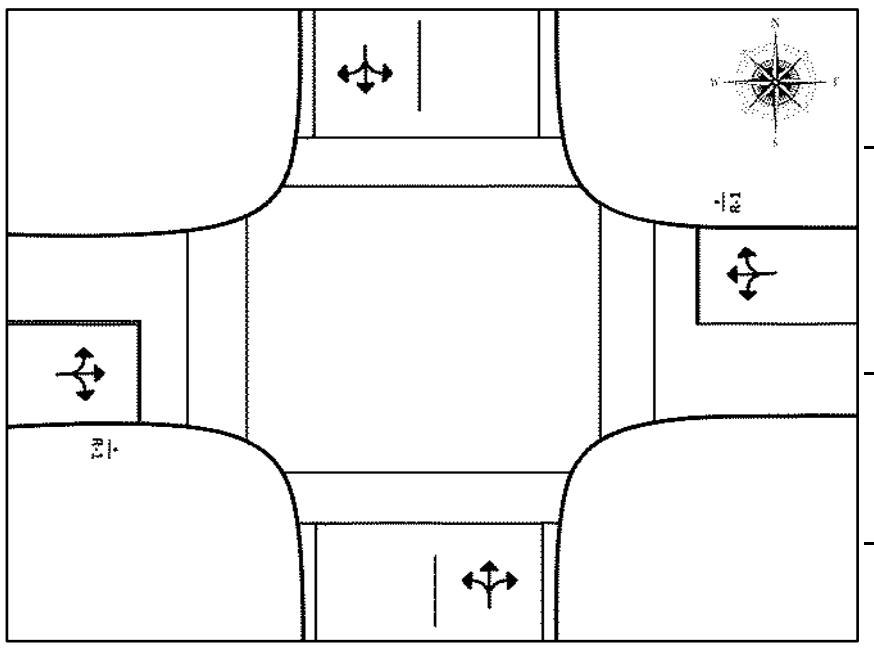
LOCATION: Ocean Dr & 1st St
CITY/STATE: Miami Beach, FL

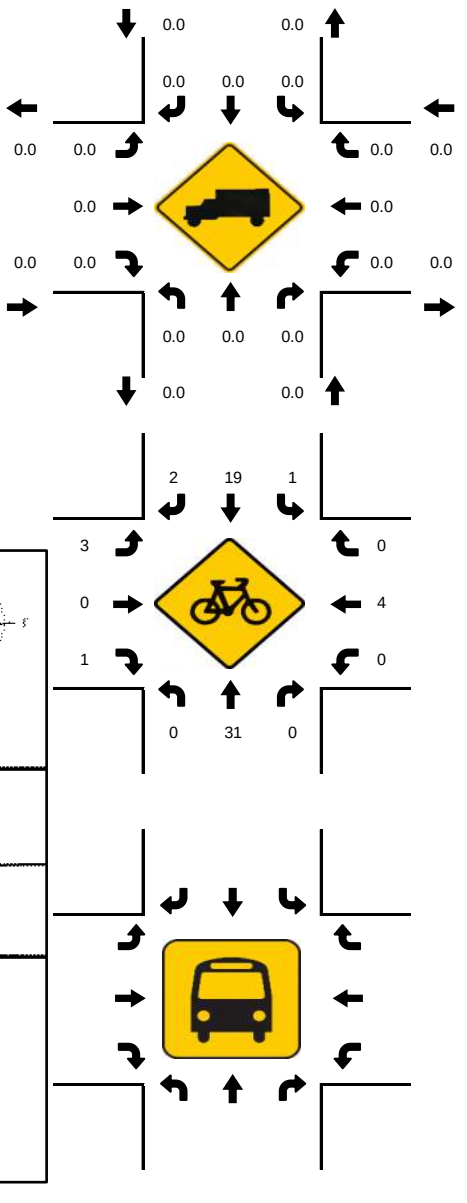
PROJECT ID: 25-570086-002
DATE: Sat, Aug 16, 2025

Peak-Hour: 07:15 PM - 08:15 PM
Peak 15-Minute: 07:15 PM - 07:30 PM









15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					1st St Eastbound					1st 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 PM	18	54	0	1		7	18	6	0		9	8	12	0		3	6	4	0		146	607
7:15 PM	19	67	2	0		2	34	8	0		11	4	22	0		2	5	4	0		180	641
7:30 PM	20	55	2	0		9	17	11	1		9	2	20	0		1	1	2	0		150	608
7:45 PM	23	34	1	1		9	17	15	0		9	2	10	0		1	5	4	0		131	581
8:00 PM	17	56	6	0		8	22	16	1		7	9	17	0		7	8	6	0		180	559
8:15 PM	17	43	4	0		4	29	12	2		10	5	8	1		3	3	6	0		147	379
8:30 PM	11	37	4	0		7	20	11	0		7	4	7	0		2	6	7	0		123	232
8:45 PM	13	33	1	0		5	10	14	0		11	4	3	0		0	7	8	0		109	109
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	92	268	24	4		36	136	64	4		44	36	88	0		28	32	24	0		**880**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**0**	
Pedestrians		100					164					128					252				**644**	
Bicycles	0	48	0	0		4	28	8	0		8	0	4	0		0	12	0	0		**112**	
Buses																						
Stopped Buses																						

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-003
Date: 8/16/2025

Data - Total

NS/EW Streets:	Ocean Dr				Ocean Dr				South Pointe Dr				South Pointe Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 PM	9	3	3	0	8	2	27	3	50	32	6	3	0	21	27	0	194
7:15 PM	10	3	0	0	20	1	43	2	37	45	8	6	0	16	41	1	233
7:30 PM	11	5	1	0	17	4	32	0	35	29	10	4	0	23	22	2	195
7:45 PM	6	1	1	0	8	3	24	0	37	41	4	6	1	25	29	4	190
8:00 PM	6	2	2	0	15	4	33	1	33	56	6	4	0	21	41	0	224
8:15 PM	10	3	2	0	15	5	22	2	33	33	11	7	0	32	27	1	203
8:30 PM	6	2	2	1	14	2	24	0	28	21	13	3	0	24	15	1	156
8:45 PM	5	2	1	0	4	7	17	2	22	13	7	6	0	9	13	1	109
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	21	12	1	101	28	222	10	275	270	65	39	1	171	215	10	1504
APPROACH %'s :	64.95%	21.65%	12.37%	1.03%	27.98%	7.76%	61.50%	2.77%	42.37%	41.60%	10.02%	6.01%	0.25%	43.07%	54.16%	2.52%	
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	33	11	4	0	60	12	132	3	142	171	28	20	1	85	133	7	842
PEAK HR FACTOR :	0.750	0.550	0.500	0.000	0.750	0.750	0.767	0.375	0.959	0.763	0.700	0.833	0.250	0.850	0.811	0.438	0.903
	0.706				0.784				0.912				0.911				

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach
Control: 4-Way Stop

Project ID: 25-570086-003
Date: 8/16/2025

Data - HT

NS/EW Streets:	Ocean Dr				Ocean Dr				South Pointe Dr				South Pointe Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	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	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:15 PM - 08:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Nationwide Traffic Data, LLC

Intersection Turning Movement Count

Location: Ocean Dr & South Pointe Dr
City: Miami Beach

Project ID: 25-570086-003
Date: 8/16/2025

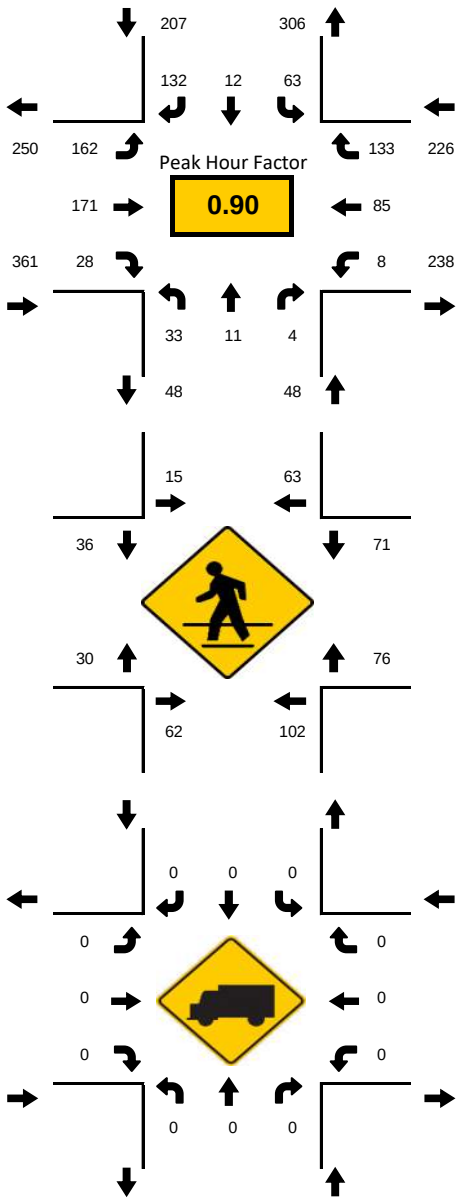
Data - Pedestrians (Crosswalks)

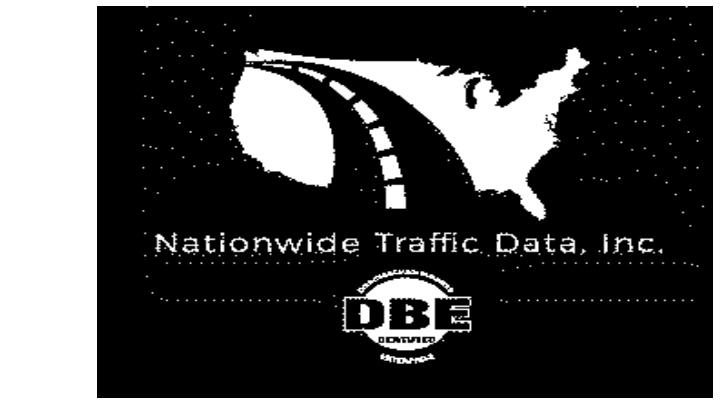
NS/EW Streets:	Ocean Dr		Ocean Dr		South Pointe Dr		South Pointe Dr		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 PM	8	7	7	22	16	22	5	15	102
7:15 PM	6	11	15	18	11	13	7	20	101
7:30 PM	3	29	16	41	15	22	13	6	145
7:45 PM	4	15	24	16	23	12	6	8	108
8:00 PM	2	8	7	27	27	24	4	2	101
8:15 PM	14	13	9	25	46	16	14	5	142
8:30 PM	3	25	20	16	33	5	17	4	123
8:45 PM	3	47	20	20	51	20	11	21	193
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	43	155	118	185	222	134	77	81	1015
APPROACH %'s :	21.72%	78.28%	38.94%	61.06%	62.36%	37.64%	48.73%	51.27%	
PEAK HR :	**07:15 PM - 08:15 PM**								TOTAL
PEAK HR VOL :	15	63	62	102	76	71	30	36	455
PEAK HR FACTOR :	0.625	0.543	0.646	0.622	0.704	0.740	0.577	0.450	0.784
	0.609		0.719		0.721		0.611		

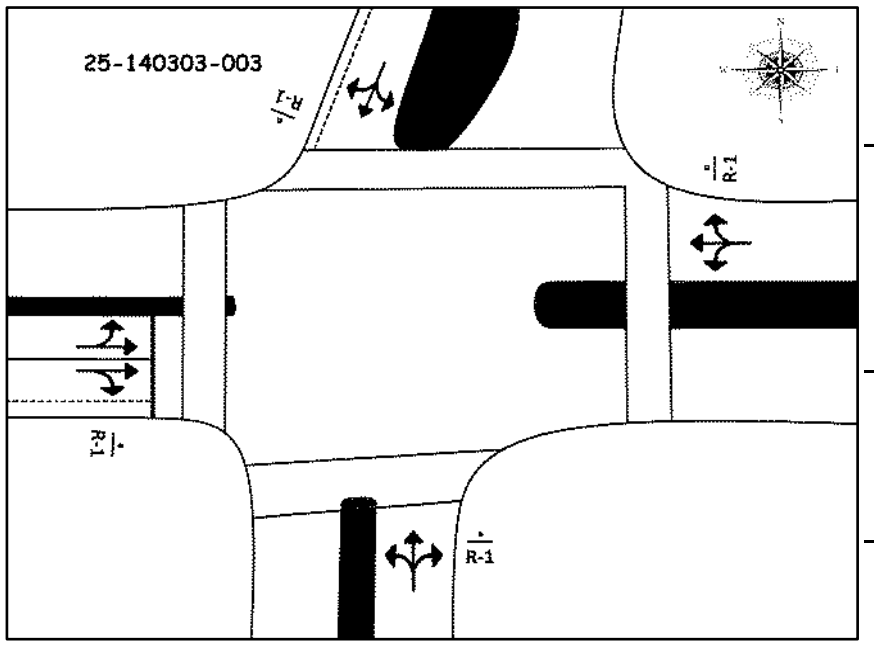
LOCATION: Ocean Dr & South Pointe Dr
CITY/STATE: Miami Beach, FL

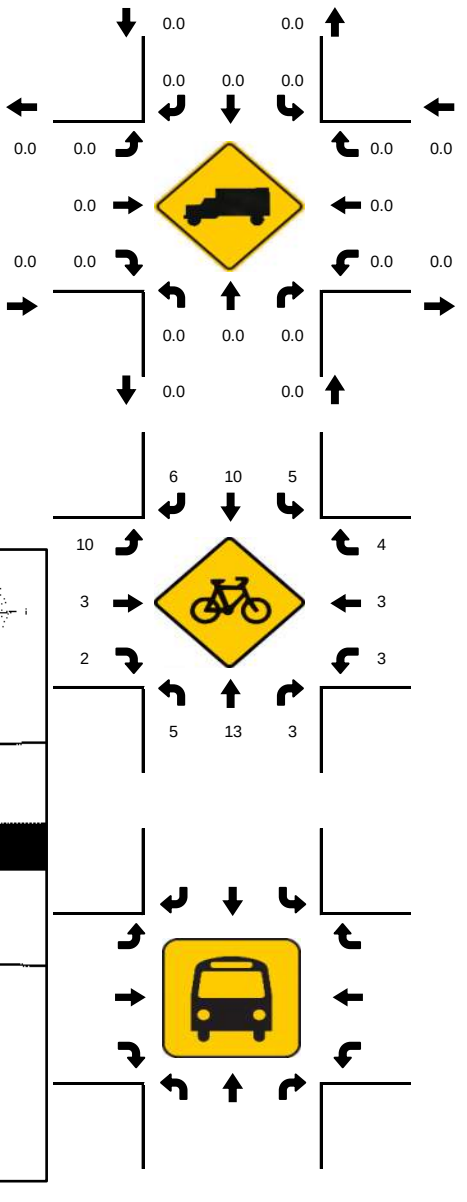
PROJECT ID: 25-570086-003
DATE: Sat, Aug 16, 2025

Peak-Hour: 07:15 PM - 08:15 PM
Peak 15-Minute: 07:15 PM - 07:30 PM









15-Min Count Period Beginning At	Ocean Dr Northbound					Ocean Dr Southbound					South Pointe Dr Eastbound					South Pointe Dr 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 PM	9	3	3	0		8	2	27	3		50	32	6	3		0	21	27	0		194	812
7:15 PM	10	3	0	0		20	1	43	2		37	45	8	6		0	16	41	1		233	842
7:30 PM	11	5	1	0		17	4	32	0		35	29	10	4		0	23	22	2		195	812
7:45 PM	6	1	1	0		8	3	24	0		37	41	4	6		1	25	29	4		190	773
8:00 PM	6	2	2	0		15	4	33	1		33	56	6	4		0	21	41	0		224	692
8:15 PM	10	3	2	0		15	5	22	2		33	33	11	7		0	32	27	1		203	468
8:30 PM	6	2	2	1		14	2	24	0		28	21	13	3		0	24	15	1		156	265
8:45 PM	5	2	1	0		4	7	17	2		22	13	7	6		0	9	13	1		109	109
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	44	20	8	0		80	16	172	8		148	224	40	24		4	100	164	16		**1068**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**0**	
Pedestrians		228					128					108					204				**668**	
Bicycles	16	20	8	0		4	24	12	8		16	8	8	4		8	4	12	0		**140**	
Buses																						
Stopped Buses																						

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

MOCF: 0.95

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

* PEAK SEASON

GROWTH RATE CALCULATION

PIER PARK

Table 3a - FDOT Historical Volume Growth

Roadway	FDOT Site	10 Year Linear Trend	10 Year Exponential Trend	10 Year Decaying Trend
5 ST SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE	872528	-0.91%	-0.90%	-1.20%
COLLINS AVE SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)	875159	2.04%	1.80%	1.71%
S. POINT DR. S POINTE DR, 150 FT W OF WASHINGTON AVE, MIAMI BEACH	878590	6.82%	3.18%	3.21%
Average Annual Growth Rate		**2.65%**	**1.36%**	**1.24%**

Table 3b - 2015 to 2045 SERPM Traffic Volumes Growth

Roadway	FDOT Site	2015	2045
Alton Road s/o 5th Street	875159	19,747	21,800
South Pointe Drive w/o Washington Avenue	875159	14,604	15,100
Collins Avenue n/o 1st Street	878590	4,770	6,200
Total		39,121	43,100
Annual Growth Rate		**0.32%**	

LANGAN

ENGINEERING & ENVIRONMENTAL SERVICES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2024 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2528 - SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2024	35000 C	E 16000	W 19000	9.00	52.50	8.70
2023	39500 C	E 19000	W 20500	9.00	54.70	6.00
2022	32500 C	E 15000	W 17500	9.00	54.90	4.50
2021	33000 C	E 15000	W 18000	9.00	54.70	5.40
2020	41000 C	E 19000	W 22000	9.00	54.30	9.20
2019	31000 F	E 15500	W 15500	9.00	54.00	5.00
2018	32000 C	E 16000	W 16000	9.00	55.20	5.60
2017	44000 C	E 20000	W 24000	9.00	54.00	5.30
2016	35500 C	E 18500	W 17000	9.00	55.50	7.80
2015	39500 C	E 20000	W 19500	9.00	55.10	4.60
2014	33000 C	E 17000	W 16000	9.00	54.30	5.10
2013	34000 C	E 17500	W 16500	9.00	54.10	6.10
2012	32500 C	E 14500	W 18000	9.00	53.40	8.40
2011	35000 C	E 16500	W 18500	9.00	51.90	7.50
2010	35000 C	E 16500	W 18500	7.16	52.27	8.80
2009	35500 C	E 16500	W 19000	9.21	57.60	8.40

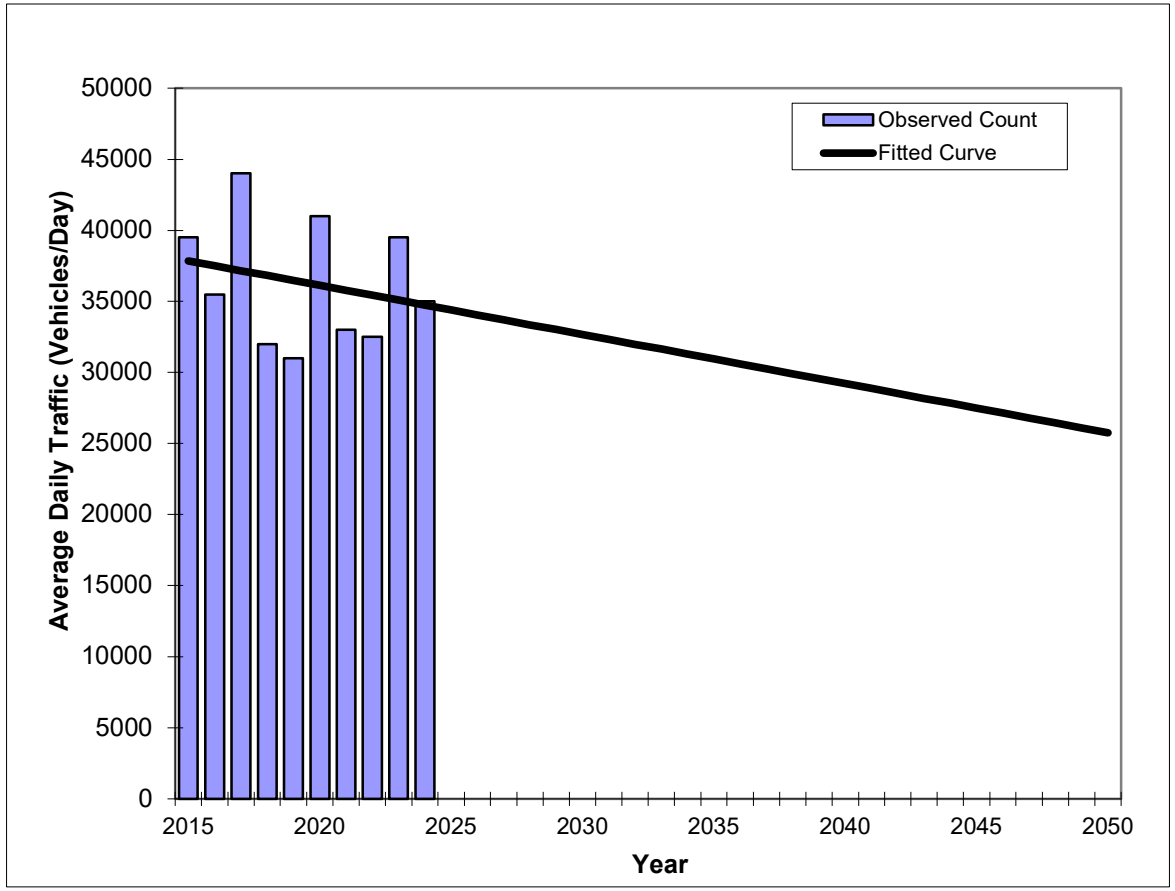
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2023

5 ST -- SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE

FM #	**330163501**
Location	**1**

County:	Miami-Dade
Station #:	872528
Roadway:	5 ST



Annual Trend Decrease:	345
Trend R-squared:	5.59%
Trend Annual Historic Growth Rate:	-0.91%
Trend Growth Rate (2024 to Design Year)	-1.00%
Printed:	8/14/2025

Linear Growth Option

Year	Traffic (ADT/AADT) Count*	Trend
2015	39,500	37,850
2016	35,500	37,510
2017	44,000	37,160
2018	32,000	36,820
2019	31,000	36,470
2020	41,000	36,130
2021	33,000	35,780
2022	32,500	35,440
2023	39,500	35,090
2024	35,000	34,750
2028 Opening Year Trend		
2028	N/A	33,360
2040 Interim Year Trend		
2040	N/A	29,220
2050 Design Year Trend		
2050	N/A	25,760
FSUTMS Forecasts/Trends		

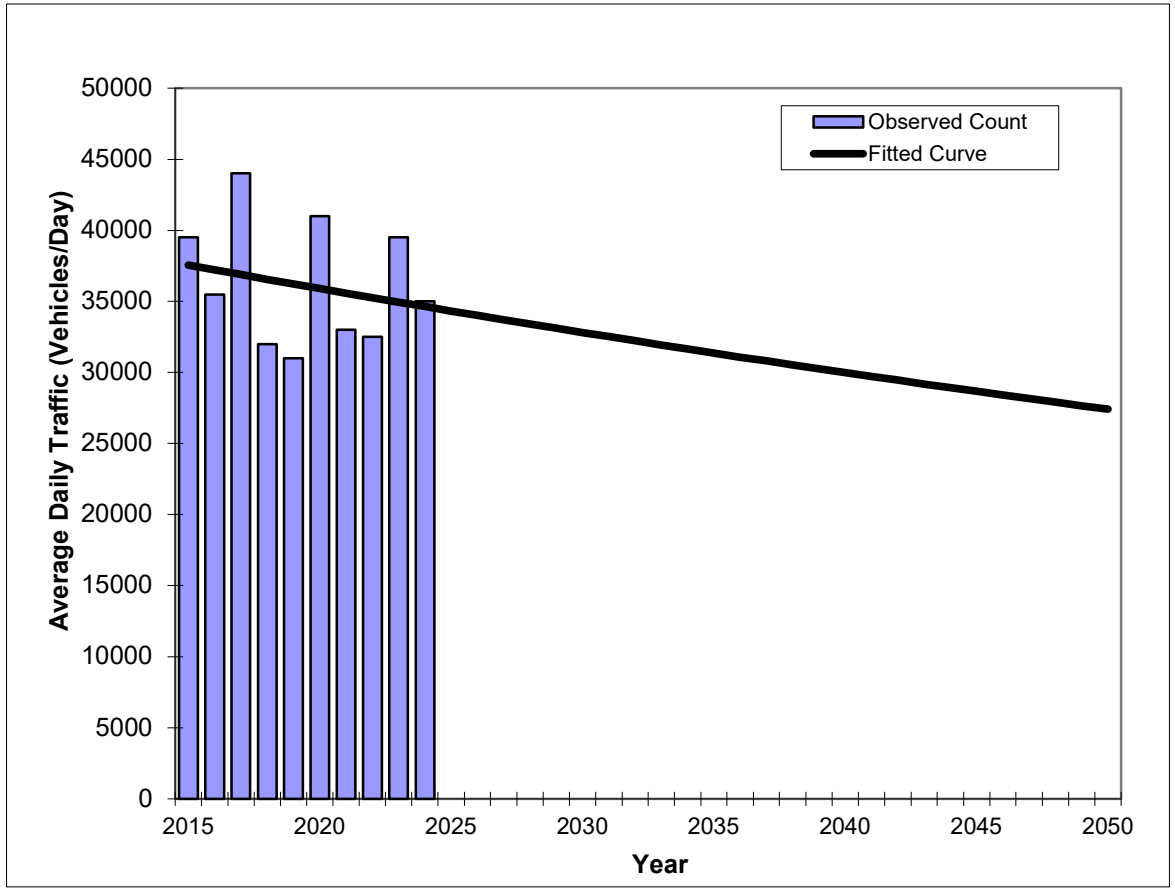
***Axle-Adjusted**

Traffic Trends - V2023

5 ST -- SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE

FM #	**330163501**
Location	**1**

County:	Miami-Dade
Station #:	872528
Roadway:	5 ST



Year	Traffic (ADT/AADT) Count*	Trend
2015	39,500	37,550
2016	35,500	37,220
2017	44,000	36,880
2018	32,000	36,550
2019	31,000	36,230
2020	41,000	35,900
2021	33,000	35,580
2022	32,500	35,260
2023	39,500	34,950
2024	35,000	34,630
2028 Opening Year Trend		
2028	N/A	33,410
2040 Interim Year Trend		
2040	N/A	29,990
2050 Design Year Trend		
2050	N/A	27,410
FSUTMS Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	5.15%
Compounded Annual Historic Growth Rate:	-0.90%
Compounded Growth Rate (2024 to Design Year)	-0.90%
Printed:	8/14/2025

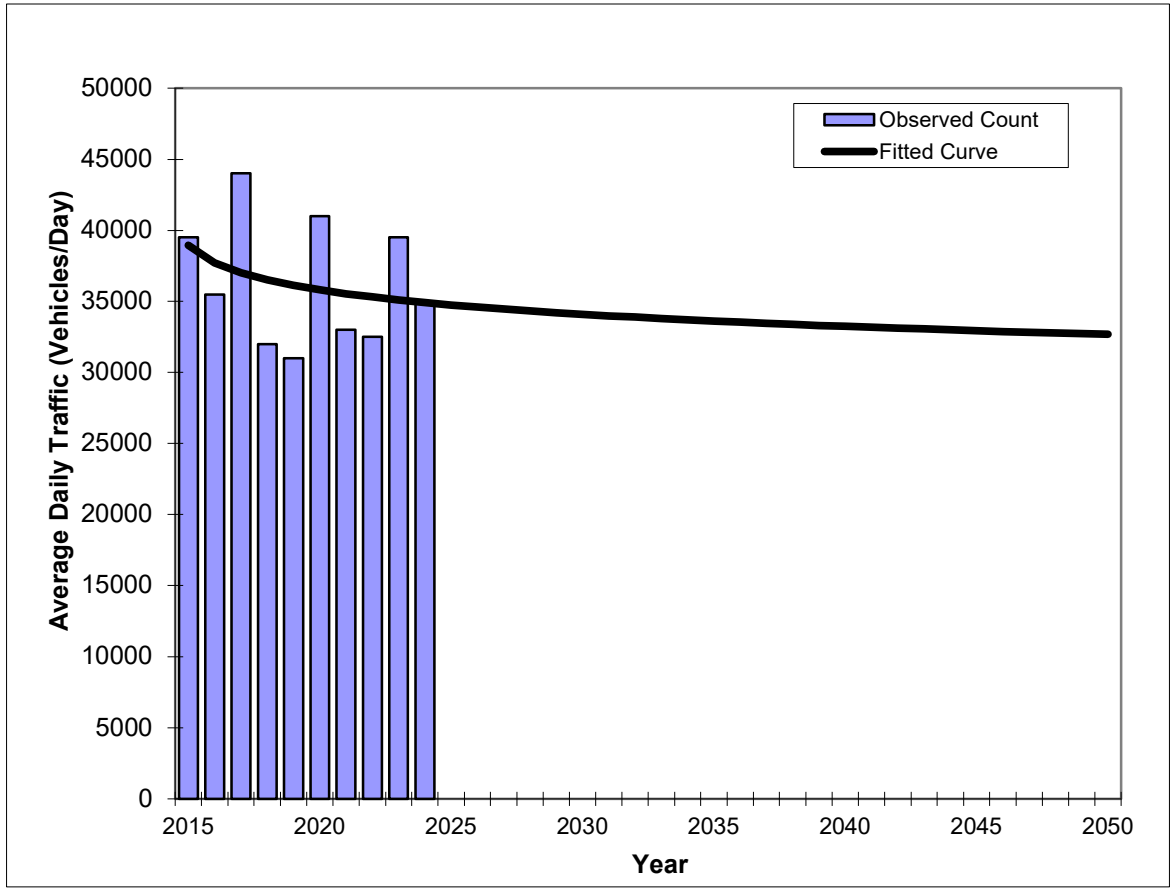
Exponential Growth Option

Traffic Trends - V2023

5 ST -- SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE

FM #	**330163501**
Location	**1**

County:	Miami-Dade
Station #:	872528
Roadway:	5 ST



Year	Traffic (ADT/AADT) Count*	Trend
2015	39,500	38,940
2016	35,500	37,730
2017	44,000	37,020
2018	32,000	36,520
2019	31,000	36,130
2020	41,000	35,810
2021	33,000	35,540
2022	32,500	35,310
2023	39,500	35,100
2024	35,000	34,920
2028 Opening Year Trend		
2028	N/A	34,330
2040 Interim Year Trend		
2040	N/A	33,250
2050 Design Year Trend		
2050	N/A	32,680
FSUTMS Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	8.39%
Compounded Annual Historic Growth Rate:	-1.20%
Compounded Growth Rate (2024 to Design Year)	-0.25%
Printed:	8/14/2025

Decaying Exponential Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2024 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5159 - SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2024	13400 C	N 7300	S 6100	9.00	54.90	9.20
2023	18000 C	N 10000	S 8000	9.00	55.10	10.90
2022	14600 C	N 7500	S 7100	9.00	54.70	4.50
2021	15700 C	N 9400	S 6300	9.00	54.30	5.40
2020	14500 C	N 6900	S 7600	9.00	54.20	9.20
2019	12900 C	N 6900	S 6000	9.00	54.60	5.00
2018	11800 C	N 6600	S 5200	9.00	54.30	5.60
2017	14600 C	N 8800	S 5800	9.00	55.00	5.30
2016	13100 C	N 6700	S 6400	9.00	54.50	7.80
2015	13800 C	N 5500	S 8300	9.00	54.70	4.60
2014	13400 C	N 6500	S 6900	9.00	54.50	5.10
2013	16400 C	N 7400	S 9000	9.00	52.40	6.10
2012	16700 C	N 7100	S 9600	9.00	55.70	8.40
2011	13600 C	N 6900	S 6700	9.00	55.10	7.50
2010	12900 C	N 6200	S 6700	8.98	54.08	8.80
2009	15300 C	N 7600	S 7700	8.99	53.24	8.40

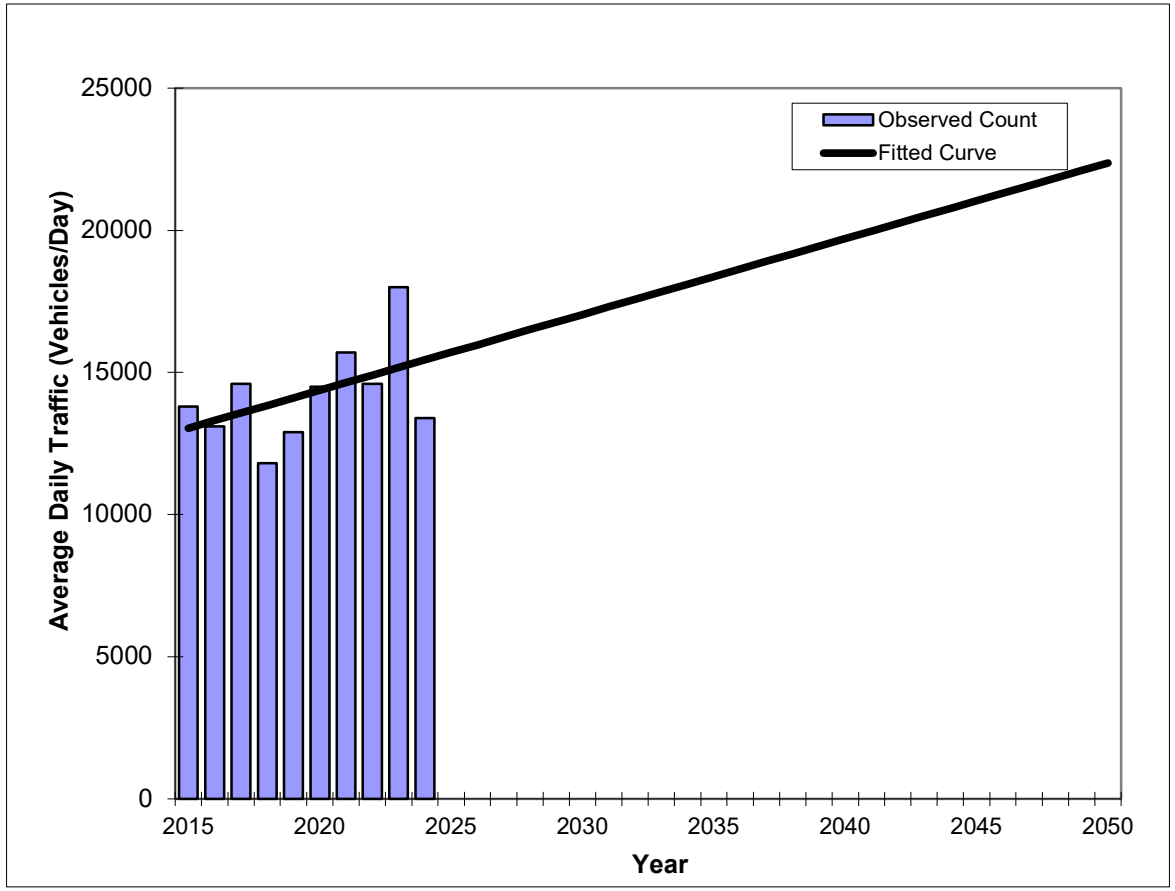
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2023

COLLINS AVE -- SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)

FM #	**330163501**
Location	**2**

County:	Miami-Dade
Station #:	875159
Roadway:	COLLINS AVE



Annual Trend Increase:	267
Trend R-squared:	22.10%
Trend Annual Historic Growth Rate:	2.04%
Trend Growth Rate (2024 to Design Year)	1.73%
Printed:	8/14/2025

Linear Growth Option

Year	Traffic (ADT/AADT) Count*	Trend
2015	13,800	13,040
2016	13,100	13,310
2017	14,600	13,570
2018	11,800	13,840
2019	12,900	14,110
2020	14,500	14,370
2021	15,700	14,640
2022	14,600	14,910
2023	18,000	15,170
2024	13,400	15,440
2028 Opening Year Trend		
2028	N/A	16,510
2040 Interim Year Trend		
2040	N/A	19,710
2050 Design Year Trend		
2050	N/A	22,370
FSUTMS Forecasts/Trends		

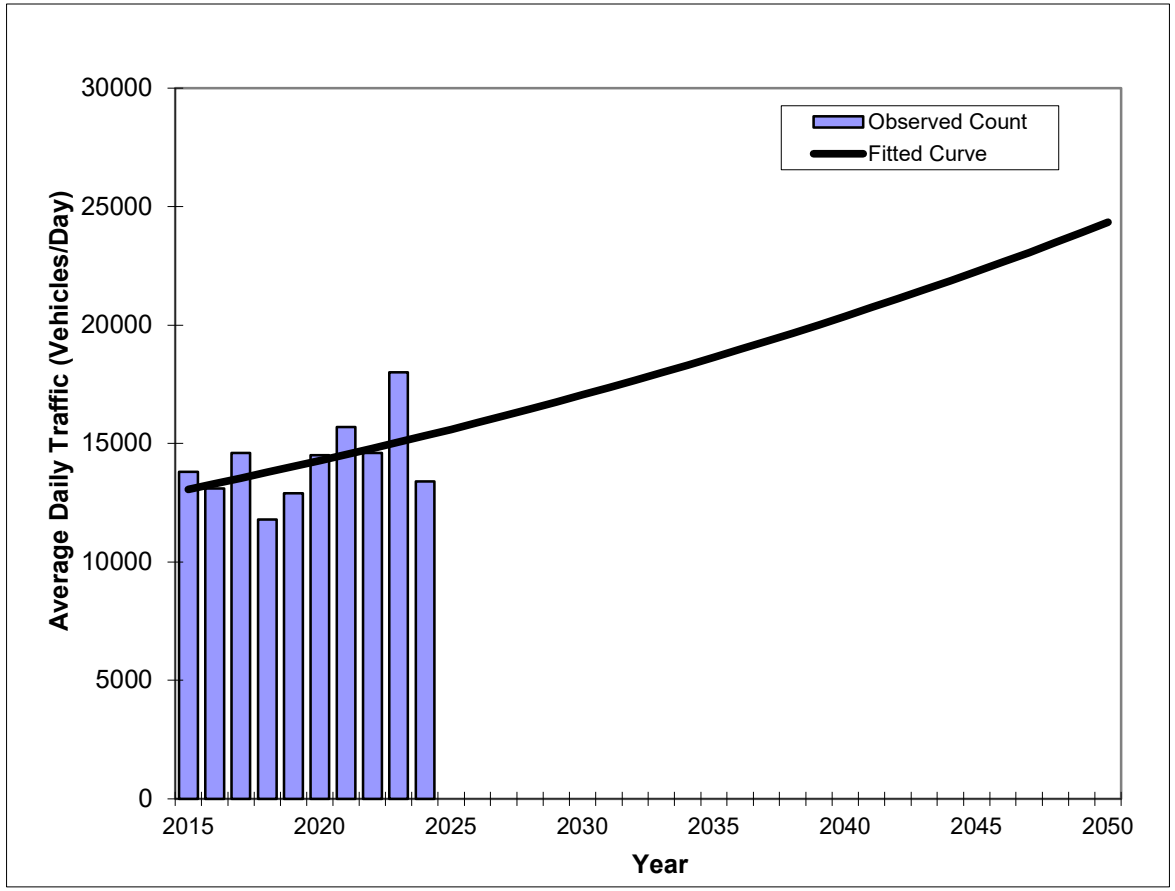
***Axle-Adjusted**

Traffic Trends - V2023

COLLINS AVE -- SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)

FM #	**330163501**
Location	**2**

County:	Miami-Dade
Station #:	875159
Roadway:	COLLINS AVE



Year	Traffic (ADT/AADT) Count*	Trend
2015	13,800	13,060
2016	13,100	13,300
2017	14,600	13,540
2018	11,800	13,780
2019	12,900	14,030
2020	14,500	14,280
2021	15,700	14,530
2022	14,600	14,790
2023	18,000	15,060
2024	13,400	15,330
2028 Opening Year Trend		
2028	N/A	16,460
2040 Interim Year Trend		
2040	N/A	20,370
2050 Design Year Trend		
2050	N/A	24,340
FSUTMS Forecasts/Trends		

Trend R-squared:	21.31%
Compounded Annual Historic Growth Rate:	1.80%
Compounded Growth Rate (2024 to Design Year)	1.79%
Printed:	8/14/2025

Exponential Growth Option

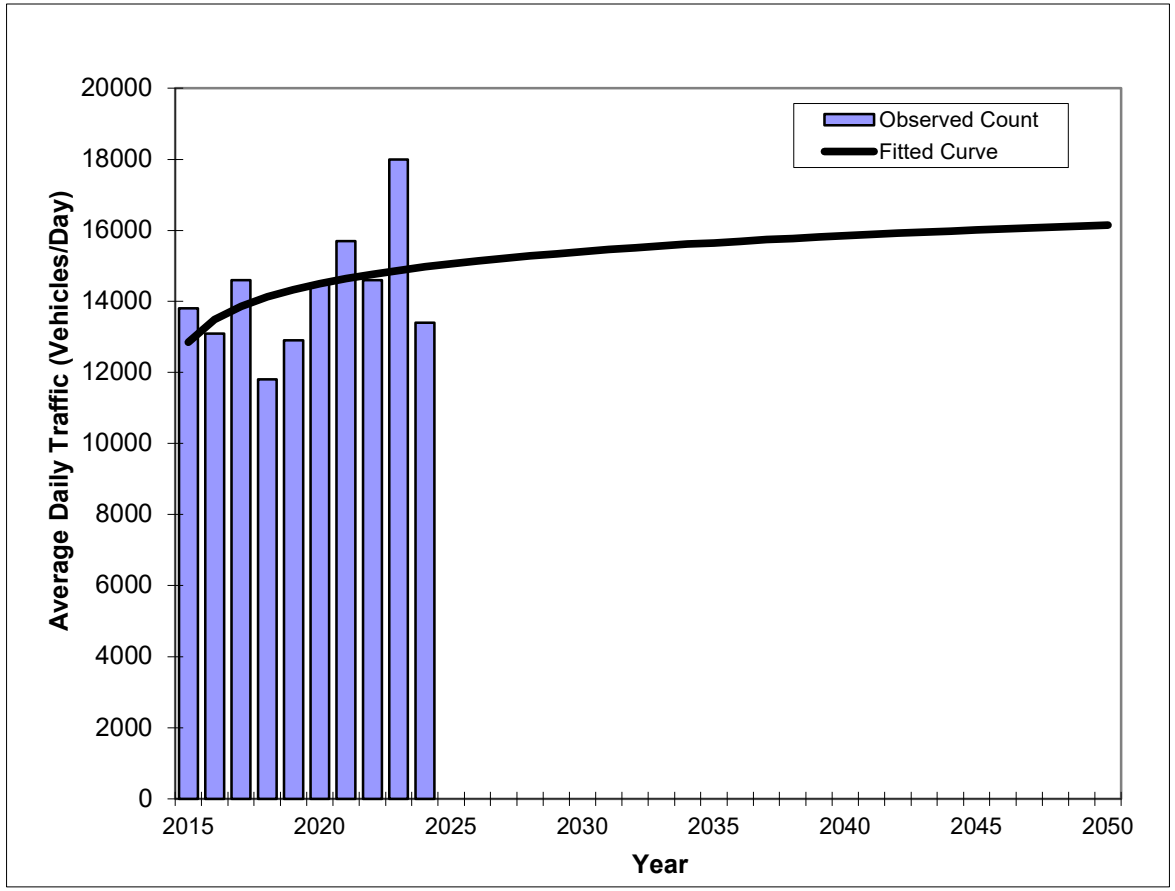
***Axle-Adjusted**

Traffic Trends - V2023

COLLINS AVE -- SR AIA/COLLINS AV, 200' N 5 ST(MIAMI BEACH)

FM #	**330163501**
Location	**2**

County:	Miami-Dade
Station #:	875159
Roadway:	COLLINS AVE



Year	Traffic (ADT/AADT) Count*	Trend
2015	13,800	12,850
2016	13,100	13,490
2017	14,600	13,860
2018	11,800	14,130
2019	12,900	14,330
2020	14,500	14,500
2021	15,700	14,640
2022	14,600	14,760
2023	18,000	14,870
2024	13,400	14,970
2028 Opening Year Trend		
2028	N/A	15,280
2040 Interim Year Trend		
2040	N/A	15,850
2050 Design Year Trend		
2050	N/A	16,150
FSUTMS Forecasts/Trends		

Trend R-squared:	15.42%
Compounded Annual Historic Growth Rate:	1.71%
Compounded Growth Rate (2024 to Design Year)	0.29%
Printed:	8/14/2025

Decaying Exponential Growth Option

***Axle-Adjusted**

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2024 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8590 - S POINTE DR, 150 FT W OF WASHINGTON AVE, MIAMI BEACH

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2024	9500 F	E 5300	W 4200	9.00	52.70	3.80
2023	9600 C	E 5400	W 4200	9.00	63.10	3.70
2022	3600 T	E 1900	W 1700	9.00	56.50	3.50
2021	3500 S	E 1800	W 1700	9.00	55.00	2.90
2020	3700 F	E 1900	W 1800	9.00	56.00	4.40
2019	4100 C	E 2100	W 2000	9.00	56.00	4.00
2018	5000 T	E 2700	W 2300	9.00	54.30	3.00
2017	5600 S	E 3000	W 2600	9.00	59.30	2.50
2016	5600 F	E 3000	W 2600	9.00	56.10	5.10
2015	5600 C	E 3000	W 2600	9.00	57.40	7.10
2014	5200 S	E 2700	W 2500	9.00	59.30	10.70
2013	5200 F	E 2700	W 2500	9.00	58.90	16.20
2012	5200 C	E 2700	W 2500	9.00	59.70	16.00

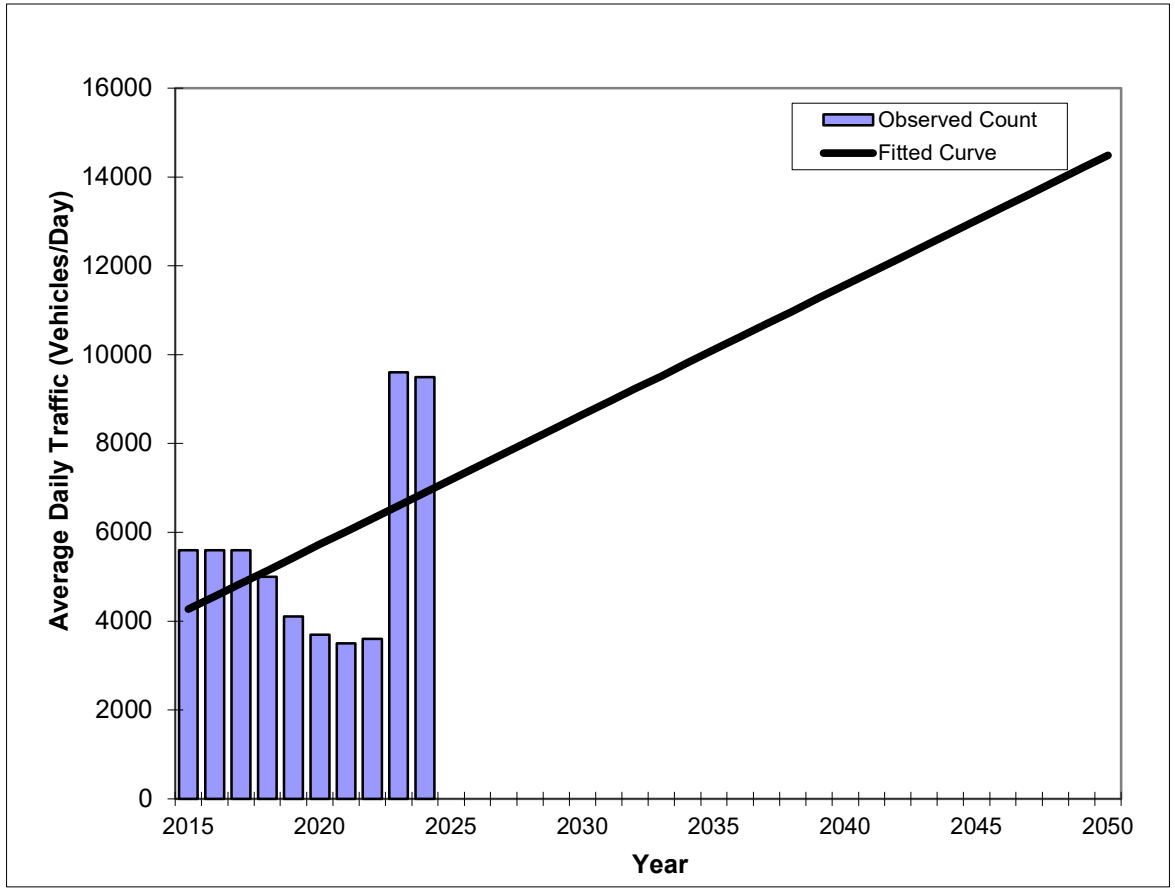
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S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2023

S. POINT DR. -- S POINTE DR, 150 FT W OF WASHINGTON AVE, MIAMI BEACH

FM #	**330163501**
Location	**3**

County:	Miami-Dade
Station #:	878590
Roadway:	S. POINT DR.



Annual Trend Increase:	292
Trend R-squared:	15.36%
Trend Annual Historic Growth Rate:	6.82%
Trend Growth Rate (2024 to Design Year)	4.24%
Printed:	8/14/2025

Linear Growth Option

Year	Traffic (ADT/AADT) Count*	Trend
2015	5,600	4,270
2016	5,600	4,560
2017	5,600	4,850
2018	5,000	5,140
2019	4,100	5,430
2020	3,700	5,730
2021	3,500	6,020
2022	3,600	6,310
2023	9,600	6,600
2024	9,500	6,890
2028 Opening Year Trend		
2028	N/A	8,060
2040 Interim Year Trend		
2040	N/A	11,570
2050 Design Year Trend		
2050	N/A	14,490
FSUTMS Forecasts/Trends		

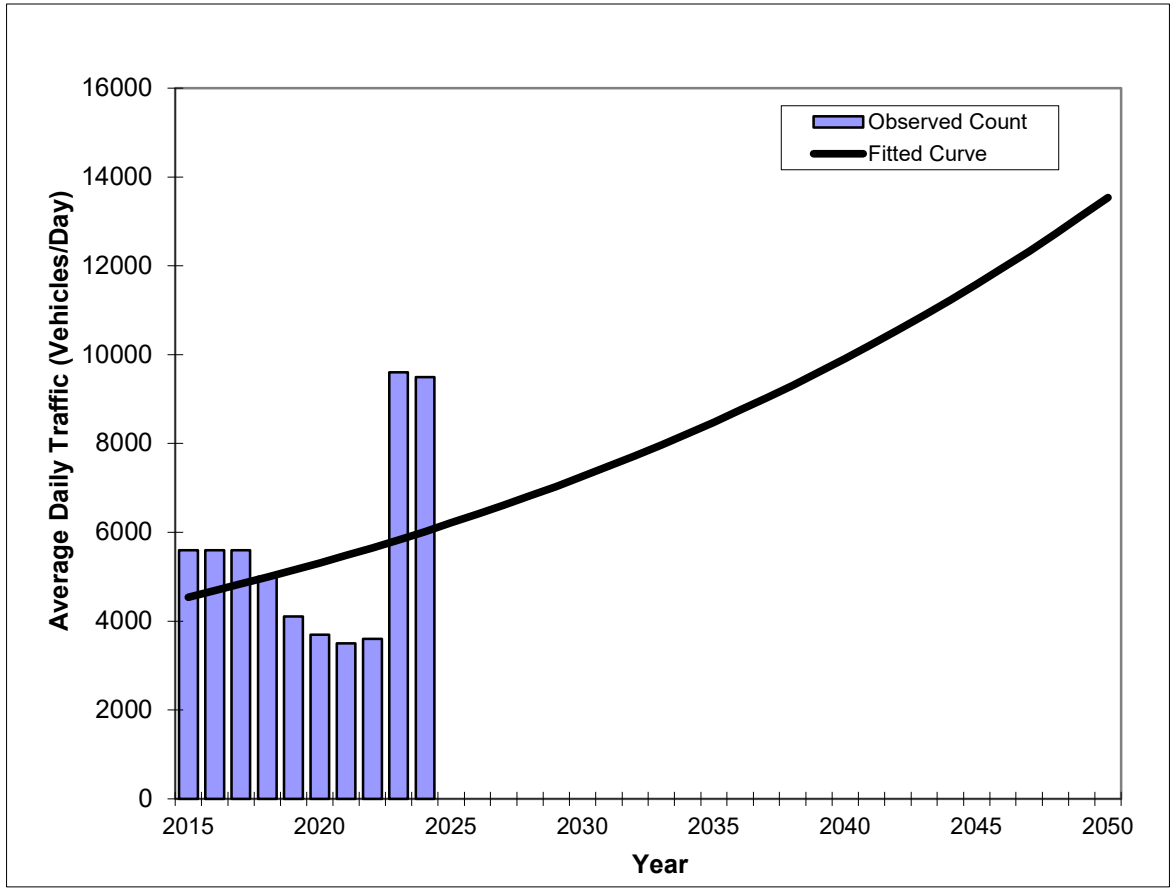
***Axle-Adjusted**

Traffic Trends - V2023

S. POINT DR. -- S POINTE DR, 150 FT W OF WASHINGTON AVE, MIAMI BEACH

FM #	**330163501**
Location	**3**

County:	Miami-Dade
Station #:	878590
Roadway:	S. POINT DR.



Year	Traffic (ADT/AADT) Count*	Trend
2015	5,600	4,540
2016	5,600	4,690
2017	5,600	4,840
2018	5,000	4,990
2019	4,100	5,150
2020	3,700	5,310
2021	3,500	5,480
2022	3,600	5,650
2023	9,600	5,830
2024	9,500	6,020
2028 Opening Year Trend		
2028	N/A	6,820
2040 Interim Year Trend		
2040	N/A	9,910
2050 Design Year Trend		
2050	N/A	13,540
FSUTMS Forecasts/Trends		

Trend R-squared:	6.58%
Compounded Annual Historic Growth Rate:	3.18%
Compounded Growth Rate (2024 to Design Year)	3.17%
Printed:	8/14/2025

Exponential Growth Option

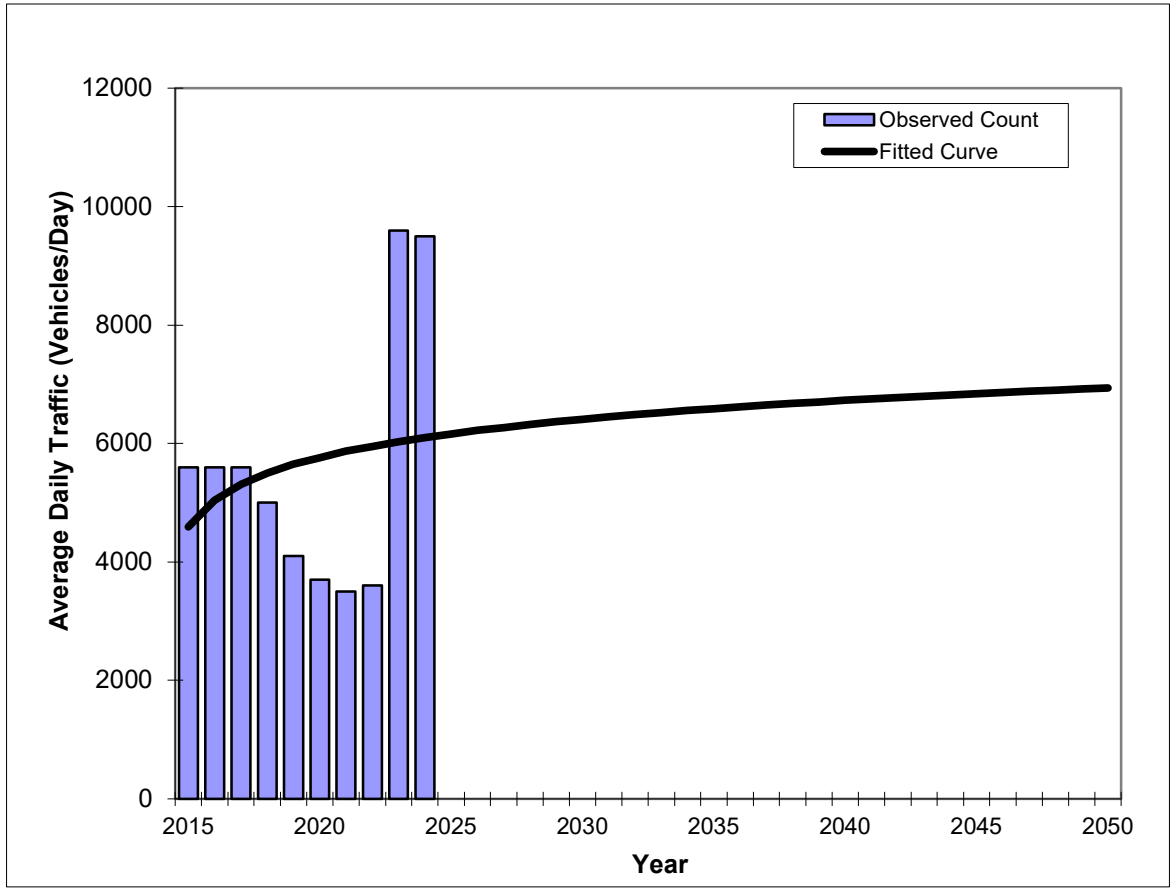
***Axle-Adjusted**

Traffic Trends - V2023

S. POINT DR. -- S POINTE DR, 150 FT W OF WASHINGTON AVE, MIAMI BEACH

FM #	**330163501**
Location	**3**

County:	Miami-Dade
Station #:	878590
Roadway:	S. POINT DR.



Year	Traffic (ADT/AADT) Count*	Trend
2015	5,600	4,590
2016	5,600	5,040
2017	5,600	5,310
2018	5,000	5,500
2019	4,100	5,650
2020	3,700	5,760
2021	3,500	5,870
2022	3,600	5,950
2023	9,600	6,030
2024	9,500	6,100
2028 Opening Year Trend		
2028	N/A	6,320
2040 Interim Year Trend		
2040	N/A	6,730
2050 Design Year Trend		
2050	N/A	6,940
FSUTMS Forecasts/Trends		

*Axle-Adjusted

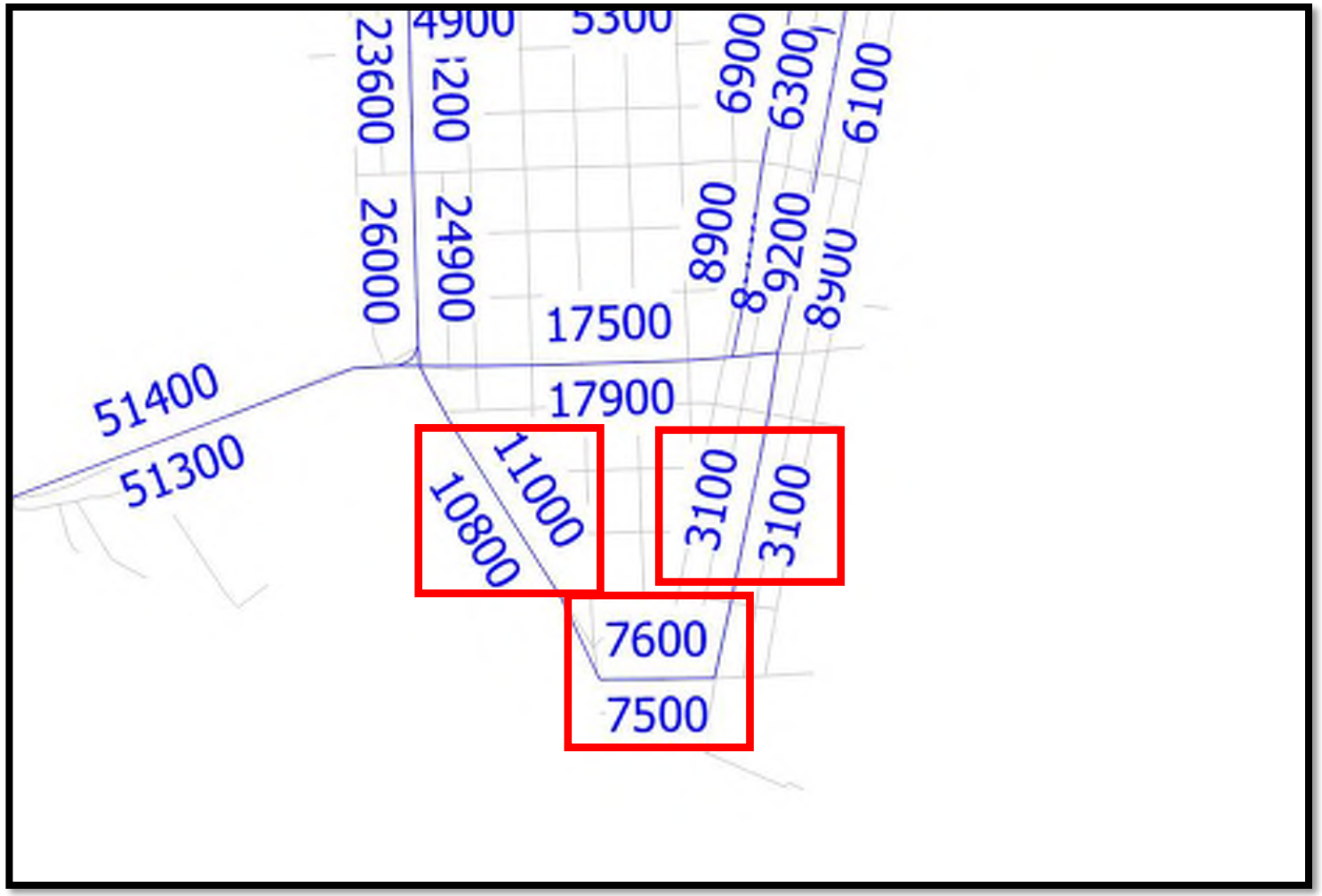
Trend R-squared:	4.55%
Compounded Annual Historic Growth Rate:	3.21%
Compounded Growth Rate (2024 to Design Year)	0.50%
Printed:	8/14/2025

Decaying Exponential Growth Option

2015 SERPM Traffic Volume



2045 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	
651	3551	Trips	601	40	126	-	25	267	541	390	2,069
651	3551	Percent	30.2	2.0	6.3	-	1.2	13.4	27.2	19.6	
652	3552	Trips	740	133	112	92	80	539	627	907	3,332
652	3552	Percent	22.9	4.1	3.5	2.8	2.5	16.7	19.4	28.1	
653	3553	Trips	597	120	187	238	48	604	488	661	2,984
653	3553	Percent	20.3	4.1	6.4	8.1	1.6	20.5	16.6	22.5	
654	3554	Trips	648	-	246	192	190	739	849	890	3,940
654	3554	Percent	17.3	-	6.6	5.1	5.1	19.7	22.6	23.7	
655	3555	Trips	2,579	-	-	-	1,029	2,523	3,354	2,903	13,375
655	3555	Percent	20.8	-	-	-	8.3	20.4	27.1	23.4	
656	3556	Trips	683	-	-	-	187	546	1,103	960	3,541
656	3556	Percent	19.6	-	-	-	5.4	15.7	31.7	27.6	
657	3557	Trips	223	26	3	49	34	152	244	154	913
657	3557	Percent	25.2	2.9	0.4	5.5	3.8	17.2	27.6	17.4	
658	3558	Trips	385	-	74	12	19	212	362	296	1,384
658	3558	Percent	28.3	-	5.4	0.9	1.4	15.6	26.6	21.8	
659	3559	Trips	1,748	-	-	-	186	1,331	2,542	2,823	9,143
659	3559	Percent	20.3	-	-	-	2.2	15.4	29.5	32.7	
660	3560	Trips	445	-	-	-	26	214	438	582	1,786
660	3560	Percent	26.1	-	-	-	1.5	12.5	25.7	34.1	
661	3561	Trips	561	-	-	-	29	307	686	550	2,237
661	3561	Percent	26.3	-	-	-	1.4	14.4	32.2	25.8	
662	3562	Trips	247	-	-	-	367	663	1,138	583	3,054
662	3562	Percent	8.2	-	-	-	12.3	22.1	38.0	19.4	
663	3563	Trips	28	-	-	-	80	28	129	132	397
663	3563	Percent	7.1	-	-	-	20.3	7.0	32.4	33.2	
664	3564	Trips	690	1,278	-	2	5	504	1,465	2,405	8,087
664	3564	Percent	10.9	20.1	-	0.0	0.1	7.9	23.1	37.9	
665	3565	Trips	1,047	-	-	16	12	2,003	2,621	4,069	11,382
665	3565	Percent	10.7	-	-	0.2	0.1	20.5	26.8	41.7	
666	3566	Trips	7	-	-	-	-	-	40	97	144
666	3566	Percent	4.6	-	-	-	-	-	27.9	67.5	
667	3567	Trips	69	191	371	354	52	-	-	11	1,049
667	3567	Percent	6.6	18.3	35.4	33.8	5.0	-	-	1.1	
668	3568	Trips	72	316	257	156	343	-	1	27	1,181
668	3568	Percent	6.2	27.0	21.9	13.3	29.2	-	0.1	2.3	
669	3569	Trips	708	1,153	1,379	1,013	424	-	6	148	4,982
669	3569	Percent	14.7	23.9	28.6	21.0	8.8	-	0.1	3.1	
670	3570	Trips	784	1,013	1,374	915	589	74	8	172	5,078
670	3570	Percent	15.9	20.6	27.9	18.6	11.9	1.5	0.2	3.5	
671	3571	Trips	868	1,044	1,129	712	718	1	40	169	4,757
671	3571	Percent	18.5	22.3	24.1	15.2	15.4	0.0	0.9	3.6	
672	3572	Trips	262	156	186	125	162	2	24	57	974
672	3572	Percent	26.9	16.0	19.1	12.8	16.7	0.3	2.4	5.8	
673	3573	Trips	172	261	359	224	207	12	36	140	1,412
673	3573	Percent	12.2	18.5	25.4	15.9	14.6	0.8	2.6	9.9	
674	3574	Trips	866	641	1,000	863	613	112	90	488	4,718
674	3574	Percent	18.5	13.7	21.4	18.5	13.1	2.4	1.9	10.4	
675	3575	Trips	904	864	749	472	371	46	31	226	3,703
675	3575	Percent	24.7	23.6	20.5	12.9	10.1	1.3	0.9	6.2	
676	3576	Trips	43	54	19	23	31	8	-	15	194
676	3576	Percent	22.4	27.9	9.7	11.7	16.2	4.3	-	7.9	

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	
651	3551	Trips	500	33	118	-	44	610	964	424	2,777
651	3551	Percent	18.6	1.2	4.4	-	1.6	22.7	35.8	15.8	
652	3552	Trips	834	141	140	71	102	864	1,319	966	4,613
652	3552	Percent	18.8	3.2	3.2	1.6	2.3	19.5	29.7	21.8	
653	3553	Trips	563	73	181	185	40	875	1,115	522	3,691
653	3553	Percent	15.8	2.1	5.1	5.2	1.1	24.6	31.4	14.7	
654	3554	Trips	527	-	154	189	209	1,276	1,357	971	4,960
654	3554	Percent	11.3	-	3.3	4.0	4.5	27.2	29.0	20.7	
655	3555	Trips	2,507	-	-	-	984	3,119	4,529	3,116	15,245
655	3555	Percent	17.6	-	-	-	6.9	21.9	31.8	21.9	
656	3556	Trips	752	-	-	-	201	872	1,503	1,028	4,509
656	3556	Percent	17.3	-	-	-	4.6	20.0	34.5	23.6	
657	3557	Trips	255	42	13	51	17	325	482	206	1,441
657	3557	Percent	18.4	3.0	1.0	3.7	1.2	23.4	34.6	14.8	
658	3558	Trips	398	-	50	10	22	302	673	339	1,860
658	3558	Percent	22.2	-	2.8	0.6	1.2	16.8	37.5	18.9	
659	3559	Trips	1,874	-	-	-	244	1,675	3,472	2,524	10,393
659	3559	Percent	19.1	-	-	-	2.5	17.1	35.5	25.8	
660	3560	Trips	386	-	-	-	28	335	726	479	2,047
660	3560	Percent	19.8	-	-	-	1.5	17.2	37.1	24.5	
661	3561	Trips	756	-	-	-	54	536	1,539	649	3,810
661	3561	Percent	21.4	-	-	-	1.5	15.2	43.6	18.4	
662	3562	Trips	292	-	-	-	279	909	1,772	764	4,053
662	3562	Percent	7.3	-	-	-	7.0	22.6	44.1	19.0	
663	3563	Trips	23	-	-	-	29	57	119	164	393
663	3563	Percent	5.9	-	-	-	7.3	14.5	30.4	41.9	
664	3564	Trips	776	1,012	-	8	8	823	2,336	4,104	11,172
664	3564	Percent	8.6	11.2	-	0.1	0.1	9.1	25.8	45.3	
665	3565	Trips	896	-	-	16	21	1,811	3,091	5,025	12,548
665	3565	Percent	8.3	-	-	0.2	0.2	16.7	28.5	46.3	
666	3566	Trips	14	-	-	-	0	4	56	145	235
666	3566	Percent	6.4	-	-	-	0.0	2.0	25.5	66.1	
667	3567	Trips	62	202	356	394	51	-	-	12	1,076
667	3567	Percent	5.8	18.8	33.0	36.6	4.7	-	-	1.1	
668	3568	Trips	190	394	278	333	392	-	1	32	1,620
668	3568	Percent	11.7	24.3	17.2	20.6	24.2	-	0.1	2.0	
669	3569	Trips	1,117	1,381	1,871	1,307	750	-	10	135	6,631
669	3569	Percent	17.0	21.0	28.5	19.9	11.4	-	0.2	2.1	
670	3570	Trips	1,284	1,233	1,894	1,616	1,059	85	15	177	7,535
670	3570	Percent	17.4	16.8	25.7	22.0	14.4	1.2	0.2	2.4	
671	3571	Trips	1,240	959	1,638	945	797	1	46	211	5,998
671	3571	Percent	21.2	16.4	28.1	16.2	13.7	0.0	0.8	3.6	
672	3572	Trips	186	161	294	189	226	24	35	120	1,234
672	3572	Percent	15.0	13.0	23.8	15.4	18.3	1.9	2.8	9.7	
673	3573	Trips	410	361	600	469	343	30	46	233	2,524
673	3573	Percent	16.5	14.5	24.1	18.8	13.8	1.2	1.8	9.4	
674	3574	Trips	1,543	1,530	2,122	1,962	1,401	177	145	1,154	10,169
674	3574	Percent	15.4	15.3	21.2	19.6	14.0	1.8	1.4	11.5	
675	3575	Trips	896	1,067	1,015	818	747	40	74	465	5,206
675	3575	Percent	17.5	20.8	19.8	16.0	14.6	0.8	1.4	9.1	
676	3576	Trips	151	160	192	100	100	18	-	45	766
676	3576	Percent	19.8	20.9	25.1	13.1	13.0	2.3	-	5.9	



MIAMIBEACH RISING ABOVE

November 12, 2024

First Street & South Pointe Stormwater Improvements

60% Design – Hybrid Meeting

PUBLIC WORKS DEPARTMENT

Jacobs MIAMIBEACH

Project Scope, Phasing and Timeline

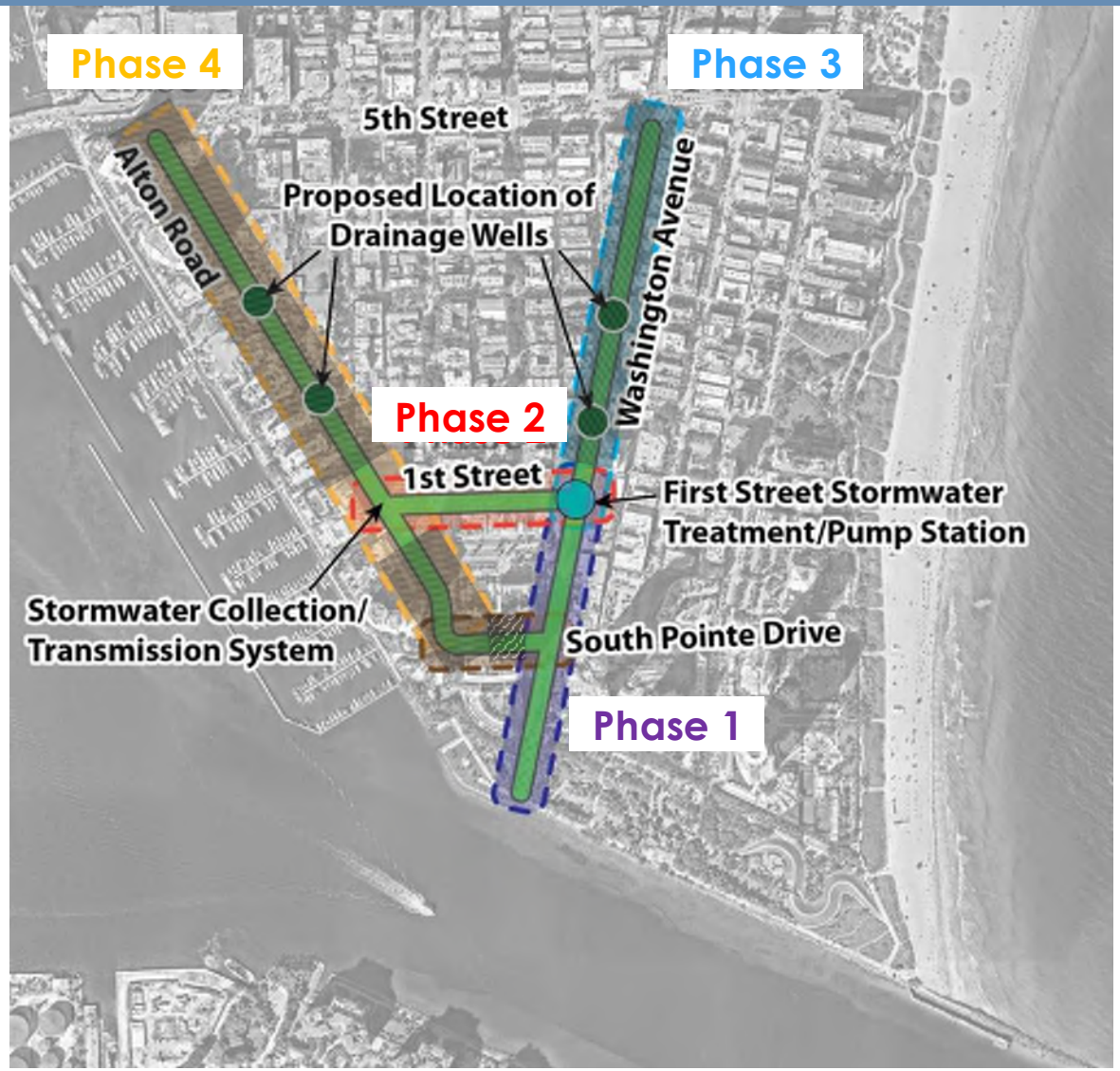
Package 1

- **Phase 1** – Pumpstation, Force Main, Outfall & Dissipator
- **Phase 2** – 1st Street Road Elevation and Green Infrastructure

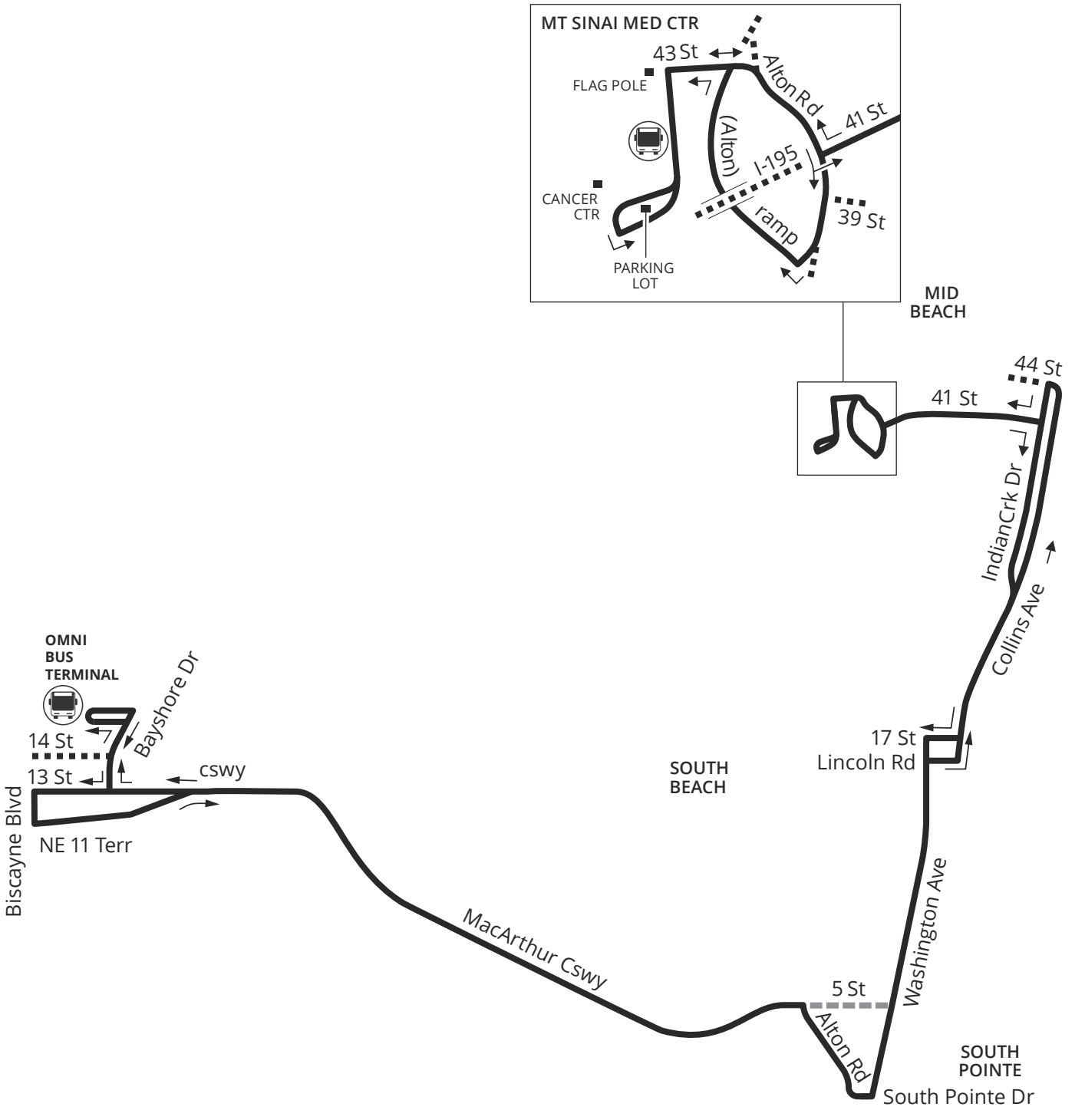
Package 2

- **Phase 3** – Washington Avenue stormwater infrastructure from 1st Street to 5th Street
- **Phase 4** – Alton Road stormwater infrastructure from 5th Street to South Pointe Drive

* *South Pointe Drive improvements not included in contract.*



14

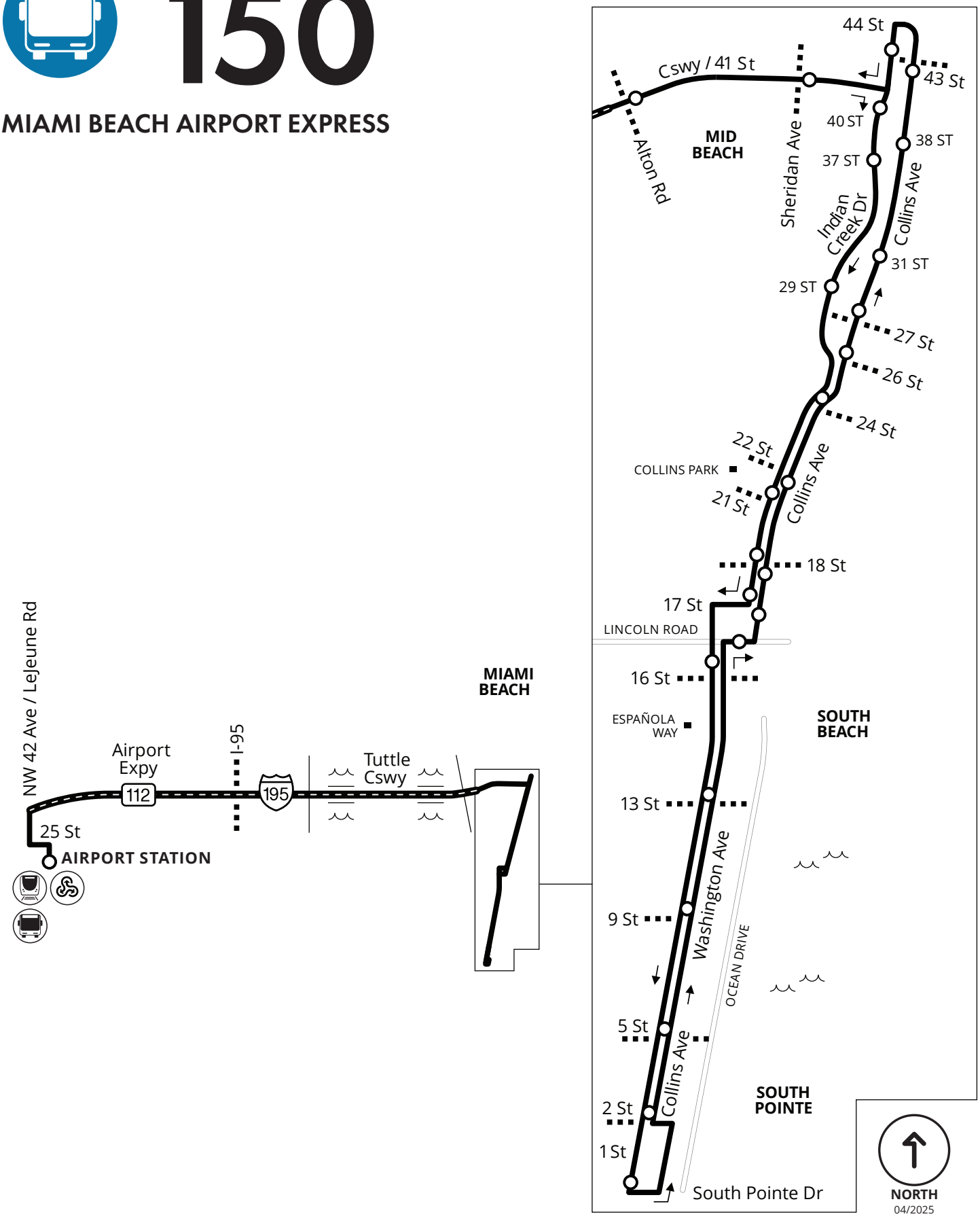


NORTH

11/2023

150

MIAMI BEACH AIRPORT EXPRESS



APPENDIX E
INTERSECTION VOLUME SPREADSHEETS

INTERSECTION TRAFFIC VOLUMES FRIDAY AM, [FRIDAY PM] AND (SATURDAY PM)
PIER PARK

Intersection	Road	Direction	Movement	2025 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) Collins Avenue & South Pointe Drive	South Pointe Drive	Eastbound	EBL	22 [82] (89)	24 [89] (96)			24 [89] (96)
			EBT	81 [221] (332)	87 [239] (359)	50%	5 [18] (27)	92 [257] (386)
			EBR	12 [16] (15)	13 [17] (16)			13 [17] (16)
			Approach	115 [319] (436)	124 [345] (471)	50%	5 [18] (27)	129 [363] (498)
		Westbound	WBL	2 [6] (11)	2 [6] (12)			2 [6] (12)
			WBT	62 [164] (238)	67 [177] (257)	(50%)	1 [49] (53)	68 [226] (310)
			WBR	5 [30] (42)	5 [32] (45)			5 [32] (45)
			Approach	69 [200] (291)	74 [215] (314)	(50%)	1 [49] (53)	75 [264] (367)
	Collins Avenue	Northbound	NBL	5 [13] (14)	5 [14] (15)			5 [14] (15)
			NBT	1 [2] (3)	1 [2] (3)			1 [2] (3)
			NBR	2 [2] (1)	2 [2] (1)			2 [2] (1)
			Approach	8 [17] (18)	8 [18] (19)			8 [18] (19)
		Southbound	SBL	7 [44] (52)	8 [48] (56)			8 [48] (56)
			SBT	1 [5] (4)	1 [5] (4)			1 [5] (4)
			SBR	21 [77] (92)	23 [83] (99)			23 [83] (99)
			Approach	29 [126] (148)	32 [136] (159)			32 [136] (159)
(2) Ocean Drive & 1st Street	1st Street	Eastbound	EBL	20 [34] (39)	22 [37] (42)			22 [37] (42)
			EBT	24 [17] (18)	26 [18] (19)			26 [18] (19)
			EBR	11 [35] (74)	12 [38] (80)	25%	2 [9] (14)	14 [47] (94)
			Approach	55 [86] (131)	60 [93] (141)	25%	2 [9] (14)	62 [102] (155)
		Westbound	WBL	1 [5] (12)	1 [5] (13)			1 [5] (13)
			WBT	3 [21] (20)	3 [23] (22)			3 [23] (22)
			WBR	6 [14] (17)	6 [15] (18)			6 [15] (18)
			Approach	10 [40] (49)	10 [43] (53)			10 [43] (53)
	Ocean Drive	Northbound	NBL	16 [63] (86)	17 [68] (93)	(25%)	1 [25] (27)	18 [93] (120)
			NBT	44 [183] (227)	48 [198] (245)	(25%)	0 [24] (26)	48 [222] (271)
			NBR	1 [7] (12)	1 [8] (13)			1 [8] (13)
			Approach	61 [253] (325)	66 [274] (351)	(50%)	1 [49] (53)	67 [323] (404)
		Southbound	SBL	7 [21] (32)	8 [23] (35)			8 [23] (35)
			SBT	27 [88] (96)	29 [95] (104)	25%	2 [9] (14)	31 [104] (118)
			SBR	18 [41] (54)	19 [44] (58)			19 [44] (58)
			Approach	52 [150] (182)	56 [162] (197)	25%	2 [9] (14)	58 [171] (211)
(3) Ocean Drive & South Pointe Drive	South Pointe Drive	Eastbound	EBL	33 [140] (173)	36 [151] (187)	50%	5 [18] (27)	41 [169] (214)
			EBT	22 [102] (183)	24 [110] (198)			24 [110] (198)
			EBR	27 [48] (30)	29 [52] (32)			29 [52] (32)
			Approach	82 [290] (386)	89 [313] (417)	50%	5 [18] (27)	94 [331] (444)
		Westbound	WBL	2 [1] (9)	2 [1] (10)			2 [1] (10)
			WBT	26 [74] (91)	28 [80] (98)			28 [80] (98)
			WBR	20 [77] (142)	22 [83] (153)			22 [83] (153)
			Approach	48 [152] (242)	52 [164] (261)			52 [164] (261)
	Ocean Drive	Northbound	NBL	26 [40] (35)	28 [43] (38)			28 [43] (38)
			NBT	1 [12] (12)	1 [13] (13)			1 [13] (13)
			NBR	2 [5] (4)	2 [5] (4)			2 [5] (4)
			Approach	29 [57] (51)	31 [61] (55)			31 [61] (55)
		Southbound	SBL	15 [48] (67)	16 [52] (72)			16 [52] (72)
			SBT	4 [13] (13)	4 [14] (14)			4 [14] (14)
			SBR	16 [97] (141)	17 [105] (152)	(50%)	1 [49] (53)	18 [154] (205)
			Approach	35 [158] (221)	37 [171] (238)	(50%)	1 [49] (53)	38 [220] (291)

APPENDIX F
INTERSECTION CAPACITY REPORTS

EXISTING CONDITIONS

Table 1.1 -2025 Existing Intersection Capacity Analysis Summary

Location	Time	Level of Service[1]					
		(1) Collins Avenue & South Pointe Drive		(2) Ocean Drive & 1st Street		(3) Ocean Drive & South Pointe Drive	
		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay
EBL	Frid AM						
	Frid PM						
	Sat PM						
EBT	Frid AM						
	Frid PM						
	Sat PM						
EBR	Frid AM						
	Frid PM						
	Sat PM						
EB Approach	Frid AM	A	8.1	A	9.1	A	7.8
	Frid PM	A	10.0	B	13.8	A	9.9
	Sat PM	B	11.6	C	15.8	B	11.8
WBL	Frid AM						
	Frid PM						
	Sat PM						
WBT	Frid AM						
	Frid PM						
	Sat PM						
WBR	Frid AM						
	Frid PM						
	Sat PM						
WB Approach	Frid AM	A	7.7	A	8.8	A	7.5
	Frid PM	A	9.0	B	14.7	A	8.8
	Sat PM	A	10.0	C	18.4	B	10.3
NBL	Frid AM						
	Frid PM						
	Sat PM						
NBT	Frid AM						
	Frid PM						
	Sat PM						
NBR	Frid AM						
	Frid PM						
	Sat PM						
NB Approach	Frid AM	A	8.1			A	7.6
	Frid PM	A	9.3			A	9.0
	Sat PM	A	9.9			A	9.8
SBL	Frid AM						
	Frid PM						
	Sat PM						
SBT	Frid AM						
	Frid PM						
	Sat PM						
SBR	Frid AM						
	Frid PM						
	Sat PM						
SB Approach	Frid AM	A	7.6			A	7.6
	Frid PM	A	9.1			A	9.3
	Sat PM	A	9.8			B	11.3
Overall	Frid AM						
	Frid PM						
	Sat PM						

[1] Delay is average delay per vehicle in seconds

[2] Approach operates under Free-flow conditions

Table 1.2 -2025 No Build Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lenghts (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile
(1) Collins Avenue & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																
(2) Ocean Drive & 1st Street	Frid AM																
	Frid PM																
	Sat PM																
(3) Ocean Drive & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																

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

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

[redacted]

HCS7 All-Way Stop Control Report

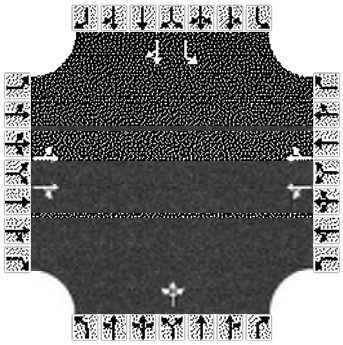
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Frid AM Exist Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	22	81	12	2	62	5	5	1	2	7	1	21
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	66	55		35	38		8			7	23	
Percent Heavy Vehicles	24	4		3	7		3			33	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.058	0.049		0.031	0.034		0.007			0.007	0.021	
Final Departure Headway, hd (s)	5.23	4.56		4.77	4.71		5.01			6.02	4.34	
Final Degree of Utilization, x	0.096	0.070		0.046	0.050		0.012			0.012	0.028	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	2.93	2.26		2.47	2.41		3.01			3.72	2.04	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	66	55		35	38		8			7	23	
Capacity	688	790		755	764		718			598	829	
95% Queue Length, Q_{95} (veh)	0.3	0.2		0.1	0.2		0.0			0.0	0.1	
Control Delay (s/veh)	8.5	7.6		7.7	7.7		8.1			8.8	7.2	
Level of Service, LOS	A	A		A	A		A			A	A	
Approach Delay (s/veh)	8.1			7.7			8.1			7.6		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	7.9						A					

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HCS7 Two-Way Stop-Control Report

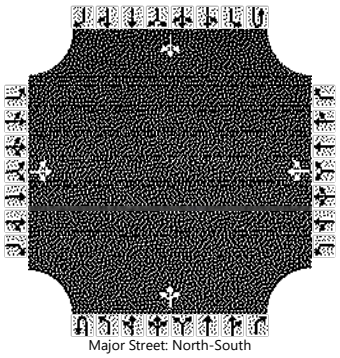
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Frid AM Exist Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		20	24	11		1	3	6		16	44	1		7	27	18
Percent Heavy Vehicles (%)		26	5	10		3	3	17		13				14		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.23				4.24		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.32				2.33		

Delay, Queue Length, and Level of Service

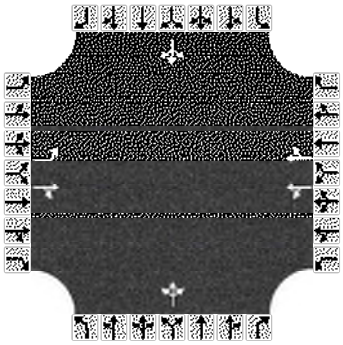
Flow Rate, v (veh/h)			60				11			17				8		
Capacity, c (veh/h)			943				946			1437				1359		
v/c Ratio			0.06				0.01			0.01				0.01		
95% Queue Length, Q_{95} (veh)			0.2				0.0			0.0				0.0		
Control Delay (s/veh)			9.1				8.8			7.5				7.7		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	9.1				8.8				2.0				1.1			
Approach LOS	A				A											

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HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	LTA	Intersection	Ocean Drive & South Pointe Drive
Agency/Co.	LANGAN	Jurisdiction	Miami Beach
Date Performed	8/21/2025	East/West Street	South Pointe Drive
Analysis Year	2025	North/South Street	Ocean Drive
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Frid AM Exist Peak Hour		
Project Description	Pier Park		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	33	22	27	2	26	20	26	1	2	15	4	16
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	36	53		16	36		32			38		
Percent Heavy Vehicles	15	3		3	13		3			18		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.032	0.047		0.014	0.032		0.028			0.034		
Final Departure Headway, hd (s)	5.46	4.37		4.85	4.53		4.45			4.37		
Final Degree of Utilization, x	0.054	0.065		0.022	0.045		0.039			0.046		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	3.16	2.07		2.55	2.23		2.45			2.37		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	36	53		16	36		32			38		
Capacity	659	824		742	795		809			823		
95% Queue Length, Q_{95} (veh)	0.2	0.2		0.1	0.1		0.1			0.1		
Control Delay (s/veh)	8.5	7.4		7.7	7.4		7.6			7.6		
Level of Service, LOS	A	A		A	A		A			A		
Approach Delay (s/veh)	7.8			7.5			7.6			7.6		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	7.7						A					

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HCS7 All-Way Stop Control Report

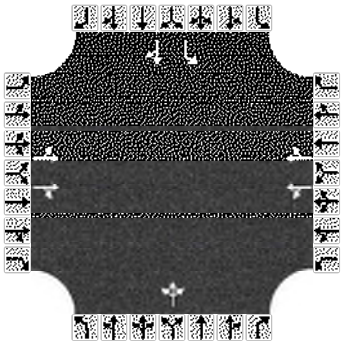
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Frid PM Exist Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	82	221	16	6	164	30	13	2	2	44	5	77
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	209	138		96	122		18			48	89	
Percent Heavy Vehicles	3	3		3	3		3			3	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.186	0.122		0.085	0.108		0.016			0.043	0.079	
Final Departure Headway, hd (s)	5.43	5.13		5.39	5.16		6.13			6.40	5.24	
Final Degree of Utilization, x	0.315	0.196		0.143	0.175		0.031			0.085	0.130	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	3.13	2.83		3.09	2.86		4.13			4.10	2.94	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	209	138		96	122		18			48	89	
Capacity	663	702		668	697		588			563	687	
95% Queue Length, Q_{95} (veh)	1.4	0.7		0.5	0.6		0.1			0.3	0.4	
Control Delay (s/veh)	10.6	9.1		9.0	9.0		9.3			9.7	8.7	
Level of Service, LOS	B	A		A	A		A			A	A	
Approach Delay (s/veh)	10.0			9.0			9.3			9.1		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	9.5						A					

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HCS7 Two-Way Stop-Control Report

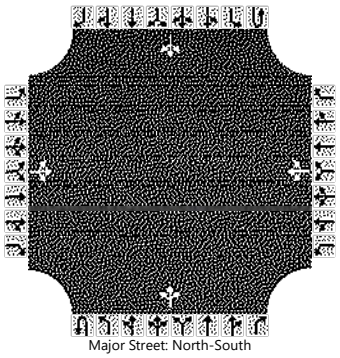
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Frid PM Exist Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		34	17	35		5	21	14		63	183	7		21	88	41
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			93				43			68				23		
Capacity, c (veh/h)			500				414			1236				951		
v/c Ratio			0.19				0.11			0.06				0.02		
95% Queue Length, Q_{95} (veh)			0.7				0.3			0.2				0.1		
Control Delay (s/veh)			13.8				14.7			8.1				8.9		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	13.8				14.7				2.4				1.4			
Approach LOS	B				B											

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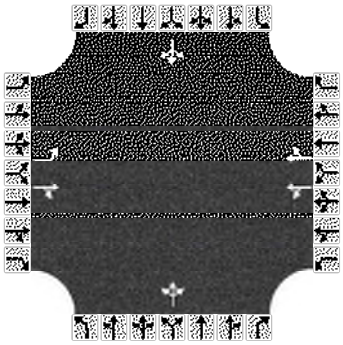
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Frid PM Exist Peak Hour
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	140	102	48	1	74	77	40	12	5	48	13	97
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	152	163		41	124		62			172		
Percent Heavy Vehicles	3	3		3	3		3			3		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.135	0.145		0.037	0.110		0.055			0.153		
Final Departure Headway, hd (s)	5.85	5.12		5.55	5.06		5.43			4.87		
Final Degree of Utilization, x	0.247	0.232		0.064	0.174		0.093			0.232		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	3.55	2.82		3.25	2.76		3.43			2.87		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	152	163		41	124		62			172		
Capacity	615	703		649	712		663			740		
95% Queue Length, Q_{95} (veh)	1.0	0.9		0.2	0.6		0.3			0.9		
Control Delay (s/veh)	10.5	9.4		8.6	8.8		9.0			9.3		
Level of Service, LOS	B	A		A	A		A			A		
Approach Delay (s/veh)	9.9			8.8			9.0			9.3		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	9.4						A					

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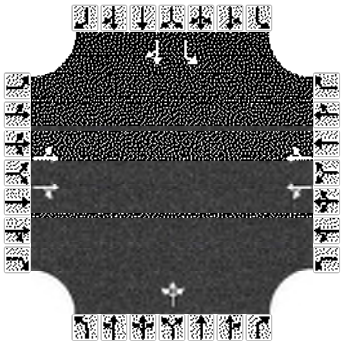
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM Exist Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.93

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	89	332	15	11	238	42	14	3	1	52	4	92
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	274	195		140	173		19			56	103	
Percent Heavy Vehicles	3	3		3	3		3			3	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.244	0.173		0.124	0.154		0.017			0.050	0.092	
Final Departure Headway, hd (s)	5.62	5.38		5.66	5.44		6.68			6.88	5.71	
Final Degree of Utilization, x	0.428	0.291		0.220	0.261		0.036			0.107	0.164	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	3.32	3.08		3.36	3.14		4.68			4.58	3.41	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	274	195		140	173		19			56	103	
Capacity	641	669		636	662		539			523	631	
95% Queue Length, Q_{95} (veh)	2.1	1.2		0.8	1.0		0.1			0.4	0.6	
Control Delay (s/veh)	12.5	10.3		10.0	10.1		9.9			10.4	9.5	
Level of Service, LOS	B	B		A	B		A			B	A	
Approach Delay (s/veh)	11.6			10.0			9.9			9.8		
Approach LOS	B			B			A			A		
Intersection Delay, s/veh | LOS	10.7						B					

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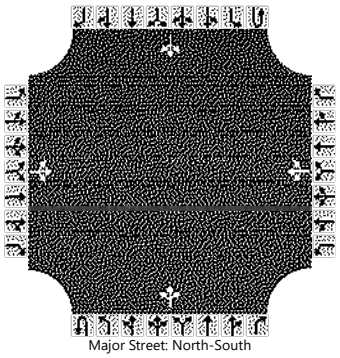
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Sat PM Exist Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		39	18	74		12	20	17		86	227	12		32	96	54
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			142				53			93				35		
Capacity, c (veh/h)			474				321			1210				871		
v/c Ratio			0.30				0.17			0.08				0.04		
95% Queue Length, Q_{95} (veh)			1.2				0.6			0.3				0.1		
Control Delay (s/veh)			15.8				18.4			8.2				9.3		
Level of Service (LOS)			C				C			A				A		
Approach Delay (s/veh)	15.8				18.4				2.7				2.0			
Approach LOS	C				C											

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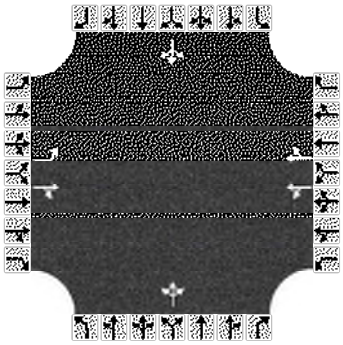
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM Exist Peak Hour
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	173	183	30	9	91	142	35	12	4	67	13	141
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	188	232		59	204		55			240		
Percent Heavy Vehicles	3	3		3	3		3			3		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.167	0.206		0.053	0.181		0.049			0.214		
Final Departure Headway, hd (s)	6.27	5.66		6.08	5.45		6.15			5.36		
Final Degree of Utilization, x	0.327	0.364		0.100	0.309		0.095			0.358		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	3.97	3.36		3.78	3.15		4.15			3.36		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	188	232		59	204		55			240		
Capacity	575	636		593	660		585			671		
95% Queue Length, Q_{95} (veh)	1.4	1.7		0.3	1.3		0.3			1.6		
Control Delay (s/veh)	12.0	11.6		9.4	10.6		9.8			11.3		
Level of Service, LOS	B	B		A	B		A			B		
Approach Delay (s/veh)	11.8			10.3			9.8			11.3		
Approach LOS	B			B			A			B		
Intersection Delay, s/veh | LOS	11.2						B					

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FUTURE NO BUILD CONDITIONS

Table 2.1 - 2028 No Build Intersection Capacity Analysis Summary

Location	Time	Level of Service[1]					
		(1) Collins Avenue & South Pointe Drive		(2) Ocean Drive & 1st Street		(3) Ocean Drive & South Pointe Drive	
		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay
EBL	Frid AM						
	Frid PM						
	Sat PM						
EBT	Frid AM						
	Frid PM						
	Sat PM						
EBR	Frid AM						
	Frid PM						
	Sat PM						
EB Approach	Frid AM	A	8.1	A	9.1	A	7.9
	Frid PM	B	10.4	B	14.5	B	10.2
	Sat PM	B	12.3	C	17.1	B	12.5
WBL	Frid AM						
	Frid PM						
	Sat PM						
WBT	Frid AM						
	Frid PM						
	Sat PM						
WBR	Frid AM						
	Frid PM						
	Sat PM						
WB Approach	Frid AM	A	7.7	A	8.9	A	7.5
	Frid PM	A	9.2	C	15.3	A	9.0
	Sat PM	B	10.4	C	19.8	B	10.9
NBL	Frid AM						
	Frid PM						
	Sat PM						
NBT	Frid AM						
	Frid PM						
	Sat PM						
NBR	Frid AM						
	Frid PM						
	Sat PM						
NB Approach	Frid AM	A	8.1			A	7.7
	Frid PM	A	9.5			A	9.2
	Sat PM	B	10.2			B	10.1
SBL	Frid AM						
	Frid PM						
	Sat PM						
SBT	Frid AM						
	Frid PM						
	Sat PM						
SBR	Frid AM						
	Frid PM						
	Sat PM						
SB Approach	Frid AM	A	7.6			A	7.6
	Frid PM	A	9.3			A	9.7
	Sat PM	B	10.2			B	12.1
Overall	Frid AM						
	Frid PM						
	Sat PM						

[1] Delay is average delay per vehicle in seconds

[2] Approach operates under Free-flow conditions

Table 1.2 - 2028 No Build Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lenghts (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile
(1) Collins Avenue & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																
(2) Ocean Drive & 1st Street	Frid AM																
	Frid PM																
	Sat PM																
(3) Ocean Drive & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																

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

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

LANGAN

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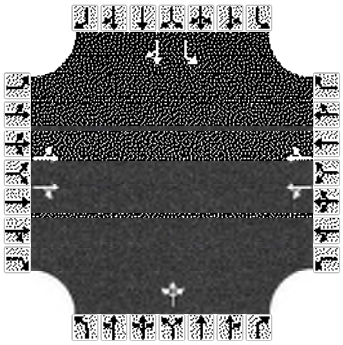
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri AM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.95

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	24	87	13	2	67	5	5	1	2	8	1	23
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	71	59		37	41		8			8	25	
Percent Heavy Vehicles	24	4		3	7		3			33	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.063	0.053		0.033	0.036		0.007			0.007	0.022	
Final Departure Headway, hd (s)	5.25	4.57		4.79	4.73		5.05			6.05	4.37	
Final Degree of Utilization, x	0.104	0.075		0.050	0.053		0.012			0.014	0.031	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	2.95	2.27		2.49	2.43		3.05			3.75	2.07	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	71	59		37	41		8			8	25	
Capacity	686	788		752	760		713			595	823	
95% Queue Length, Q_{95} (veh)	0.3	0.2		0.2	0.2		0.0			0.0	0.1	
Control Delay (s/veh)	8.6	7.6		7.7	7.7		8.1			8.8	7.2	
Level of Service, LOS	A	A		A	A		A			A	A	
Approach Delay (s/veh)	8.1			7.7			8.1			7.6		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	7.9						A					

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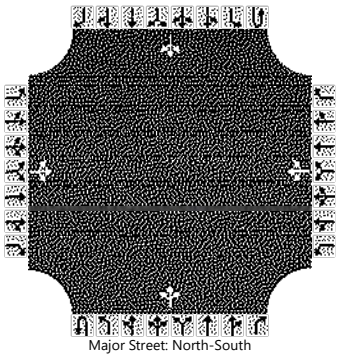
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Fri AM No Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		22	26	12		1	3	6		17	48	1		8	29	19
Percent Heavy Vehicles (%)		26	5	10		3	3	17		13				14		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.23				4.24		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.32				2.33		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			65				11			18				9		
Capacity, c (veh/h)			933				938			1433				1354		
v/c Ratio			0.07				0.01			0.01				0.01		
95% Queue Length, Q_{95} (veh)			0.2				0.0			0.0				0.0		
Control Delay (s/veh)			9.1				8.9			7.5				7.7		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	9.1				8.9				2.0				1.1			
Approach LOS	A				A											

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HCS7 All-Way Stop Control Report

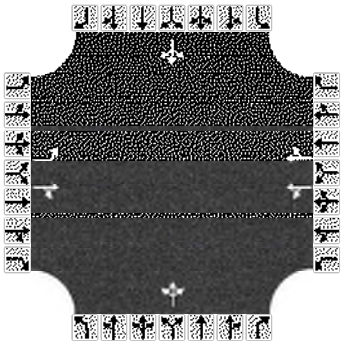
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri AM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	36	24	29	2	28	22	28	1	2	16	4	17
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	39	58		17	39		34			40		
Percent Heavy Vehicles	15	3		3	13		3			18		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.035	0.051		0.015	0.035		0.030			0.036		
Final Departure Headway, hd (s)	5.48	4.39		4.87	4.55		4.49			4.40		
Final Degree of Utilization, x	0.060	0.070		0.024	0.049		0.042			0.049		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	3.18	2.09		2.57	2.25		2.49			2.40		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	39	58		17	39		34			40		
Capacity	657	821		740	792		802			817		
95% Queue Length, Q_{95} (veh)	0.2	0.2		0.1	0.2		0.1			0.2		
Control Delay (s/veh)	8.5	7.4		7.7	7.5		7.7			7.6		
Level of Service, LOS	A	A		A	A		A			A		
Approach Delay (s/veh)	7.9			7.5			7.7			7.6		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh | LOS	7.7						A					

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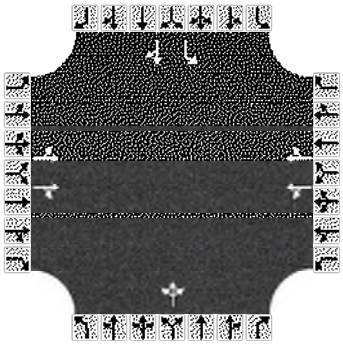
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri PM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	89	239	17	6	177	32	14	2	2	48	5	83
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	227	148		103	131		20			52	96	
Percent Heavy Vehicles	3	3		3	3		3			3	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.201	0.132		0.091	0.116		0.017			0.046	0.085	
Final Departure Headway, hd (s)	5.49	5.19		5.47	5.25		6.25			6.50	5.34	
Final Degree of Utilization, x	0.346	0.214		0.156	0.191		0.034			0.094	0.142	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	3.19	2.89		3.17	2.95		4.25			4.20	3.04	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	227	148		103	131		20			52	96	
Capacity	655	693		659	686		576			554	674	
95% Queue Length, Q_{95} (veh)	1.5	0.8		0.5	0.7		0.1			0.3	0.5	
Control Delay (s/veh)	11.1	9.3		9.2	9.2		9.5			9.9	8.9	
Level of Service, LOS	B	A		A	A		A			A	A	
Approach Delay (s/veh)	10.4			9.2			9.5			9.3		
Approach LOS	B			A			A			A		
Intersection Delay, s/veh | LOS	9.8						A					

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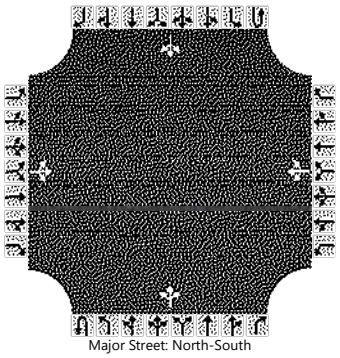
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Fri PM No Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		37	18	38		5	23	15		68	198	8		23	95	44
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			101				47			74				25		
Capacity, c (veh/h)			479				396			1225				937		
v/c Ratio			0.21				0.12			0.06				0.03		
95% Queue Length, Q_{95} (veh)			0.8				0.4			0.2				0.1		
Control Delay (s/veh)			14.5				15.3			8.1				8.9		
Level of Service (LOS)			B				C			A				A		
Approach Delay (s/veh)	14.5				15.3				2.4				1.5			
Approach LOS	B				C											

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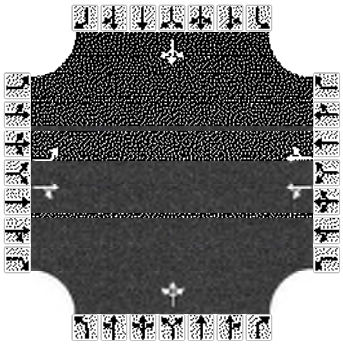
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri PM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	151	110	52	1	80	83	43	13	5	52	14	105
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	164	176		45	134		66			186		
Percent Heavy Vehicles	3	3		3	3		3			3		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.146	0.157		0.040	0.119		0.059			0.165		
Final Departure Headway, hd (s)	5.94	5.21		5.65	5.16		5.56			4.97		
Final Degree of Utilization, x	0.271	0.255		0.070	0.192		0.102			0.257		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	3.64	2.91		3.35	2.86		3.56			2.97		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	164	176		45	134		66			186		
Capacity	606	691		637	697		648			724		
95% Queue Length, Q_{95} (veh)	1.1	1.0		0.2	0.7		0.3			1.0		
Control Delay (s/veh)	10.8	9.7		8.8	9.1		9.2			9.7		
Level of Service, LOS	B	A		A	A		A			A		
Approach Delay (s/veh)	10.2			9.0			9.2			9.7		
Approach LOS	B			A			A			A		
Intersection Delay, s/veh | LOS	9.7						A					

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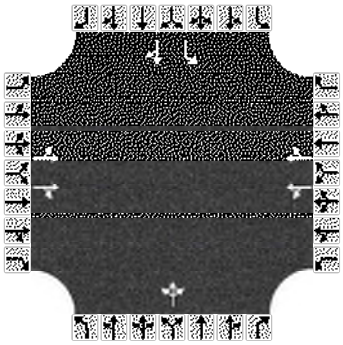
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.93

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	96	359	16	12	257	45	15	3	1	56	4	99
% Thrus in Shared Lane	50		50	50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	296	210		151	187		20			60	111	
Percent Heavy Vehicles	3	3		3	3		3			3	3	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.263	0.187		0.134	0.166		0.018			0.054	0.098	
Final Departure Headway, hd (s)	5.73	5.50		5.80	5.57		6.88			7.05	5.88	
Final Degree of Utilization, x	0.471	0.321		0.243	0.289		0.039			0.118	0.181	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, ts (s)	3.43	3.20		3.50	3.27		4.88			4.75	3.58	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	296	210		151	187		20			60	111	
Capacity	628	655		621	646		523			510	612	
95% Queue Length, Q_{95} (veh)	2.5	1.4		0.9	1.2		0.1			0.4	0.7	
Control Delay (s/veh)	13.4	10.8		10.4	10.5		10.2			10.7	9.9	
Level of Service, LOS	B	B		B	B		B			B	A	
Approach Delay (s/veh)	12.3			10.4			10.2			10.2		
Approach LOS	B			B			B			B		
Intersection Delay, s/veh | LOS	11.3						B					

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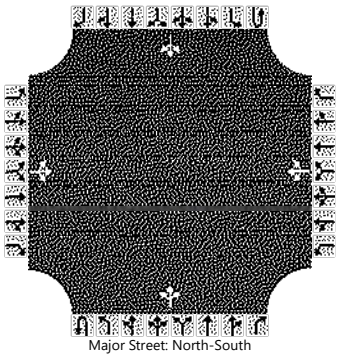
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Time Analyzed	Sat PM No Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		42	19	80		13	22	18		93	245	13		35	104	58
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			153				58			101				38		
Capacity, c (veh/h)			450				300			1197				856		
v/c Ratio			0.34				0.19			0.08				0.04		
95% Queue Length, Q_{95} (veh)			1.5				0.7			0.3				0.1		
Control Delay (s/veh)			17.1				19.8			8.3				9.4		
Level of Service (LOS)			C				C			A				A		
Approach Delay (s/veh)	17.1				19.8				2.8				2.1			
Approach LOS	C				C											

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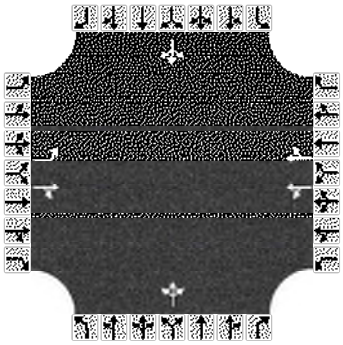
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	8/21/2025
Analysis Year	2025
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM No Build Peak Hour
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	187	198	32	10	98	153	38	13	4	72	14	152
% Thrus in Shared Lane				50		50						
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	203	250		64	220		60			259		
Percent Heavy Vehicles	3	3		3	3		3			3		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.181	0.222		0.057	0.195		0.053			0.230		
Final Departure Headway, hd (s)	6.41	5.80		6.25	5.62		6.37			5.51		
Final Degree of Utilization, x	0.362	0.403		0.111	0.343		0.106			0.396		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, ts (s)	4.11	3.50		3.95	3.32		4.37			3.51		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	203	250		64	220		60			259		
Capacity	562	620		576	640		565			653		
95% Queue Length, Q_{95} (veh)	1.6	1.9		0.4	1.5		0.4			1.9		
Control Delay (s/veh)	12.7	12.4		9.7	11.2		10.1			12.1		
Level of Service, LOS	B	B		A	B		B			B		
Approach Delay (s/veh)	12.5			10.9			10.1			12.1		
Approach LOS	B			B			B			B		
Intersection Delay, s/veh | LOS	11.8						B					

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FUTURE BUILD CONDITIONS

Table 5.1 - 2028 Build Intersection Capacity Analysis Summary

Location	Time	Level of Service[1]							
		(1) Collins Avenue & South Pointe Drive		(2) Ocean Drive & 1st Street		(3) Ocean Drive & South Pointe Drive		(4) Ocean Drive & Project Driveway	
		Unsignalized		Unsignalized		Unsignalized		Unsignalized	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EBL	Frid AM								
	Frid PM								
	Sat PM								
EBT	Frid AM								
	Frid PM								
	Sat PM								
EBR	Frid AM								
	Frid PM								
	Sat PM								
EB Approach	Frid AM	A	8.2	A	9.1	A	7.9		
	Frid PM	B	10.7	B	14.5	B	10.8		
	Sat PM	B	13.0	C	17.7	B	13.6		
WBL	Frid AM								
	Frid PM								
	Sat PM								
WBT	Frid AM								
	Frid PM								
	Sat PM								
WBR	Frid AM								
	Frid PM								
	Sat PM								
WB Approach	Frid AM	A	7.7	A	8.9	A	7.6	A	8.3
	Frid PM	A	9.6	C	16.2	A	9.3	B	10.3
	Sat PM	B	11.1	C	20.8	B	11.5	B	12.0
NBL	Frid AM								
	Frid PM								
	Sat PM								
NBT	Frid AM								
	Frid PM								
	Sat PM								
NBR	Frid AM								
	Frid PM								
	Sat PM								
NB Approach	Frid AM	A	8.1			A	7.7		
	Frid PM	A	9.6			A	9.4		
	Sat PM	B	10.3			B	10.5		
SBL	Frid AM								
	Frid PM								
	Sat PM								
SBT	Frid AM								
	Frid PM								
	Sat PM								
SBR	Frid AM								
	Frid PM								
	Sat PM								
SB Approach	Frid AM	A	7.6			A	7.6		
	Frid PM	A	9.5			B	10.5		
	Sat PM	B	10.4			B	13.8		
Overall	Frid AM								
	Frid PM								
	Sat PM								

Table 5.2 -2028 Build Intersection Queue Lengths Summary

Location	Time	95th Percentile Queue Lenghts (ft)															
		EBL		EBR		WBL		WBR		NBL		NBR		SBL		SBR	
		Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile	Storage (ft)	95th %tile
(1) Collins Avenue & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																
(2) Ocean Drive & 1st Street	Frid AM																
	Frid PM																
	Sat PM																
(3) Ocean Drive & South Pointe Drive	Frid AM																
	Frid PM																
	Sat PM																
(4) Ocean Drive & Project Driveway	Frid AM																
	Frid PM																
	Sat PM																

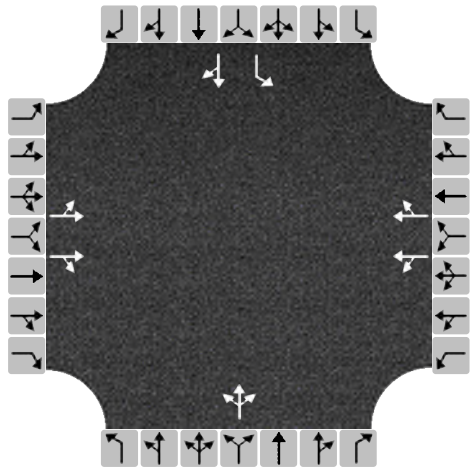
LANGAN

HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri AM Build Peak Hour
Project Description	Pier Park
Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	24	92	13	2	68	5	5	1	2	8	1	23
% Thrus in Shared Lane	50		50	50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	74	62		38	41		8			8	25	
Percent Heavy Vehicles	24	4		3	7		3			33	3	
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.065	0.055		0.034	0.036		0.007			0.007	0.022	
Final Departure Headway, h_d (s)	5.24	4.58		4.79	4.74		5.06			6.07	4.39	
Final Degree of Utilization, x	0.107	0.079		0.050	0.054		0.012			0.014	0.031	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, t_s (s)	2.94	2.28		2.49	2.44		3.06			3.77	2.09	

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	74	62		38	41		8			8	25	
Capacity (veh/h)	687	786		752	759		711			594	821	
95% Queue Length, Q_{95} (veh)	0.4	0.3		0.2	0.2		0.0			0.0	0.1	
95% Queue Length, Q_{95} (ft)	11.9	7.7		5.1	5.3		0.0			0.0	2.6	
Control Delay (s/veh)	8.6	7.7		7.7	7.7		8.1			8.9	7.2	
Level of Service, LOS	A	A		A	A		A			A	A	
Approach Delay (s/veh) | LOS	8.2	A		7.7	A		8.1	A		7.6	A	
Intersection Delay (s/veh) | LOS	8.0						A					

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HCS Two-Way Stop-Control Report

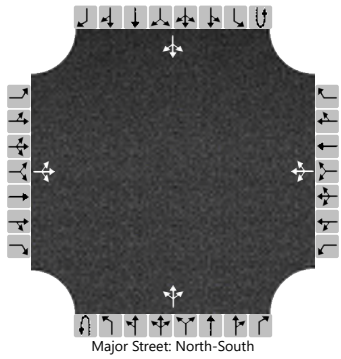
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Fri AM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		22	26	14		1	3	6		18	48	1		8	31	19
Percent Heavy Vehicles (%)		26	5	10		3	3	17		13				14		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.23				4.24		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.32				2.33		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			67				11			20				9		
Capacity, c (veh/h)			946				941			1430				1354		
v/c Ratio			0.07				0.01			0.01				0.01		
95% Queue Length, Q_{95} (veh)			0.2				0.0			0.0				0.0		
95% Queue Length, Q_{95} (ft)			5.5				0.0			0.0				0.0		
Control Delay (s/veh)			9.1				8.9			7.6	0.1	0.1		7.7	0.1	0.1
Level of Service (LOS)			A				A			A	A	A		A	A	A
Approach Delay (s/veh)	9.1				8.9				2.1				1.1			
Approach LOS	A				A				A				A			

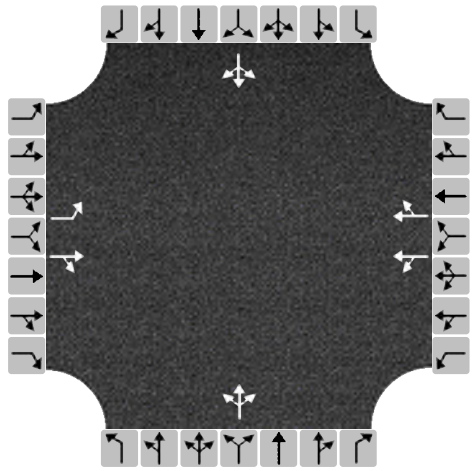
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HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri AM Build Peak Hour
Project Description	Pier Park
Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	41	24	29	2	28	22	28	1	2	16	4	18
% Thrus in Shared Lane				50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	45	58		17	39		34			41		
Percent Heavy Vehicles	15	3		3	13		3			18		
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20		
Initial Degree of Utilization, x	0.040	0.051		0.015	0.035		0.030			0.037		
Final Departure Headway, h_d (s)	5.48	4.39		4.88	4.55		4.50			4.41		
Final Degree of Utilization, x	0.068	0.070		0.024	0.050		0.042			0.051		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	3.18	2.09		2.58	2.25		2.50			2.41		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	45	58		17	39		34			41		
Capacity (veh/h)	657	820		738	791		800			817		
95% Queue Length, Q_{95} (veh)	0.2	0.2		0.1	0.2		0.1			0.2		
95% Queue Length, Q_{95} (ft)	5.6	5.1		2.6	5.5		2.6			5.7		
Control Delay (s/veh)	8.6	7.4		7.7	7.5		7.7			7.6		
Level of Service, LOS	A	A		A	A		A			A		
Approach Delay (s/veh) | LOS	7.9	A		7.6	A		7.7	A		7.6	A	
Intersection Delay (s/veh) | LOS	7.8						A					

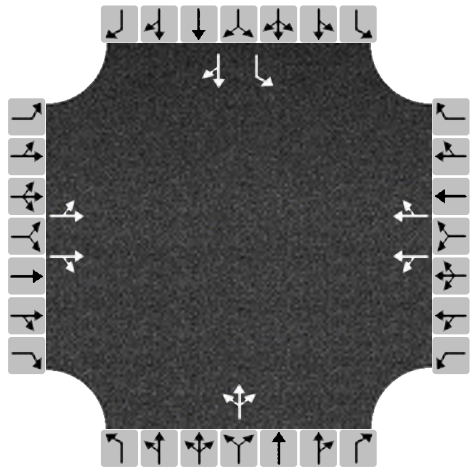
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HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri PM Build Peak Hour
Project Description	Pier Park
Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	89	257	17	6	226	32	14	2	2	48	5	83
% Thrus in Shared Lane	50		50	50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	236	158		129	158		20			52	96	
Percent Heavy Vehicles	3	3		3	3		3			3	3	
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.210	0.141		0.115	0.140		0.017			0.046	0.085	
Final Departure Headway, h_d (s)	5.56	5.27		5.50	5.32		6.41			6.66	5.50	
Final Degree of Utilization, x	0.365	0.232		0.198	0.233		0.035			0.097	0.146	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, t_s (s)	3.26	2.97		3.20	3.02		4.41			4.36	3.20	

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	236	158		129	158		20			52	96	
Capacity (veh/h)	648	683		655	677		561			540	654	
95% Queue Length, Q_{95} (veh)	1.7	0.9		0.7	0.9		0.1			0.3	0.5	
95% Queue Length, Q_{95} (ft)	43.5	23.0		17.9	23.0		2.6			7.7	12.8	
Control Delay (s/veh)	11.4	9.6		9.5	9.6		9.6			10.1	9.1	
Level of Service, LOS	B	A		A	A		A			B	A	
Approach Delay (s/veh) | LOS	10.7	B		9.6	A		9.6	A		9.5	A	
Intersection Delay (s/veh) | LOS	10.1						B					

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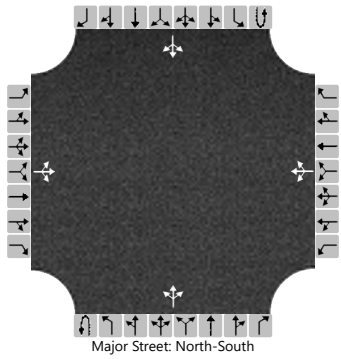
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Fri PM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		37	18	47		5	23	15		93	222	8		23	104	44
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			111				47			101				25		
Capacity, c (veh/h)			489				368			1215				917		
v/c Ratio			0.23				0.13			0.08				0.03		
95% Queue Length, Q_{95} (veh)			0.9				0.4			0.3				0.1		
95% Queue Length, Q_{95} (ft)			23.0				10.2			7.5				2.5		
Control Delay (s/veh)			14.5				16.2			8.2	0.8	0.8		9.0	0.3	0.3
Level of Service (LOS)			B				C			A	A	A		A	A	A
Approach Delay (s/veh)	14.5				16.2				2.9				1.5			
Approach LOS	B				C				A				A			

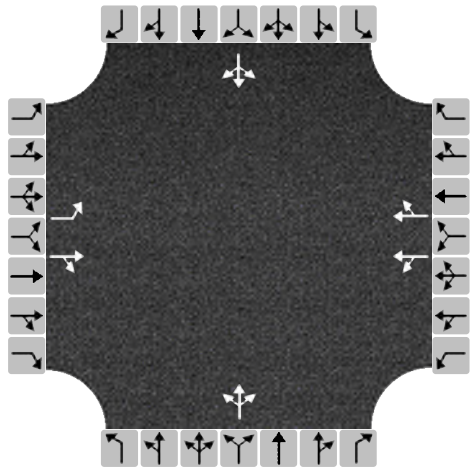
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HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Fri PM Build Peak Hour
Project Description	Pier Park
Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	169	110	52	1	80	83	43	13	5	52	14	154
% Thrus in Shared Lane				50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	184	176		45	134		66			239		
Percent Heavy Vehicles	3	3		3	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	0.163	0.157		0.040	0.119		0.059			0.213		
Final Departure Headway, h_d (s)	6.11	5.38		5.87	5.38		5.75			5.01		
Final Degree of Utilization, x	0.312	0.263		0.073	0.200		0.106			0.332		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	3.81	3.08		3.57	3.08		3.75			3.01		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	184	176		45	134		66			239		
Capacity (veh/h)	589	669		614	669		626			719		
95% Queue Length, Q_{95} (veh)	1.3	1.1		0.2	0.7		0.4			1.5		
95% Queue Length, Q_{95} (ft)	33.3	28.2		5.1	17.9		10.2			38.4		
Control Delay (s/veh)	11.6	10.0		9.0	9.4		9.4			10.5		
Level of Service, LOS	B	A		A	A		A			B		
Approach Delay (s/veh) | LOS	10.8	B		9.3	A		9.4	A		10.5	B	
Intersection Delay (s/veh) | LOS	10.3						B					

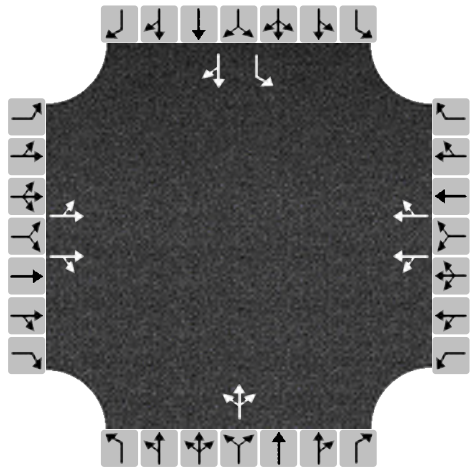
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HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM Build Peak Hour
Project Description	Pier Park
Intersection	Collins Avenue & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Collins Avenue
Peak Hour Factor	0.93

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	96	386	16	12	310	45	15	3	1	56	4	99
% Thrus in Shared Lane	50		50	50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	311	225		180	215		20			60	111	
Percent Heavy Vehicles	3	3		3	3		3			3	3	
Initial Departure Headway, h_d (s)	3.20	3.20		3.20	3.20		3.20			3.20	3.20	
Initial Degree of Utilization, x	0.276	0.200		0.160	0.191		0.018			0.054	0.098	
Final Departure Headway, h_d (s)	5.81	5.59		5.85	5.66		7.05			7.23	6.05	
Final Degree of Utilization, x	0.502	0.349		0.292	0.338		0.040			0.121	0.186	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.3	2.3	
Service Time, t_s (s)	3.51	3.29		3.55	3.36		5.05			4.93	3.75	

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	TR		LT	TR		LTR			L	TR	
Flow Rate, v (veh/h)	311	225		180	215		20			60	111	
Capacity (veh/h)	619	644		615	636		511			498	595	
95% Queue Length, Q_{95} (veh)	2.8	1.6		1.2	1.5		0.1			0.4	0.7	
95% Queue Length, Q_{95} (ft)	71.7	41.0		30.7	38.4		2.6			10.2	17.9	
Control Delay (s/veh)	14.2	11.3		10.9	11.2		10.3			10.9	10.1	
Level of Service, LOS	B	B		B	B		B			B	B	
Approach Delay (s/veh) | LOS	13.0	B		11.1	B		10.3	B		10.4	B	
Intersection Delay (s/veh) | LOS	11.9						B					

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HCS Two-Way Stop-Control Report

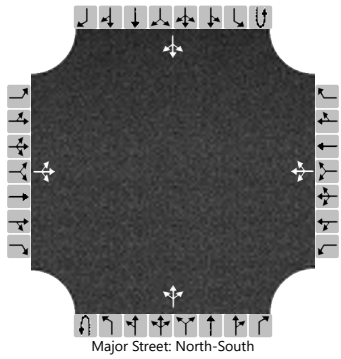
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Sat PM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & 1st Street
Jurisdiction	Miami Beach
East/West Street	1st Street
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		42	19	94		13	22	18		120	271	13		35	118	58
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		5.0	5.0	5.0		5.0	5.0	5.0		4.1				4.1		
Critical Headway (sec)		5.00	5.00	5.00		5.00	5.00	5.00		4.13				4.13		
Base Follow-Up Headway (sec)		3.0	3.0	3.0		3.0	3.0	3.0		2.2				2.2		
Follow-Up Headway (sec)		3.00	3.00	3.00		3.00	3.00	3.00		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			168				58			130				38		
Capacity, c (veh/h)			451				285			1182				835		
v/c Ratio			0.37				0.20			0.11				0.05		
95% Queue Length, Q_{95} (veh)			1.7				0.7			0.4				0.1		
95% Queue Length, Q_{95} (ft)			43.5				17.9			10.0				2.5		
Control Delay (s/veh)			17.7				20.8			8.4	1.1	1.1		9.5	0.5	0.5
Level of Service (LOS)			C				C			A	A	A		A	A	A
Approach Delay (s/veh)	17.7				20.8				3.3				2.0			
Approach LOS	C				C				A				A			

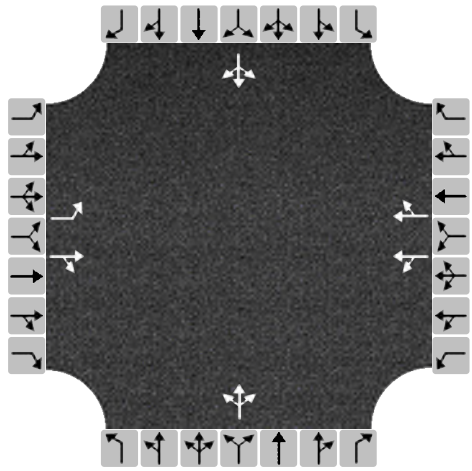
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HCS All-Way Stop Control Report

General and Site Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Analysis Time Period (hrs)	0.25
Time Analyzed	Sat PM Build Peak Hour
Project Description	Pier Park
Intersection	Ocean Drive & South Pointe Drive
Jurisdiction	Miami Beach
East/West Street	South Pointe Drive
North/South Street	Ocean Drive
Peak Hour Factor	0.92

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	214	198	32	10	98	153	38	13	4	72	14	205
% Thrus in Shared Lane				50		50						

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	233	250		64	220		60			316		
Percent Heavy Vehicles	3	3		3	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	0.207	0.222		0.057	0.195		0.053			0.281		
Final Departure Headway, h_d (s)	6.64	6.03		6.53	5.90		6.64			5.58		
Final Degree of Utilization, x	0.429	0.419		0.116	0.360		0.110			0.490		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.0			2.0		
Service Time, t_s (s)	4.34	3.73		4.23	3.60		4.64			3.58		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	TR		LT	TR		LTR			LTR		
Flow Rate, v (veh/h)	233	250		64	220		60			316		
Capacity (veh/h)	542	597		551	610		542			645		
95% Queue Length, Q_{95} (veh)	2.1	2.1		0.4	1.6		0.4			2.7		
95% Queue Length, Q_{95} (ft)	53.8	53.8		10.2	41.0		10.2			69.1		
Control Delay (s/veh)	14.2	13.0		10.1	11.9		10.5			13.8		
Level of Service, LOS	B	B		B	B		B			B		
Approach Delay (s/veh) | LOS	13.6	B		11.5	B		10.5	B		13.8	B	
Intersection Delay (s/veh) | LOS	13.0						B					

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DRIVEWAYS

HCS Two-Way Stop-Control Report

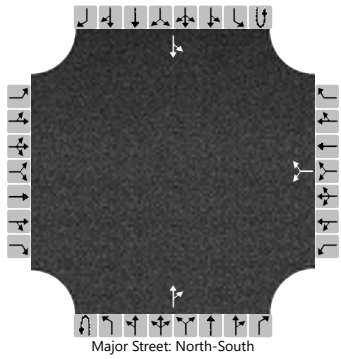
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Fri AM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & Site Driveway
Jurisdiction	Miami Beach
East/West Street	Site Driveway
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						1		2			59	6		6	42	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						5.0		5.0						4.1		
Critical Headway (sec)						5.00		5.00						4.13		
Base Follow-Up Headway (sec)						3.0		3.0						2.2		
Follow-Up Headway (sec)						3.00		3.00						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							3							7		
Capacity, c (veh/h)							1100							1523		
v/c Ratio							0.00							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
95% Queue Length, Q_{95} (ft)							0.0							0.0		
Control Delay (s/veh)							8.3							7.4	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						8.3								0.9		
Approach LOS						A								A		

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HCS Two-Way Stop-Control Report

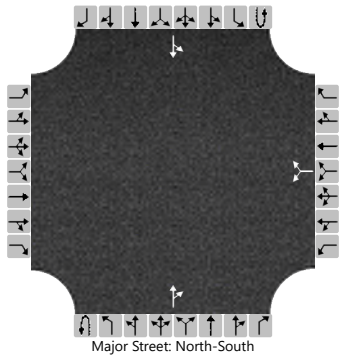
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Fri PM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & Site Driveway
Jurisdiction	Miami Beach
East/West Street	Site Driveway
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						68		68			247	25		15	138	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						5.0		5.0						4.1		
Critical Headway (sec)						5.00		5.00						4.13		
Base Follow-Up Headway (sec)						3.0		3.0						2.2		
Follow-Up Headway (sec)						3.00		3.00						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							148							16		
Capacity, c (veh/h)							821							1260		
v/c Ratio							0.18							0.01		
95% Queue Length, Q_{95} (veh)							0.7							0.0		
95% Queue Length, Q_{95} (ft)							17.9							0.0		
Control Delay (s/veh)							10.3							7.9	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.3								0.9		
Approach LOS						B								A		

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HCS Two-Way Stop-Control Report

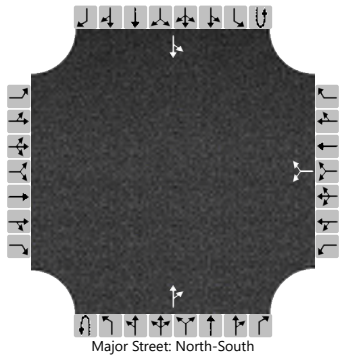
General Information

Analyst	LTA
Agency/Co.	LANGAN
Date Performed	10/29/2025
Analysis Year	2028
Time Analyzed	Sat PM Build Peak Hour
Intersection Orientation	North-South
Project Description	Pier Park

Site Information

Intersection	Ocean Drive & Site Driveway
Jurisdiction	Miami Beach
East/West Street	Site Driveway
North/South Street	Ocean Drive
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						73		74			353	38		38	197	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						5.0		5.0						4.1		
Critical Headway (sec)						5.00		5.00						4.13		
Base Follow-Up Headway (sec)						3.0		3.0						2.2		
Follow-Up Headway (sec)						3.00		3.00						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							160							41		
Capacity, c (veh/h)							671							1129		
v/c Ratio							0.24							0.04		
95% Queue Length, Q_{95} (veh)							0.9							0.1		
95% Queue Length, Q_{95} (ft)							23.0							2.6		
Control Delay (s/veh)							12.0							8.3	0.3	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						12.0								1.6		
Approach LOS						B								A		

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LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Left Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 FRID AM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
SOUTHBOUND LEFT TURN

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

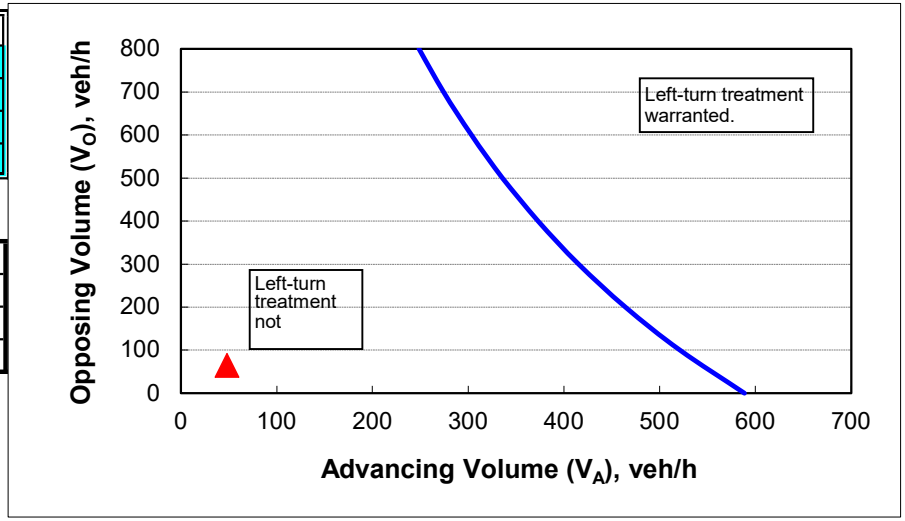
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	48
Opposing volume (V_O), veh/h:	65

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	543
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Left Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 FRID PM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
SOUTHBOUND LEFT TURN

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

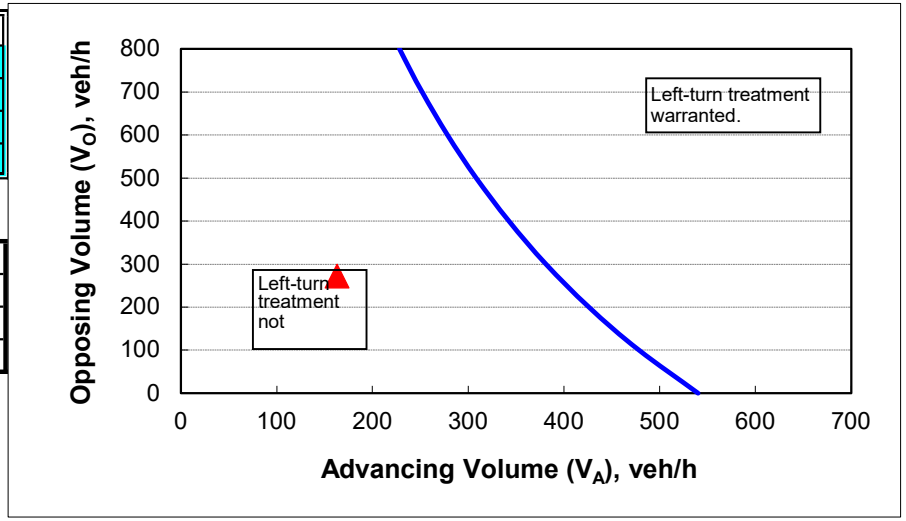
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	15%
Advancing volume (V_A), veh/h:	163
Opposing volume (V_O), veh/h:	272

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	393
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Left Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 SAT PM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
SOUTHBOUND LEFT TURN

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

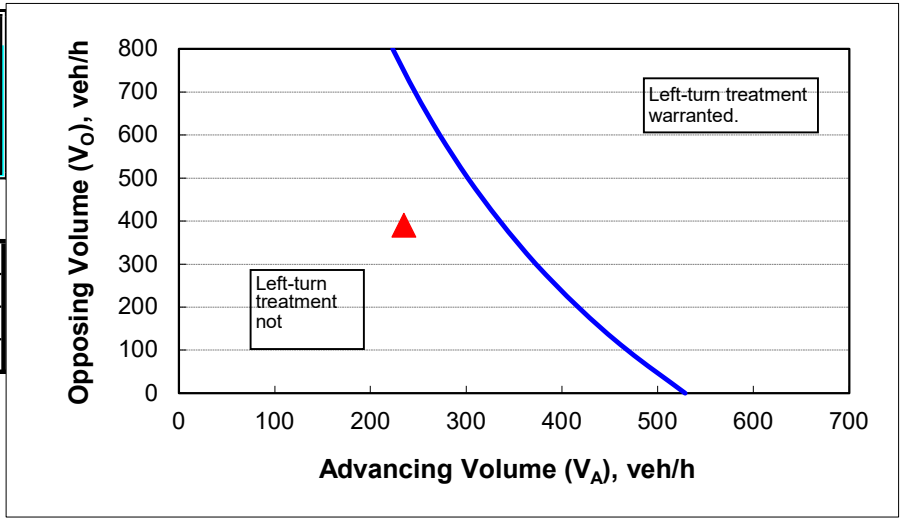
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	16%
Advancing volume (V_A), veh/h:	235
Opposing volume (V_O), veh/h:	391

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	338
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Right Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 FRID AM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
NORTHBOUND RIGHT TURN

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

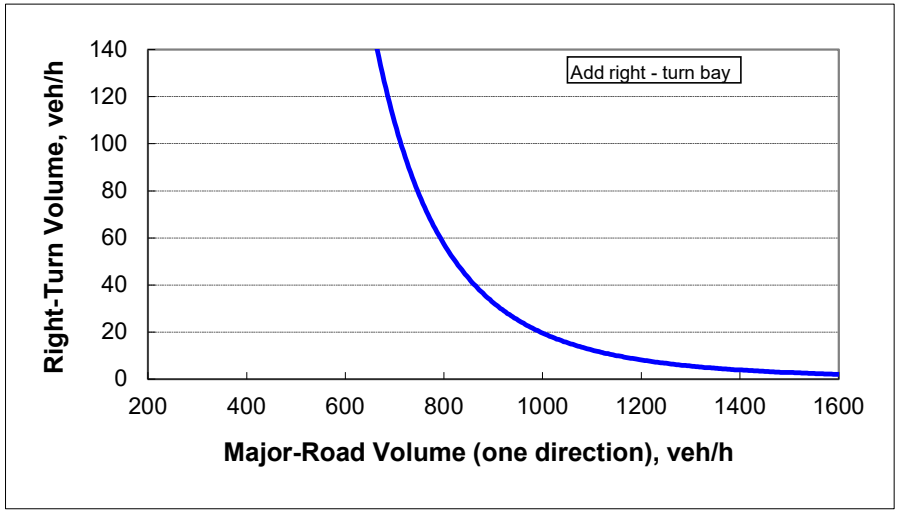
INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	65
Right-turn volume, veh/h:	6

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	10268193
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Data Source: NCHRP 457 Evaluation of Intersection Improvements

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Right Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 FRID PM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
NORTHBOUND RIGHT TURN

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

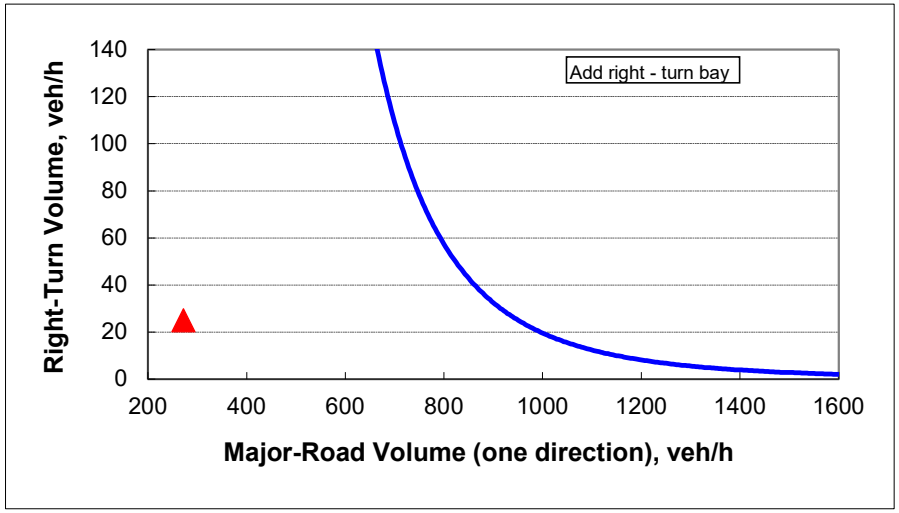
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	272
Right-turn volume, veh/h:	25

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	10369
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Data Source: NCHRP 457 Evaluation of Intersection Improvements

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Right Turn Lane Warrant
Analyst: LTA
Date: OCTOBER 2025
Analysis Year: 2028 SAT PM
Job#: 330163501

Intersection:
N/S: Ocean Drive
E/W: West Driveway
NORTHBOUND RIGHT TURN

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

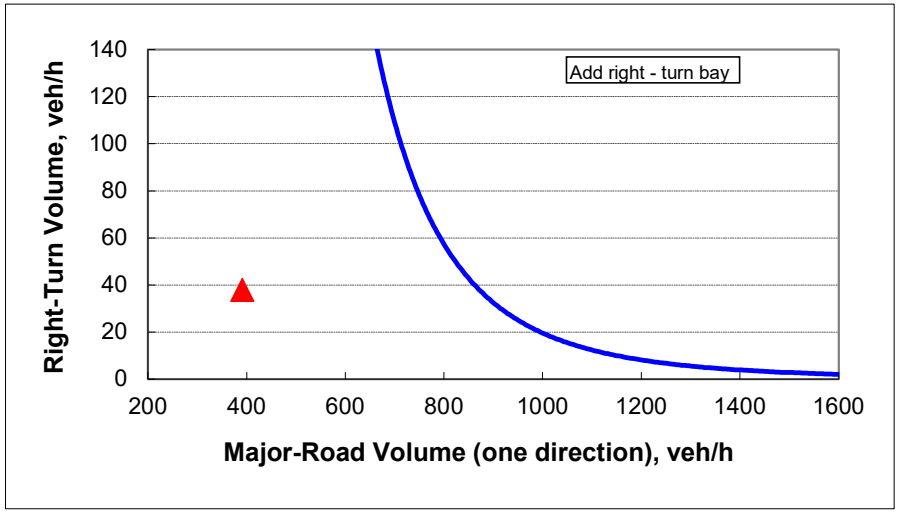
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	391
Right-turn volume, veh/h:	38

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1804
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Data Source: NCHRP 457 Evaluation of Intersection Improvements

APPENDIX G
TRIP GENERATION DATA

TRIP GENERATION ANALYSIS
PIER PARK

FRIDAY AM PEAK HOUR

Land Use	ITE Code	Size	Trip Generation Rate	In	Out	Total Site Trips		
						In	Out	Total
Existing Uses								
Beach Club	NA	23,243 SF	T = 0.0002 (X)	80%	20%	3	1	4
Proposed Uses								
Beach Club	NA	84,297 SF	T = 0.0002 (X)	80%	20%	12	3	15
					Net-New	**9**	**2**	**11**

FRIDAY PM PEAK HOUR

Land Use	ITE Code	Size	Trip Generation Rate	In	Out	Total Site Trips		
						In	Out	Total
Existing Uses								
Beach Club	NA	23,243 SF	T = 0.0022 (X)	27%	73%	14	38	51
Proposed Uses								
Beach Club	NA	84,297 SF	T = 0.0022 (X)	27%	73%	50	136	187
					Net-New	**36**	**98**	**135**

SATURDAY PM PEAK HOUR

Land Use	ITE Code	Size	Trip Generation Rate	In	Out	Total Site Trips		
						In	Out	Total
Existing Uses								
Beach Club	NA	23,243 SF	T = 0.0026 (X)	34%	66%	21	41	61
Proposed Uses								
Beach Club	NA	84,297 SF	T = 0.0026 (X)	34%	66%	76	147	223
					Net-New	**55**	**106**	**161**

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Prepared by Nationwide Traffic Data, LLC

Trip Generation Study

Location: Miami Beach Parking Lot, 1 Ocean Dr
City: Miami Beach, FL
Date: 08/15/2025, (Fri)

TIME	[001]		[002]		TRIP		
	IN	OUT	IN	OUT	IN	OUT	OUTCOME
7:00 AM	4	3	1	1	*5*	*4*	*1*
7:15 AM	9	0	0	0	*9*	*0*	*9*
7:30 AM	3	2	0	0	*3*	*2*	*1*
7:45 AM	2	1	1	0	*3*	*1*	*2*
8:00 AM	3	8	1	0	*4*	*8*	*-4*
8:15 AM	3	6	1	1	*4*	*7*	*-3*
8:30 AM	1	3	1	0	*2*	*3*	*-1*
8:45 AM	6	5	0	0	*6*	*5*	*1*
6:00 PM	8	10	7	6	*15*	*16*	*-1*
6:15 PM	18	23	9	16	*27*	*39*	*-12*
6:30 PM	21	15	4	9	*25*	*24*	*1*
6:45 PM	24	27	1	5	*25*	*32*	*-7*
7:00 PM	27	28	3	15	*30*	*43*	*-13*
7:15 PM	21	20	3	6	*24*	*26*	*-2*
7:30 PM	31	31	2	9	*33*	*40*	*-7*
7:45 PM	25	23	1	3	*26*	*26*	*0*
Totals	**206**	**205**	**35**	**71**	**241**	**276**	**-35**



Prepared by Nationwide Traffic Data, LLC

Trip Generation Study

Location: Miami Beach Parking Lot, 1 Ocean Dr
City: Miami Beach, FL
Date: 08/16/2025, (Sat)

TIME	[001]		[002]		TRIP		
	IN	OUT	IN	OUT	IN	OUT	OUTCOME
7:00 PM	32	26	7	8	*39*	*34*	*5*
7:15 PM	28	33	5	15	*33*	*48*	*-15*
7:30 PM	25	35	6	14	*31*	*49*	*-18*
7:45 PM	30	26	7	12	*37*	*38*	*-1*
8:00 PM	30	30	4	9	*34*	*39*	*-5*
8:15 PM	25	23	6	13	*31*	*36*	*-5*
8:30 PM	15	19	1	12	*16*	*31*	*-15*
8:45 PM	14	22	3	15	*17*	*37*	*-20*
Totals	199	214	39	98	238	312	-74



APPENDIX H
SERVICE TIME DATA

Valet Service Time Calculations

PIER PARK

Valet Service Time Drop-off	
Activity	**Service Time (min)**
Vehicle Pick-Up	0.40
Vehicle Travel Time to Furthest Space	0.41
Return to Valet booth	2.00
Total Service Time	**2.81**

Valet Service Time Pick-up	
Activity	**Service Time (min)**
Get Ticket/Keys	0.15
Travel time from Valet booth to Furthest Spot	2.00
Pull car from furthest space and drive to valet booth	0.41
Return car	0.40
Total Service Time	**2.96**

Travel Time from Valet Booth to Valet Parking Spaces

Mode	Location		Speed (mph)	Speed (mps)	Distance (m)	Travel Time (sec)
Car	From Valet	To Furthest Space	10	4.44	110.00	24.75
	From Furthest Space	To Valet Booth	10	4.44	110.00	24.75
Jog	From Furthest Space	To Valet Booth	5	2.22	-	120.00

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APPENDIX I
ITE EXCERPTS AND QUEUING ANALYSIS CALCULATIONS

PIER PARK

Estimated Service Time

Entrance Type	Time (min)*
Drop-off Valet Operation	2.81
Pick-up Valet Operation	2.96

Friday Morning Ingress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **12**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.81**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	256.00	12	0.0469	0.0469	**0.0**

Friday Afternoon Ingress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **50**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.81**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	256.00	50	0.1953	0.1953	**0.0**

Saturday Afternoon Ingress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **76**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.81**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	256.00	76	0.2969	0.2969	**0.5**

Friday Morning Egress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **3**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.96**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	244.00	3	0.0123	0.0123	**0.0**

Friday Afternoon Egress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **136**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.96**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	244.00	136	0.5574	0.5574	**3.1**

Saturday Afternoon Egress Peak Hour Valet Parking Queuing Analysis

Peak Hour Arrival Rate (veh/hr): **147**
Probablity of Back-up on Adjacent Street: **5%**
Service Time (min): **2.96**
Number of Operators: **12**

N	Q	q	r	Q_m	M
1	244.00	147	0.6025	0.6025	**3.9**

Friday Morning Peak Hour Trip Generation Summary

Land Use	ITE Code	In	Out	Total Trips
Beach Club	N/A	12	3	15
	Total	**12**	**3**	**15**

Friday Afternoon Peak Hour Trip Generation Summary

Land Use	ITE Code	In	Out	Total Trips
Beach Club	N/A	50	136	187
	Total	**50**	**136**	**187**

Saturday Afternoon Peak Hour Trip Generation Summary

Land Use	ITE Code	In	Out	Total Trips
Beach Club	N/A	76	147	223
	Total	**76**	**147**	**223**

r	N=1	2	3	4	6	8	10
0.1	0.1000	0.0182	0.0037	0.0008	0.0000	0.0000	0.0000
0.2	0.2000	0.0666	0.0247	0.0093	0.0015	0.0002	0.0000
0.3	0.3000	0.1385	0.0700	0.0370	0.0111	0.0036	0.0011
0.4	0.4000	0.2286	0.1411	0.0907	0.0400	0.0185	0.0088
0.5	0.5000	0.3333	0.2368	0.1739	0.0991	0.0591	0.0360
0.6	0.6000	0.4501	0.3548	0.2870	0.1965	0.1395	0.1013
0.7	0.7000	0.5766	0.4923	0.4286	0.3359	0.2706	0.2218
0.8	0.8000	0.7111	0.6472	0.5964	0.5178	0.4576	0.4093
0.9	0.9000	0.8526	0.8172	0.7878	0.7401	0.7014	0.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

** ITE Transportation and Development Table 8.11*

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Required queuing storage equation:

$$M = \frac{\ln(0.05) - \ln(Q_m)}{\ln \rho} - 1$$

where:

N = Number of Lanes
Q = Average Service Rate (veh/hr)
q = Peak Hour Arrival Rate (veh/hr)
r = Coefficient of Utiliation (q/NQ)
Q_m = ITE table value of relationship between queue length, number of attendants and utilization factor (ITE Transportation and Land Development Table 8.11
M = Queue length which is exceeded 5% of the time (veh)

INSTITUTE
OF
TRANSPORTATION ENGINEERS

Transportation and Land Development

Vergil G. Stover
Texas A & M University

Frank J. Koepke
The Traffic Institute, Northwestern University



Prentice Hall, *Englewood Cliffs, New Jersey 07632*

APPLICATIONS OF QUEUEING ANALYSIS

Providing an adequate and well-defined storage area for drive-thru traffic is particularly critical, especially at fast-food restaurants and drive-thru bank facilities where queues can, and do, become quite long. Waiting vehicles should be stored on private property clear of driveways so that traffic back-up does not interfere with movement on the arterial street. At fast-food restaurants, the menu board should be installed upstream of the service window to permit drive-thru customers to place their orders prior to their arrival at the service window. Preparation of their order can then begin before they reach the service window, thus minimizing their time at the service window. A well-defined storage area for the waiting traffic should be located so that the waiting vehicles do not block or impede the movement of driveway traffic.

Where a single service position is involved, the situation is referred to as a *single-channel problem*. *Multiple-channel problems* arise when two or more service positions are available. Such problems commonly arise with bank tellers (indoor as well as drive-in windows), entrances and exits at large parking lots and garages, at passenger pick-up areas at transit stations and taxi stands, truck terminals or loading/unloading areas, supermarket checkout counters, telephone calls, building entrances, and transit-station turnstiles. The assumptions of Poisson arrivals and negative exponential service time are commonly acceptable and used for both single- and multiple-channel problems. Thurgood [11] found these assumptions to be representative of drive-in facilities.

Customers arriving randomly at a drive-in facility may enter into service immediately or may have to enter the queue until they can be served. Waiting lines occur whenever the immediate demand for service exceeds the current capacity of the facility providing that service.

Basic Notation and Terminology

The following notation is employed throughout this section:

n = number of customers in the drive-in system
M = number of customers in the queue waiting to be served (number of customers in the system minus the number being served)
$P(n)$ = steady-state probability that exactly n customers are in the queueing system
$P(0)$ = probability that zero vehicles are in the queueing system
N = number of parallel service positions
q = mean average arrival rate of vehicles into the system (vehicles/hour)
Q = mean average service rate per service position (vehicles/hour/position)
Avg (t) = $\%$ = mean service time expressed in minutes per vehicle
ρ = $\%\varrho$ = coefficient of utilization
$E(m)$ = expected (average) number of customers in the system
$E(n)$ = expected (average) number of customers waiting in the queue
$E(t)$ = expected (average) waiting time in system (includes service time)
$E(w)$ = expected (average) waiting time in queue (excludes service time)

The equations employed in the analysis of queueing problems are given in Table 8-10.

Jones, Woods, and Thurgood [4] have developed a graph (Figure 8-6) for determining the probability that there will be no customers in the system — values for $P(0)$. They also developed graphs for determining the average number of waiting customers (Figure 8-7), the average waiting time (Figure 8-8), and average queue length (Figure 8-9). These figures avoid the necessity to perform the time-consuming, although simple, queueing-analysis calculations. See pp. 228–30.

TABLE 8-10
Queueing System Equations

Equation Number	Variable	Equation
(8-1)	Coefficient of utilization	$\rho = \dfrac{q}{NQ}$
(8-2)	Probability of no customers in the system	$P(0) = \left[\sum_{n=0}^{N-1} \dfrac{\left(\frac{q}{Q}\right)^n}{n!} + \dfrac{\left(\frac{q}{Q}\right)^N}{N!(1-\rho)}\right]^{-1}$
(8-3)	Mean number in the queue	$E(m) = \left[\dfrac{\rho\left(\frac{q}{Q}\right)^N}{N!(1-\rho)^2}\right] P(0)$
(8-4)	Mean number in the system	$E(n) = E(m) + \dfrac{q}{Q}$
(8-5)	Mean wait time in queue (hours)	$E(w) = \dfrac{E(m)}{q}$
(8-6)	Mean time in the system (hours)	$E(t) = E(w) + \dfrac{1}{Q}$ $= E(w) + \text{Avg}\ (t)$
(8-7)	Proportion of customers who wait	$P[E(w) > 0] = \left[\dfrac{\left(\frac{q}{Q}\right)^N}{N!(1-\rho)}\right] P(0)$
(8-8)	Probability of a queue exceeding a length M	$P(x > M) = (\rho^{N+1})P[E(w) > 0]$
(8-9a)	Queue storage required	$M = \left[\dfrac{\ln P(x > M) - \ln E(w) > 0}{\ln \rho}\right] - 1$
(8-9b)*	Queue storage required	$M = \left[\dfrac{\ln P(x > M) - \ln Q_M}{\ln \rho}\right] - 1$

*Q_M is a statistic which is a function of the utilization rate and the number of service channels (service positions); see Table 8-11. The table of Q_M values and use of Equation (8-9b) greatly simplifies the calculations compared to those using Equations (8-9a).

Use of the equations and the graphs may be illustrated by the following example of a drive-in bank.

Conditions:

Number of drive-in windows, $N = 3$

Demand on the system, $q = 70$

Service capacity per channel, $Q = 28.6$ for an average service time, Avg $(t) = 2.1$ minutes

Solution Using Graphs:

- Coefficient of utilization $= 70/(3)(28.6) = 0.816$
- Probability that there are customers waiting in the system, Figure 8-6: $P(0) = 0.05$
- Expected average number of customers waiting in the queue, Figure 8-7: $E(m)/N = 1.0$; and the average number $E(m) = (3)(1.0) = 3$

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8–9b) given in Table 8-10 and repeated below for convenience.

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho}\right] - 1$$

where:

M = queue length which is exceeded p percent of the time
N = number of service channels (drive-in positions)
Q = service rate per channel (vehicles per hour)
$\rho = \dfrac{\text{demand rate}}{\text{service rate}} = \dfrac{q}{NQ}$ = utilization factor
q = demand rate on the system (vehicles per hour)
Q_M = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8.11)

TABLE 8-11
Table of Q_M Values

	$N = 1$	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	.1000	.0182	.0037	.0008	.0000	0.0000	0.0000
.2	.2000	.0666	.0247	.0096	.0015	.0002	.0000
.3	.3000	.1385	.0700	.0370	.0111	.0036	.0011
.4	.4000	.2286	.1411	.0907	.0400	.0185	.0088
.5	.5000	.3333	.2368	.1739	.0991	.0591	.0360
.6	.6000	.4501	.3548	.2870	.1965	.1395	.1013
.7	.7000	.5766	.4923	.4286	.3359	.2706	.2218
.8	.8000	.7111	.6472	.5964	.5178	.4576	.4093
.9	.9000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$\rho = \dfrac{q}{NQ} = \dfrac{\text{arrival rate, total}}{(\text{number of channels})(\text{service rate per channel})}$
N = number of channels (service positions)

Solution

Step 1: $Q = \dfrac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3$ services per hour

Step 2: $q = (110 \text{ veh}/45 \text{ min}) \times (60 \text{ min/hr}) = 146.7$ vehicles per hour

Step 3: $\rho = \dfrac{q}{NQ} = \dfrac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_M = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_M values (see Table 8-11).

Step 5: The acceptable probability of the queue, M, being longer than the storage, 18 spaces in this example, was stated to be 5%. $P(x > M) = 0.05$, and:

$$M = \left[\frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956}\right] - 1 = \left[\frac{-2.996 - (-0.314)}{-0.110}\right] - 1$$
$$= 24.38 - 1 = 23.38, \text{ say } 23 \text{ vehicles.}$$

The number of vehicles in the queue would be expected to exceed 23 more than 5% of the time. Since the site plan will accommodate a queue of 18 vehicles, the storage is not sufficient for the conditions stated.

It is important to realize that, for any $P\ (x > M)$ value, the queue length required increases very rapidly for values of $\rho > 0.85$ (see Figure 8-9). When $\rho > 1.0$, the solution is indeterminate and the queue length theoretically becomes infinite.

Analysis of Service Times. In many instances it is effective to demonstrate that a proposed design not only is inadequate to store vehicles waiting for service but will result in unacceptable wait times as well. The necessary equations are given in Table 8-10.

For purposes of checking computations it is convenient to know that the limit of $P(0)$, as the number of channels approaches infinity (in practical terms when $N > 10$), is:

$$\lim_{N \to \infty} P(0) = e^{-\lambda} \qquad \text{where } \lambda = q/Q$$

Drive-In Bank Example: Under the site-development approval requirements, representatives of a bank presented a site plan for the construction of a new bank having three service positions. Information provided by bank officials and observations at other local banks provided the following data:

- Expected average arrival rate during the design hour (4:30–5:30 p.m. on Fridays) = 70 vehicles per hour (vph)
- Average service time per customer = 2.1 minutes

Does the site plan provide for sufficient storage to accommodate all vehicles arriving 95% of the time?

$$q = 70 \text{ vph arrival rate}$$

$$Q = \frac{60 \text{ minutes per hour}}{2.1 \text{ minutes per service}} = 28.6 \text{ vph service rate}$$

$$\rho = \frac{70}{(3)(28.6)} = 0.816$$

$$\frac{q}{Q} = \frac{70}{28.6} = 2.45$$

$$Q_M = 0.674 \text{ by interpolation from Table 8-11}$$

$$P(x > M) = 1.00 - 0.95 = 0.05$$

By Equation (8-9b)

$$M = \left[\frac{\ln 0.05 - \ln 0.674}{\ln 0.816}\right] - 1 = \left[\frac{-2.996 - (-0.396)}{-0.203}\right] - 1 = 11.8, \text{ say } 12$$

Thus, it would be necessary to store 12 vehicles, exclusive of the three service positions, in order to accommodate the arriving vehicles 95% of the time; or alternatively, to have waiting vehicles extending back into the adjacent street no more than 5% of the time between 4:30 and 5:30 p.m. on Fridays. Since the site plan provides for six spaces, the site plan as submitted is inadequate and should be disapproved.

A solution to the problem would be to increase the storage, or if this is not possible add a service position in order to reduce the average service time.

Addition of a service position would reduce the number of storage spaces needed to three (three storage plus four service positions)—assuming the same arrival rate and service time:

$$M = \left[\frac{\ln 0.05 - \ln 0.301}{\ln 0.612}\right] - 1 = 2.7, \text{ say } 3$$

A redesign to provide four service positions would have the additional benefit of substantially reducing the expected waiting time (from over 4 minutes to less than $\frac{1}{2}$ minute) for the bank customers using the drive-in windows:

With Three Service Positions:

$$q = 70 \text{ vph}$$
$$Q = 28.6 \text{ vph}$$
$$\frac{q}{Q} = 2.45$$
$$\rho = \frac{70}{(3)(28.6)} = 0.816$$
$$P(0) = \left[\frac{(2.45)^0}{0!} + \frac{(2.45)^1}{1!} + \frac{(2.45)^2}{2!} + \frac{(2.45)^3}{3!\left[1 - \left(\frac{2.45}{3}\right)\right]}\right]^{-1}$$
$$= [1 + 2.45 + 3.00 + 13.37]^{-1} = 0.0505$$
$$E(m) = \left[\frac{(0.816)\left(\frac{70}{28.6}\right)^3}{3!(1 - 0.816)^2}\right]0.0505 = 2.97$$
$$E(n) = 2.97 + \frac{70}{28.6} = 5.42$$
$$E(t) = \frac{2.97}{70} = 0.0424 \text{ hours or } 2.55 \text{ minutes}$$
$$E(w) = 0.0424 + \frac{1}{28.6} = 0.0774 \text{ hours or } 4.64 \text{ minutes}$$

With Four Service Positions:

$$q = 70 \text{ vph}$$
$$Q = 28.6 \text{ vph}$$
$$\frac{q}{Q} = 2.45$$
$$\rho = \frac{70}{(4)(28.6)} = 0.612$$
$$P(0) = \left[\frac{(2.45)^0}{0!} + \frac{(2.45)^1}{1!} + \frac{(2.45)^2}{2!} + \frac{(2.45)^3}{3!} + \frac{(2.45)^4}{4!\left[1 - \left(\frac{2.45}{4}\right)\right]}\right]^{-1}$$
$$= 0.0783$$
$$E(m) = \left[\frac{(0.612)(2.45)^4}{4!(1 - 0.612)^2}\right]0.0783 = 0.48$$
$$E(n) = 0.48 + 2.45 = 2.93$$
$$E(t) = 0.007 + \frac{1}{28.6} = 0.042 \text{ hours or } 2.51 \text{ minutes}$$
$$E(w) = \frac{0.48}{70} = 0.007 \text{ hours or } 0.41 \text{ minutes}$$

However, the service time would increase somewhat unless an additional teller were also added. Nevertheless, an increase to 2.5 minutes, or more, would still reduce the storage space required and result in better service (less time in the system). Besides, time spent being served is less irritating to the customer than an equal time spent waiting.

Conversion of a Residence. An existing single-family residence was situated on a 2.5-acre tract fronting on the major north–south arterial in the urbanizing fringe of a metropolitan area of 100,000 population. The 85th percentile speed exceeded 50 mph; however, it was anticipated that the speed limit would be reduced to 45 mph as further urbanization occurred.

Requests for rezoning from single-family residential to general commercial had received negative recommendations from the Planning and Zoning Commission and denied by the City Council. Nevertheless, the fact that changing conditions in the vicinity of the site were making the property less desirable as a single-family residence was generally recognized. Therefore, when an application was submitted for a Conditional Use Permit to establish a private school using the existing residence for classrooms, the Planning and Zoning Commission was very favorably disposed to the request. The applicant provided the following information prior to the public hearing.

1. The completed application for a conditional use
2. A statement that the intended use was for a Montessori school using the existing structure
3. A site plan as required for all proposed development, other than single-family and duplex residential development, before a building permit will be issued for a new structure and for remodeling of an existing one

The following information was presented at the public hearing by the applicant:

1. At least 40 students would be enrolled before any change would be made in the site circulation.
2. Eighty percent of the students were expected to be picked up within a 20-minute period — a substantial additional fee was to be charged for children picked up more than 30 minutes after school.
3. A strong parent–school relationship was intended, so that average pick-up time of at least 2 minutes and visits of 5 minutes or longer would not be unusual.

The following were agreed upon at the public hearing:

1. The probability of vehicles backing up onto the main lane of the major arterial should be negligible, less than 1%.
2. The site plan, with no change in the circulation pattern, would provide for four service positions and three storage positions.

Based upon these conditions, the following analysis was performed using Equation (8-9b):

$$M = 3$$

$$N = 4$$

$$Q = 60 \text{ minutes per hour} \div 2 \text{ minutes per service} = 30 \text{ vph}$$

$$q = (40 \text{ students})\,(80\% \text{ in } 20 \text{ minutes})\left(\frac{60}{20}\right) = 96 \text{ vph}$$

$$\rho = \frac{96}{(4)\,(30)} = 0.8000$$

$$P(x > 3) = 0.01 \text{ (a 1\% chance of vehicles backing up onto the arterial)}$$

$$Q_M = 0.8585, \text{ from Table 8-11}$$

$$3 = \left[\frac{\ln P(x > 3) - \ln 0.5964}{\ln 0.8000}\right] - 1$$

$$3 = \left[\frac{\ln P(x > 3) - (-0.5168)}{-0.2231}\right] - 1$$

Then,

$$\ln P(x > 3) = (4)(-0.2231) - 0.5168 = -1.4092$$

and

$$P(x > 3) = e^{-1.4092} = 0.244 \text{ or } 24\%$$

Thus, the calculated probability that the queue could back up onto the arterial is 24% (given the stated conditions), which is considerably greater than the acceptable probability of less than 1%, and the application was denied. The Planning and Zoning Commission suggested various compromises of redesign of the site and issuance of a conditional use permit for a school (under the ordinance, a school can be located in any zoning district by condition) with the condition that the maximum enrollment would not exceed 24 students, which is the number necessary to achieve a value of $P(x > 3) < 0.01$. All such proposals were rejected by the applicant. The site was subsequently rezoned to the Administrative and Professional District (a restricted office district) and is now being used as a dentist's office.

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8/28/2025

On behalf of Boucher Brothers Pier Park LLC ("Client"), I am pleased to present the following proposal ("Letter of Intent") to Elite Parking, LLC and/or affiliate entity ("Parking Operator") for Parking Operator and Client to enter into a agreement for the provision of 183 spots by Parking Operator to Client for valet parking.

Parking Operator confirms it's intent to provide 183 parking spaces to Boucher Brothers Pier Park LLC for valet parking operations upon the opening of the development at 1 Ocean Drive pursuant to the Concession Agreement Between the City of Miami Beach, Florida and Boucher Brothers Pier Park, LLC for the Management and Operations of High-End Beach Establishment Concessions dated as of October 20, 2023 pursuant to Resolution No. 2023-32825 adopted at the October 18, 2023 City of Miami Beach Commission Meeting approving said Concession Agreement.

These parking spaces will be located in the following parking lots as listed below and in the map on Exhibit A.

Lot Name	Lot Location	Available Parking Spots
Publix Garage	550 Lenox Ave Miami Beach	183 Spots

CLIENT ADDRESS: 1 Ocean Drive, Miami Beach, FL 33139

DELIVERY DATE: The parking spots will be made available for valet operations to client upon the opening of the Beach Club.

HOURS OF OPERATION: These spots will be made available for valet services during operating hours at the Beach Club.

FEE STRUCTURE: To be agreed to in licensing agreement.

X Ruben Perez Sorkel
Name
Title managing member elite parkers

X Adam Cedrati
Name
Title CFO

AM

Major Food Group & Boucher Brothers
10 E. 53rd Street, New York, NY 10022
451 Ocean Drive Suite #205 Miami Beach, FL 33139

8/28/2025

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DELIVERY DATE: The parking spots will be made available for valet operations to client upon the opening of the Beach Club.

HOURS OF OPERATION: These spots will be made available for valet services during operating hours at the Beach Club.

FEE STRUCTURE: To be agreed to in licensing agreement.

X _____
Name Ruben Perez Sorett
Title managing member Elite Parking

X _____
Name Adan Cadali
Title CFO

APPENDIX J
MIAMI BEACH PARKING CODE

5.2.14 ALTERNATIVE PARKING INCENTIVES

In order to encourage the use of alternatives modes of transportation, the minimum off-street parking requirements identified in this article maybe reduced as follows:

a. *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 otherwise be required in tier 1, 20 percent in tier 2 and 25 percent in tier 3. Notwithstanding the foregoing, in no case shall the proximity of an available bike share program be counted in any ways towards private property parking reductions.
b. *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 otherwise be required in tier 1, 20 percent in tier 2 and 25 percent in tier 3. Notwithstanding the foregoing, in no case shall the proximity of an available bike share program be counted in any ways towards private property parking reductions.
c. *Carpool/vanpool parking:* The minimum off-street parking requirements may be reduced by three off-street parking spaces for every one parking space reserved for carpool or vanpool vehicles sanctioned by the City of Miami Beach, not to exceed a reduction of more than ten percent of the off-street parking spaces that would otherwise be required. The property manager must submit an annual report to the planning director documenting the carpool/vanpool registration and ongoing participation by registered users.
d. *Drop-off and loading zones for transportation for compensation vehicles: The* minimum off-street parking requirements may be reduced at a ratio of three off-street parking spaces for every one curb side drop off stall. Developments over 50,000 square feet may increase their drop off area to a maximum of three drop-off stalls for a maximum reduction of nine off-street parking spaces. Vehicles stopped in such areas shall not stop in the drop-off and loading zones for no more than the time necessary to drop-off or load passengers and their belongings.
e. *Scooter, moped and motorcycle parking:* The minimum off-street parking requirements may be reduced by one off-street parking space for every three scooter, moped, or motorcycle parking space provided off-street, not to exceed 15 percent of the off-street parking spaces that would otherwise be required.
f. *Showers:* The minimum off-street parking requirements for nonresidential uses that provide showers and changing facilities for bicyclists may be reduced by two off-street parking spaces for each separate shower facility up to a maximum of eight parking spaces. Where possible, clothes lockers should be provided for walking and biking commuters.
g. *Calculation of reductions:* Each of the reductions identified above shall be calculated independently from the pre-reduction off-street parking requirement. The reductions shall then be added together to determine the overall required off-street parking reduction. The sum of all reductions shall not exceed 50 percent of the pre-reduction off-street parking. This limit is not applicable in the Tier 3 area d.
h. *Facilities are encouraged:* All developments are encouraged to provide the aforementioned facilities to the extent possible. Any building or structure incorporating any of the aforementioned facilities may provide required off-street parking on site up to the level specified in its applicable parking tier. Such required parking, if provided, shall be exempt from FAR, in accordance with the regulations specified in section 1.2.1 (definition of FAR), of these land development regulations.