TRAFFIC IMPACT ANALYSIS

411 Michigan Avenue

411-419 Michigan Ave
Miami Beach, FL 33139

Prepared For:
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LANGAN

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EXECUTIVE SUMMARY

Bizzi & Partners Acquisitions, LLC retained Langan Engineering & Environmental Services, Inc. to prepare a traffic-impact analysis for the 411 Michigan mixed-use development. The 0.94-acre vacant site is at 411-419 Michigan Avenue in Miami Beach, Florida. The proposed development comprises 36,442 square feet of general office space, which will have approximately 200-employees, and 4,320 square-feet of retail uses expected to be built by 2023. We analyzed two signalized intersections and one stop-sign controlled intersection for the 2023 build conditions. The peak-hour capacity analyses with the proposed development's impacts in 2023 yielded the following results:

- All study intersections are expected to operate within their adopted Level of Service (LOS) during the morning and afternoon peak-hours with the development's impacts.
- The proposed driveway connection to the alley abutting the development is expected to operate at LOS A during the morning and afternoon peak-hours.
- The proposed development will not have gate-controlled access at any of the proposed site driveways.
- The proposed development will have a have a valet-operation that will control parking throughout the entire day. All patrons will be required to use the valet-operation.
- The proposed connection to Michigan Avenue will operate as an ingress only driveway, and the proposed connection to the alley will operate as an egress only driveway during all times of the day. The alley will operate as a two-way road between 5th and 4th streets.
- All patrons will be required to drop-off their vehicles at the vehicle elevator entrance located on the alley. This will allow for efficient valet operation without impacting the public right-of-way.
- The developer plans to lease out three parking spaces abutting the property on Michigan Avenue to assist in vehicle drop-off and avoid queues on public right-of-way.
- The valet operation will not cause entering traffic to back into the adjacent public roadways with a minimum of six parking attendants to serve expected demand.
- The proposed car elevators will be sufficient to serve the expected demand.
- The development site is within the Urban Infill Area (UIA).
- 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 1,250 daily, 66 morning peak-hour and 90 afternoon net-new peak-hour trips.

INTRODUCTION

Langan was retained by Bizzi & Partners Acquisitions, LLC to prepare this impact-analysis report for the 411 Michigan mixed-use development that will be built by 2023. The site will comprise approximately 0.94 acres at 411-419 Michigan Avenue in Miami Beach, Florida. The development will comprise 36,442 square feet of office space, with approximately 200-employess, and 4,320 square feet of retail uses.

We analyzed two signalized intersections and one stop-sign controlled intersection during the morning and afternoon peak hours. We found that all the study intersections are expected to operate within their adopted LOS during the morning and afternoon peak-hours with and without the proposed project's impacts. The valet operation is expected to generate a queue of four vehicles and need a minimum of six parking attendants to serve the expected demand. The development is proposing to change the operation of the abutting alley from one-way to two-way which will allow the valet-operation to operate efficiently without impacting the public right-of-way. This report presents the traffic-data and traffic-impact analysis for this proposed development.

Project Description

The proposed development will be built on two parcels (Folio Nos.: 02-4203-010-0030 & 02-4203-009-6170). **Appendix A** contains the figures of this report. **Figure 1** illustrates the site location. **Appendix B** contains a copy of the site plans showing the proposed development program and the two proposed driveway connections; one to a public road (Michigan Avenue) and one to an alley. Traffic from the proposed development will enter the site via Michigan Avenue and will exit to the alley (abutting the site). The drop-off and pick-up locations will facilitate the valet-parking operation, and will be managed by valet staff throughout the day using signs and verbal communication. The Michigan Avenue driveway will operate as an ingress only driveway, while the alley driveway will operate solely as an egress only ingress driveway. Vehicles exiting the site to the alley will be allowed to make a left-turn or a right-turn.

The development will relocate the existing historical house on the site to front Michigan Avenue and will reuse the existing foundations on site. The majority of the 85 parking spaces provided by the proposed development will comprise vehicular lifts which can stack up to three vehicles in one parking space. Nine of the 85 parking spaces will be exclusive carpool spaces. The development will also provide 25 bicycle parking spaces and 5 scooter parking spaces. All visitors and employees will have to use the valet-parking service. The maximum acceptable LOS for

roadways and intersections is LOS D for county and city roads and LOS E for State Urban Minor Arterials (SUMA) between Infill Area and Urban Development Boundary.

Scope of Study

Langan undertook the following steps to prepare this study in accordance with the methodology discussed with the city's staff. **Appendix C** contains a copy of the methodology letter.

- Collected morning (7 to 9 AM) and afternoon (4 to 6 PM) peak-hour vehicle turning-movement volumes at the following study intersections:
    - Alton Road and 4th Street (signalized)
    - Michigan Avenue and 4th Street (unsignalized)
    - Michigan Avenue and State Road A1A / 5th Street (signalized)
    - Collected 24-Hour bidirectional counts on SR-A1A/5th Street between Meridian and Euclid avenues
- Used Peak Season Conversion Factors (PSCF) from the Florida Department of Transportation (FDOT) to convert the traffic data into peak-season volumes.
- Developed a COVID-adjustment factor by comparing 2020 traffic data to 2021 traffic data along segments of 5th Street to scale the traffic data to account for variations from the true traffic count due to the ongoing Coronavirus pandemic. The COVID-adjustment factor was used in conjunction with the traditional Peak Season Category Factor (PSCF) to estimate the existing traffic data.
- The COVID-adjustment factor calculated for the morning and afternoon peak-hours were 1.46 and 1.62, respectively.
- Prepared trip-generation estimates for the proposed development, based on accepted trip-generation rates developed by the Institute of Transportation Engineers (ITE).
- Calculated a growth rate for background traffic using FDOT historical data from traffic-count stations near the project.
- Developed trip-distribution estimates for the project, based on the cardinal distribution for the corresponding Traffic Analysis Zone of the Miami-Dade County 2045 Long Range Transportation Plan (LRTP). A computer program used to develop the *2045 LRTP Directional Distribution Report* generates directional distributions for each TAZ for the eight secondary-intercardinal directions (NNE; ENE; ESE; SSE; SSW; WSW; WNW; NNW).
- Prepared morning and afternoon peak-hour intersection-capacity analyses for the following conditions at the study intersections: 2021 existing, 2023 future no-build, and 2023 future build.
- Calculated the morning and afternoon peak-hour LOS intersection-capacity analyses of the development's driveways for the 2023 build conditions.

DESCRIPTION OF EXISTING CONDITIONS

Langan visited the study area to collect the lane-configuration and traffic-control data shown in **Figure 2**. **Appendix D** contains the county's signal-timing data.

Roads

Alton Road

Alton Road is a four-lane, north-south, divided, city-maintained major collector roadway with a 30 MPH posted speed limit.

4th Street

4th Street is a two-lane, east-west, undivided, city-maintained local collector roadway with a 25 MPH posted speed limit.

Michigan Avenue

Michigan Avenue is a two-lane, undivided, north-south, city-maintained local roadway with a 25 MPH posted speed limit.

SR-A1A / 5th Street

SR-A1A / 5th Street is a six-lane divided, east-west, state-maintained principal arterial roadway with a posted speed limit of 35 MPH.

Traffic Volumes

Traffic-volume data was collected on Thursday, August 5, 2021 from 7:00 to 9:00 AM and 4:00 to 6:00 PM. We applied FDOT's season adjustment factor (1.05) and a COVID-factor to convert the traffic data into peak-season volumes because the data was collected during the ongoing Coronavirus pandemic. We developed peak-hour COVID-adjustment factors (1.46 morning and 1.62 afternoon) by comparing the traffic data collected on 5th Street to 2021 traffic counts collected on the same roadway segments. We compared the data of each intersection and determined that the peak hour occurred between 8:00 AM and 9:00 AM and between 4:45 PM and 5:45 PM for the study area. **Figure 3** illustrates the existing weekday morning and afternoon peak-hour traffic volumes. Appendix D contains the traffic data and seasonal-adjustment factors.

Intersection Capacity Analysis (Level of Service)

We conducted 2021 existing-conditions capacity analyses for the study intersections using Synchro software. We found that all study intersections are operating within their adopted LOS.

Table 1 summarizes the results of the existing-conditions analysis. **Appendix E** contains intersection-volume tables; **Appendix F** contains the capacity-analyses worksheets.

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 *6th Edition Highway Capacity Manual* published by the Transportation Research Board.

Table 1 - 2021 Existing Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alton Road & 4th Street	Signalized	Overall	C	28.7	C	26.9
Michigan Avenue & 4th Street	Stop-sign controlled	EB	A	7.5	A	8.4
		WB	A	7.5	A	8.7
		NB	A	7.7	A	8.5
		SB	A	7.6	A	8.4
Michigan Avenue & 5th Street	Signalized	Overall	C	22.8	B	12.7

PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

We reviewed the Transportation Planning Organization's 2021 Transportation Improvement Program (2021 through 2025), the county Long Range Transportation Plan (2045) and the FDOT Five Year Work Program (2021 through 2025) and found two planned roadway improvements in the TIP's program network. The proposed improvement project number DT4434321 will construct a pedestrian and bicycle path along the MacArthur Causeway from SR 5/Biscayne Boulevard to SR 907/Alton Road. The second project (No.: TA4466531) will implement the South Beach trolley service route along 5th Street. Appendix C includes excerpts from Miami-Dade TIP showing the proposed improvement information.

FUTURE CONDITIONS

This section of the report covers background traffic growth, site-generated trips, trip distribution, and future traffic volumes. The project should be completed by the end of 2023. We developed 2023 no-build traffic volumes by applying a compounded growth rate to the 2021 volumes. We added site-generated trips to the 2023 no-build traffic volumes to develop 2023 build traffic volumes.

Background Traffic

We conducted intersection capacity analyses and found that all study intersections are expected to operate within their adopted LOS. We performed a growth rate analysis for the most recent five and nine year periods (the ten year period was not available) using FDOT historical traffic volumes. We analyzed the growth rate based on linear, exponential, and decay-exponential approaches and determined that the growth rate with the strongest correlation was the nine year linear-trend. This trend yielded a negative result, and as such we used a 0.5 percent annual growth-rate factor to develop future background volumes. The growth-rate factor accounts for increased background traffic volumes and was applied to the existing volumes. **Figure 4** illustrates the 2023 no-build traffic volumes. **Table 2** summarizes the results of the 2023 no-build conditions capacity analysis. Appendix F contains the capacity-analyses worksheets.

Table 2 - 2023 No Build Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alton Road & 4th Street	Signalized	Overall	C	28.9	C	27.1
Michigan Avenue & 4th Street	Stop-sign controlled	EB	A	7.5	A	8.4
		WB	A	7.5	A	8.7
		NB	A	7.7	A	8.5
		SB	A	7.6	A	8.4
Michigan Avenue & 5th Street	Signalized	Overall	C	22.9	B	12.8

Site-Generated Trips

The proposed development is expected to generate 1,250 daily, 66 morning peak-hour, and 90 afternoon net-new peak-hour trips. We prepared daily, morning peak-hour and afternoon peak-hour trip estimates for the proposed development using equations from the 10th Edition of the ITE *Trip Generation Manual*. We performed the office trip generation calculations based on the expected number of employees to provide a conservative analysis, based on conversations with City Staff. We used the morning rate for the retail uses because the morning peak-hour equation for retail has a 151.78 offset, which results in a minimum trip generation of 152 trips for small area retail buildings. We applied a 34% pass-by rate to retail uses trip generation estimates, based on rates of the ITE Trip Generation Handbook 3rd Edition. We also applied a non-vehicular reduction of 20% based on the parking incentives allowed by the City of Miami Beach. In addition, the Miami Beach 2019 Transportation Plan shows that approximately 26% of its population uses transit, bikes and walks. The development will provide 85 off-street vehicle parking spaces, where nine of the 85 parking spaces will be exclusive carpool spaces. In addition the development will provide 25 bicycle long-term parking spaces, five scooter parking spaces and three showers within the development to promote the use of non-vehicular transportation. **Table 3** summarizes the trip-generation estimates for the proposed development. **Appendix G** contains the trip-generation data and includes Miami Beach mode-share data.

Table 3 - Trip Generation Estimates*

Use	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Uses								
General Office	200 Employees	853	66	13	79	16	62	78
Shopping Center**	4,320 SF	710	2	2	4	16	19	35
Total		**1,563**	**68**	**15**	**83**	**32**	**81**	**113**
Non-vehicular reduction (20%)		313	14	3	17	6	16	23
Net New Trips		**1,250**	**54**	**12**	**66**	**26**	**65**	**90**

** Based on Trip Generation Manual 10th Ed.*

*** Shopping Center land use includes 34% afternoon pass-by trip reduction.*

Trip Distribution

We determined the directional distribution of site-generated trips based on the cardinal distribution data for TAZ 652 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 average directional-distribution values to develop percentages for 2023. **Table 4** shows the proposed development's trip distributions. **Figures 5a** and **5b** show

the proposed development's traffic distributions to the study intersections. **Figures 6a** and **6b** illustrate 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	22.90%	4.10%	3.50%	2.80%	2.50%	16.70%	19.40%	28.10%
2045	18.80%	3.20%	3.20%	1.60%	2.30%	19.50%	29.70%	21.80%
2023	**21.81%**	**3.86%**	**3.42%**	**2.48%**	**2.45%**	**17.45%**	**22.15%**	**26.42%**

Build Traffic Volumes

We conducted capacity analyses for the study intersections and determined that they are expected to operate within their adopted LOS with the development's impacts. The 2023 build traffic volumes were derived by adding the total site-generated trips to the 2023 no-build traffic volumes. **Figure 7** illustrates the 2023 build morning and afternoon peak-hour traffic volumes. **Table 5** summarizes the 2023 build LOS for the morning and afternoon peak hours. The analysis takes into account the vehicles that are expected to travel on external roadways as a result of valet returning the cars from the car elevator to the main driveway ingress on Michigan Avenue. To provide a conservative analysis we assumed that 92% of the trips will utilize the car elevator. As such, when retrieving cars to bring back to the valet stand, valet will have to travel on external roadways to access the main driveway. These additional trips were also included in the analysis.

Table 5 - 2023 Build Intersection Capacity Analysis Summary

Location	Traffic Control	Approach	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Alton Road & 4th Street	Signalized	Overall	C	28.8	C	27.8
Michigan Avenue & 4th Street	Stop-sign controlled	EB	A	7.7	A	8.6
		WB	A	7.5	A	9.4
		NB	A	7.8	A	8.8
		SB	A	7.7	A	8.7
Michigan Avenue & 5th Street	Signalized	Overall	C	23.9	B	12.6
Driveway	Stop-sign controlled	EB	A	8.8	A	9.3

*The site driveway LOS represents the Michigan Avenue driveway during the AM and PM.

The analysis for the site driveway at the alley was done based on the proposed operation of the driveway, which will operate as an egress only driveway during the morning and afternoon peak hours.

Site Access & Circulation

The proposed connection to Michigan Avenue will operate as an ingress only driveway during the morning and afternoon peak hours, and the alley will operate as an egress only driveway during the morning and afternoon peak hours. The proposed connection to Michigan Avenue cannot be widen to operate as a two-way driveway all the time due to the existing building at 411 Michigan Avenue and the existing foundations on site. To provide a conservative analysis, we assumed all traffic will drop-off their vehicles at the valet stand, and valet wishing to travel to the car elevator will take the dropped off cars and exit through the alley and drive north to the car elevator. Pick-up will also occur at the valet stand in the main driveway. Valet operators will travel to the car elevator, retrieve the car, and utilize the alley, 4th Street, and Michigan Avenue to re-enter the site through the main ingress. Appendix B contains the vehicle circulation figures showing how vehicles will arrive to and depart from the site.

Driveway Volumes

We analyzed the development's proposed driveway connections to Michigan Avenue and the alley for the morning and afternoon peak-hour build conditions and found that they will operate at LOS A. Based on the proposed access operation, site traffic will enter the site from Michigan Avenue and exit via the alley. The alley operates as a two-way northbound and southbound road. The proposed morning and afternoon peak hour onsite circulation will facilitate the valet-parking operation and ensure the vehicle queues remain within the site and not back onto Michigan Avenue. Even though the developer plans to lease out the three parking spaces on Michigan Avenue, allowing some unexperienced patrons to drop-off their cars there to the valet operators, we assumed that 100% of the traffic will enter through Michigan Avenue and exit through the alley to provide a conservative analysis. Gate-controlled access is not proposed and circulation will be managed by valet staff. Table 5 summarizes the 2023 build LOS of the driveway for the morning and afternoon peak hours traffic volumes. **Figure 8** shows the project's driveway volumes and Appendix F contains the capacity-analyses worksheets.

All visitors and employees will have to valet park their vehicles. The alley is a 20-foot wide, local road that operates in the northbound and southbound direction. The proposed development will have 27 off-street parking spaces on the ground floor and 58 off-street parking spaces on the basement floor with access to the alley through a car elevator. In addition, the development will have three on-street parking spaces on Michigan Avenue. The car elevator will be approximately 50 feet north of the proposed alley driveway. The parking spaces on the ground floor will be for visitors and the basement parking spaces will be for employees. The valet operation station will

be located on the ground floor and by the car elevator in the morning peak-hour, where employees and visitors will be able to drop-off their vehicles and the operators will then park the vehicles on the ground floor or basement floor using the car elevator. The valet operators will manage traffic flow to provide for efficient operations. The pick-up operation will be handled on the ground floor where the valet operator will retrieve vehicles from the basement and access the site through the alley. Valet patrons will then exit the site through the alley and can travel north or south once in the alley. Appendix B includes the circulation diagrams for the valet operation during the morning and afternoon peak hour.

Valet Operation and Car Elevator Queuing Analysis

We prepared a queuing analysis for the proposed development's valet operation and found that it will not cause entering traffic to back onto the adjacent public roadway (Michigan Avenue). The proposed development will have a valet-parking station on the ground floor with on-site vehicle-stacking area for five vehicles. All visitors and employees will be required to use the valet operation to park their vehicles. The site plan in Appendix B shows the location of the valet booth and the stacking/queuing area. We used the queuing-analysis methodology from the Transportation and Land Development published by the ITE. This methodology requires hourly rates of vehicle arrival and service times for the valet operation to determine vehicle-queue lengths. The queues resulting from this analysis are 95th percentile queues, which are those expected to be generated 95 percent of the time.

The development will provide nine parking spaces with triple-stack car lifts at the valet court on the ground floor and 29 parking spaces with double-stack car lifts on the basement floor for a total of 85 parking spaces. Vehicle lifts allow two or three vehicles to occupy one parking space by lifting vehicles above the ground and allowing a second or third vehicle to park underneath one another. The parking spaces on the ground floor will be used exclusively for the visitors and the parking spaces on the basement floor will be for employees. The development will also have three on-street parking spaces along Michigan Avenue. Note that there is more than 103 feet of onsite vehicle stacking between the alley and the valet station.

The vehicle-arrival rate was based on the project's peak-hour trip generation, summarized in Table 3. The development is expected to generate 66 (54 ingress and 12 egress) morning peak-hour trips and 105 (33 ingress and 72 egress) afternoon peak hour trips. We estimated the average service time for the valet operation of 3.85 minutes for the drop-off and 4.92 minutes for the pick-up operations. The service time accounts for the time required for the valet attendant to pick-up/drop-off the car, operate the lift, operate the car elevator and return to the valet station. To provide an extremely conservative analysis, we assumed all vehicles would be dropped-off at the valet stand within the proposed development, rather than directly at the car elevator. The analysis indicates that the valet operation will need a minimum of five attendants on the ground floor and one parking attendant on the basement floor. We used 25 feet to convert the number of queued vehicles to linear feet. **Table 6** summarizes the results of the queuing analysis and indicates that queues for the proposed valet operation are not expected to exceed four vehicles. The analyses indicate that the expected 95th percentile queue lengths will not exceed the length of the queue-storage area. **Appendix H** contains excerpts from ITE, the queuing-analysis and service-time calculations.

Table 6 – Valet Operation Queuing Analysis Summary

Time	Storage Capacity (feet)	95th Percentile Queue Length		Exceeds Capacity?
		Vehicles	Feet	
AM	103	1	25	**NO**
PM	103	4	100	**NO**

Appendix H contains the queuing-analysis and service-time calculations for the valet operations, as well as the parking stacker specifications. The development will coordinate and setup specific timeframes for the use of the proposed loading area along the alley to avoid any conflict with the valet operation. The specific times frames for the loading area will be outside the expected peak-hours of pick-up and drop-off.

In addition, as requested by city staff we performed a queuing analysis for the proposed car elevators and determined that the proposed elevators (2) will be sufficient to serve the expected demand. We used the service time of 1.33 minutes as provided by the car elevator manufacturer. As stated previously, the basement parking spaces will be used mainly by employees. We estimated the number of ingress trips for employees based on rates developed by the Urban Land Institute (ULI) Shared Parking 3 Edition. The proposed access to the car elevators has 25 feet of vehicle stacking. All patrons are expected to drop off their vehicles at the main internal driveway, and valet will take the cars to the car elevator. The development is proposing to lease three parking spaces along Michigan Avenue to serve the demand and the expected queues to avoid vehicles queueing on the alley which will add to a total of four off-street spaces available for the valet-operation. In addition, these on-street parking spaces will allow the internal driveway to operate efficiently and will avoid conflicts with the proposed ground floor stackers. **Table 7** summarizes the results of the queuing analysis for the car elevators and indicates that queues are not expected to exceed three vehicles. Appendix B contains a plans showing the valet stand location, the valet parking spaces. Appendix H contains excerpts from ULI, IT and the queuing-analysis.

Table 7 – Car Elevator Queuing Analysis Summary

Time	Storage Capacity (feet)	95th Percentile Queue Length		Exceeds Capacity?
		Vehicles	Feet	
AM	75	3	75	**NO**
PM	75	1	25	**NO**

Transportation Demand Management Strategies

The site abuts SR-A1A (5th Street) which provides a wide sidewalk, a bicycle lane, special emphasis crosswalks and a transit stop of the southeast corner of Michigan Avenue and 5th Street. The proposed development will provide infrastructure to motivate the use of the available multimodal transportation systems provided by the city and the existing roadway network. This infrastructure will consist of bicycle racks, scooters parking spaces, carpool parking spaces, lockers and showers. In addition, the office spaces will provide Miami-Dade Transit & Miami Beach bus and trolley route information on or near employee bulletin boards to promote the use of public transportation.

The development will work to create Transportation Demand Management (TDM) strategies to support the overall TDM goals of City of Miami Beach and maximize the use of the available transportation systems. The most important action will be doing a regular employees outreach to provide them with the multiple commute options and establish preferences to target TDM efforts. **Table 8** summarizes the proposed TDM strategies.

Table 8 - Proposed TDM Strategies

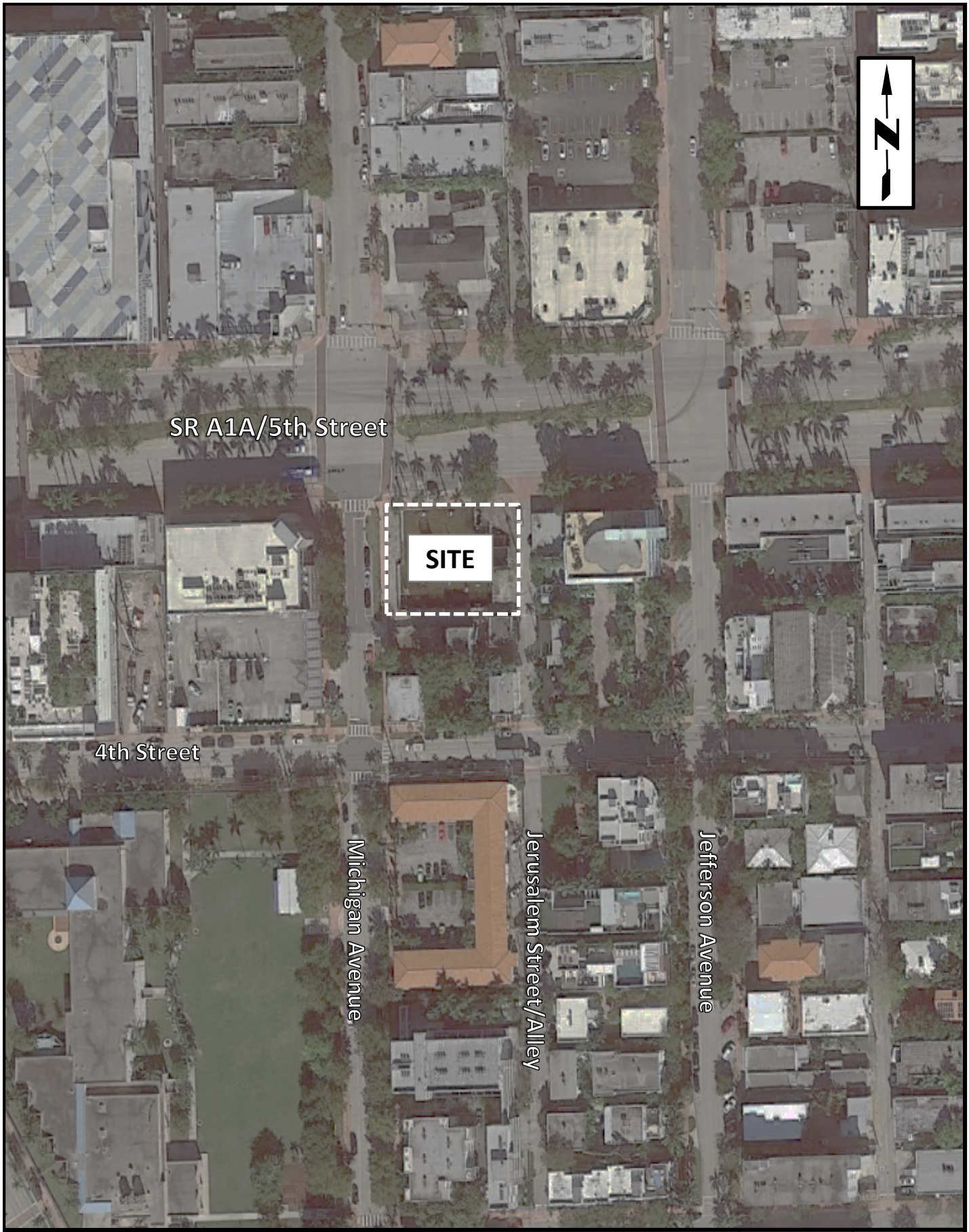
Action	Details
Employee Survey	Survey employees to determine current commute characteristics establish preferences, and target TDM efforts.
Employee Outreach	Provide employees with information regarding multimodal commute options.
Carpool Support	Provide initial coordination and support in setting up carpool parking spaces for employees.
Bicycle Facilities	On-site bike racks will be available for employees who ride their bikes to work.
Travel Mapping	Transit route maps and schedules will be made available on site to employees and visitors.
Flexible Schedule	On site businesses will be encouraged to offer flexible and compressed work schedules to the extent possible.
Valet Operations	The valet operation comprise of six valet attendants and will focus on avoiding vehicles queuing on the public right-of-way. The development will lease three off-street parking spaces to serve the expected demand and avoid queuing during peak-hours.
Loading Area	The loading area will have specific timeframes outside the pick-up/drop-off peak hours to avoid conflicts with the valet-operation.

CONCLUSIONS

Langan performed a traffic-impact analysis for the 411 Michigan development expected to be completed by 2023. The analysis shows the following results for the 2023 build conditions:

- 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.
- The proposed driveway connections to Michigan Avenue and the alley are expected to operate at LOS A during the morning and afternoon peak-hours.
- The valet operation will not cause entering traffic to back into the adjacent public roadways with a minimum of six parking attendants to serve expected demand.
- The proposed development will have a have a valet-operation that will control parking throughout the entire day. All patrons will be required to use the valet-operation.
- The proposed car elevators will be sufficient to serve the expected demand.
- The proposed connection to Michigan Avenue will operate as an ingress only driveway, and the proposed connection to the alley abutting the development will operate as an egress only driveway during all times of the day. The alley will operate as a two-way road between 5th and 4th streets.
- All patrons will be required to drop-off their vehicles at main internal driveway, and the valet operators will drive the vehicles to the car elevator when necessary. This will allow for efficient valet operation without impacting the public right-of-way.
- The developer plans to lease out three parking spaces abutting the property on Michigan Avenue to assist in vehicle drop-off and avoid queues on public right-of-way.
- The development will not have gate-controlled access at the proposed site driveways.
- The development site is within the UIA.
- The development will promote the use of different modes of transportation through the implementation of several TDM strategies.

APPENDIX A
FIGURES



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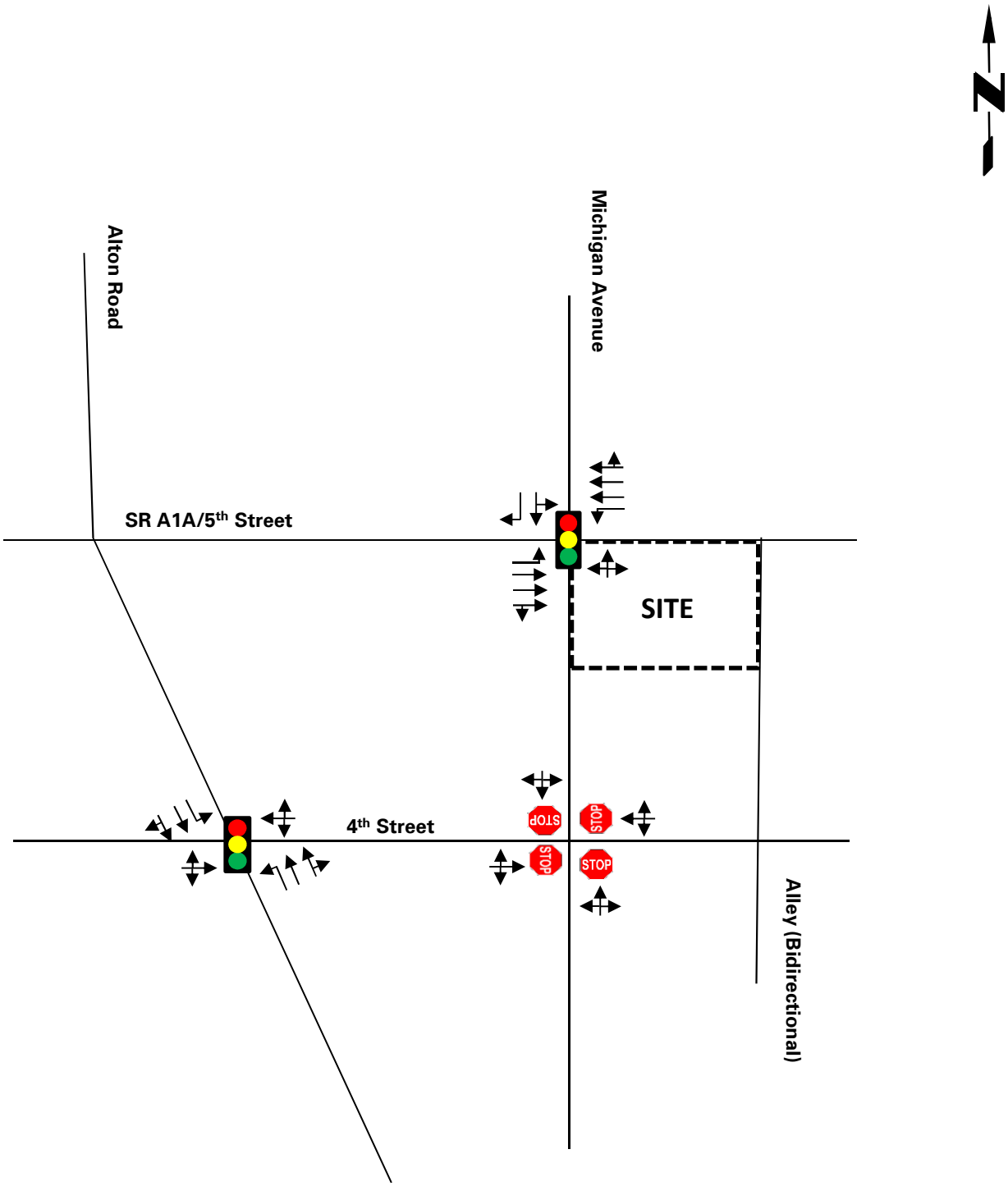
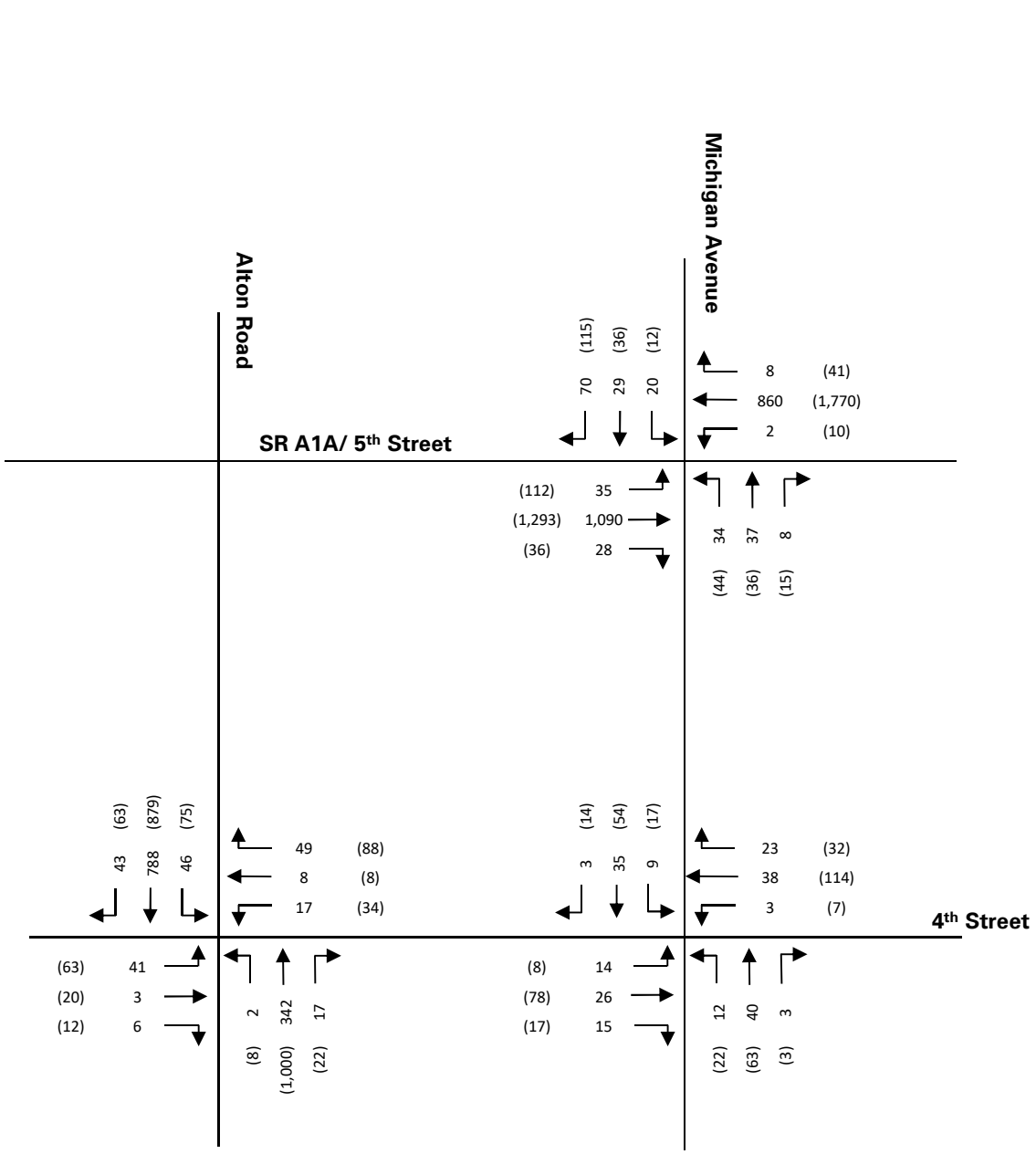
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA
Figure Title	SITE LOCATION MAP
Project No.	300277901
Date	2/3/2022
Scale	NTS

FIGURE 1



LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project 411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	Figure Title INTERSECTION LANE CONFIGURATIONS	Project No. 300277901 Date 2/3/2022 Scale NTS	FIGURE 2



LEGEND
AM Peak Hour
(#) PM Peak Hour

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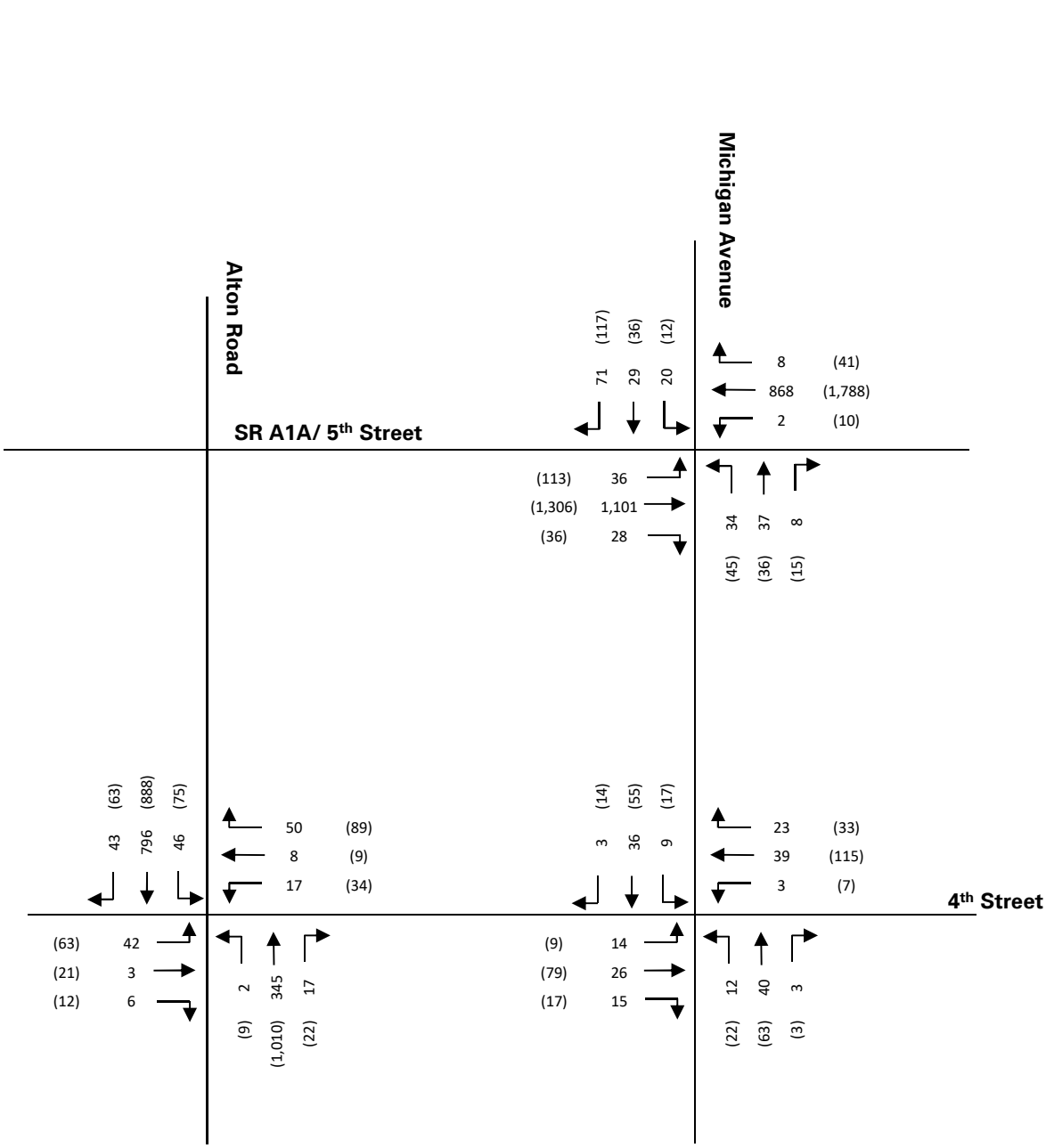
Project	Figure Title	Project No.	
411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	2021 EXISTING TRAFFIC VOLUMES	300277901	FIGURE 3
		Date 2/3/2022	
		Scale NTS	



LEGEND
AM Peak Hour
(#) PM Peak Hour

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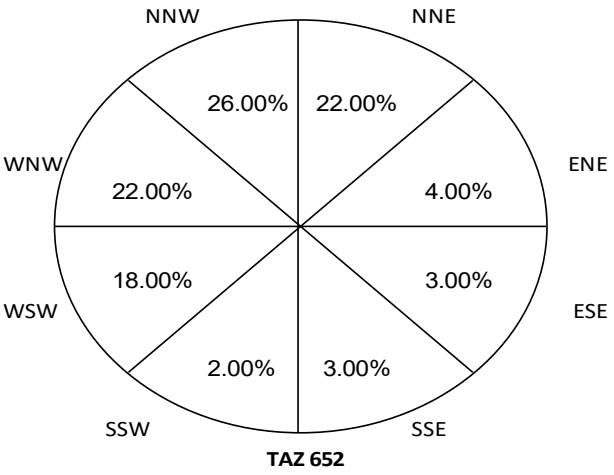
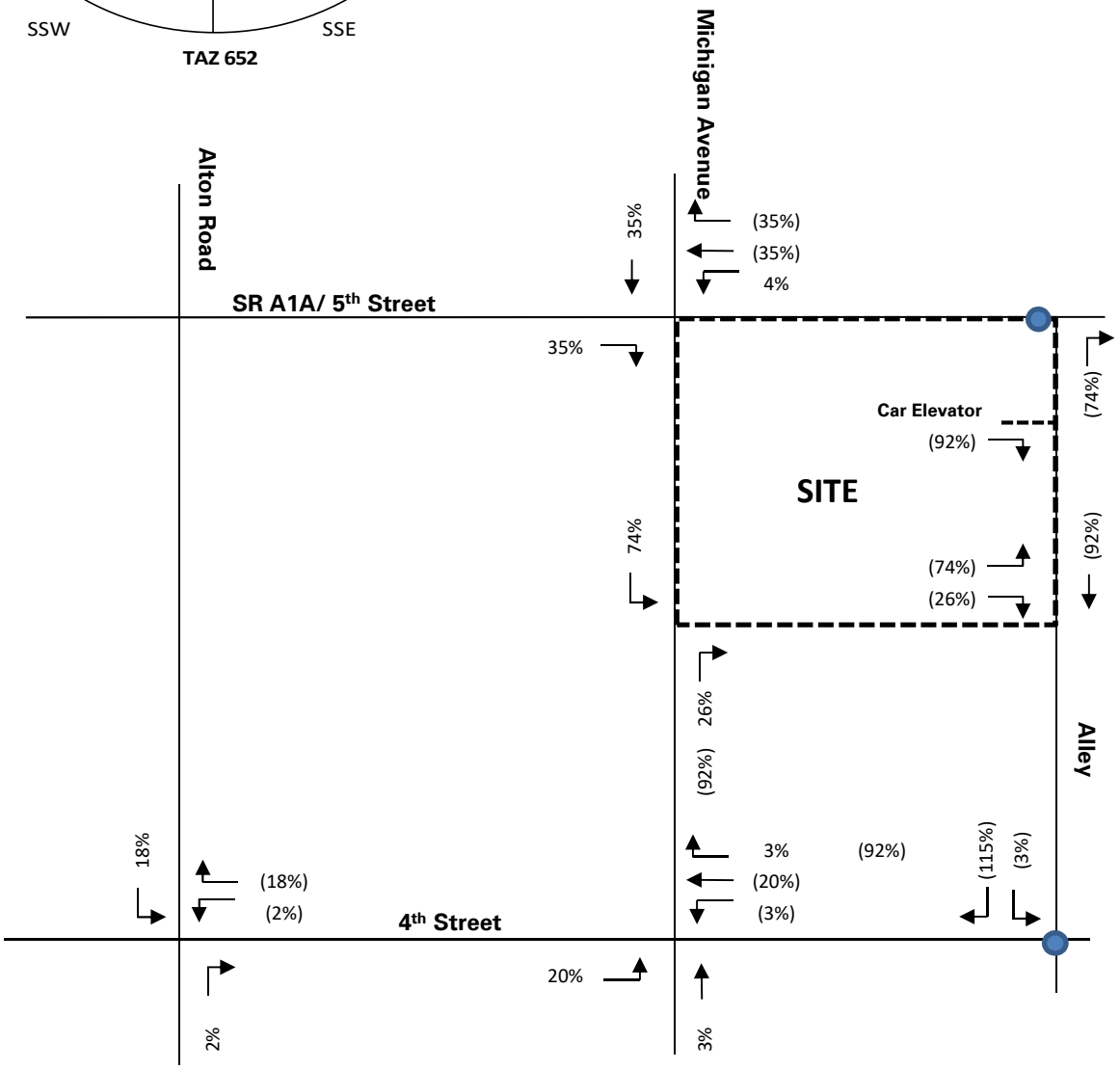
FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project	Figure Title	Project No.	
411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	2023 NO BUILD TRAFFIC VOLUMES	300277901	FIGURE 4
		Date 2/3/2022	
		Scale NTS	





Note: The NBR on Michigan Ave & 5 Street takes into account 20% of trips expected to use external roads to access the car elevators.

LEGEND

- # Ingress
- (#) Egress
- Not a study intersection

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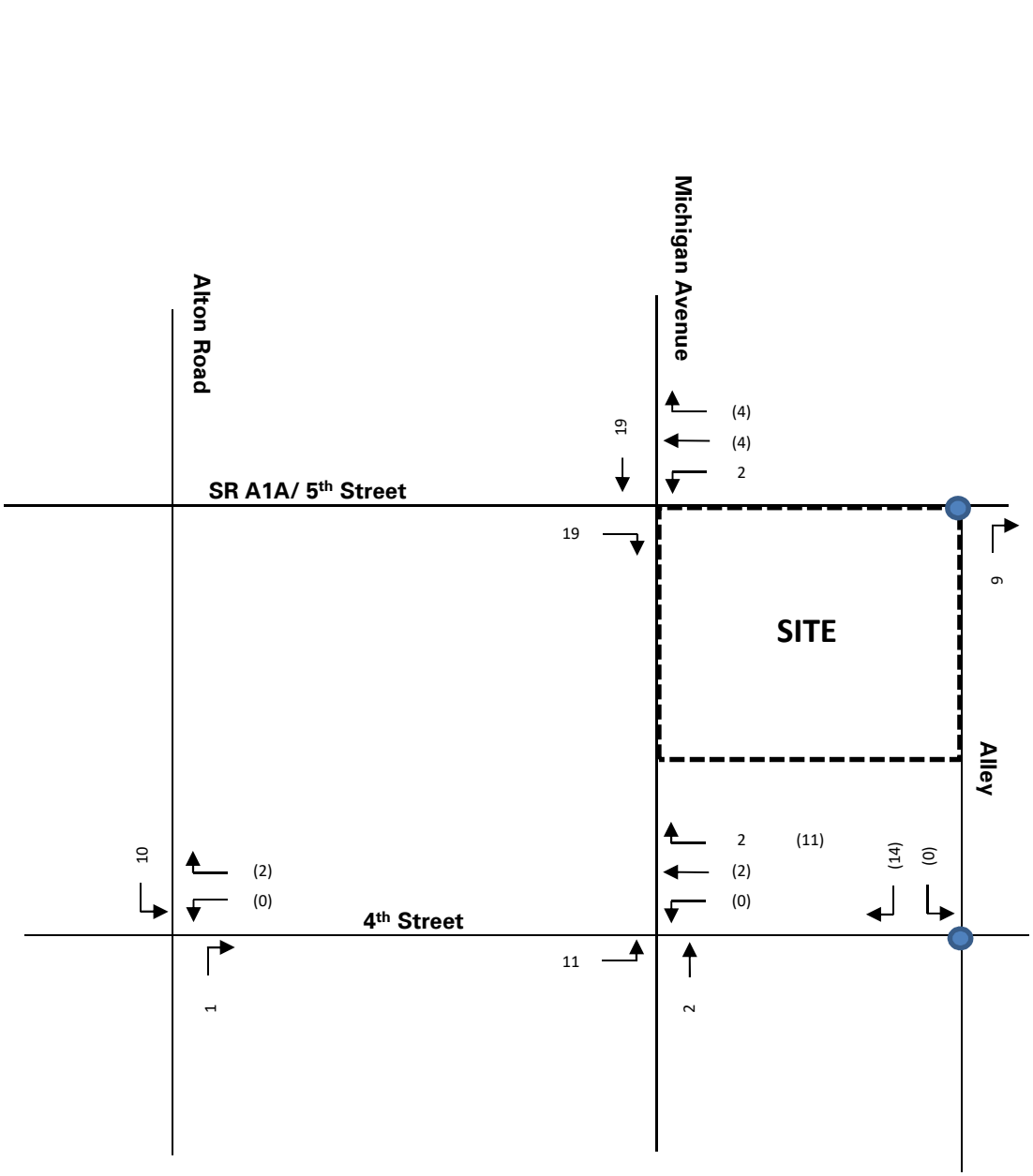
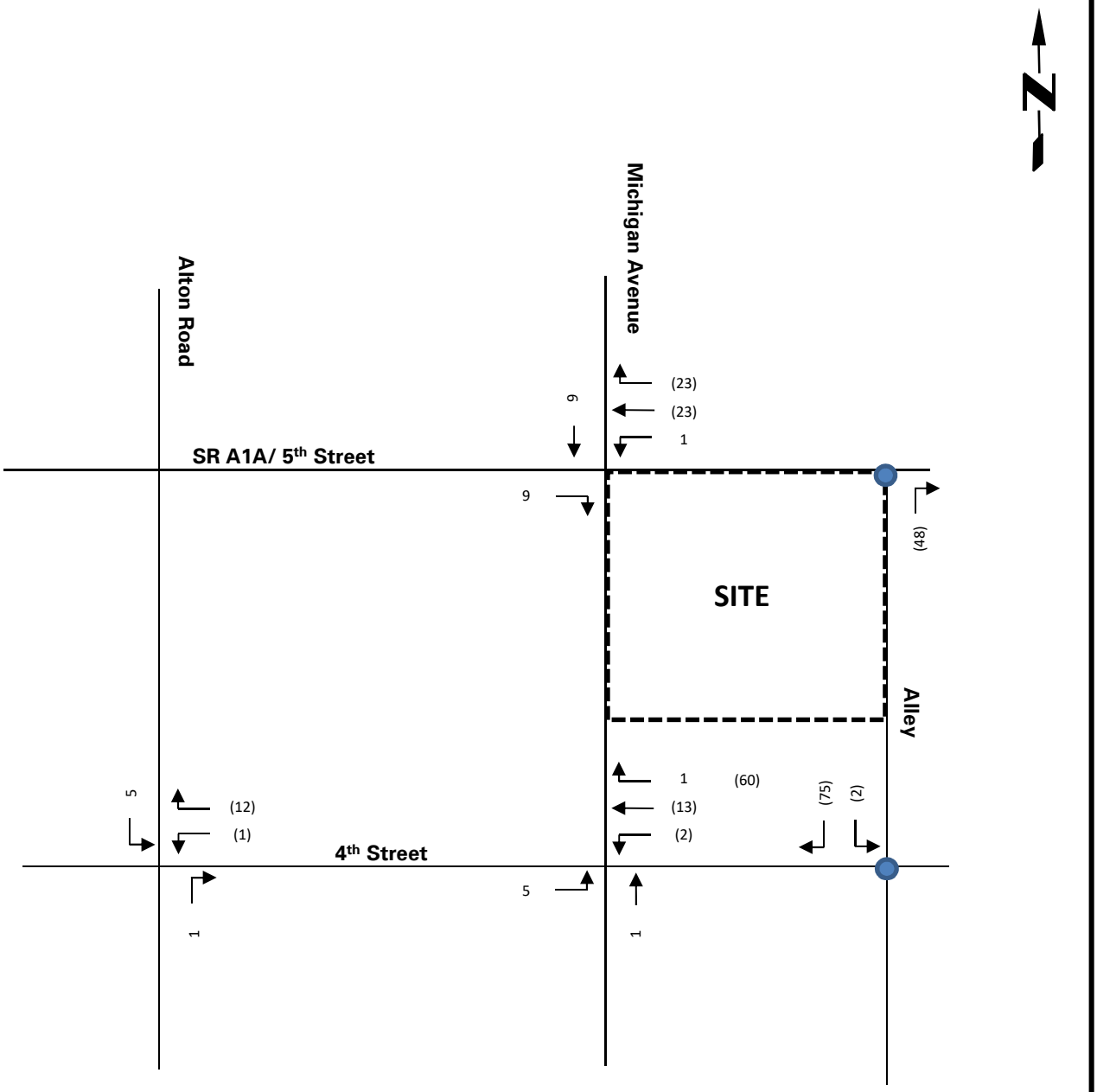
Project	Figure Title	Project No.	
411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	PROJECT TRAFFIC DISTRIBUTION	300277901	FIGURE 5
		Date 2/3/2022	
		Scale NTS	



LEGEND
Ingress
(#) Egress
Not a study intersection

LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 15150 NW 79th Court, Suite 200, Miami Lakes, FL 33016 P: 786.264.7221 F: 786.264.7201 www.langan.com FL CERTIFICATE OF AUTHORIZATION No. 00006601	Project 411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	Figure Title PROJECT TRAFFIC AM	Project No. 300277901 Date 2/3/2022 Scale NTS	FIGURE 6a



LEGEND
Ingress
(#) Egress
Not a study intersection

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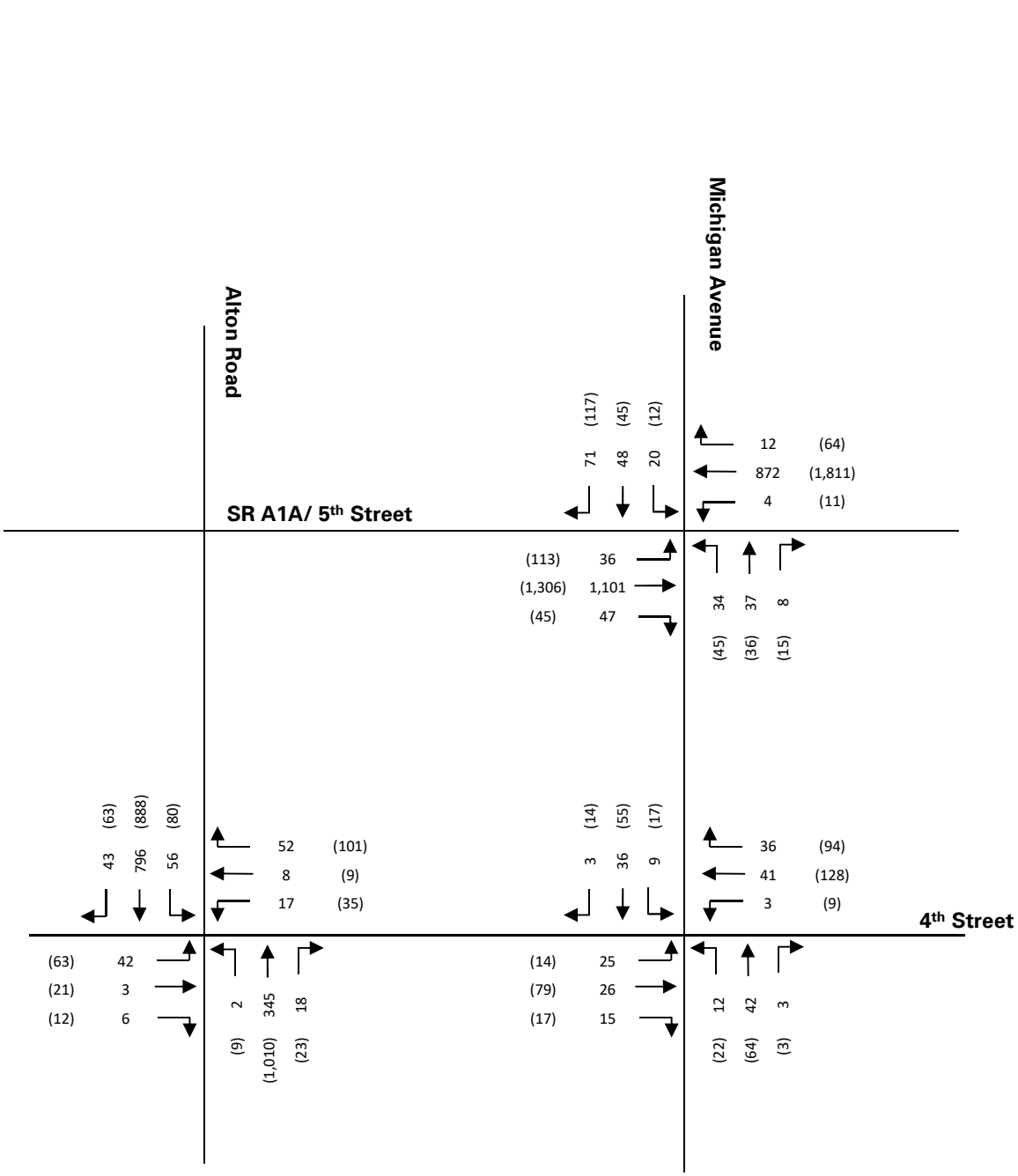
Project	Figure Title	Project No.	
411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	PROJECT TRAFFIC PM	300277901	FIGURE 6b
		Date 2/3/2022	
		Scale NTS	



LEGEND
AM Peak Hour
(#) PM Peak Hour

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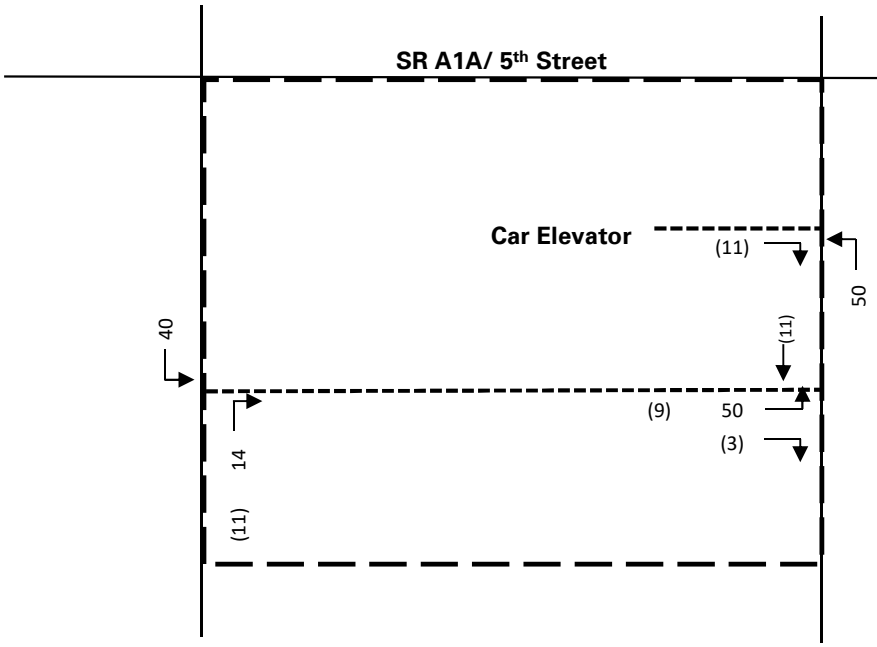
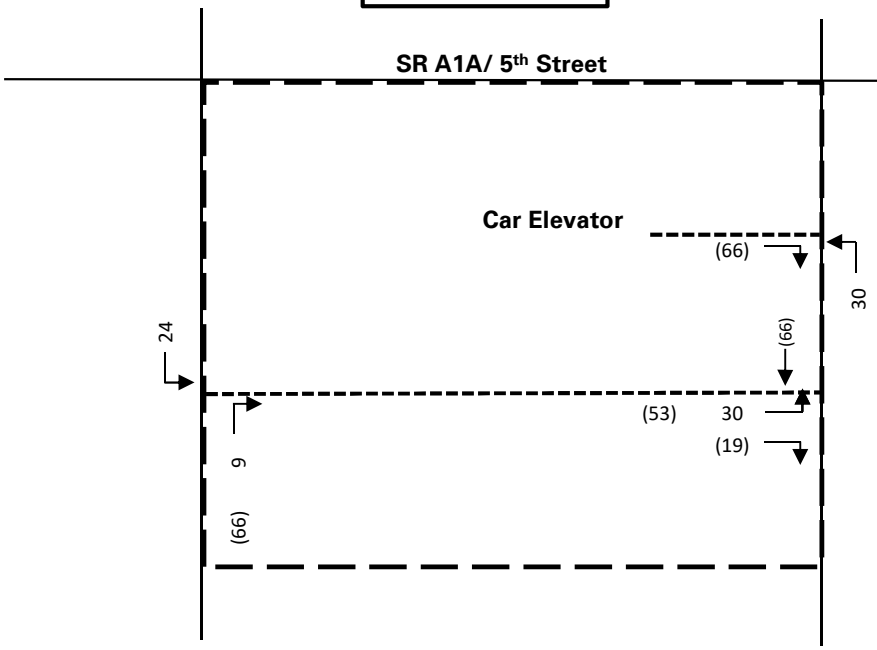
Project	Figure Title	Project No.	
411 MICHIGAN MIAMI BEACH MIAMI DADE FLORIDA	2023 BUILD TRAFFIC VOLUMES	300277901	FIGURE 7
		Date 2/3/2022	
		Scale NTS	

AM Peak Hour



PM Peak Hour



* Assumed 8% of trips will be visitors arriving / departing in the morning and afternoon peak hours and utilizing the site driveway

LEGEND

Ingress
(#) Egress
Driveway

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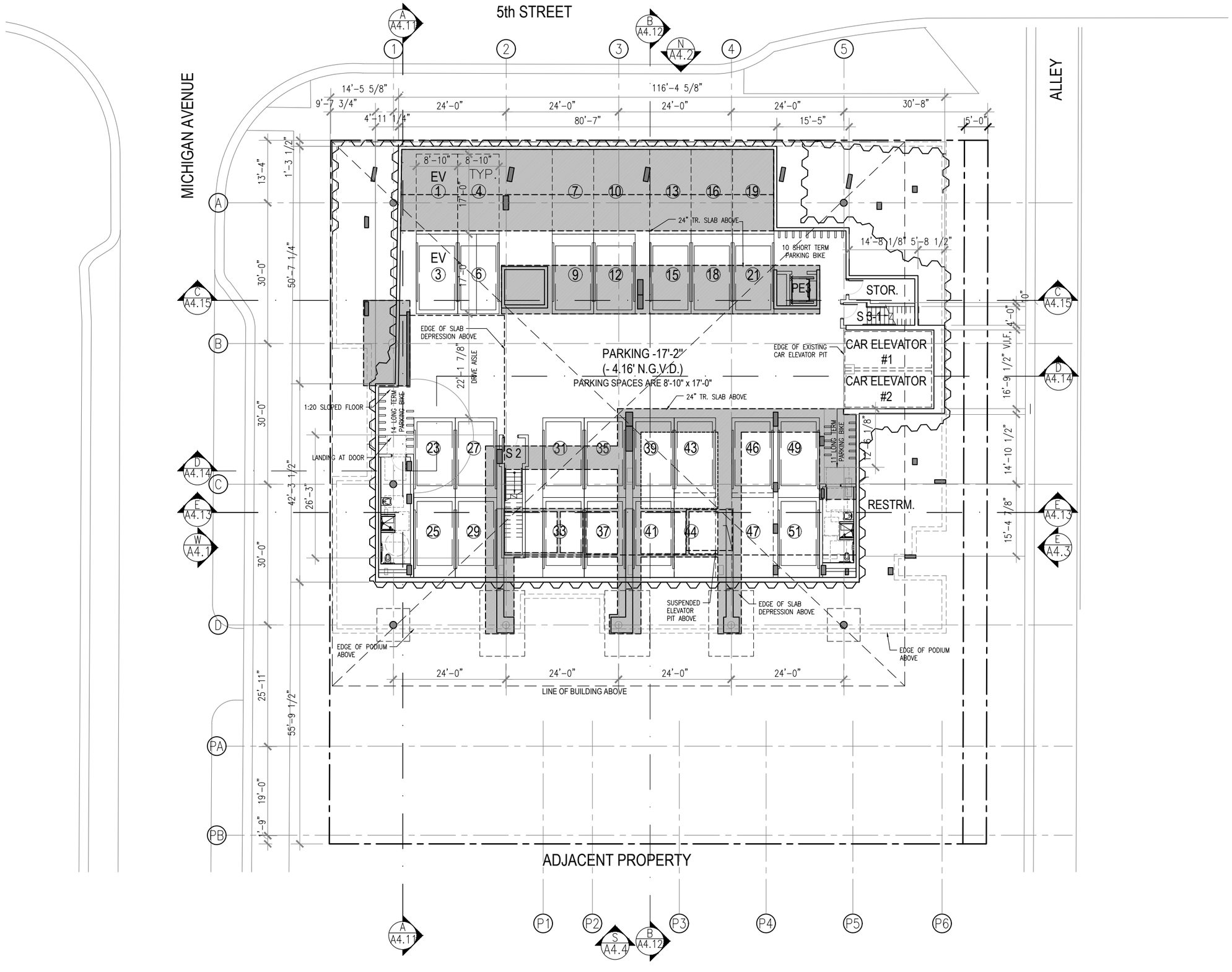
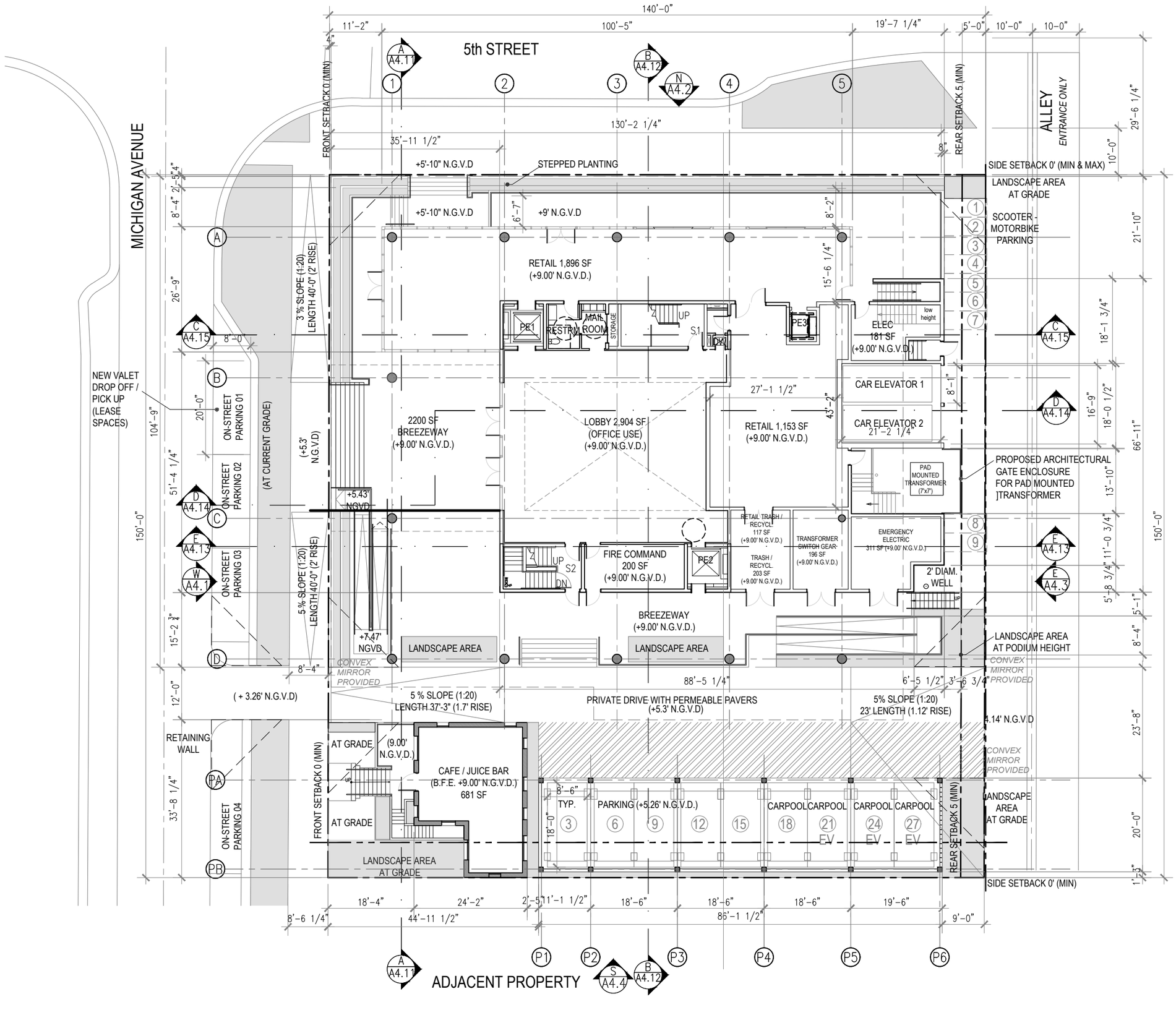
APPENDIX B
SITE PLAN


5th STREET
MICHIGAN AVENUE
ALLEY
A A4.11
B A4.12
N A4.2
1
2
3
4
5
14'-5 5/8"
9'-7 3/4"
4'-11 1/4"
24'-0"
24'-0"
80'-7"
116'-4 5/8"
24'-0"
24'-0"
15'-5"
30'-8"
5'-0"
8'-10"
8'-10" TYP.
EV
1
4
7
10
13
16
19
17'-0"
24" TR. SLAB ABOVE
10 SHORT TERM PARKING BIKE
EV
3
6
9
12
15
18
21
PE1
STOR.
S 3-1
14'-8 1/8"
5'-8 1/2"
EDGE OF SLAB DEPRESSION ABOVE
EDGE OF EXISTING CAR ELEVATOR PIT
CAR ELEVATOR #1
CAR ELEVATOR #2
PARKING -17'-2"
(- 4.16' N.G.V.D.)
PARKING SPACES ARE 8'-10" x 17'-0"
22'-1 7/8"
DRIVE AISLE
1:20 SLOPED FLOOR
14-LONG TERM PARKING BIKE
LANDING AT DOOR
23
27
S 2
31
35
39
43
46
49
11-LONG TERM PARKING BIKE
12'-6 1/8"
RESTRM.
25
29
33
37
41
44
47
51
SUSPENDED ELEVATOR PIT ABOVE
EDGE OF SLAB DEPRESSION ABOVE
EDGE OF PODIUM ABOVE
EDGE OF PODIUM ABOVE
24'-0"
24'-0"
24'-0"
24'-0"
LINE OF BUILDING ABOVE
13'-4"
1'-3 1/2"
30'-0"
50'-7 1/4"
30'-0"
42'-3 1/2"
26'-3"
30'-0"
25'-11"
55'-9 1/2"
19'-0"
1'-9"
16'-9 1/2" V.I.F.
4'-0"
14'-10 1/2"
15'-4 7/8"
C A4.15
D A4.14
E A4.13
W A4.1
D A4.14
E A4.13
E A4.3
A
B
C
D
PA
PB
ADJACENT PROPERTY
P1
P2
P3
P4
P5
P6
A A4.11
S A4.4
B A4.12


140'–0"
11'–2"
100'–5"
19'–7 1/4"
5'–0"
10'–0"
10–0"
5th STREET
MICHIGAN AVENUE
ALLEY
ENTRANCE ONLY
FRONT SETBACK 0 (MIN)
REAR SETBACK 5 (MIN)
SIDE SETBACK 0' (MIN & MAX)
LANDSCAPE AREA AT GRADE
SCOOTER - MOTORBIKE PARKING
130'–2 1/4"
35'–11 1/2"
+5'-10" N.G.V.D
STEPPED PLANTING
+9' N.G.V.D
RETAIL 1,896 SF (+9.00' N.G.V.D.)
3 % SLOPE (1:20) LENGTH 40'-0" (2' RISE)
RESTRM
MAIL ROOM
STORAGE
UP
DN
S1
PE1
PE3
ELEC 181 SF (+9.00' N.G.V.D.)
low height
CAR ELEVATOR 1
CAR ELEVATOR 2
21'–2 1/4"
NEW VALET DROP OFF / PICK UP (LEASE SPACES)
ON-STREET PARKING 01
ON-STREET PARKING 02
ON-STREET PARKING 03
ON-STREET PARKING 04
(AT CURRENT GRADE)
2200 SF BREEZEWAY (+9.00' N.G.V.D.)
LOBBY 2,904 SF (OFFICE USE) (+9.00' N.G.V.D.)
RETAIL 1,153 SF (+9.00' N.G.V.D.)
27'–1 1/2"
(+5.3' N.G.V.D)
+5.43' NGVD
+7.47' NGVD
5 % SLOPE (1:20) LENGTH 40'-0" (2' RISE)
FIRE COMMAND 200 SF (+9.00' N.G.V.D.)
PE2
RETAIL TRASH / RECYCL 117 SF (+9.00' N.G.V.D.)
TRASH / RECYCL 203 SF (+9.00' N.G.V.D.)
TRANSFORMER SWITCH GEAR 196 SF (+9.00' N.G.V.D.)
EMERGENCY ELECTRIC 311 SF (+9.00' N.G.V.D.)
PAD MOUNTED TRANSFORMER (7'x7')
2' DIAM. WELL
PROPOSED ARCHITECTURAL GATE ENCLOSURE FOR PAD MOUNTED TRANSFORMER
BREEZEWAY (+9.00' N.G.V.D.)
LANDSCAPE AREA
LANDSCAPE AREA AT PODIUM HEIGHT
CONVEX MIRROR PROVIDED
(+ 3.26' N.G.V.D)
5 % SLOPE (1:20) LENGTH 37'-3" (1.7' RISE)
PRIVATE DRIVE WITH PERMEABLE PAVERS (+5.3' N.G.V.D)
5% SLOPE (1:20) 23' LENGTH (1.12' RISE)
4.14' N.G.V.D
RETAINING WALL
AT GRADE
(9.00' N.G.V.D.)
CAFE / JUICE BAR (B.F.E. +9.00' N.G.V.D.) 681 SF
PARKING (+5.26' N.G.V.D.)
TYP.
CARPOOL
EV
LANDSCAPE AREA AT GRADE
ADJACENT PROPERTY
150'–0"
104'–9"
51'–4 1/4"
15'–2 3/4"
33'–8 1/4"
26'–9"
8'–4" 2'–5 3/4"
12'–0"
29'–6 1/4"
21'–10"
18'–1 3/4"
16'–9"
18'–0 1/2"
66'–11"
13'–10"
5'–1"
8'–4"
23'–8"
20'–0"
1'–3"
8'–6 1/4"
44'–11 1/2"
86'–1 1/2"
9'–0"
18'–4"
24'–2"
2'–5"
11'–1 1/2"
18'–6"
19'–6"
A A4.11
B A4.12
N A4.2
C A4.15
D A4.14
E A4.13
W A4.1
E A4.3
S A4.4
P1
P2
P3
P4
P5
P6
PA
PB

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

MULTIFAMILY - COMMERCIAL - ZONING DATA SHEET

ITEM #	Project Information			
1	Address:	411-419 Michigan Ave, 944 5 Street		
2	Board and file numbers :	PB21-0469		
3	Folio number(s):	02-4203-010-0030, 02-4203-009-6170, 02-4203-009-6160		
4	Year constructed:	N/A	Zoning District:	CPS-2
5	Based Flood Elevation:	8	Grade value in NGVD:	4
6	Adjusted grade (Flood+Grade/2):	6	Lot Area:	21,000
7	Lot width:	140'	Lot Depth:	150'
8	Minimum Unit Size	N/A	Average Unit Size	N/A
9	Existing use:	N/A	Proposed use:	Commercial

	Zoning Information / Calculations	Maximum	Existing	Proposed	Deficiencies
10	Height	75'	0'	75'	*Pursuant to in-process Code Amendment*
11	Number of Stories	N/A	N/A	5	
12	**FAR**	42,000	0	41,936	
13	Gross square footage	N/A	9,500	92,356	
14	Square Footage by use	N/A	9,500	3,123 Retail, 38,813 Office	
15	Number of units Residential	N/A	N/A	N/A	
16	Number of units Hotel	N/A	N/A	N/A	
17	Number of seats	N/A	N/A	N/A	
18	Occupancy load	N/A	N/A	N/A	

	Setbacks	Required	Existing	Proposed	Deficiencies
	Subterranean:				
19	Front Setback facing Michigan:	0	0	0	
20	Side Setback:	0	0	0	
22	Side Setback facing 5th street:	0	0	0	
23	Rear Setback facing Alley:	5'	10'	9'	
	At Grade Parking:				
24	Front Setback facing Michigan:	0	0	0	
25	Side Setback:	0	0	0	
27	Side Setback facing 5th street:	0	0	0	
28	Rear Setback Facing Alley:	5'	10'	9'	
	Pedestal and Tower:				
29	Front Setback facing Michigan:	0	0	4"	
30	Side Setback:	0	1'-6"	0	
31	Side Setback facing 5th street:	0	0	4"	
32	Rear Setback Facing Alley:	5'	10'	9'	
	Parking	**Required**	**Existing**	**Proposed**	**Deficiencies**
39	Parking District	**1**	**1**	**1**	
40	Total # of parking spaces	**84**	**0**	**85**	*103 Required before Reductions (see chart)*
41	# of parking spaces per use (Provide a separate chart for a breakdown calculation)	**see chart**	**0**	**see chart**	

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42	# of parking spaces per level (Provide a separate chart for a breakdown calculation)	**N/A**	**0**	**Basement - 58 Ground Floor -27**	
43	Parking Space Dimensions	**8.5' x 18'**	**0**	**8.5' x 18'**	
44	Parking Space configuration (45o, 60o, 90o, Parallel)	**90**	**0**	**90**	
45	ADA Spaces				
46	Tandem Spaces	**N/A**	**0**	**15**	
47	Drive aisle width	**22'**	**0**	**22'**	
48	Valet drop off and pick up	**Y**	**N**	**Y**	
49	Loading zones and Trash collection areas	**3**	**0**	**1 in alley**	*Waiver Requested*
50	Bicycle parking, location and Number of racks	**0**	**0**	**25 Long Term in Basement**	

	Restaurants, Cafes, Bars, Lounges, Nightclubs	**Required**	**Existing**	**Proposed**	**Deficiencies**
51	Type of use				
52	Number of seats located outside on private property	N/A	N/A	N/A	
53	Number of seats inside	N/A	N/A	N/A	
54	Total number of seats	N/A	N/A	N/A	
55	Total number of seats per venue (Provide a separate chart for a breakdown calculation)	N/A	N/A	N/A	
56	Total occupant content	N/A	N/A	N/A	
57	Occupant content per venue (Provide a separate chart for a breakdown calculation)	N/A	N/A	N/A	

58	Proposed hours of operation	8am-8pm
59	Is this an NIE? (Neighboot Impact stablishment, see CMB 141-1361)	N
60	Is dancing and/or entertainment proposed ? (see CMB 141-1361)	N
61	Is this a contributing building?	Yes
62	Located within a Local Historic District?	Yes

Notes:

If not applicable write N/A N/A

Parking Requirements - Parking District No. 01

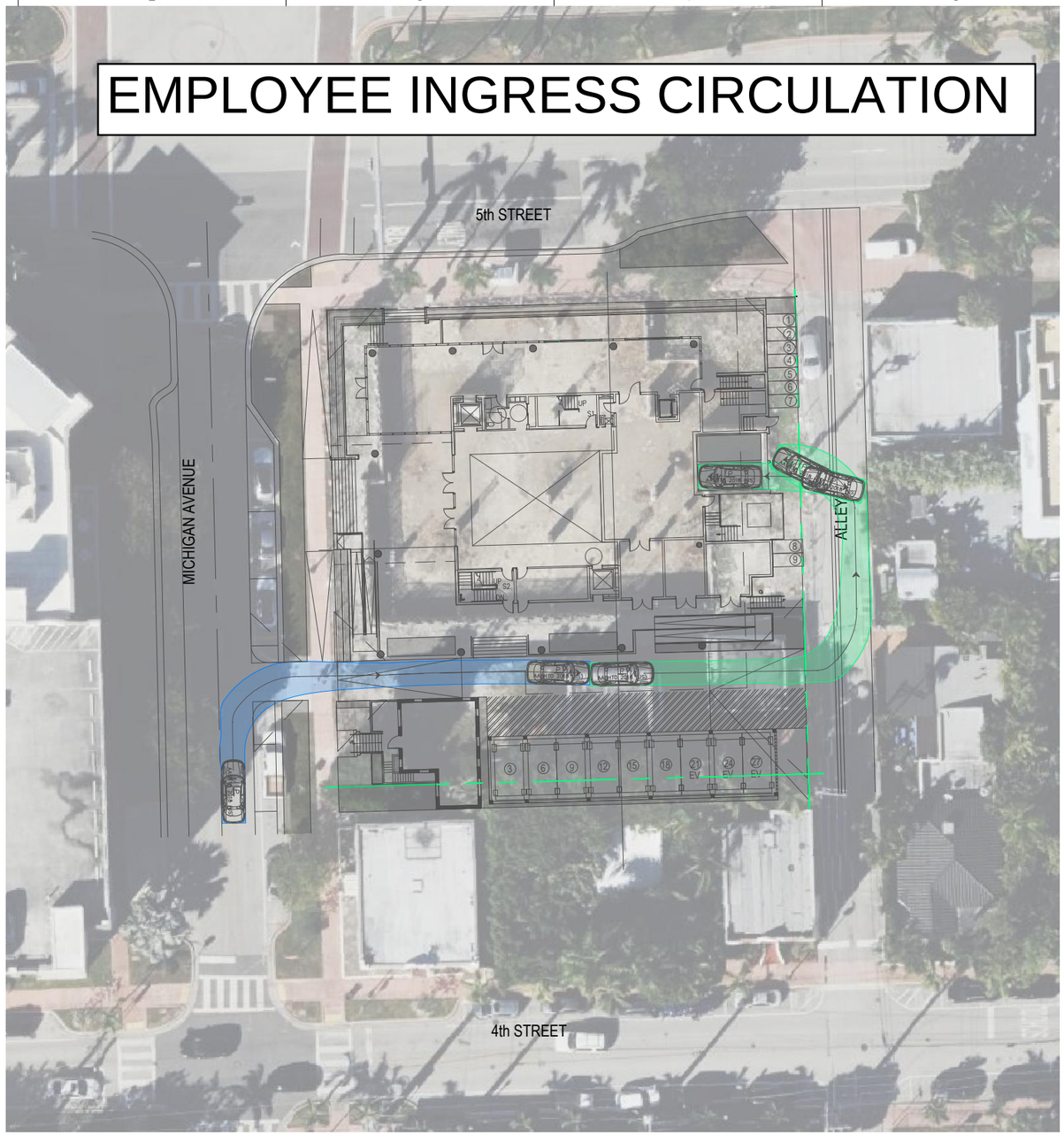
		Total FAR SF	Required # Parking Spaces
Office or Office Building	Ground floor - One Space per 300 square feet of floor area	2,904	9.7
	Upper floors - One space per 400 square feet of floor area		
	SF 2nd Floor	8,440	21.1
	SF Typical Floor (3-5) + Roof	24,795	62.0
	Total	36,139	
	Office or Office Building Required Parking		92.8 Spaces
Retail Parking	One space per 300 square feet of floor area		
	Ground Floor Retail Space (New Building)	3,123	10.41
	Retail Required Parking		10 Spaces
	TOTAL OFFICE + RETAIL PARKING REQUIRED		**102.8 SPACES**

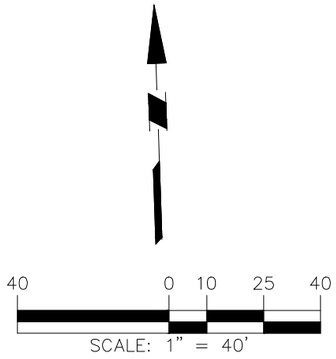
Alternative Parking Incentives - Sec. 130-40		Provided	# Spaces Reduced
Showers	2 parking less for each shower (max -8)	3	6
Scooters - Motorcycles	1 parking less for 3 parkings (max 15%)	5	5
Long term Bikes	1 parking less for 5 parkings (max 15%)	25	5
Short term Bikes	1 parking less for 10 parkings (max 15%)	0	0
Carpool / Vanpool	3 parking less for each parking (max 10%)	9	3
	Total # Reduced Parking Spaces		19
	TOTAL PARKING **REQUIRED AFTER DEDUCTIONS**		**83.8 SPACES**

Parking Spaces Delivered

Existing Cellar	58	
Triple Stacker	27	
TOTAL PARKING SPACES **DELIVERED**		**85 SPACES**

EMPLOYEE INGRESS CIRCULATION





PASSENGER VEHICLE

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

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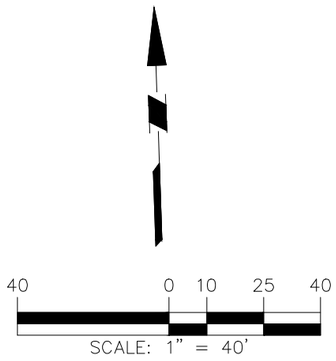
Project	419 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE FLORIDA
Drawing Title	VEHICLE CIRCULATION FIGURE
Project No.	300277901
Date	09/02/2021
Drawn By	EC
Checked By	MP
Drawing No.	Fig-001

Filename: \\langan.com\data\MIA\data9\300277901\Project Data\CAD\01\SheetFiles_Drafts\300277901-CS101-0101.dwg Date: 2/3/2022 Time: 08:56 User: mpolanco Style Table: Langan.stb Layout: Fig001

EMPLOYEE EGRESS CIRCULATION



PASSENGER VEHICLE

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

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Project	419 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE FLORIDA
Drawing Title	VEHICLE CIRCULATION FIGURE
Project No.	300277901
Date	09/02/2021
Drawing By	EC
Checked By	MP
Drawing No.	Fig-002

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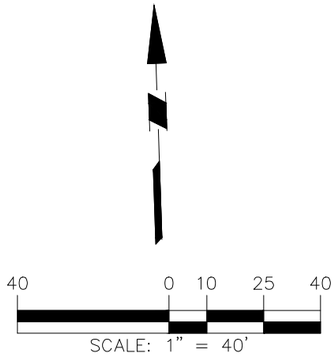
EMPLOYEE INGRESS & VISITOR EGRESS CIRCULATION



PASSENGER VEHICLE

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

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Project	419 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE FLORIDA
Drawing Title	VEHICLE CIRCULATION FIGURE
Project No.	300277901
Date	09/02/2021
Drawn By	EC
Checked By	MP
Drawing No.	Fig-003

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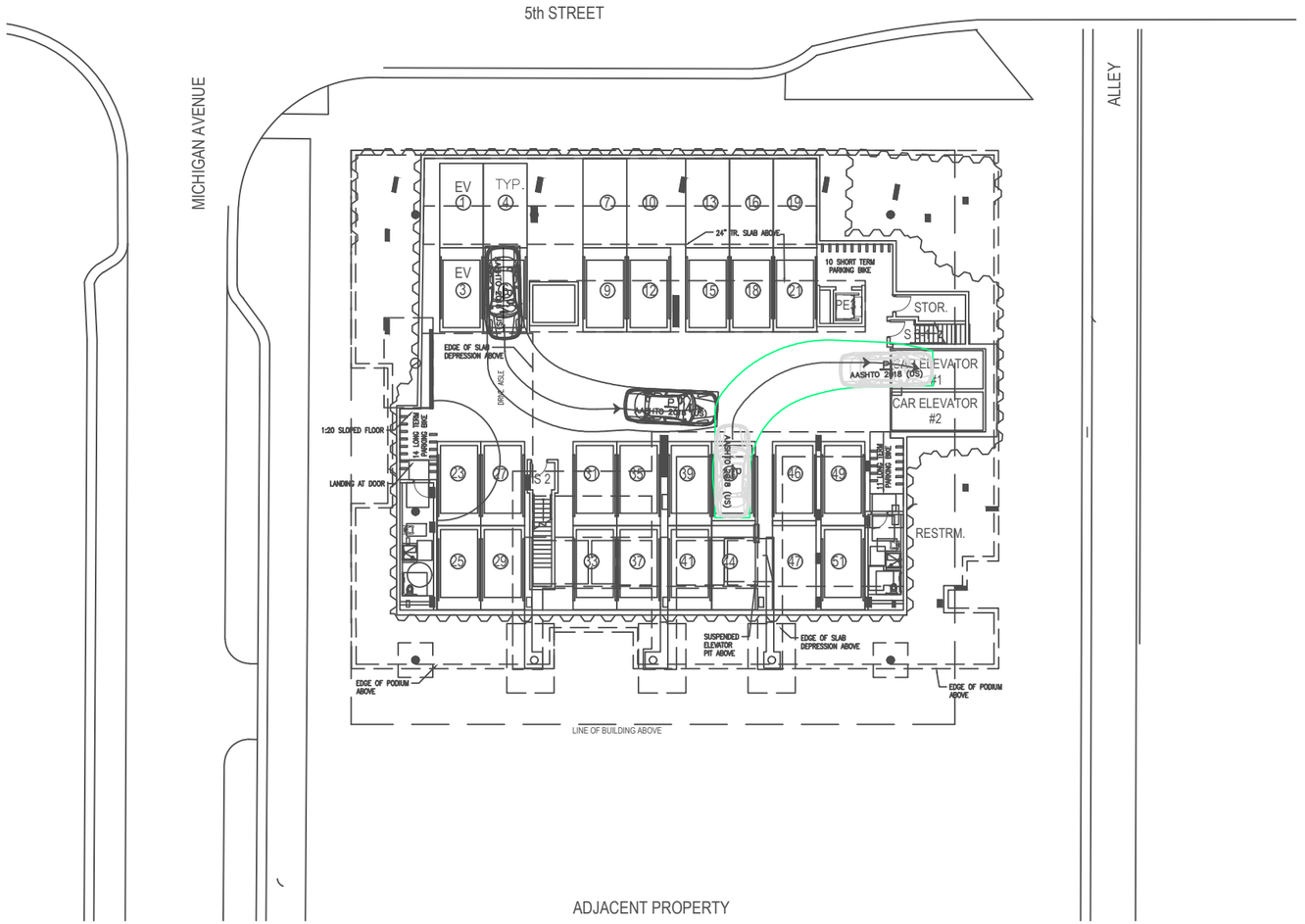
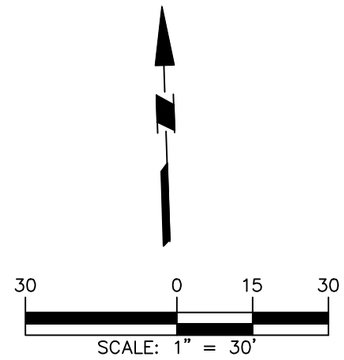
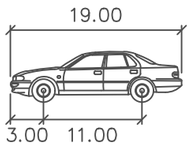
Basement Parking Egress Circulation







PASSENGER VEHICLE

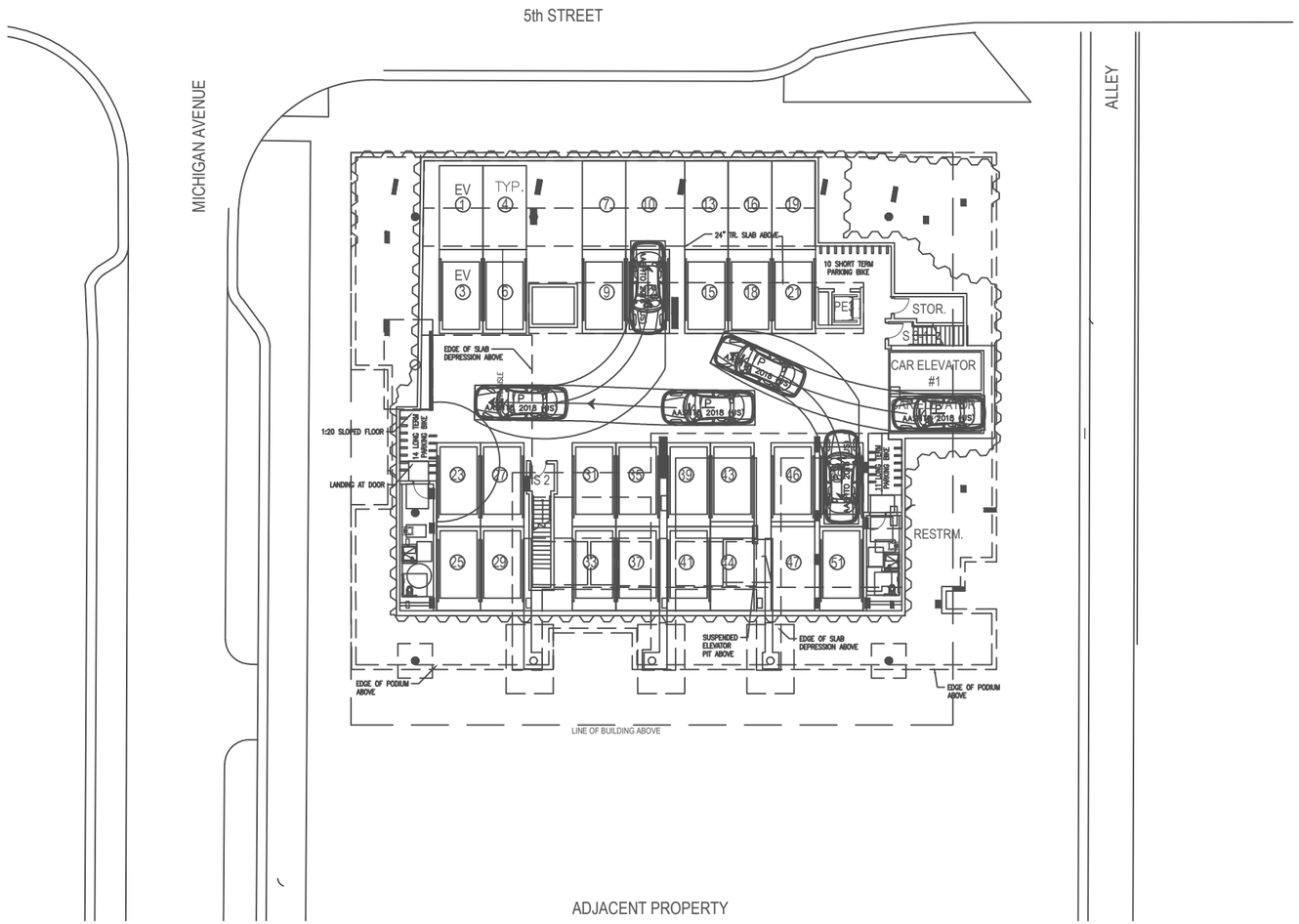
	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

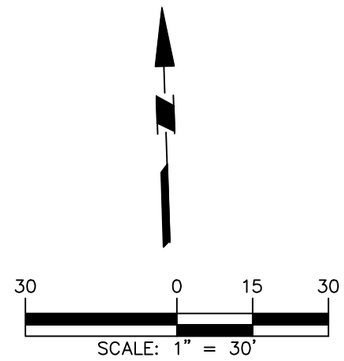
LANGAN
Langan Engineering and Environmental Services, Inc.
15150 NW 79th Court, Suite 200
Miami Lakes, FL 33016
T: 786.264.7200 F: 786.264.7201 www.langan.com
FL Certificate of Authorization No. 00006601/LB8172/LB8198

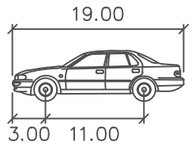
Project	419 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE FLORIDA
Drawing Title	VEHICLE CIRCULATION FIGURE
Project No.	300277901
Date	09/02/2021
Drawn By	EC
Checked By	MP
Drawing No.	Fig-004

Filename: \\langan.com\data\MIA\data9\300277901\Project Data\CAD\01\SheetFiles_Drafts\300277901-CS101-0101.dwg Date: 2/3/2022 Time: 09:30 User: mpolanco Style Table: Langan.stb Layout: ANSIB-BL (4)

Basement Parking Ingress Circulation







PASSENGER VEHICLE

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

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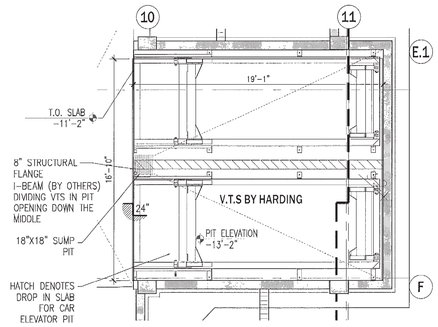
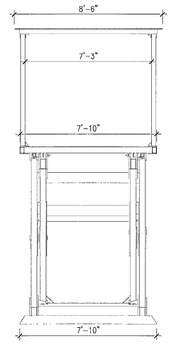
Project	419 MICHIGAN AVENUE MIAMI BEACH MIAMI-DADE FLORIDA
Drawing Title	VEHICLE CIRCULATION FIGURE
Project No.	300277901
Date	09/02/2021
Drawn By	EC
Checked By	MP
Drawing No.	Fig-005

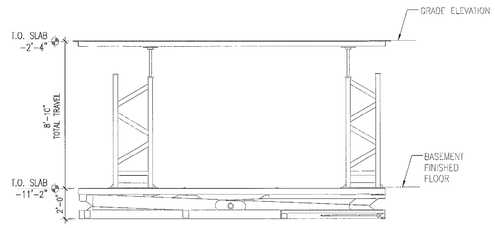
Filename: \\langan.com\data\MIA\data9\300277901\Project Data\CAD\01\SheetFiles_Drafts\300277901-CS101-0101.dwg Date: 2/3/2022 Time: 09:38 User: mpolanco Style Table: Langan.stb Layout: ANSIB-BL (5)



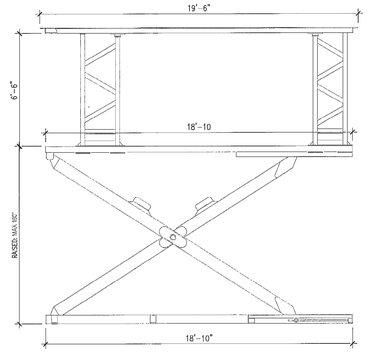
1 PARTIAL GROUND FLOOR PLAN
SCALE:3/16"=1'-0"



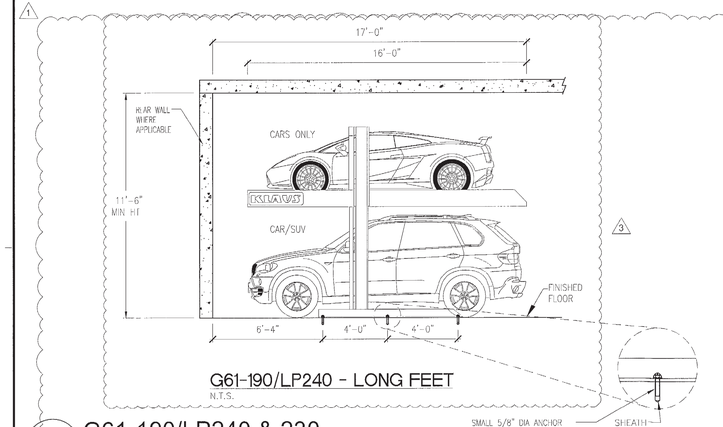
2 HARDING VTS FRONT VIEW (RAISED)
SCALE: 1/4"=1'-0"



3 HARDING VTS SIDE VIEW (LOWERED)
SCALE:1/4"=1'-0"



4 HARDING VTS SIDE VIEW (RAISED)
SCALE:1/4"=1'-0"

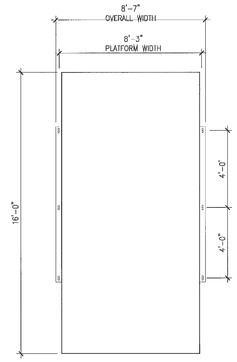


5 G61-190/LP240 - LONG FEET
N.T.S.

5 G61-190/LP240 & 230
SCALE:NTS

NOTE:
REFER TO FIRE SPRINKLER DRAWINGS FOR THE FIRE SUPPRESSION REQUIREMENTS AT THE CAR LIFTS

3



6 G61-190/LP240 PLAN VIEW
SCALE:1/4"=1'-0"

GENERAL NOTES

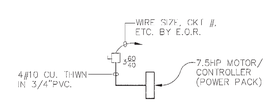
1. CLIENT MUST PROVIDE (1) DISCONNECT, 3P, 208V, 60A W/ 40A FUSE.
2. 24 VOLT CONTROL LINES BY KLAUS
3. 13 KLAUS LIFTS AND 1 POWER PACK
4. KLAUS LIFT WEIGHS 2,000 LBS
5. HYDRAULIC TANK CAPACITY 100 LITERS
6. NOT USED
7. ALL HYDRAULIC FITTINGS, PIPES, HOSES, PISTONS, CYLINDERS, AND VALVES ARE PROVIDED BY THE MANUFACTURER AS A COMPLETE SYSTEM
8. ALL CONNECTION HARDWARE AND ANCHORAGE PROVIDED BY MANUFACTURER
9. ONE HUNDRED POUNDS PER SQ-FT LOAD CAPACITY REQUIRED
10. KLAUS MODEL G01 SHALL BE IN THE LOWERED POSITION DURING A HURRICANE EVENT

LEGEND

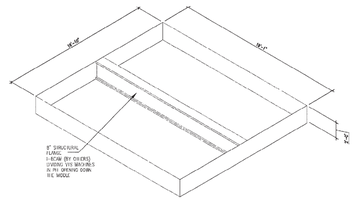
- KS KEY SWITCH
- FJB FLOOR JUNCTION BOX
- WJB WALL MOUNTED JUNCTION BOX
- PP POWER PACK W/ S.D. TRANSFORMER
- 3P, 208V, 60A W/ 40A FUSE DISC.
- ELECT./HYD. CONTROL LINE 24 VOLTS IN 3/4"C

CAR LIFT SCHEDULE

LIFT MODEL	OVERALL WIDTH	MIN. CEILING HT.	# OF LIFTS
G61-190 LP240	8'-7"	11'-6"	13
TOTAL # OF PARKING SPACES			26



9 ELECTRIC RISER DIAGRAM - KLAUS SYSTEM
SCALE:NTS



7 PIT INTERIOR DIMENSIONS
SCALE:1/8"=1'-0"

SEQUENCE OF OPERATIONS FOR CAR LIFT GATES

- WHEN VALET PULLS UP TO GATE THEY CAN OPEN THE GARAGE DOOR WITH A CLICKER
  IF THE LIFTS ARE NOT IN THE CORRECT POSITION THE DOOR WILL NOT OPEN
- THEY DRIVE CAR ONTO CAR LIFT
- GET OUT OF CAR AND EXIT THE LIFT
  THERE SHALL BE A SENSOR INDICATING THAT THE CAR IS PULLED FAR ENOUGH IN TO ALLOW THE GARAGE DOOR TO CLOSE FULLY.
- ONCE GATE IS FULLY CLOSED THEY CAN USE LIFT CONTROLS TO LOWER CAR LIFT TO BASEMENT
  THE LIFT IS OPERATED BY A DEAD MAN'S SWITCH LOCATED ON THE COLUMN IN THE BASEMENT
- ONCE CAR LIFT IS COMPLETELY LOWERED TO BASEMENT
  DEAD MAN'S SWITCH IS RELEASED
- VALET ENTERS CAR LIFT, ENTERS CAR AND DRIVES IT OUT OF CAR LIFT
- NOW CAR LIFT IS READY TO RECEIVE CAR TO BE SENT BACK TO VALET AT STREET LEVEL USING SEQUENCE OF OPERATION IN REVERSE ORDER

NOTE: IF THE STREET LEVEL GARAGE DOORS ARE OPEN, THE LIFT SYSTEM WILL STOP WORKING
NOTE: CAR LIFT AND CAR ELEVATOR SYSTEM UNDER SEPARATE PERMIT

2

City of Miami Beach
Fire Prevention Division
PLANS APPROVED

OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On : 8/17/2021

Property Information	
Folio:	02-4203-010-0030
Property Address:	944 5 ST Miami Beach, FL 33139-6514
Owner	411 MICHIGAN SOFI OWNER LLC
Mailing Address	520 W 27 ST NEW YORK, NY 10022 USA
PA Primary Zone	6503 COMMERCIAL
Primary Land Use	1081 VACANT LAND - COMMERCIAL : VACANT LAND
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	7,000 Sq.Ft
Year Built	0

Assessment Information			
Year	2021	2020	2019
Land Value	$3,500,000	$3,500,000	$3,500,000
Building Value	$0	$0	$0
XF Value	$0	$0	$0
Market Value	$3,500,000	$3,500,000	$3,500,000
Assessed Value	$3,500,000	$2,818,392	$2,562,175

Benefits Information				
Benefit	Type	2021	2020	2019
Non-Homestead Cap	Assessment Reduction		$681,608	$937,825

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

Short Legal Description
3-4 54 42 34 53 42
WITHAMS RE-SUB PB 9-10
LOTS 1 TO 5 INC LESS N90FT
THEREOF FOR R/W BLK 83
LOT SIZE 140.000 X 50

Taxable Value Information			
	2021	2020	2019
County			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,818,392	$2,562,175
School Board			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$3,500,000	$3,500,000
City			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,818,392	$2,562,175
Regional			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,818,392	$2,562,175

Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/11/2021	$7,000,000	32578-2150	Qual on DOS, multi-parcel sale
11/05/2020	$2,100	32194-4520	Federal, state or local government agency
06/11/2014	$4,250,000	29190-2460	Qual on DOS, multi-parcel sale
08/01/2000	$765,000	19257-3689	Sales which are qualified

Version:

OFFICE OF THE PROPERTY APPRAISER

Summary Report

Generated On : 8/17/2021

Property Information	
Folio:	02-4203-009-6170
Property Address:	419 MICHIGAN AVE Miami Beach, FL 33139-6509
Owner	411 MICHIGAN SOFI OWNER LLC
Mailing Address	520 W 27 ST NEW YORK, NY 10022 USA
PA Primary Zone	6503 COMMERCIAL
Primary Land Use	1081 VACANT LAND - COMMERCIAL : VACANT LAND
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	7,000 Sq.Ft
Year Built	0

Assessment Information			
Year	2021	2020	2019
Land Value	$3,500,000	$3,500,000	$3,500,000
Building Value	$0	$0	$0
XF Value	$0	$0	$0
Market Value	$3,500,000	$3,500,000	$3,500,000
Assessed Value	$3,500,000	$2,137,837	$1,943,489

Benefits Information				
Benefit	Type	2021	2020	2019
Non-Homestead Cap	Assessment Reduction		$1,362,163	$1,556,511

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

Short Legal Description
OCEAN BEACH ADD NO 3 PB 2-81 LOT 9 BLK 83 LOT SIZE 50.000 X 140 OR 19588-3015 0301 6

Taxable Value Information			
	2021	2020	2019
County			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,137,837	$1,943,489
School Board			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$3,500,000	$3,500,000
City			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,137,837	$1,943,489
Regional			
Exemption Value	$0	$0	$0
Taxable Value	$3,500,000	$2,137,837	$1,943,489

Sales Information			
Previous Sale	Price	OR Book-Page	Qualification Description
06/11/2021	$7,000,000	32578-2150	Qual on DOS, multi-parcel sale
11/05/2020	$2,100	32194-4520	Federal, state or local government agency
06/11/2014	$4,250,000	29190-2460	Qual on DOS, multi-parcel sale
03/01/2001	$870,000	19588-3015	Other disqualified

Version:

APPENDIX C
METHODOLOGY LETTER

Maximo Polanco

From: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Sent: Friday, July 23, 2021 10:56 AM
To: Maximo Polanco
Cc: John Kim; Joe Goldberg
Subject: [External] RE: 419 Michigan Avenue Traffic Methodology

Maximo,

Pleasure to speak with you and your team. Please see notes from today's meeting. Please let me know if I missed anything that was discussed.

Parking queueing:
Triple Stacker: Parking queueing study.
Car elevator: Number of spaces is the limiting factor, provide queueing study. Identify alternative parking for spill over.
Narrative on identifying users of parking locations.
Circulation diagram for parking of vehicles.
Valet operations plan and assumptions
Breezeway stacking diagram.

Roadway & Circulation:
Based on your queueing please indicate if the alley (Jerusalem Street) should be converted to NB instead.
Maneuverability Diagrams for the breezeway, alley loading and elevators and basement parking.

Intersection LOS Study:
Intersections: Michigan Ave x 4th and 5th Streets, and Alton Road and 4th Street.
Trip Distribution: Agreed on the methodology below.

Trip Gen:
Develop matrix with # of employees as well.
Average x fitted trip generation figures, assume fitted curve for a conservative analysis

Multimodal:
Provide bicycle parking.
Provide lockers and bicycle facilities, if feasible.

Clarification:
Retail portion will be restricted to shopping or other uses will be evaluated.

MIAMIBEACH RISING ABOVE

Firat Akcay, M.S.C.E. MBA
Transportation Engineer
Transportation and Mobility Department
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000, ext 26839

From: Maximo Polanco <mpolanco@langan.com>
Sent: Tuesday, July 20, 2021 9:59 AM
To: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Cc: John Kim <jkim@langan.com>; Joe Goldberg <jgoldberg@langan.com>
Subject: RE: 419 Michigan Avenue Traffic Methodology

Hi Firat,

We have scheduled the meeting for Friday 23rd at 10:00 AM. Here is a narrative and plans to discuss in our meeting.

Proposed Traffic Methodology for 419 Michigan

The proposed development is a mixed-use development of office uses and retail uses to be constructed on three parcels (Folio Nos. 02-4203-010-0030; 02-4203-009-6170 and 02-4203-009-6160). The proposed development will move the existing historical house to be adjacent to Michigan Avenue to maximize the developable area of the site. The development will use the existing foundations of the previously approved development and construct a parking lot in the basement that will be accessed through a vehicle elevator. The proposed development will be served by a valet parking operation that all patrons will be have to use. The development will have triple vehicle stackers on the ground floor and double stackers in most of the spaces of the basement floor. Please find attach a schematic design of the proposed development.

Based on our understanding we propose the following tasks for the traffic-impact analysis for the proposed mixed-use development at 419 Michigan Avenue, Miami Beach, FL.

- **Data Collection**
  - Collect morning (7 to 9 AM) and afternoon (4 to 6 PM) peak-hour vehicle turning-movement volumes at the following study intersections:
    - Michigan Avenue & SR-A1A
    - Michigan Avenue & 4th Street
  - Collect 24-hour bidirectional counts at the roadway segment of SR-A1A between Michigan & Washington avenues.
  - Develop a COVID-adjustment factor by comparing PRE-COVID traffic data to 2021 traffic data along the segment of SR-A1A to convert the traffic data into peak-season volumes.
  - Adjust the peak-season volumes with FDOT's 2019 PSCF.
- **Trip Generation** will be based on information contained in the Institute of Transportation Engineer's (ITE), Trip Generation Manual, 10th Edition.
- **Project Distribution** will be based on the cardinal distribution of the Traffic Analysis Zone 652 of the Miami-Dade County 2045 Transportation Model.
- **Future traffic** volumes will be developed by applying a compound growth rate to the collected traffic data. The growth rate will be based on a FDOT historical data from traffic count stations in the vicinity of the project. A one-half percent annual growth rate will be used if a negative growth rate is determined.
  - We will include any approved and unbuilt projects that can be provided by the City of Miami Beach.

- We will include any roadway improvement planned within the first three years of the county's Transportation Improvement Program.

- **Intersection capacity analyses** will be performed for the study intersections using software based on the Highway Capacity Manual methodology. The analysis will be performed for the morning and afternoon peak-hours conditions using Synchro software.
  - The analysis scenarios will include the existing (2021), no-build (2023 without project) and build (2023 with project). Conditions.
  - Project Driveways will be analyzed for the build conditions.
- **Queueing Analysis** We will prepare a queuing analysis for the proposed valet operation to determine the number of required valet-parking attendant to avoid traffic to queue back onto the adjacent public roadways.
  - The analysis will be based on the queuing-analysis methodology from the Transportation and Land Development published by the ITE. This methodology requires hourly rates of arrival and service times for the valet parking to determine queue lengths.

Table 1 - Trip Generation Estimates *

Use	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoo	
			In	Out	Total	In	Out
Proposed Uses							
General Office	36,442 SF	399	36	6	42	7	35
Shopping Center**	4,320 SF	710	2	2	4	16	18
	Total	**1,109**	**38**	**8**	**46**	**23**	**53**

** Based on Trip Generation Manual 10th Ed.*

*** Includes 36% afternoon pass-by.*

Regards,

Maximo Polanco
Senior Staff Engineer

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Mobile: 305.570.8593
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ATHENS CALGARY DUBAI LONDON PANAMA

From: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Sent: Monday, July 19, 2021 2:54 PM
To: Maximo Polanco <mpolanco@langan.com>
Cc: John Kim <jkim@langan.com>; Joe Goldberg <jgoldberg@langan.com>
Subject: [External] RE: 419 Michigan Avenue Traffic Methodology

Maximo,

Please see my availability via the attached link: https://calendly.com/d/xfxb-s823/30-minute-meeting
Thank you

MIAMIBEACH RISING ABOVE

Firat Akcay, M.S.C.E. MBA
Transportation Engineer
Transportation and Mobility Department
1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139
Tel: 305-673-7000, ext 26839

We are committed to providing excellent public service and safety to all who live, work and play in our vibrant, tropical, historic community.

Please do not print this e-mail unless necessary.

From: Maximo Polanco <mpolanco@langan.com>
Sent: Wednesday, July 14, 2021 9:08 AM
To: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Cc: John Kim <jkim@langan.com>; Joe Goldberg <jgoldberg@langan.com>
Subject: 419 Michigan Avenue Traffic Methodology

[THIS MESSAGE COMES FROM AN EXTERNAL EMAIL - USE CAUTION WHEN REPLYING AND OPENING LINKS OR ATTACHMENTS]

Good morning Firat,

Can we schedule a conference call to discuss a proposed mixed-use development at 419 Michigan Avenue.

Please let us know your availability.

Regards,

Maximo Polanco
Senior Staff Engineer

LANGAN

Direct: 954.320.2155
Mobile: 305.570.8593
File Sharing Link

Phone: 954.320.2100 Fax: 954.320.2101
110 East Broward Boulevard, Suite 1500
Fort Lauderdale, FL 33301
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ATHENS CALGARY DUBAI LONDON PANAMA

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APPENDIX D
TRAFFIC, TAZ, SIGNAL TIMING DATA, CENSUS DATA & FDOT TABLES

National Data & Surveying Services Intersection Turning Movement Count

Location: Michigan Ave & 5th St
City: Miami Beach
Control: Signalized

Project ID: 21-140172-003
Date: 8/5/2021

Data - Total

NS/EW Streets:	Michigan Ave				Michigan Ave				5th St				5th 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	1	0	0	3	1	6	0	3	126	2	0	0	108	3	0	255
7:15 AM	3	1	0	0	0	1	4	0	6	115	3	0	1	121	0	0	255
7:30 AM	5	2	1	0	1	4	13	0	0	115	1	0	1	95	0	0	238
7:45 AM	3	1	0	0	2	5	7	1	5	148	3	1	2	106	3	1	288
8:00 AM	3	7	1	0	2	3	10	0	5	156	2	0	1	115	2	0	307
8:15 AM	7	3	1	0	1	5	9	0	7	184	6	0	0	140	0	0	363
8:30 AM	7	9	2	0	5	5	15	1	6	182	6	0	0	137	2	0	377
8:45 AM	5	5	1	0	4	6	12	0	4	189	4	1	0	169	1	0	401
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	29	6	0	18	30	76	2	36	1215	27	2	5	991	11	1	2484
APPROACH %'s :	50.00%	41.43%	8.57%	0.00%	14.29%	23.81%	60.32%	1.59%	2.81%	94.92%	2.11%	0.16%	0.50%	98.31%	1.09%	0.10%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	22	24	5	0	12	19	46	1	22	711	18	1	1	561	5	0	1448
PEAK HR FACTOR :	0.786	0.667	0.625	0.000	0.600	0.792	0.767	0.250	0.786	0.940	0.750	0.250	0.250	0.830	0.625	0.000	0.903
	0.708				0.750				0.949				0.834				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	14	8	2	0	3	2	18	0	11	183	9	2	1	237	1	0	491
4:15 PM	15	4	3	0	6	7	16	0	12	168	5	4	1	266	3	1	511
4:30 PM	18	7	3	0	4	3	14	0	22	192	5	1	0	241	4	0	514
4:45 PM	4	8	1	0	2	2	12	0	19	196	7	3	0	247	7	0	508
5:00 PM	8	6	3	0	2	8	18	0	16	185	3	2	2	234	6	1	494
5:15 PM	9	3	5	0	0	5	21	1	13	205	7	0	0	269	5	1	544
5:30 PM	5	4	0	0	2	6	17	0	10	176	4	3	2	293	6	0	528
5:45 PM	6	5	2	0	3	5	14	0	14	154	2	1	2	262	0	0	470
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	79	45	19	0	22	38	130	1	117	1459	42	16	8	2049	32	3	4060
APPROACH %'s :	55.24%	31.47%	13.29%	0.00%	11.52%	19.90%	68.06%	0.52%	7.16%	89.29%	2.57%	0.98%	0.38%	97.94%	1.53%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	26	21	9	0	6	21	68	1	58	762	21	8	4	1043	24	2	2074
PEAK HR FACTOR :	0.722	0.656	0.450	0.000	0.750	0.656	0.810	0.250	0.763	0.929	0.750	0.667	0.500	0.890	0.857	0.500	0.953
	0.824				0.857				0.943				0.891				

PEAK HR	8:00 AM - 9:00 AM																TOTAL
PEAK HR VOLUME	22	24	5	0	12	19	46	1	22	711	18	1	1	561	5	0	1448

PEAK HR	4:45 PM - 5:45 PM																TOTAL
PEAK HR VOLUME	26	21	9	0	6	21	68	1	58	762	21	8	4	1043	24	2	2074

National Data & Surveying Services Intersection Turning Movement Count

Location: Michigan Ave & 5th St
City: Miami Beach
Control: Signalized

Project ID: 21-140172-003
Date: 8/5/2021

Data - Bikes

NS/EW Streets:	Michigan Ave				Michigan Ave				5th St				5th St				
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	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:45 AM	0	1	0	0	0	2	0	0	0	4	0	0	0	0	0	0	7
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	3	0	0	0	5	1	0	0	8	0	0	0	3	0	0	21
APPROACH %'s :	25.00%	75.00%	0.00%	0.00%	0.00%	83.33%	16.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	1	0	0	0	3	1	0	0	1	0	0	0	0	0	0	7
PEAK HR FACTOR :	0.250	0.250	0.000	0.000	0.000	0.750	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.875
	0.500				0.500				0.250								

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
4:00 PM	0	1	0	0	0	2	0	0	0	0	2	0	1	2	2	0	10
4:15 PM	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0	0	6
4:30 PM	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	4
4:45 PM	1	1	0	0	0	3	0	0	0	1	0	0	1	2	0	0	9
5:00 PM	1	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	6
5:15 PM	0	0	0	0	0	6	0	0	0	1	0	0	0	1	1	0	9
5:30 PM	1	0	0	0	1	2	0	0	0	3	0	0	0	4	1	0	12
5:45 PM	1	4	0	0	0	2	0	0	0	3	0	0	0	1	0	0	11
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	7	0	0	1	20	0	0	2	9	2	0	3	15	4	0	67
APPROACH %'s :	36.36%	63.64%	0.00%	0.00%	4.76%	95.24%	0.00%	0.00%	15.38%	69.23%	15.38%	0.00%	13.64%	68.18%	18.18%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	3	1	0	0	1	13	0	0	0	5	0	0	1	10	2	0	36
PEAK HR FACTOR :	0.750	0.250	0.000	0.000	0.250	0.542	0.000	0.000	0.000	0.417	0.000	0.000	0.250	0.625	0.500	0.000	0.750
	0.500				0.583				0.417				0.650				

National Data & Surveying Services Intersection Turning Movement Count

Location: Michigan Ave & 5th St
City: Miami Beach
Project ID: 21-140172-003
Date: 8/5/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Michigan Ave		Michigan Ave		5th St		5th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	4	4	0	1	0	0	0	9
7:15 AM	1	2	2	1	1	0	1	3	11
7:30 AM	7	4	0	3	0	1	0	1	16
7:45 AM	2	6	1	1	2	1	2	2	17
8:00 AM	3	3	3	1	0	0	2	1	13
8:15 AM	4	4	1	2	0	1	0	2	14
8:30 AM	0	5	0	4	0	0	3	1	13
8:45 AM	7	8	1	3	0	3	1	1	24
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	24	36	12	15	4	6	9	11	117
APPROACH %'s :	40.00%	60.00%	44.44%	55.56%	40.00%	60.00%	45.00%	55.00%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	14	20	5	10	0	4	6	5	64
PEAK HR FACTOR :	0.500	0.625	0.417	0.625		0.333	0.500	0.625	0.667
	0.567		0.938		0.333		0.688		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	2	5	2	1	0	3	2	4	19
4:15 PM	11	7	4	3	0	0	3	2	30
4:30 PM	9	8	2	3	0	1	3	2	28
4:45 PM	3	9	2	6	1	2	2	0	25
5:00 PM	5	8	0	4	1	0	0	0	18
5:15 PM	5	10	2	8	1	2	0	1	29
5:30 PM	6	12	2	1	6	0	3	3	33
5:45 PM	6	16	4	2	0	2	1	4	35
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	47	75	18	28	9	10	14	16	217
APPROACH %'s :	38.52%	61.48%	39.13%	60.87%	47.37%	52.63%	46.67%	53.33%	
PEAK HR :	04:45 PM - 05:45 PM								TOTAL
PEAK HR VOL :	19	39	6	19	9	4	5	4	105
PEAK HR FACTOR :	0.792	0.813	0.750	0.594	0.375	0.500	0.417	0.333	0.795
	0.806		0.625		0.542		0.375		

Prepared by National Data & Surveying Services

Michigan Ave & 5th St

Peak Hour Turning Movement Count

ID: 21-140172-003
City: Miami Beach

Day: Thursday
Date: 8/5/2021

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Michigan Ave)

AM	46	19	12	1	52	AM
NOON	0	0	0	0	0	NOON
PM	68	21	6	1	104	PM

EASTBOUND (5th St)

AM	NOON	PM	
630	0	1145	⇦
1	0	8	↶ 0
22	0	58	↱ 0
711	0	762	→ 0
18	0	21	↴ 0

WESTBOUND (5th St)

PM	NOON	AM	
24	0	5	↰ 0
1043	0	561	← 0
4	0	1	↶ 0
2	0	0	↶ 0
779	0	728	⇨

NORTHBOUND (Michigan Ave)

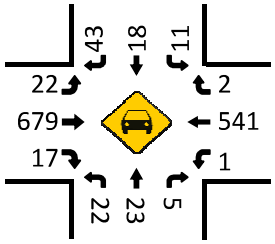
PM	46	0	26	21	9	PM
NOON	0	0	0	0	0	NOON
AM	38	0	22	24	5	AM

CONTROL

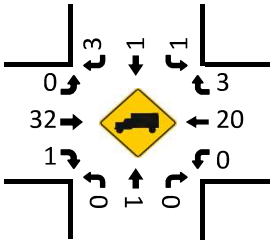
Signalized

TEV	1448 AM	0 NOON	2074 PM
PHF	0.90		0.95

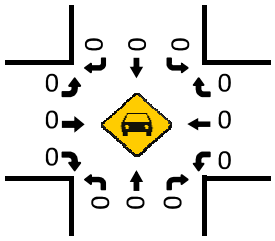
Cars (AM)



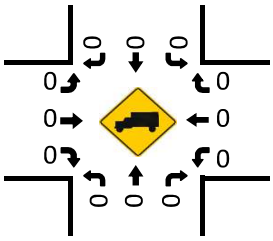
HT (AM)



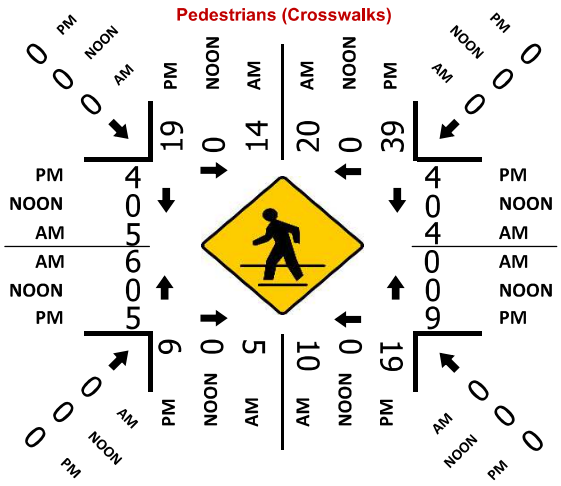
Cars (NOON)



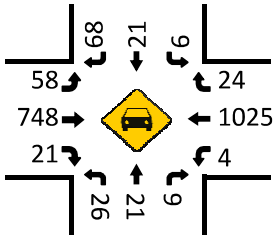
HT (NOON)



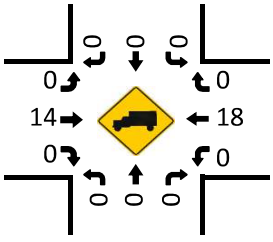
Pedestrians (Crosswalks)



Cars (PM)



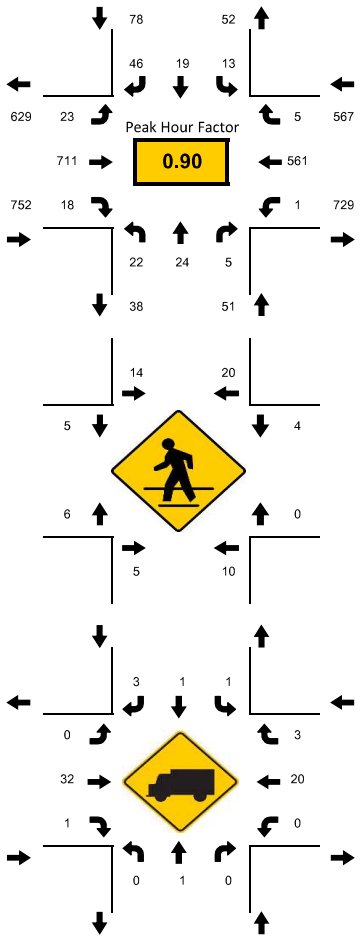
HT (PM)



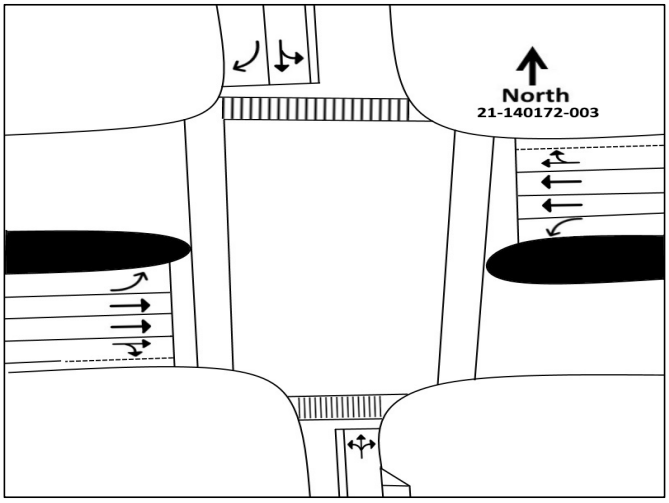
LOCATION: Michigan Ave & 5th St
CITY/STATE: Miami Beach, FL

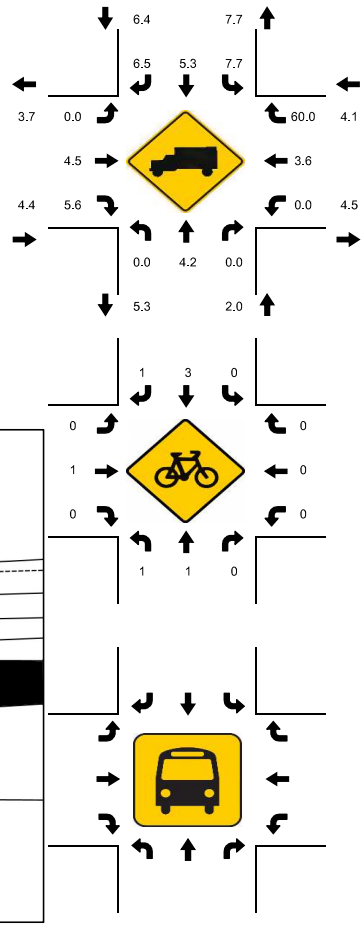
PROJECT ID: 21-140172-003
DATE: Thu, Aug 05, 2021

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



National Data & Surveying Services



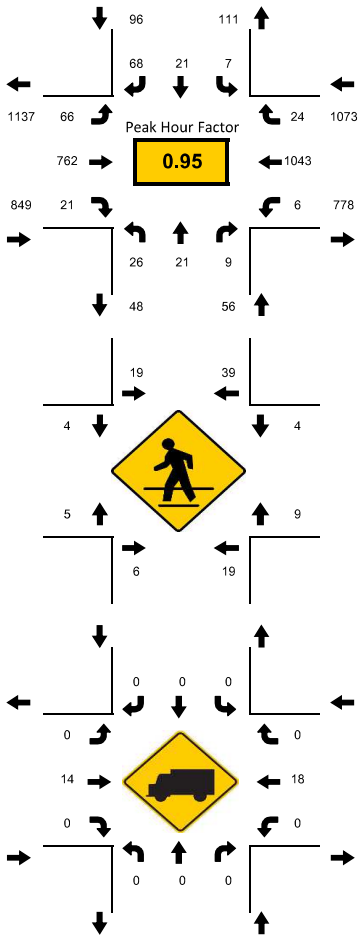


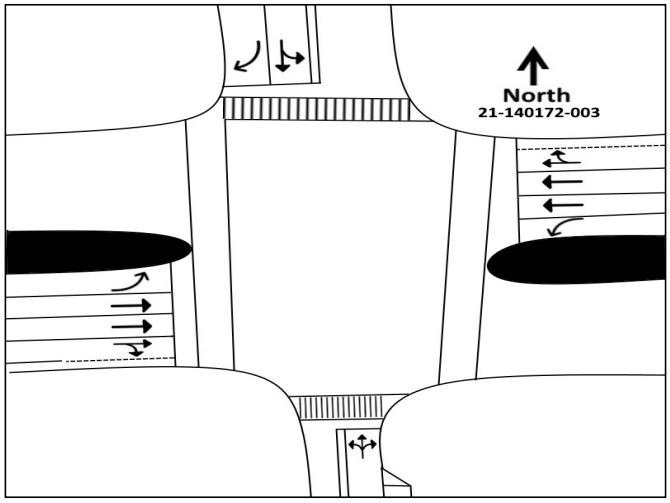
15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					5th St Eastbound					5th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	2	1	0	0		3	1	6	0		3	126	2	0		0	108	3	0		255	1036
07:15 AM	3	1	0	0		0	1	4	0		6	115	3	0		1	121	0	0		255	1088
07:30 AM	5	2	1	0		1	4	13	0		0	115	1	0		1	95	0	0		238	1196
07:45 AM	3	1	0	0		2	5	7	1		5	148	3	1		2	106	3	1		288	1335
08:00 AM	3	7	1	0		2	3	10	0		5	156	2	0		1	115	2	0		307	1448
08:15 AM	7	3	1	0		1	5	9	0		7	184	6	0		0	140	0	0		363	1141
08:30 AM	7	9	2	0		5	5	15	1		6	182	6	0		0	137	2	0		377	778
08:45 AM	5	5	1	0		4	6	12	0		4	189	4	1		0	169	1	0		401	401
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**						
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Total**	
All Vehicles	28	36	8	0		20	24	60	4		28	756	24	4		4	676	8	0		**1680**	
Heavy Trucks	0	4	0	0		4	4	8	0		0	52	4	0		0	36	4	0		**116**	
Pedestrians		16					60					16					12				**104**	
Bicycles	4	4	0	0		0	4	4	0		0	4	0	0		0	0	0	0		**20**	
Buses																						
Stopped Buses																						

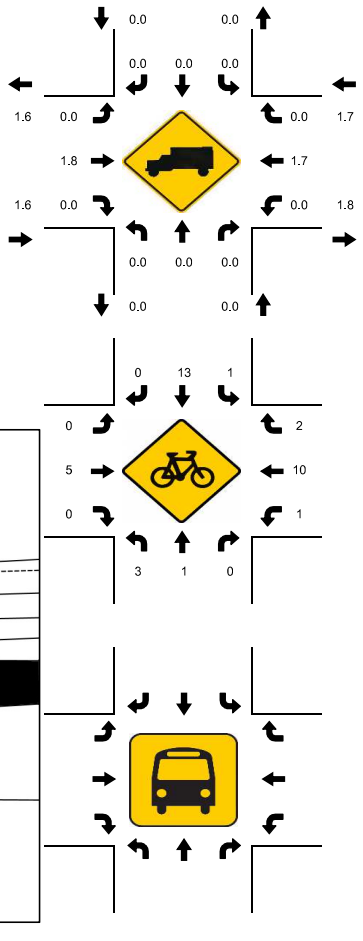
LOCATION: Michigan Ave & 5th St
CITY/STATE: Miami Beach, FL

PROJECT ID: 21-140172-003
DATE: Thu, Aug 05, 2021

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







15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					5th St Eastbound					5th 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*		
04:00 PM	14	8	2	0		3	2	18	0		11	183	9	2		1	237	1	0		491	2024
04:15 PM	15	4	3	0		6	7	16	0		12	168	5	4		1	266	3	1		511	2027
04:30 PM	18	7	3	0		4	3	14	0		22	192	5	1		0	241	4	0		514	2060
04:45 PM	4	8	1	0		2	2	12	0		19	196	7	3		0	247	7	0		508	2074
05:00 PM	8	6	3	0		2	8	18	0		16	185	3	2		2	234	6	1		494	2036
05:15 PM	9	3	5	0		0	5	21	1		13	205	7	0		0	269	5	1		544	1542
05:30 PM	5	4	0	0		2	6	17	0		10	176	4	3		2	293	6	0		528	998
05:45 PM	6	5	2	0		3	5	14	0		14	154	2	1		2	262	0	0		470	470
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**						
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Total**	
All Vehicles	36	32	20	0		8	32	84	4		76	820	28	12		8	1172	28	4		**2364**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	16	0	0		0	28	0	0		**44**	
Pedestrians		40					72					24					24				**160**	
Bicycles	4	4	0	0		4	24	0	0		0	12	0	0		4	16	4	0		**72**	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 4th St
City: Miami Beach
Control: Signalized

Project ID: 21-140172-001
Date: 8/5/2021

Data - Total

NS/EW Streets:	Alton Rd				Alton Rd				4th St				4th St				
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	42	1	0	4	67	6	0	4	0	1	0	3	1	4	0	133
7:15 AM	0	31	1	1	2	71	4	0	2	1	0	0	1	0	7	0	121
7:30 AM	0	47	2	0	4	73	4	1	7	1	1	0	1	0	5	0	146
7:45 AM	1	52	2	0	2	89	4	1	6	0	1	0	1	0	5	0	164
8:00 AM	0	41	4	0	7	100	3	1	6	0	1	0	1	0	4	0	168
8:15 AM	0	52	4	0	8	116	9	1	3	1	2	0	3	1	8	0	208
8:30 AM	0	63	2	0	7	117	6	0	9	1	1	1	1	2	11	0	221
8:45 AM	1	67	1	0	5	181	10	1	8	0	0	0	6	2	9	0	291
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	395	17	1	39	814	46	5	45	4	7	1	17	6	53	0	1452
APPROACH %'s :	0.48%	95.18%	4.10%	0.24%	4.31%	90.04%	5.09%	0.55%	78.95%	7.02%	12.28%	1.75%	22.37%	7.89%	69.74%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	223	11	0	27	514	28	3	26	2	4	1	11	5	32	0	888
PEAK HR FACTOR :	0.250	0.832	0.688	0.000	0.844	0.710	0.700	0.750	0.722	0.500	0.500	0.250	0.458	0.625	0.727	0.000	0.763
	0.851				0.726				0.688				0.706				

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
4:00 PM	1	143	6	0	9	133	10	0	9	3	1	0	4	1	9	0	329
4:15 PM	3	159	3	1	7	169	8	0	6	3	3	0	6	3	15	0	386
4:30 PM	2	130	4	0	11	128	7	0	4	3	3	0	2	4	14	0	312
4:45 PM	2	138	5	1	7	110	12	0	9	5	3	0	3	1	6	0	302
5:00 PM	0	168	1	0	9	145	11	1	10	4	2	0	5	3	12	0	371
5:15 PM	1	144	3	0	10	134	9	1	10	1	2	0	6	0	18	0	339
5:30 PM	1	139	4	0	15	129	5	1	8	2	0	0	6	1	16	0	327
5:45 PM	1	134	2	0	12	140	5	1	8	3	1	0	1	2	18	0	328
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	11	1155	28	2	80	1088	67	4	64	24	15	0	33	15	108	0	2694
APPROACH %'s :	0.92%	96.57%	2.34%	0.17%	6.46%	87.81%	5.41%	0.32%	62.14%	23.30%	14.56%	0.00%	21.15%	9.62%	69.23%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	7	595	13	2	34	552	38	1	29	15	11	0	16	11	47	0	1371
PEAK HR FACTOR :	0.583	0.885	0.650	0.500	0.773	0.817	0.792	0.250	0.725	0.750	0.917	0.000	0.667	0.688	0.783	0.000	0.888
	0.913				0.849				0.809				0.771				

PEAK HR	8:00 AM - 9:00 AM																TOTAL
PEAK HR VOLUME	1	223	11	0	27	514	28	3	26	2	4	1	11	5	32	0	888

PEAK HR	4:45 PM - 5:45 PM																TOTAL
PEAK HR VOLUME	4	589	13	1	41	518	37	3	37	12	7	0	20	5	52	0	1339

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 4th St
City: Miami Beach
Control: Signalized

Project ID: 21-140172-001
Date: 8/5/2021

Data - Bikes

NS/EW Streets:	Alton Rd				Alton Rd				4th St				4th St				
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	1	1	0	0	3	0	0	0	0	0	0	1	0	0	0	6
7:15 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
7:45 AM	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
8:00 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	1	0	0	8	0	2	0	0	0	0	1	0	0	0	12
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	2	0	0	22	1	2	0	0	0	0	4	0	0	0	39
APPROACH %'s :	0.00%	80.00%	20.00%	0.00%	0.00%	88.00%	4.00%	8.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	5	1	0	0	12	0	2	0	0	0	0	1	0	0	0	21
PEAK HR FACTOR :	0.000	0.417	0.250	0.000	0.000	0.375	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.438
	0.500				0.350								0.250				

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
4:00 PM	0	0	2	0	0	1	0	0	0	0	0	0	2	0	0	0	5
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	3	0	0	0	1	0	0	0	0	0	0	4	0	0	0	8
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
5:00 PM	0	3	2	0	0	4	0	0	0	0	0	0	0	0	0	0	9
5:15 PM	0	1	1	0	2	2	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	2	1	0	0	1	0	0	1	0	0	0	0	0	0	0	5
5:45 PM	0	1	0	0	0	4	0	0	0	0	0	0	2	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	6	0	2	15	0	0	1	0	0	0	9	0	0	0	44
APPROACH %'s :	0.00%	64.71%	35.29%	0.00%	11.76%	88.24%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	7	2	0	0	7	0	0	0	0	0	0	5	0	0	0	21
PEAK HR FACTOR :	0.000	0.583	0.250	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.000	0.000	0.000	0.583
	0.450				0.438								0.313				

PEAK HR	8:00 AM - 9:00 AM																TOTAL
PEAK HR VOLUME	0	5	1	0	0	12	0	2	0	0	0	0	1	0	0	0	21

PEAK HR	4:45 PM - 5:45 PM																TOTAL
PEAK HR VOLUME	0	6	4	0	2	8	0	0	1	0	0	0	1	0	0	0	22

National Data & Surveying Services Intersection Turning Movement Count

Location: Alton Rd & 4th St
City: Miami Beach
Project ID: 21-140172-001
Date: 8/5/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Alton Rd		Alton Rd		4th St		4th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	2	0	2	1	1	1	8
7:15 AM	1	1	1	1	0	3	3	1	11
7:30 AM	0	0	1	1	1	4	3	0	10
7:45 AM	1	0	3	7	3	6	3	2	25
8:00 AM	0	0	2	4	3	5	2	3	19
8:15 AM	0	0	2	6	2	6	6	2	24
8:30 AM	0	0	3	5	1	5	1	1	16
8:45 AM	0	0	0	4	1	4	5	0	14
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	2	14	28	13	34	24	10	127
APPROACH %'s :	50.00%	50.00%	33.33%	66.67%	27.66%	72.34%	70.59%	29.41%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	0	0	7	19	7	20	14	6	73
PEAK HR FACTOR :			0.583	0.792	0.583	0.833	0.583	0.500	0.760
			0.813		0.844		0.625		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	3	3	2	0	0	1	9
4:15 PM	0	0	1	0	2	4	1	3	11
4:30 PM	0	0	5	3	6	2	2	1	19
4:45 PM	0	0	3	9	7	6	1	3	29
5:00 PM	0	0	1	2	7	0	0	1	11
5:15 PM	3	0	0	5	0	2	1	0	11
5:30 PM	0	0	4	3	6	0	0	1	14
5:45 PM	0	1	2	2	4	2	1	0	12
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	3	1	19	27	34	16	6	10	116
APPROACH %'s :	75.00%	25.00%	41.30%	58.70%	68.00%	32.00%	37.50%	62.50%	
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	0	0	10	14	22	12	4	8	70
PEAK HR FACTOR :			0.500	0.389	0.786	0.500	0.500	0.667	0.603
			0.500		0.654		0.750		

PEAK HR :	04:45 - 05:45 PM								TOTAL
PEAK HR VOL :	3	0	8	19	20	8	2	5	65

Prepared by National Data & Surveying Services

Alton Rd & 4th St

Peak Hour Turning Movement Count

ID: 21-140172-001
City: Miami Beach

Day: Thursday
Date: 8/5/2021

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	888	0	1371
PHF	0.76		0.89

SOUTHBOUND (Alton Rd)

	Left	Thru	Thru	Right	Right	
AM	28	514	27	3	284	AM
NOON	0	0	0	0	0	NOON
PM	38	552	34	1	672	PM

EASTBOUND (4th St)

	Left	Thru	Right	
AM	35	0	56	AM
NOON	0	0	0	NOON
PM	0	0	0	PM

	Left	Thru	Right	
AM	1	0	0	0
NOON	26	0	29	0
PM	2	0	15	0
	4	0	11	0

WESTBOUND (4th St)

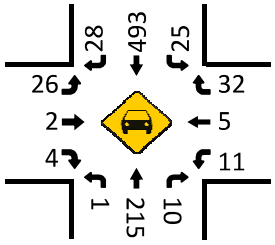
	Left	Thru	Right	
PM	47	0	32	0
NOON	11	0	5	0
AM	16	0	11	0
	0	0	0	0

	Left	Thru	Right	
PM	62	0	40	PM
NOON	0	0	0	NOON
AM	0	0	0	AM

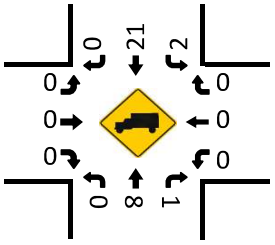
NORTHBOUND (Alton Rd)

	Left	Thru	Thru	Right	Right	
PM	581	2	7	595	13	PM
NOON	0	0	0	0	0	NOON
AM	529	0	1	223	11	AM

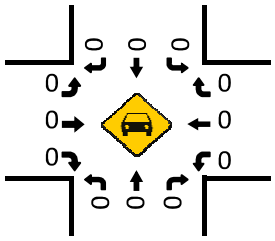
Cars (AM)



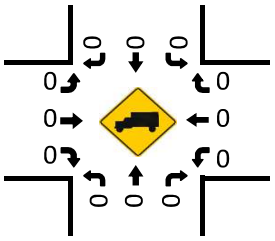
HT (AM)



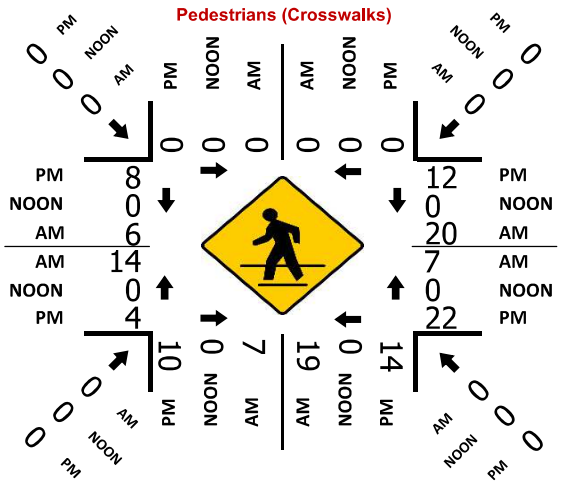
Cars (NOON)



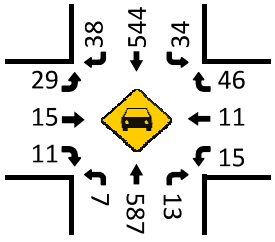
HT (NOON)



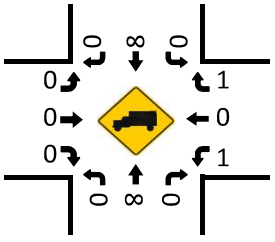
Pedestrians (Crosswalks)



Cars (PM)



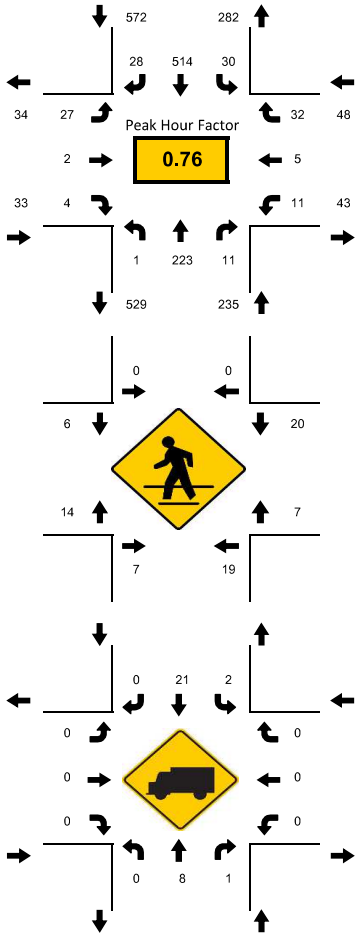
HT (PM)



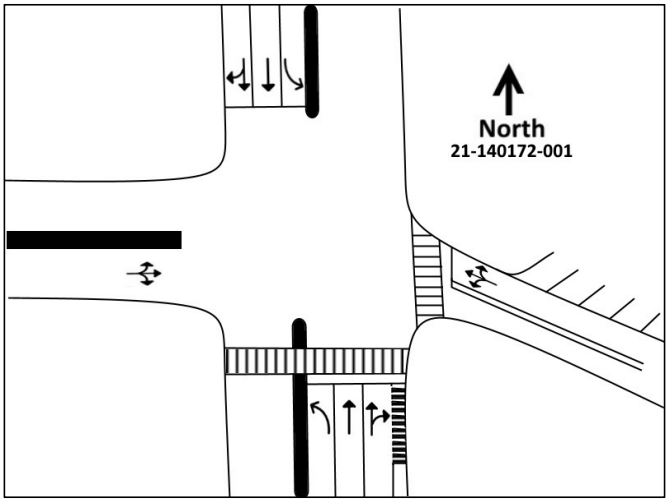
LOCATION: Alton Rd & 4th St
CITY/STATE: Miami Beach, FL

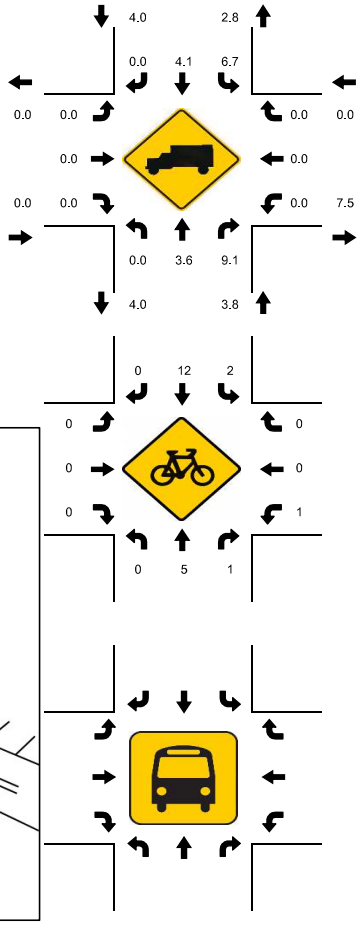
PROJECT ID: 21-140172-001
DATE: Thu, Aug 05, 2021

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



National Data & Surveying Services



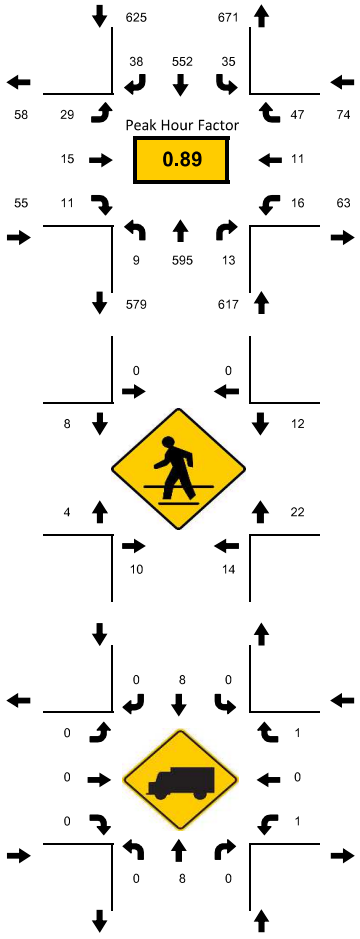


15-Min Count Period Beginning At	Alton Rd Northbound					Alton Rd Southbound					4th St Eastbound					4th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	42	1	0		4	67	6	0		4	0	1	0		3	1	4	0		133	564
07:15 AM	0	31	1	1		2	71	4	0		2	1	0	0		1	0	7	0		121	599
07:30 AM	0	47	2	0		4	73	4	1		7	1	1	0		1	0	5	0		146	686
07:45 AM	1	52	2	0		2	89	4	1		6	0	1	0		1	0	5	0		164	761
08:00 AM	0	41	4	0		7	100	3	1		6	0	1	0		1	0	4	0		168	888
08:15 AM	0	52	4	0		8	116	9	1		3	1	2	0		3	1	8	0		208	720
08:30 AM	0	63	2	0		7	117	6	0		9	1	1	1		1	2	11	0		221	512
08:45 AM	1	67	1	0		5	181	10	1		8	0	0	0		6	2	9	0		291	291
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	4	268	16	0		32	724	40	4		36	4	8	4		24	8	44	0		**1216**	
Heavy Trucks	0	12	4	0		4	28	0	0		0	0	0	0		0	0	0	0		**48**	
Pedestrians		32					0					32					32				**96**	
Bicycles	0	12	4	0		0	32	0	8		0	0	0	0		4	0	0	0		**52**	
Buses																						
Stopped Buses																						

LOCATION: Alton Rd & 4th St
CITY/STATE: Miami Beach, FL

PROJECT ID: 21-140172-001
DATE: Thu, Aug 05, 2021

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



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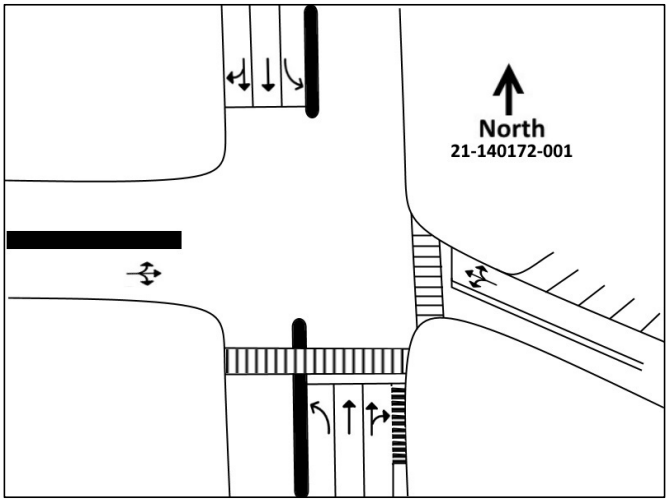
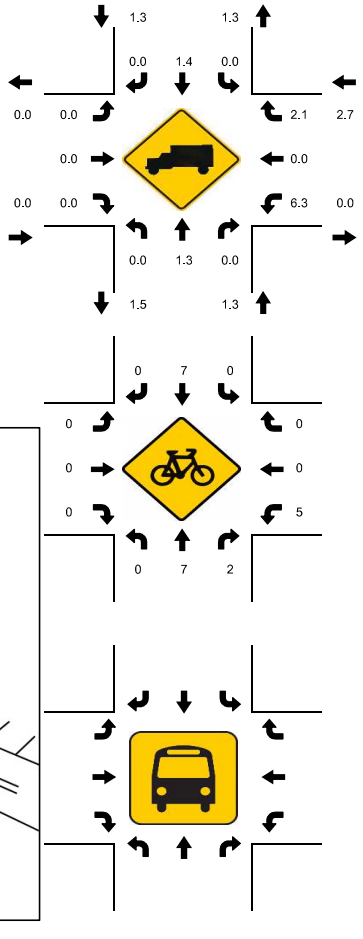




15-Min Count Period Beginning At	Alton Rd Northbound					Alton Rd Southbound					4th St Eastbound					4th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	1	143	6	0		9	133	10	0		9	3	1	0		4	1	9	0		329	1329
04:15 PM	3	159	3	1		7	169	8	0		6	3	3	0		6	3	15	0		386	1371
04:30 PM	2	130	4	0		11	128	7	0		4	3	3	0		2	4	14	0		312	1324
04:45 PM	2	138	5	1		7	110	12	0		9	5	3	0		3	1	6	0		302	1339
05:00 PM	0	168	1	0		9	145	11	1		10	4	2	0		5	3	12	0		371	1365
05:15 PM	1	144	3	0		10	134	9	1		10	1	2	0		6	0	18	0		339	994
05:30 PM	1	139	4	0		15	129	5	1		8	2	0	0		6	1	16	0		327	655
05:45 PM	1	134	2	0		12	140	5	1		8	3	1	0		1	2	18	0		328	328
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	12	672	20	4		44	676	48	4		40	20	12	0		24	16	60	0		**1652**	
Heavy Trucks	0	12	0	0		0	12	0	0		0	0	0	0		4	0	4	0		**32**	
Pedestrians		48					0					16					52				**116**	
Bicycles	0	12	8	0		0	16	0	0		0	0	0	0		16	0	0	0		**52**	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

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

Project ID: 21-140172-002
Date: 8/5/2021

Data - Total

NS/EW Streets:	Michigan Ave				Michigan Ave				4th St				4th St				
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	3	0	0	1	2	0	0	0	2	1	0	0	4	0	0	16
7:15 AM	1	0	0	0	1	3	0	0	1	1	1	0	0	4	3	0	15
7:30 AM	1	7	0	0	0	4	0	0	0	4	2	0	0	4	0	0	22
7:45 AM	0	3	0	0	1	4	0	0	0	4	2	0	0	5	3	0	22
8:00 AM	3	7	1	0	0	6	0	1	2	3	3	0	0	4	0	0	30
8:15 AM	2	3	0	0	2	5	1	0	2	4	1	0	0	4	7	0	31
8:30 AM	1	10	0	0	1	5	0	0	4	6	3	0	0	9	4	0	43
8:45 AM	2	6	1	0	2	7	1	0	1	4	3	0	2	8	4	0	41
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	39	2	0	8	36	2	1	10	28	16	0	2	42	21	0	220
APPROACH %'s :	24.07%	72.22%	3.70%	0.00%	17.02%	76.60%	4.26%	2.13%	18.52%	51.85%	29.63%	0.00%	3.08%	64.62%	32.31%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	8	26	2	0	5	23	2	1	9	17	10	0	2	25	15	0	145
PEAK HR FACTOR :	0.667	0.650	0.500	0.000	0.625	0.821	0.500	0.250	0.563	0.708	0.833	0.000	0.250	0.694	0.536	0.000	0.843
	0.818				0.775				0.692				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
4:00 PM	3	12	0	0	1	9	2	0	2	8	5	0	1	7	5	0	55
4:15 PM	3	15	2	0	3	11	1	0	3	16	3	0	1	12	4	0	74
4:30 PM	5	16	2	0	3	3	2	0	4	12	1	0	2	12	3	0	65
4:45 PM	4	12	0	0	0	7	2	0	1	15	1	0	0	13	2	0	57
5:00 PM	2	10	1	0	3	7	1	0	3	10	3	0	1	16	3	0	60
5:15 PM	4	10	0	0	6	10	0	0	0	10	2	0	3	19	8	0	72
5:30 PM	3	5	1	0	1	8	5	0	1	11	4	0	0	19	6	0	64
5:45 PM	5	9	0	0	1	7	0	0	4	15	2	0	0	9	5	0	57
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	29	89	6	0	18	62	13	0	18	97	21	0	8	107	36	0	504
APPROACH %'s :	23.39%	71.77%	4.84%	0.00%	19.35%	66.67%	13.98%	0.00%	13.24%	71.32%	15.44%	0.00%	5.30%	70.86%	23.84%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	14	53	5	0	9	28	6	0	11	53	8	0	4	53	12	0	256
PEAK HR FACTOR :	0.700	0.828	0.625	0.000	0.750	0.636	0.750	0.000	0.688	0.828	0.667	0.000	0.500	0.828	0.750	0.000	0.865
	0.783				0.717				0.818				0.863				

PEAK HR	8:00 AM - 9:00 AM																TOTAL
PEAK HR VOLUME	8	26	2	0	5	23	2	1	9	17	10	0	2	25	15	0	145

PEAK HR	4:45 PM - 5:45 PM																TOTAL
PEAK HR VOLUME	13	37	2	0	10	32	8	0	5	46	10	0	4	67	19	0	253

National Data & Surveying Services Intersection Turning Movement Count

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

Project ID: 21-140172-002
Date: 8/5/2021

Data - Bikes

NS/EW Streets:	Michigan Ave				Michigan Ave				4th St				4th St				
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	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
7:45 AM	0	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	5
8:00 AM	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	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 :	2	4	0	0	0	6	0	0	0	0	2	0	0	2	0	0	16
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	2	1	0	0	0	2	0	0	0	0	1	0	0	0	0	0	6
PEAK HR FACTOR :	0.250	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500
	0.375				0.500				0.250								

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
4:00 PM	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	6
4:15 PM	0	2	0	0	0	1	1	0	0	2	0	0	0	2	0	0	8
4:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	2	0	0	0	1	3	0	0	0	2	0	0	1	0	0	9
5:00 PM	0	0	0	0	0	2	0	0	0	0	3	0	0	1	0	0	6
5:15 PM	0	1	1	0	0	3	1	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	0	1	3	0	0	0	0	0	0	0	1	1	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	9	1	0	3	17	7	0	0	2	5	0	0	5	1	0	50
APPROACH %'s :	0.00%	90.00%	10.00%	0.00%	11.11%	62.96%	25.93%	0.00%	0.00%	28.57%	71.43%	0.00%	0.00%	83.33%	16.67%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	4	0	0	0	6	4	0	0	2	5	0	0	4	0	0	25
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.750	0.333	0.000	0.000	0.250	0.417	0.000	0.000	0.500	0.000	0.000	0.694
	0.500				0.625				0.583				0.500				

PEAK HR	4:45 PM - 5:45 PM																TOTAL
PEAK HR VOLUME	0	4	1	0	1	8	4	0	0	0	5	0	0	2	0	0	25

National Data & Surveying Services Intersection Turning Movement Count

Location: Michigan Ave & 4th St
City: Miami Beach
Project ID: 21-140172-002
Date: 8/5/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Michigan Ave		Michigan Ave		4th St		4th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	2	0	1	1	0	1	5
7:15 AM	0	0	1	0	0	0	0	2	3
7:30 AM	0	0	1	0	0	0	0	2	3
7:45 AM	0	1	0	2	2	0	1	2	8
8:00 AM	0	2	1	3	1	0	1	2	10
8:15 AM	0	0	1	0	1	2	0	3	7
8:30 AM	0	1	2	1	2	0	0	1	7
8:45 AM	0	2	3	1	0	1	3	1	11
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	6	11	7	7	4	5	14	54
APPROACH %'s :	0.00%	100.00%	61.11%	38.89%	63.64%	36.36%	26.32%	73.68%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	0	5	7	5	4	3	4	7	35
PEAK HR FACTOR :		0.625	0.583	0.417	0.500	0.375	0.333	0.583	0.795
	0.625		0.750		0.583		0.688		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	2	1	3	3	9
4:15 PM	0	0	2	1	1	3	1	2	10
4:30 PM	0	0	1	0	0	0	1	4	6
4:45 PM	0	0	5	0	3	4	4	3	19
5:00 PM	0	0	3	0	3	0	0	0	6
5:15 PM	1	2	0	1	1	0	1	1	7
5:30 PM	0	3	2	1	5	0	0	4	15
5:45 PM	0	0	0	2	2	1	2	2	9
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	5	13	5	17	9	12	19	81
APPROACH %'s :	16.67%	83.33%	72.22%	27.78%	65.38%	34.62%	38.71%	61.29%	
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	0	0	11	1	7	7	6	9	41
PEAK HR FACTOR :			0.550	0.250	0.583	0.438	0.375	0.563	0.539
			0.600		0.500		0.536		

PEAK HR :	04:45 - 05:45 PM								TOTAL
PEAK HR VOL :	1	5	10	2	12	4	5	8	47

Prepared by National Data & Surveying Services

Michigan Ave & 4th St

Peak Hour Turning Movement Count

ID: 21-140172-002
City: Miami Beach

Day: Thursday
Date: 8/5/2021

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

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

SOUTHBOUND (Michigan Ave)

AM	2	23	5	1	51	AM
NOON	0	0	0	0	0	NOON
PM	6	28	9	0	76	PM

EASTBOUND (4th St)

AM	NOON	PM	
35	0	73	
0	0	0	0
9	0	11	0
17	0	53	0
10	0	8	0

WESTBOUND (4th St)

PM	NOON	AM	
12	0	15	0
53	0	25	0
4	0	2	0
0	0	0	0
67	0	24	

NORTHBOUND (Michigan Ave)

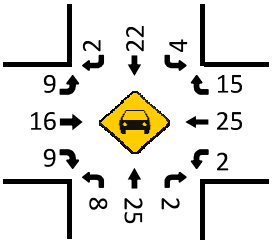
PM	40	0	14	53	5	PM
NOON	0	0	0	0	0	NOON
AM	35	0	8	26	2	AM

CONTROL

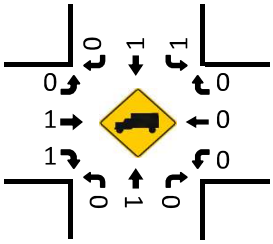
4-Way Stop

TEV	145 AM	0 NOON	256 PM
PHF	0.84		0.86

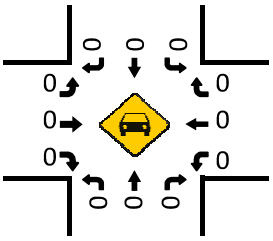
Cars (AM)



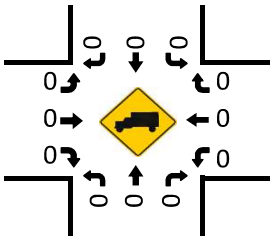
HT (AM)



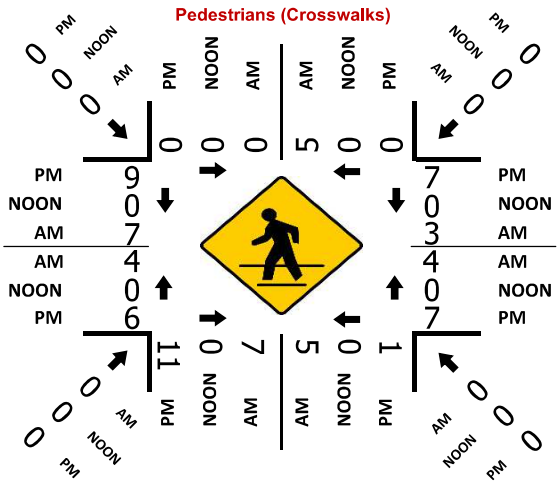
Cars (NOON)



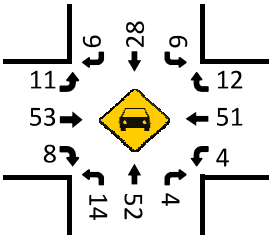
HT (NOON)



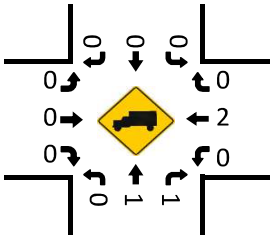
Pedestrians (Crosswalks)



Cars (PM)



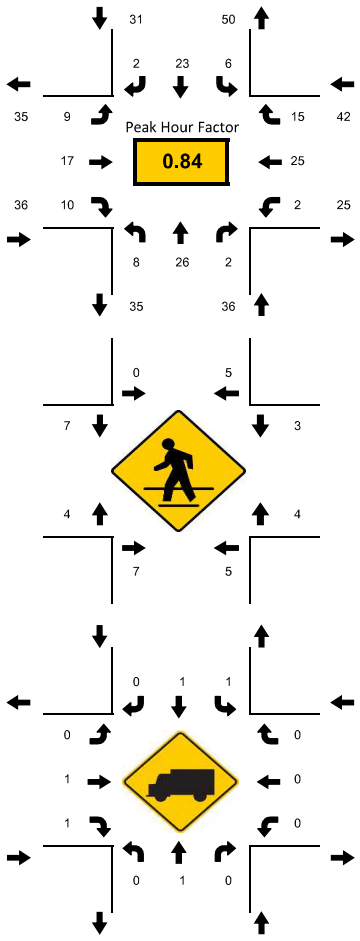
HT (PM)



LOCATION: Michigan Ave & 4th St
CITY/STATE: Miami Beach, FL

PROJECT ID: 21-140172-002
DATE: Thu, Aug 05, 2021

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



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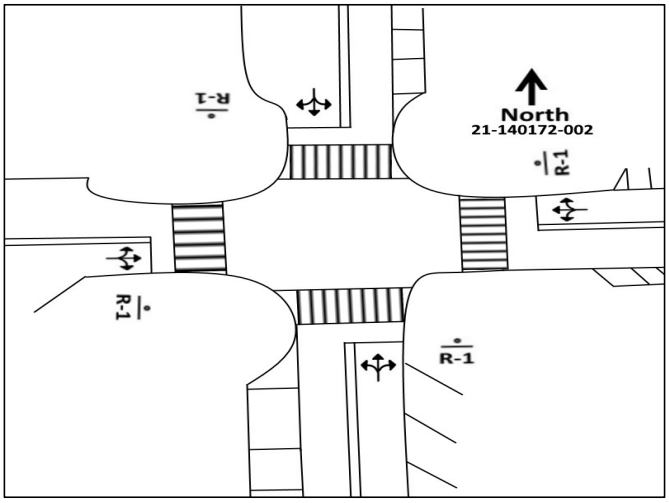
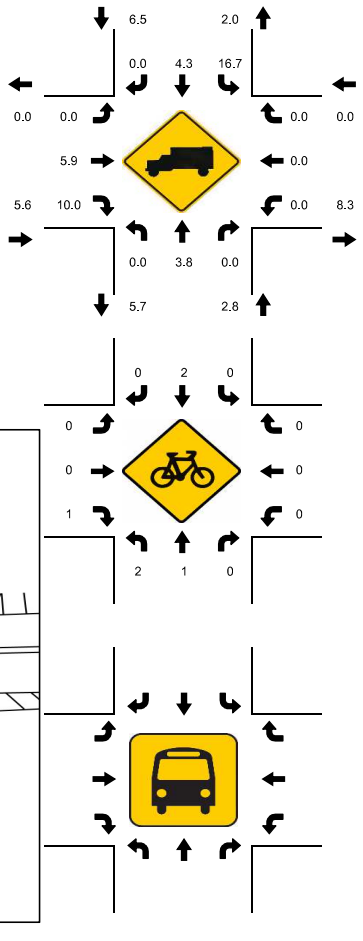


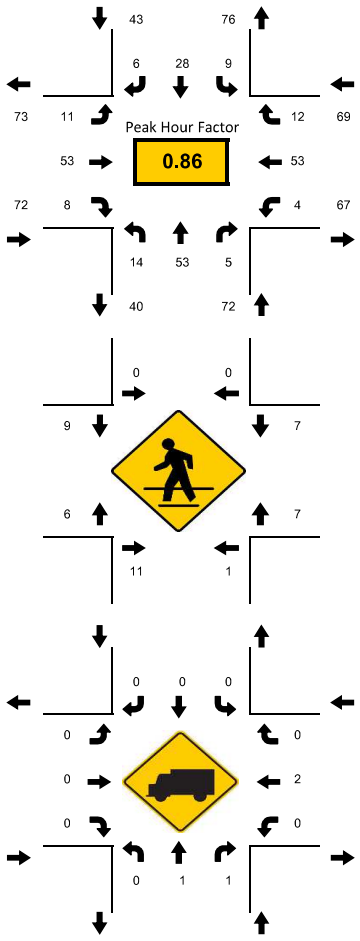


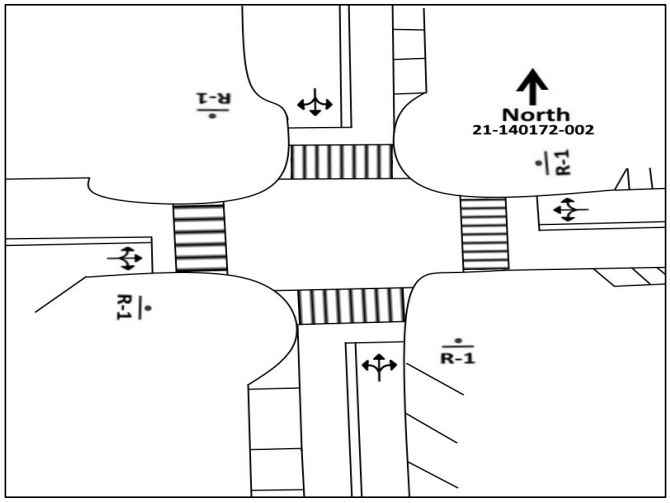
15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					4th St Eastbound					4th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	3	3	0	0		1	2	0	0		0	2	1	0		0	4	0	0		16	75
07:15 AM	1	0	0	0		1	3	0	0		1	1	1	0		0	4	3	0		15	89
07:30 AM	1	7	0	0		0	4	0	0		0	4	2	0		0	4	0	0		22	105
07:45 AM	0	3	0	0		1	4	0	0		0	4	2	0		0	5	3	0		22	126
08:00 AM	3	7	1	0		0	6	0	1		2	3	3	0		0	4	0	0		30	145
08:15 AM	2	3	0	0		2	5	1	0		2	4	1	0		0	4	7	0		31	115
08:30 AM	1	10	0	0		1	5	0	0		4	6	3	0		0	9	4	0		43	84
08:45 AM	2	6	1	0		2	7	1	0		1	4	3	0		2	8	4	0		41	41
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	12	40	4	0		8	28	4	4		16	24	12	0		8	36	28	0		**224**	
Heavy Trucks	0	4	0	0		4	4	0	0		0	4	4	0		0	0	0	0		**20**	
Pedestrians		16					8					16					12				**52**	
Bicycles	8	4	0	0		0	4	0	0		0	0	4	0		0	0	0	0		**20**	
Buses																						
Stopped Buses																						

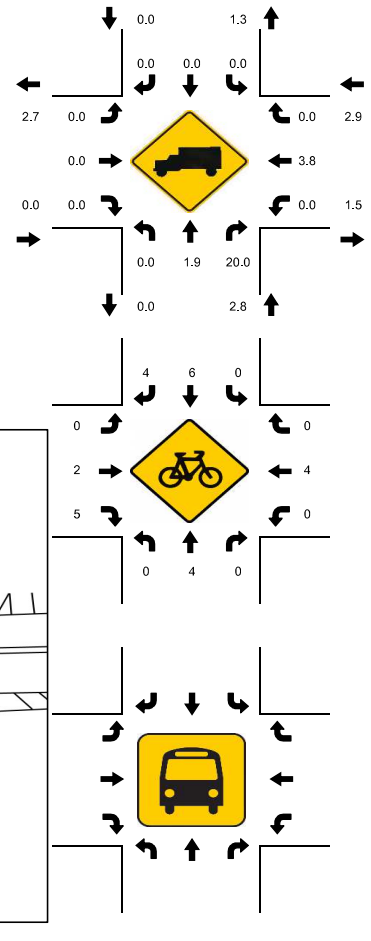
LOCATION: Michigan Ave & 4th St
CITY/STATE: Miami Beach, FL

PROJECT ID: 21-140172-002
DATE: Thu, Aug 05, 2021

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







15-Min Count Period Beginning At	Michigan Ave Northbound					Michigan Ave Southbound					4th St Eastbound					4th 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*		
04:00 PM	3	12	0	0		1	9	2	0		2	8	5	0		1	7	5	0		55	251
04:15 PM	3	15	2	0		3	11	1	0		3	16	3	0		1	12	4	0		74	256
04:30 PM	5	16	2	0		3	3	2	0		4	12	1	0		2	12	3	0		65	254
04:45 PM	4	12	0	0		0	7	2	0		1	15	1	0		0	13	2	0		57	253
05:00 PM	2	10	1	0		3	7	1	0		3	10	3	0		1	16	3	0		60	253
05:15 PM	4	10	0	0		6	10	0	0		0	10	2	0		3	19	8	0		72	193
05:30 PM	3	5	1	0		1	8	5	0		1	11	4	0		0	19	6	0		64	121
05:45 PM	5	9	0	0		1	7	0	0		4	15	2	0		0	9	5	0		57	57
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**						
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Total**	
All Vehicles	20	64	8	0		12	44	8	0		16	64	12	0		8	64	16	0		**336**	
Heavy Trucks	0	4	4	0		0	0	0	0		0	0	0	0		0	4	0	0		**12**	
Pedestrians		20					0					28					28				**76**	
Bicycles	0	8	0	0		0	8	12	0		0	8	12	0		0	8	0	0		**56**	
Buses																						
Stopped Buses																						

Prepared by National Data & Surveying Services

VOLUME

5th St Bet. Meridian Ave & Euclid Ave

Day: Thursday
Date: 8/5/2021

City: Miami Beach
Project #: FL21_140173_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,222	14,421	25,643

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			93		134		227		12:00			190		182		372	
00:15			92		116		208		12:15			165		212		377	
00:30			73		126		199		12:30			150		190		340	
00:45			80	338	100	476	180	814	12:45			163	668	213	797	376	1465
01:00			58		105		163		13:00			151		212		363	
01:15			68		101		169		13:15			174		197		371	
01:30			44		70		114		13:30			162		197		359	
01:45			46	216	74	350	120	566	13:45			147	634	220	826	367	1460
02:00			26		67		93		14:00			176		245		421	
02:15			46		51		97		14:15			186		244		430	
02:30			25		34		59		14:30			190		244		434	
02:45			36	133	52	204	88	337	14:45			199	751	254	987	453	1738
03:00			24		44		68		15:00			164		218		382	
03:15			22		49		71		15:15			167		225		392	
03:30			25		38		63		15:30			178		216		394	
03:45			26	97	49	180	75	277	15:45			190	699	204	863	394	1562
04:00			32		62		94		16:00			150		210		360	
04:15			37		65		102		16:15			154		247		401	
04:30			31		71		102		16:30			154		224		378	
04:45			31	131	48	246	79	377	16:45			185	643	214	895	399	1538
05:00			26		58		84		17:00			161		222		383	
05:15			20		37		57		17:15			165		240		405	
05:30			33		38		71		17:30			146		211		357	
05:45			70	149	49	182	119	331	17:45			147	619	206	879	353	1498
06:00			50		60		110		18:00			163		218		381	
06:15			57		62		119		18:15			127		250		377	
06:30			75		46		121		18:30			130		226		356	
06:45			84	266	45	213	129	479	18:45			176	596	178	872	354	1468
07:00			116		109		225		19:00			139		210		349	
07:15			119		70		189		19:15			120		229		349	
07:30			101		101		202		19:30			152		209		361	
07:45			137	473	95	375	232	848	19:45			135	546	183	831	318	1377
08:00			143		86		229		20:00			123		185		308	
08:15			136		141		277		20:15			147		192		339	
08:30			153		108		261		20:30			155		231		386	
08:45			181	613	122	457	303	1070	20:45			109	534	182	790	291	1324
09:00			145		146		291		21:00			120		192		312	
09:15			143		133		276		21:15			140		160		300	
09:30			160		167		327		21:30			117		158		275	
09:45			146	594	169	615	315	1209	21:45			102	479	162	672	264	1151
10:00			150		163		313		22:00			125		171		296	
10:15			165		180		345		22:15			146		165		311	
10:30			141		189		330		22:30			88		136		224	
10:45			168	624	185	717	353	1341	22:45			115	474	140	612	255	1086
11:00			180		203		383		23:00			102		169		271	
11:15			145		183		328		23:15			56		157		213	
11:30			141		205		346		23:30			77		136		213	
11:45			155	621	197	788	352	1409	23:45			89	324	132	594	221	918
TOTALS				4255		4803		9058	TOTALS				6967		9618		16585
SPLIT %				47.0%		53.0%		35.3%	SPLIT %				42.0%		58.0%		64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,222	14,421	25,643

AM Peak Hour			11:45	11:30	11:30	PM Peak Hour			14:00	14:00	14:00
AM Pk Volume			660	796	1447	PM Pk Volume			751	987	1738
Pk Hr Factor			0.868	0.939	0.960	Pk Hr Factor			0.943	0.971	0.959
7 - 9 Volume	0	0	1086	832	1918	4 - 6 Volume	0	0	1262	1774	3036
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	613	457	1070	4 - 6 Pk Volume	0	0	665	907	1565
Pk Hr Factor	0.000	0.000	0.847	0.810	0.883	Pk Hr Factor	0.000	0.000	0.899	0.918	0.966

County: 87
Station: 2528
Description: SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE
Start Date: 03/10/2020
Start Time: 0000

	Direction: E					Direction: W					Combined
Time	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Total
0000	128	144	151	150	573	173	161	91	114	539	1112
0100	117	102	83	79	381	115	118	88	123	444	825
0200	78	71	68	78	295	88	96	88	94	366	661
0300	50	81	85	60	276	95	82	91	94	362	638
0400	81	61	40	74	256	88	95	90	99	372	628
0500	71	66	79	96	312	75	86	69	57	287	599
0600	102	119	159	193	573	85	97	102	102	386	959
0700	169	207	185	233	794	143	159	181	184	667	1461
0800	200	245	251	306	1002	245	214	248	208	915	1917
0900	322	313	245	288	1168	209	202	221	231	863	2031
1000	259	242	224	248	973	232	215	230	235	912	1885
1100	251	226	207	264	948	278	260	258	265	1061	2009
1200	281	268	252	272	1073	307	295	314	308	1224	2297
1300	317	299	279	257	1152	313	306	327	344	1290	2442
1400	240	230	221	248	939	351	311	352	314	1328	2267
1500	304	304	285	334	1227	361	356	380	386	1483	2710
1600	323	279	294	283	1179	377	349	398	365	1489	2668
1700	311	257	275	286	1129	454	345	365	353	1517	2646
1800	317	223	264	307	1111	338	350	392	395	1475	2586
1900	237	177	258	218	890	359	363	356	279	1357	2247
2000	251	204	208	195	858	337	345	274	281	1237	2095
2100	178	168	164	148	658	306	267	238	228	1039	1697
2200	204	254	283	274	1015	199	201	215	219	834	1849
2300	162	151	169	162	644	228	205	197	183	813	1457
24-Hour Totals:					19426					22260	41686

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	830	1192	800	915	830	2059
P.M.	1515	1246	1615	1566	1515	2745
Daily	1515	1246	1615	1566	1515	2745

Generated by SPS 5.0.53P
County: 87
Station: 2528
Description: SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE
Start Date: 03/11/2020
Start Time: 0000

	Direction: E					Direction: W					Combined
Time	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Total
0000	141	141	130	124	536	210	185	147	181	723	1259
0100	108	96	95	89	388	135	159	134	129	557	945
0200	77	89	106	71	343	139	148	105	129	521	864
0300	69	108	66	57	300	125	139	121	127	512	812
0400	68	61	92	60	281	104	113	98	101	416	697
0500	74	95	60	93	322	97	109	90	87	383	705
0600	105	121	165	206	597	96	122	125	123	466	1063
0700	180	203	200	241	824	161	172	177	165	675	1499
0800	211	260	275	290	1036	218	220	223	197	858	1894
0900	336	272	272	267	1147	214	210	209	220	853	2000
1000	220	255	264	282	1021	251	228	253	238	970	1991
1100	310	268	247	272	1097	260	267	296	308	1131	2228
1200	277	302	264	297	1140	319	306	350	304	1279	2419
1300	286	269	314	301	1170	312	332	323	355	1322	2492
1400	311	295	264	164	1034	359	338	374	327	1398	2432
1500	279	321	321	320	1241	376	384	368	357	1485	2726
1600	317	322	253	291	1183	346	350	381	329	1406	2589
1700	304	259	314	276	1153	365	329	357	294	1345	2498
1800	349	245	275	297	1166	394	340	319	327	1380	2546
1900	243	252	294	258	1047	366	348	349	378	1441	2488
2000	202	241	213	206	862	315	337	345	266	1263	2125
2100	166	203	173	199	741	267	279	273	303	1122	1863
2200	206	178	169	163	716	307	254	255	267	1083	1799
2300	165	156	161	161	643	218	244	272	242	976	1619
24-Hour Totals:					19988					23565	43553

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	830	1173	800	858	830	2017
P.M.	1530	1280	1500	1485	1515	2734
Daily	1530	1280	1500	1485	1515	2734

Generated by SPS 5.0.53P
County: 87
Station: 2528
Description: SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE
Start Date: 03/12/2020
Start Time: 0000

	Direction: E					Direction: W					Combined
Time	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Total
0000	156	146	161	136	599	228	206	187	190	811	1410
0100	129	87	115	99	430	160	182	138	143	623	1053
0200	83	82	98	109	372	124	146	106	151	527	899
0300	108	112	151	129	500	154	166	127	163	610	1110
0400	83	119	106	87	395	162	144	158	121	585	980
0500	67	99	101	88	355	113	126	128	98	465	820
0600	93	100	124	170	487	112	116	128	129	485	972
0700	189	187	217	217	810	154	168	193	173	688	1498
0800	246	268	281	310	1105	185	221	239	220	865	1970
0900	271	309	306	291	1177	223	205	250	207	885	2062
1000	273	300	309	250	1132	224	260	249	249	982	2114
1100	268	297	237	281	1083	286	300	272	299	1157	2240
1200	254	315	284	282	1135	304	302	318	307	1231	2366
1300	296	236	257	284	1073	292	343	304	293	1232	2305
1400	316	322	313	298	1249	323	345	338	349	1355	2604
1500	301	311	280	316	1208	359	394	392	363	1508	2716
1600	266	255	285	230	1036	407	399	347	359	1512	2548
1700	284	274	297	258	1113	394	345	422	320	1481	2594
1800	313	262	319	262	1156	364	324	312	361	1361	2517
1900	203	190	206	198	797	348	342	325	316	1331	2128
2000	181	196	190	172	739	319	274	285	266	1144	1883
2100	218	164	157	172	711	230	238	224	184	876	1587
2200	194	166	202	146	708	220	228	174	186	808	1516
2300	140	127	151	142	560	197	200	179	171	747	1307
24-Hour Totals:					19930					23269	43199

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	845	1196	815	903	845	2094
P.M.	1400	1249	1530	1561	1515	2729
Daily	1400	1249	1530	1561	1515	2729

TOD Schedule Report
for 7699: Alton Rd&4 St

Print Date: 4/8/2020

Print Time: 2:25 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
7699	Alton Rd&4 St	DOW-4	TOD	N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
SEL	SET	XPD	EBT	NWL	NWT	-	NBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk Phase Bank 1	Walk Phase Bank 2	Walk Phase Bank 3	Don't Walk Phase Bank 1	Don't Walk Phase Bank 2	Don't Walk Phase Bank 3	Min Initial Phase Bank 1	Min Initial Phase Bank 2	Min Initial Phase Bank 3	Veh Ext Phase Bank 1	Veh Ext Phase Bank 2	Veh Ext Phase Bank 3	Max Limit Phase Bank 1	Max Limit Phase Bank 2	Max Limit Phase Bank 3	Max 2 Phase Bank 1	Max 2 Phase Bank 2	Max 2 Phase Bank 3	Yellow	Red
1 SEL	0	0	0	0	0	0	5	5	5	3	3	3	9	9	9	18	18	18	4	3.4
2 SET	6	0	7	19	0	19	7	7	7	1	1	1	35	49	49	0	0	0	4	3.4
3 XPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 EBT	0	0	0	0	0	0	7	7	7	2.5	-2.5	2.5	30	49	49	65	65	65	4	2.6
5 NWL	0	0	0	0	0	0	5	5	5	3	3	3	9	9	9	18	18	18	4	3.4
6 NWT	6	0	7	19	0	19	7	7	7	1	1	1	35	49	49	0	0	0	4	3.4
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 NBT	6	0	7	20	0	20	7	7	7	2.5	-2.5	2.5	30	49	49	65	65	65	4	2.6

Last In Service Date: unknown

Permitted Phases

	12345678
Default	123456-8
External Permit 0	123456-8
External Permit 1	123456-8
External Permit 2	123456-8

TOD Schedule Report
for 7699: Alton Rd&4 St

Print Date: 4/8/2020

Print Time: 2:25 AM

Current TOD Schedule	Plan	Cycle	Green Time 1 SEL	2 SET	3 XPD	4 EBT	5 NWL	6 NWT	7 -	8 NBT	Ring Offset	Offset
	1	85	7	29	0	28	7	29	0	28	0	84
	2	150	14	61	0	54	14	61	0	54	0	0
	3	100	10	41	0	28	10	41	0	28	0	0
	5	150	17	72	0	40	17	72	0	40	0	0
	6	180	17	88	0	54	17	88	0	54	0	0
	7	85	7	29	0	28	7	29	0	28	0	40
	8	100	10	41	0	28	10	41	0	28	0	0
	9	90	8	33	0	28	8	33	0	28	0	0
	10	80	5	27	0	27	5	27	0	27	0	77
	22	100	10	41	0	28	10	41	0	28	0	0
	25	140	13	73	0	33	13	73	0	33	0	127
	26	100	10	41	0	28	10	41	0	28	0	79

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M T W Th F S
0500	2	M T W Th F
0500	Free	Su S
0800	6	M T W Th F
0850	9	M T W Th F
1000	10	Su S
1130	5	M T W Th F
1300	6	M T W Th F
1340	9	M T W Th F
1540	6	M T W Th F
1615	25	M T W Th F
1800	1	M T W Th F
1800	7	Su S
2200	Free	Su M T W Th F S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-7------	SuM T W ThF S
0500	PED RECALL	8-6-432-	SuM T W ThF S
0700	TOD OUTPUTS	-------1	M T W ThF
0850	TOD OUTPUTS	-7------	M T W ThF
1340	TOD OUTPUTS	-------1	M T W ThF
1540	TOD OUTPUTS	-7------	M T W ThF
2200	PED RECALL	--------	SuM T W ThF S

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-7------	SuM T W ThF S
0500	PED RECALL	8-6-432-	SuM T W ThF S
0700	TOD OUTPUTS	-------1	M T W ThF
0850	TOD OUTPUTS	-7------	M T W ThF
1340	TOD OUTPUTS	-------1	M T W ThF
1540	TOD OUTPUTS	-7------	M T W ThF
2200	PED RECALL	--------	SuM T W ThF S

* Settings

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report
for 2752: Michigan Av&5 St

Print Date: 5/8/2020

Print Time: 2:07 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2752	Michigan Av&5 St	DOW-6		[03] AM PEAK	120	104	N/A	1	Max 2

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
EBL	WBT	-	NBT	WBL	EBT	-	SBT
12	36	0	54	6	42	0	54

Active Phase Bank: Phase Bank 1

Phase	Walk Phase Bank 1	Walk Phase Bank 2	Walk Phase Bank 3	Don't Walk Phase Bank 1	Don't Walk Phase Bank 2	Don't Walk Phase Bank 3	Min Initial Phase Bank 1	Min Initial Phase Bank 2	Min Initial Phase Bank 3	Veh Ext Phase Bank 1	Veh Ext Phase Bank 2	Veh Ext Phase Bank 3	Max Limit Phase Bank 1	Max Limit Phase Bank 2	Max Limit Phase Bank 3	Max 2 Phase Bank 1	Max 2 Phase Bank 2	Max 2 Phase Bank 3	Yellow	Red
1 EBL	0	0	0	0	0	0	5	5	5	2	2	2	12	5	5	30	40	25	4	2
2 WBT	7	7	7	12	12	12	7	7	7	1	1	1	30	30	30	0	30	30	4	2
3 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 NBT	7	7	7	29	29	29	7	7	7	2.5	2.5	2.5	8	8	12	60	20	18	4	2.5
5 WBL	0	0	0	0	0	0	5	5	5	2	2	2	5	5	5	16	12	12	4	2.5
6 EBT	7	7	7	12	12	12	7	7	7	1	1	1	30	30	30	0	30	30	4	2
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 SBT	7	7	7	29	29	29	7	7	7	2.5	2.5	2.5	8	8	12	60	20	18	4	2.5

Last In Service Date: unknown

Permitted Phases

	12345678
Default	12-456-8
External Permit 0	12-456-8
External Permit 1	12-456-8
External Permit 2	12-456-8

TOD Schedule Report

for 2752: Michigan Av&5 St

Print Date: 5/8/2020

Print Time: 2:07 AM

Current TOD Schedule	Plan	Cycle	Green Time 1 EBL	2 WBT	3 -	4 NBT	5 WBL	6 EBT	7 -	8 SBT	Ring Offset	Offset
	1	170	17	86	0	49	9	94	0	49	0	62
	2	150	12	66	0	54	6	72	0	54	0	39
	3	120	12	36	0	54	6	42	0	54	0	104
	4	150	12	66	0	54	6	72	0	54	0	76
	5	150	12	66	0	54	6	72	0	54	0	49
	6	180	12	96	0	54	6	102	0	54	0	128
	7	170	12	86	0	54	6	92	0	54	0	167
	8	160	12	76	0	54	6	82	0	54	0	58
	10	160	13	93	0	36	13	93	0	36	0	58
	14	120	12	36	0	54	6	42	0	54	0	9
	15	130	20	43	0	49	16	47	0	49	0	4
	16	120	12	36	0	54	6	42	0	54	0	7
	22	110	12	26	0	54	6	32	0	54	0	14
	23	110	12	26	0	54	6	32	0	54	0	109
	25	140	12	56	0	54	6	62	0	54	0	54
	26	200	12	116	0	54	6	122	0	54	0	29
	27	140	12	56	0	54	6	62	0	54	0	18
	28	220	35	113	0	54	6	142	0	54	0	54

Local TOD Schedule

Time	Plan	DOW
0000	3	Su M T W Th F S
0500	2	M T W Th F
0500	3	Su S
0800	6	M T W Th F
1000	5	M T W Th F
1000	10	Su S
1300	6	M T W Th F
1615	25	M T W Th F
1800	1	M T W Th F
1800	7	Su S
2000	4	Su S
2200	8	M T W Th F

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-------	SuM T W ThF S
0000	TOD LOCAL MULTIFU	----4---	SuM T W ThF S
0500	TOD LOCAL MULTIFU	--------	SuM T W ThF S
0600	TOD OUTPUTS	--------	M T W ThF
1800	PED RECALL	8---4---	M T W ThF
1800	TOD OUTPUTS	8-------	M T W ThF
2200	PED RECALL	--------	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-------	SuM T W ThF S
0000	TOD LOCAL MULTIFUNCT	----4---	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	--------	SuM T W ThF S
0600	TOD OUTPUTS	--------	M T W ThF
0700	TOD OUTPUTS	-------1	Su S
0800	TOD OUTPUTS	--------	S
1000	TOD OUTPUTS	--------	Su
1000	PED RECALL	8---4---	Su S
1800	PED RECALL	--------	Su S
1800	PED RECALL	8---4---	M T W ThF
1800	TOD OUTPUTS	8-------	M T W ThF
1900	TOD OUTPUTS	8-------	Su S
2200	PED RECALL	--------	M T W ThF

* Settings

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

TOD Schedule Report

for 2752: Michigan Av&5 St

Print Date: 5/8/2020

Print Time: 2:07 AM

No Calendar Defined/Enabled