

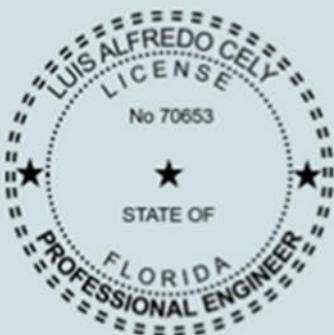
# Redevelopment Traffic Study

624 Collins Ave Fine Dining Restaurant

**Prepared by:**  
Alfka, LLC

**Prepared for:**  
624 Collins Avenue, LLC

**Project Number:**  
FNV2301



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# Table of Contents

|                                  |    |
|----------------------------------|----|
| Executive Summary                | 1  |
| Trip Generation                  | 2  |
| Queue Analysis                   | 2  |
| Intersection Capacity Analysis   | 7  |
| Transportation Demand Management | 11 |

## Appendices

- A – US Census Means of Transportation to Work
- B – Miami-Dade Transit Bus Service Routes
- C – City of Miami Beach South Beach Trolley Map
- D – Context Location Map
- E – Land Use Plan
- F – Site Plan, Floor Plan, and Site Access
- G – ITETripGen Web Application Worksheets and Graphs
- H – Coordination with City of Miami Beach Parking Dept.
- I – Traffic Volume and Turning Movement Counts
- J – Miami-Dade Traffic Signal Operations for Collins @ 7<sup>th</sup>
- K – Peak Season Conversion Factor
- L – Miami-Dade TPO 2045 Directional Trip Distribution
- M – Synchro Intersection Capacity Results



## Executive Summary

The commercial property at 624 Collins Avenue is proposed to be redeveloped into a sit-down fine-dining restaurant. The proposed redeveloped building will serve as sit-down fine dining restaurant with a total of 318 dining seats.

A trip generation study was completed based on the Fine-Dining Restaurant use for 624 Collins Avenue. The study shows that the proposed redevelopment is expected to result in a increase of 84 weekend peak hour trips when compared to the previous permitted use.

Recent Census Data shows an increase in multimodal use nationwide, and as such 2023 data shows approximately a 25% multimodal use in Miami Beach, however as a conservative approach this Study assumes a 20% Multimodal factor. There are several Miami-Dade Transit lines that serve the vicinity of the project site, these include Route S, M, C, 120 and 150. In addition, the City of Miami Beach operates the South Beach Trolley, which also serves the subject project.

An intersection capacity analysis was performed utilizing Synchro 11 Traffic Modelling software for the signalized Collins Avenue and 7<sup>th</sup> Street intersection and the HCM 6<sup>th</sup> Edition for the unsignalized Collins Avenue and 6<sup>th</sup> Street intersection. The analysis shows that all intersections are projected to operate within acceptable LOS standards. A 95<sup>th</sup> percentile queue analysis was performed to determine if the roadway network have sufficient storage to accommodate project vehicle queue lengths for existing and future conditions.

To further improve traffic circulation within its project, the 624 Collins Avenue Restaurant is currently formulating its Transportation Demand Management (TDM) Plan. The TDM will incentivize the use of transit, cycling, carpooling, and alternative transportation modes.

Patrons of the proposed restaurant will use two (2) on-street parking spaces along Collins Avenue, as valet pick-up / drop-off lanes. The design team has coordinated with the City's Parking Department for the use of the on-street parking spaces as valet service spaces. The proposed development intends to use the City's Parking Garage located at 7<sup>th</sup> Street and Collins Avenue, which is next door to the property. The restaurant is currently coordinating with several valet operators to provide valet services for its patrons. The valet queuing operations analysis was performed based on the methodology outlined in ITE's Transportation and Land Development manual published in 1988. The analysis determined the use of two (2) on-street parking spaces is adequate to handle valet parking operations for the redevelopment. The analysis identified that a total of 8 valet attendants would be required during the weekend peak hour (with a 99.6% confidence interval). Please refer to Table 3 for the details of the valet operation analysis.

Garbage pickup was completed within Collins Court (northbound one-way street) and will continue to do so for the restaurant. Loading and unloading operations can be completed within the on-street loading zone available 15 feet away from the property within Collins Avenue. Loading and Unloading operations are to be completed between 7AM and 3PM, as those are the existing restrictions placed for the on-street loading zone.



## Trip Generation

624 Collins Avenue proposes to use the existing commercial space to serve as a sit-down fine-dining restaurant. Trip generation calculations were performed using Institute of Transportation Engineers' (ITE's) Trip Generation Manual, 11th Edition. ITE Land Use Code (LUC) 931 (Fine-Dining Restaurant) was used to estimate traffic from the proposed redevelopment. The redevelopment will function as a sit-down fine-dining restaurant with a total of 318 dining seats.

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census Means of Transportation to Work data was reviewed for the census tract containing the redevelopment (see Appendix A). A multimodal factor of 25.9 percent (25.9%) was determined for the area based on the census data for this tract, for the calculations a conservative 20% multimodal reduction factor was applied to the trip generation. It is expected that employees, patrons, and guests will choose to walk, bicycle or use public transit to and from the proposed redevelopment. There are several transit lines that serve the vicinity of the project site (see Appendix B), these include Route S, M, C, 120 and 150. In addition the City of Miami Beach operates the South Beach Trolley, which also serves the subject project (see Appendix C).

The proposed redevelopment is expected to result in a increase of 84 weekend peak hour trips. Detailed trip generation calculations are shown below on Table 1.

**Table 1 - Trip Generation Summary**

| ITE Code / Description                              | Quantity | Units | Peak Hour Trips |     |       | Multimodal Reduction | Net Peak Hour Trips |     |       |
|-----------------------------------------------------|----------|-------|-----------------|-----|-------|----------------------|---------------------|-----|-------|
|                                                     |          |       | In              | Out | Total |                      | In                  | Out | Total |
| 931 / Fine Dining Restaurant - Weekday Daily Total  | 318      | Seats | 413             | 414 | 827   | 20%                  | 330                 | 331 | 661   |
| 931 / Fine Dining Restaurant - Weekday AM Peak Hour | 318      | Seats | 48              | 33  | 81    | 20%                  | 38                  | 26  | 64    |
| 931 / Fine Dining Restaurant - Weekday PM Peak Hour | 318      | Seats | 56              | 38  | 94    | 20%                  | 45                  | 30  | 75    |
| 931 / Fine Dining Restaurant - Weekend Daily Total  | 318      | Seats | 409             | 408 | 817   | 20%                  | 327                 | 326 | 653   |
| 931 / Fine Dining Restaurant - Weekend Peak Hour    | 318      | Seats | 62              | 43  | 105   | 20%                  | 50                  | 34  | 84    |

*ITE Trip Generation Manual - 11th Edition*



## Queue Analysis

Two (2) existing on-street parking spaces are proposed to be converted to valet parking spaces. The use of the on-street parking spaces for valet use was coordinated with the City's Parking Department (see Appendix H). Figure 1 provides details of the site location and the existing on-street parking spaces. Appendix D, provides a Context Location Plan. The remaining two (2) parking spaces will be used to accommodate patrons using rideshare services.

**Figure 1 - Existing On-Street Spaces**



The 624 Collins Avenue plans to use the next-door City of Miami Beach Parking Garage to accommodate parking through the use of valet parking. The Restaurant is currently coordinating with several Valet Parking operators for use in the project. For valet operations, there will be a manager on-site at all times supervising the Valet services operation. An automated system will be used with patrons to help them order the vehicle in advance via a mobile app or mobile phone call/text message. This will allow the Valet Operator to schedule pick-ups and reduce congestion at the valet area.



Figures 2 and 3 provide photographs of the site along Collins Avenue and Collins Court. As noted in the image, valet parking operations are to be maintained using the two (2) on-street parking spaces along Collins Avenue. All patrons are expected to valet or use the drop-off area for taxi or rideshare arrivals. There is an existing on-street loading zone on Collins Avenue, adjacent to the property, which will be used for loading and unloading of deliveries. The previous use handled garbage pick-up along Collins Court, this project will continue to use garbage pick-up operations along Collins Court.

**Figure 2 - Site Photograph along Collins Avenue looking West towards the 624 Collins Avenue Property.**



**Figure 3 - Site Photograph along Collins Court looking East towards the 624 Collins Avenue Property**

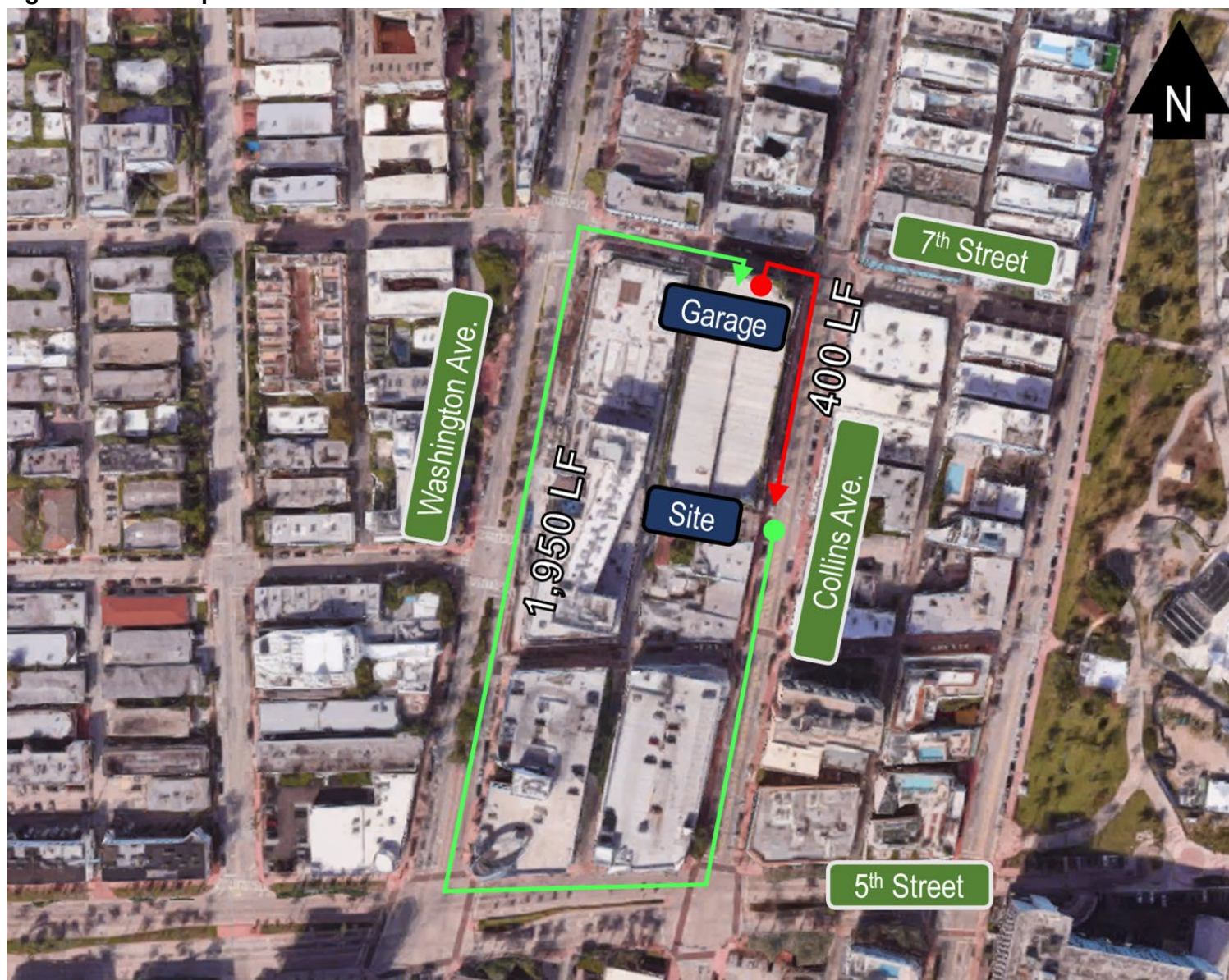




The valet queuing operations analysis was performed based on the methodology outlined in ITE's Transportation and Land Development, 1988. The analysis was performed to determine if valet operations could accommodate vehicular queues without exceeding the storage length provided on the two (2) on-street valet designated spaces.

Valet attendants will serve patrons with a valet station located in-front of the project site, adjacent to the dedicated on-street valet parking spaces. Valet attendants would travel along Collins Avenue, 5<sup>th</sup> Street, Washington Avenue and 7<sup>th</sup> Street to pick-up or drop-off vehicles. The calculated service time for vehicles parked at the City's Collins/7<sup>th</sup> Street Parking Garage is 2.9 minutes. Figure 4, shows the valet operation routes and Table 2 provides a summary of the travel times used to determine the valet service time.

**Figure 4 - Valet Operation Routes**



**Table 2 - Valet Operation Travel Times**

| Drop-Off                   |              |                               | Pick-Up                   |              |                               |
|----------------------------|--------------|-------------------------------|---------------------------|--------------|-------------------------------|
| Vehicle                    |              | Valet Attendant               | Vehicle                   |              | Valet Attendant               |
| Distance                   | 1950 feet    | Distance 400 feet             | Distance                  | 400 feet     | Distance 400 feet             |
| Average Speed              | 25 mph       | Average Speed 5 feet/sec.     | Average Speed             | 25 mph       | Average Speed 5 feet/sec.     |
| Travel Time                | 0.89 minutes | Travel Time 1.33 minutes      | Travel Time               | 0.18 minutes | Travel Time 1.33 minutes      |
| Controlled Delay           | 0.50 minutes | Controlled Delay 0.50 minutes | Controlled Delay          | 0.50 minutes | Controlled Delay 0.50 minutes |
| Vehicle Time               | 1.39 minutes | Pedestrian Time 1.83 minutes  | Vehicle Time              | 0.68 minutes | Pedestrian Time 1.83 minutes  |
| Drop-Off Time 3.22 Minutes |              |                               | Pick-Up Time 2.52 Minutes |              |                               |

The valet queuing operations analysis was performed based on the methodology outlined in ITE's Transportation and Land Development manual published in 1988. The analysis determined that two (2) vehicle drop-off spaces are adequate to handle valet parking operations for the redevelopment.

Furthermore, the analysis identified that a total of 8 valet attendants would be required during the weekend peak hour (with a 99.6% Confidence Interval). Please refer to Table 3 for the details of the valet operation analysis.

**Table 3 - Waiting Line Model - Multiple Server Analysis of Valet Operations**

|                                         |    |        |                             |      |         |
|-----------------------------------------|----|--------|-----------------------------|------|---------|
| Peak Hour Arrival Vehicles              | 50 | veh/hr | Attendant Pick-up Rate      | 2.5  | min/veh |
| Peak Hour Departure Vehicles            | 34 | veh/hr | Attendant Drop-off Rate     | 3.22 | min/veh |
| Avg. Vehicle Arrival Rate ( $\lambda$ ) | 84 | veh/hr | Avg. Attendant Service Rate | 2.9  | min/veh |

|                                              |       |         |                                    |      |     |
|----------------------------------------------|-------|---------|------------------------------------|------|-----|
| Valet Attendants (s)                         | 8     | person  | <b>99.6% Confidence Interval</b>   |      |     |
| Hourly Service Rate per Attendant ( $\mu$ )  | 20.9  | veh/hr  |                                    |      |     |
| Mean Service Rate for System ( $\sigma\mu$ ) | 167.4 | veh/hr  |                                    |      |     |
| Avg. Time Waiting in Queue ( $W_q$ )         | 0.04  | minutes |                                    |      |     |
| Avg. Time Spent in the System ( $W$ )        | 2.91  | minutes |                                    |      |     |
| Avg. Vehicles in the System ( $L$ )          | 4.1   | veh     | Probability M vehicles are waiting | 0.4% |     |
| Avg. System Utilization ( $\rho$ )           | 50.2% |         | Waiting Vehicles (M)               | 3.0  | veh |
| Probability no vehicles on queue ( $P_o$ )   | 1.74% |         | Valet Parking Stalls               | 2    | veh |
| Avg. Vehicles Waiting in Queue ( $L_q$ )     | 0.06  | veh     | Exceeding vehicles                 | 1.0  | veh |



## Intersection Capacity Analysis

To identify the existing peak hour for the vehicular traffic along Collins Avenue, between 6<sup>th</sup> and 7<sup>th</sup> Street a 72-hour traffic volume count was completed from Thursday 07/27/2023 to Saturday 07/29/2023. The observed peak hour occurred from 2:15 to 3:15 pm with 971 vehicles but due to the nature of the proposed use of the site, the 6:00 pm to 7:00 pm peak hour was analyzed using 964 vehicles (Please refer to Appendix I for Traffic Volume Counts). Intersection turning movement counts were collected within this peak hour at the intersection north of the project site (Collins at 7<sup>th</sup> Street) and the intersection south of the project site (Collins at 6<sup>th</sup> Street). The intersection at 7<sup>th</sup> Street is controlled via a traffic signal. The signal operations plan was obtained from Miami Dade County and is included in Appendix J. The existing roadway network volumes are summarized in Figure 5.

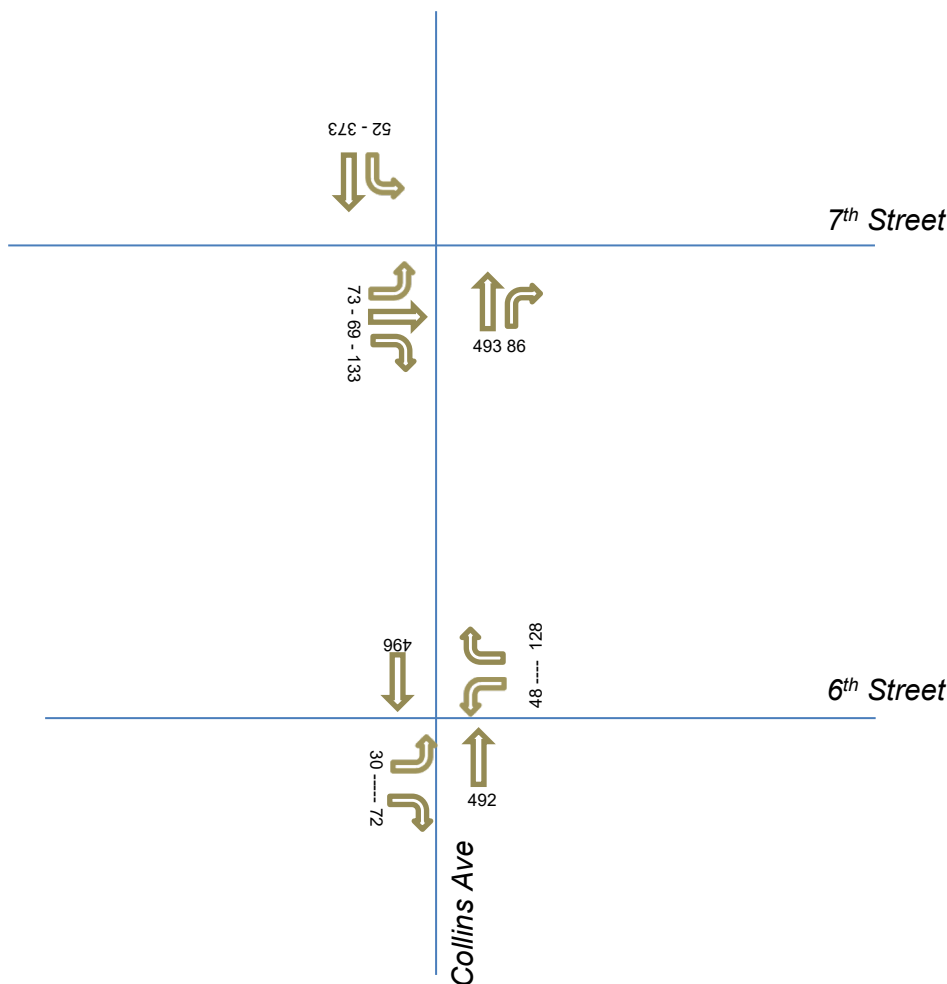


Figure 5 – Existing Traffic Volumes



The Fine Dining Restaurant is anticipated to open in 2024, thus the year 2024 was selected as the build-out year for the project site, in order to evaluate proposed conditions. Available FDOT and Miami-Dade County traffic counts were consulted to determine a growth factor consistent with historical annual growth in the area. The growth factor was applied to the existing traffic volumes to establish background traffic.

| Collins Ave         | 2018   | 2019   | 2020   | 2021   | 2022   |
|---------------------|--------|--------|--------|--------|--------|
| AADT                | 11,800 | 12,900 | 14,500 | 15,700 | 14,600 |
| Growth Rate         |        | 9%     | 12%    | 8%     | -7%    |
| Average Growth Rate | 6%     |        |        |        |        |

The FDOT Peak Season Factor (Appendix K) was used to estimate the traffic volumes in 2024. The peak season conversion was selected for I-395 and the coinciding factor for the analysis date was determined to be 1.07. Future without project turning movement volumes were obtained by applying one year of background growth to the existing network. Future Background without project trips is summarized in Figure 6.

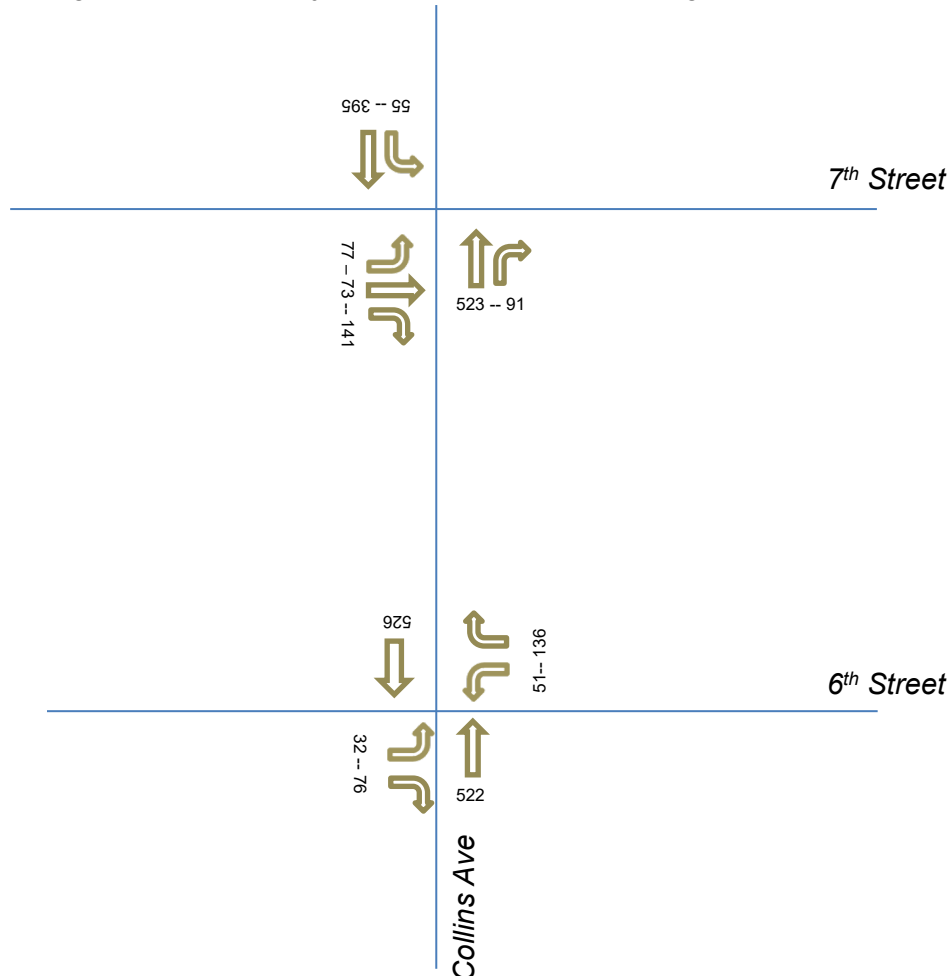


Figure 6 – Background Growth Future Volumes without Project in 2024

Trip generation calculations were performed using Institute of Transportation Engineers' (ITE's) Trip Generation Manual, 11th Edition. ITE Land Use Code (LUC) 931 (Fine-Dining Restaurant) was used to estimate traffic from the proposed redevelopment. The redevelopment will function as a sit-down fine-dining restaurant with a total of 318



dining seats. The proposed redevelopment is anticipated to generate 50 inbound and 34 outbound trips during the Saturday PM peak period. The development will utilize the valet operation of all inbound and outbound trips.

### Project Trip Assignment

Project traffic was distributed and assigned to the study area using the Cardinal Distribution for TAZ 655 shown in Table 4. The Cardinal Distribution gives a generalized distribution of trips from a TAZ to other parts of Miami-Dade County (see Appendix L). For estimating trip distribution for the project traffic, consideration was given to conditions such as the roadway network accessed by the project traffic, roadways available to travel in the desired direction, and attractiveness of traveling on a specific roadway. The future with project volumes is shown on figure 7.

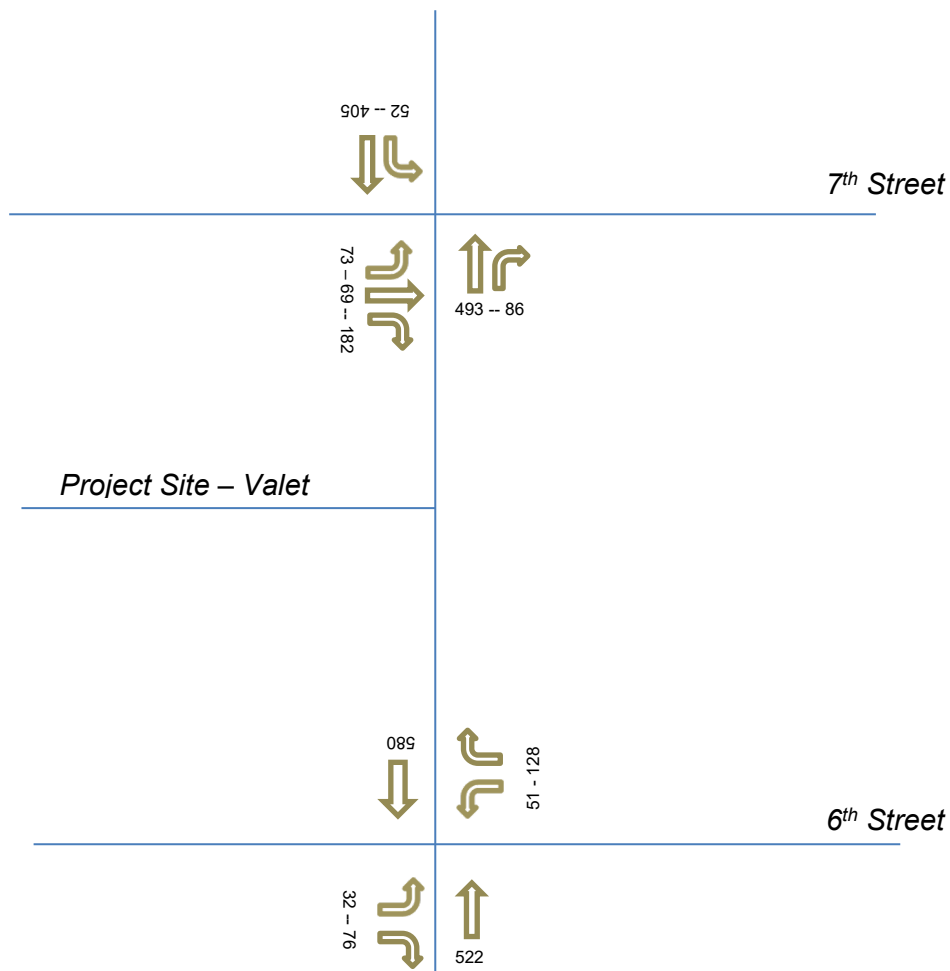


Figure 7 – Future with Project Traffic Volumes in 2024

**Table 4 – Cardinal Distribution**

| Direction | 2015   | 2045   | 2024   |
|-----------|--------|--------|--------|
| NNE       | 20.80% | 17.60% | 19.70% |
| ENE       | 0.00%  | 0.00%  | 0.00%  |
| ESE       | 0.00%  | 0.00%  | 0.00%  |
| SSE       | 0.00%  | 0.00%  | 0.00%  |
| SSW       | 8.30%  | 6.90%  | 7.80%  |
| WSW       | 20.40% | 21.90% | 20.90% |
| WNW       | 27.10% | 31.80% | 28.70% |
| NNW       | 23.40% | 21.90% | 22.90% |

An intersection capacity analysis was performed utilizing Synchro 11 Traffic Modelling software for the signalized Collins Avenue and 7th Street intersection and the HCM 6th Edition for the unsignalized Collins Avenue and 6th Street intersection. The analysis show that all intersections are projected to operate within acceptable LOS standards except for the Collins Avenue and 6th Street intersection in background future and future with project scenarios. The delay experienced at the 6th Street intersection is due to the high volume of pedestrians that negatively impact the EB and WB movements. Synchro results for the Intersection Capacity Analysis are included in Appendix M. A 95th percentile queue analysis was performed to determine if the roadway network have sufficient storage to accommodate project vehicle queue lengths for existing and future conditions. Synchro was used for this analysis. Synchro worksheets are included in Appendix M. The results of the analysis indicate that the existing lanes are sufficient to accommodate anticipated vehicle queues at the studied intersections. The results of the future condition analysis are provided in Table 5.

**Table 5 – Intersection Capacity Analysis Results**

| Intersection                      | Signalized/<br>Unsignalized | Direction | Scenario<br>LOS<br>Standard | Existing |          | Background |          | Future |          |
|-----------------------------------|-----------------------------|-----------|-----------------------------|----------|----------|------------|----------|--------|----------|
|                                   |                             |           |                             | PM LOS   | PM Delay | PM LOS     | PM Delay | PM LOS | PM Delay |
| Collins<br>Avenue &<br>7th Street | S                           | NB        | D + 20%                     | B        | 12.6     | B          | 13.3     | B      | 13.3     |
|                                   |                             | SB        |                             | A        | 9.4      | A          | 9.7      | A      | 9.9      |
|                                   |                             | EB        |                             | C        | 27.2     | B          | 27.8     | C      | 33.6     |
|                                   |                             | WB        |                             | -        | -        | -          | -        | -      | -        |
|                                   |                             | Overall   |                             | B        | 14.7     | B          | 15.2     | B      | 17.0     |
| Collins<br>Avenue &<br>6th Street | U                           | NB        | D + 20%                     | A        | 0.0      | A          | 0.0      | A      | 0.0      |
|                                   |                             | SB        |                             | A        | 0.0      | A          | 0.0      | A      | 0.0      |
|                                   |                             | EB        |                             | F        | 98.6     | F          | 168.0    | F      | 183.0    |
|                                   |                             | WB        |                             | F        | 65.8     | F          | 94.7     | F      | 102.8    |
|                                   |                             | Overall   |                             | C        | 22.1     | E          | 36.3     | E      | 38.9     |



# Transportation Demand Management Plan

One of the reasons the proposed Miami Beach location of the 624 Collins Avenue Restaurant was selected is because it is within an urban, dense, and mixed-use land area. This type of land use promotes the use of sustainable transportation modes and provides opportunities to employees and patrons to use transportation modes that do not rely on single-occupant motor vehicle rides. A land-use plan is included under Appendix E to provide information on surrounding land uses.

The 624 Collins Avenue Restaurant Transportation Demand Management Plan (TDMP) includes elements to incentivize the preferred use of transit, cycling, carpooling, and other alternative transportation modes. These strategies have the goal of reducing the impacts of the project traffic on the surrounding roadway network and focus on promoting bicycling and walking, car/vanpooling, and alternatives to the typical single-occupant use of a motor vehicle to access the site, either as a patron or employee. TDMP Strategies include:

**Employee Transportation Coordinator.** To promote the use of alternative transportation modes, the 624 Collins Avenue Restaurant has designated Ms. Aurora Leigh, as the restaurant's Employee Transportation Coordinator. Ms. Leigh's contact information is as follows:

Ms. Aurora Leigh

Phone: (401) 305-2064

Email: [aleigh@fndev.com](mailto:aleigh@fndev.com)

**Promoting Transit.** The 624 Collins Avenue shall promote the use of transit with employees and patrons. Transit information will be posted within the site with information on transit route maps and route schedules. Carpooling and vanpooling program information shall be provided to employees, including the development of economic incentive programs (such as subsidized transit passes) to encourage employees' participation in the reduction of single-occupant vehicular trips or the use of transit facilities.

**Promoting Pedestrian and Cycling.** Collins Avenue has wide sidewalks (>5ft) which will be maintained as part of the operation of the restaurant with locations for open cafes, well established landscaping and local art which promotes and invites walking. These wide sidewalks and streetscape amenities such as lighting, landscaping, benches, bike racks, and trash cans, create an environment which encourages walking and cycling, and are proposed to remain. Furthermore, Collins Avenue has shared bike lanes on both directions, which serve as a major north-south connector for the bicycle network. In addition, Collins Avenue has designated micro-mobility on-street parking spaces, further promoting the use of alternative transportation modes. The project site is located right within this livable corridor, promoting and inviting the use of alternative transportation modes for patrons and employees.



## **APPENDIX A**

### **US Census Means of Transportation to Work**

# MEANS OF TRANSPORTATION TO WORK BY VEHICLES AVAILABLE

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

| United States                                   |             |                 |
|-------------------------------------------------|-------------|-----------------|
| Label                                           | Estimate    | Margin of Error |
| ▼ Total:                                        | 152,891,752 | ±149,819        |
| No vehicle available                            | 6,298,680   | ±49,012         |
| 1 vehicle available                             | 31,422,618  | ±117,551        |
| 2 vehicles available                            | 61,801,315  | ±185,070        |
| 3 or more vehicles available                    | 53,369,139  | ±166,780        |
| ▼ Car, truck, or van - drove alone:             | 104,249,513 | ±136,937        |
| No vehicle available                            | 1,580,531   | ±29,738         |
| 1 vehicle available                             | 19,701,567  | ±73,979         |
| 2 vehicles available                            | 43,283,148  | ±133,720        |
| 3 or more vehicles available                    | 39,684,267  | ±142,947        |
| ▼ Car, truck, or van - carpoled:                | 11,921,065  | ±69,985         |
| No vehicle available                            | 599,486     | ±17,049         |
| 1 vehicle available                             | 2,452,307   | ±34,518         |
| 2 vehicles available                            | 4,366,569   | ±44,474         |
| 3 or more vehicles available                    | 4,502,703   | ±44,867         |
| ▼ Public transportation (excluding taxicab):    | 3,728,343   | ±36,906         |
| No vehicle available                            | 1,554,809   | ±25,465         |
| 1 vehicle available                             | 1,137,414   | ±22,511         |
| 2 vehicles available                            | 640,079     | ±14,107         |
| 3 or more vehicles available                    | 396,041     | ±13,136         |
| ▼ Walked:                                       | 2,858,418   | ±31,619         |
| No vehicle available                            | 709,516     | ±18,908         |
| 1 vehicle available                             | 857,169     | ±20,321         |
| 2 vehicles available                            | 753,612     | ±15,296         |
| 3 or more vehicles available                    | 538,121     | ±15,860         |
| ▼ Taxicab, motorcycle, bicycle, or other means: | 2,850,491   | ±34,969         |
| No vehicle available                            | 561,967     | ±12,777         |
| 1 vehicle available                             | 778,691     | ±17,553         |
| 2 vehicles available                            | 846,256     | ±21,567         |
| 3 or more vehicles available                    | 663,577     | ±19,392         |
| ▼ Worked from home:                             | 27,283,922  | ±105,055        |
| No vehicle available                            | 1,292,371   | ±19,631         |
| 1 vehicle available                             | 6,495,470   | ±61,103         |
| 2 vehicles available                            | 11,911,651  | ±89,390         |
| 3 or more vehicles available                    | 7,584,430   | ±56,519         |

Table Notes

MEANS OF TRANSPORTATION TO WORK BY VEHICLES AVAILABLE

**Survey/Program:** American Community Survey  
**Universe:** Workers 16 years and over in households  
**Year:** 2021  
**Estimates:** 1-Year  
**Table ID:** B08141

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

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

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

Source: U.S. Census Bureau, 2021 American Community Survey 1-Year Estimates

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

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

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

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

Explanation of Symbols:

- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.
- N  
The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.
- (X)  
The estimate or margin of error is not applicable or not available.
- median-  
The median falls in the lowest interval of an open-ended distribution (for example "2,500-")
- median+  
The median falls in the highest interval of an open-ended distribution (for example "250,000+").
- \*\*  
The margin of error could not be computed because there were an insufficient number of sample observations.
- \*\*\*  
The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.
- \*\*\*\*\*  
A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.



## **APPENDIX B**

### **Miami-Dade Transit Bus Service Routes**



# METROBUS SYSTEM

MAY 2019

## METROBUS ROUTES

- Limited-Stop Service
- Express Service
- Non-stop Service
- East-West Local-Stop Service
- North-South Local-Stop Service
- Local Shuttle or Circulator Service

## METROBUS DESTINATIONS

- Service Endpoint - Single Route Type
- Service Endpoints - Multiple Route Types
- Terminal
- Park and Ride Lot
- South Dade TransitWay Station
- Metrorail & Station - Routes Serving Station
- Tri-Rail
- Brightline

THIS IS A GENERAL REFERENCE MAP. CONSULT INDIVIDUAL ROUTE MAPS FOR DETAILS.

## BROWARD COUNTY



## FLORIDA KEYS



## DOWNTOWN MIAMI



Connects with Metrorail Serves Park & Ride Lot Overnight Service Serves Miami International Airport Connects with Tri-Rail Connects with Brightline

- 1 Perrine ↔ Quail Roost Dr/SW 117 Ave
- 2 163 St Mall, 84 St ↔ Downtown Miami
- 3 Aventura Mall ↔ Downtown Miami
- 7 Dolphin Mall, Miami Intl Airport ↔ Downtown Miami
- 8 FIU Maidique Campus ↔ Brickell Metrorail
- 9 Aventura, 163 St Mall ↔ Downtown Miami
- 10 SkyLake Mall ↔ Omni Metrobus Terminal
- 11 FIU Maidique Campus, Mall of the Americas ↔ Downtown Miami
- 12 Northside Metrorail ↔ Mercy Hospital
- 16 163 St Mall ↔ Omni Metrobus Terminal
- 17 Norwood ↔ Vizzaya Metrorail
- 19 (WEEKDAYS ONLY) MDC North Campus ↔ 163 St Mall
- 21 Northside Metrorail ↔ Downtown Miami
- 22 163 St Mall ↔ Coconut Grove Metrorail
- 24 CORAL WAY LIMITED - West Dade ↔ Brickell Metrorail
- 27 Miami Gardens ↔ Coconut Grove Metrorail
- 29 (WEEKDAYS ONLY) Miami Lakes Education Center ↔ Hialeah
- 31 BUSWAY LOCAL - South Dade Government Center ↔ Dadeland South Metrorail
- 32 Carol City ↔ Omni Metrobus Terminal
- 33 Hialeah ↔ NE 79 St/Biscayne Blvd
- 34 EXPRESS (WEEKDAY RUSH-HOUR ONLY) Florida City ↔ Dadeland South Metrorail
- 35 MDC Kendall Campus ↔ Florida City
- 36 Dolphin Mall, Doral, Miami Springs ↔ Midtown Miami
- 37 Hialeah ↔ South Miami Metrorail
- 38 BUSWAY MAX Dadeland South Metrorail ↔ Florida City
- 39 EXPRESS (WEEKDAY RUSH-HOUR ONLY) Dade Govt Ctr ↔ Dadeland South Metrorail
- 40 Lakes of the Meadow, Tamiami Trail/SW 132 Ave ↔ Douglas Road Metrorail
- 42 Opa-locka Tri-Rail ↔ Douglas Road Metrorail
- 46 LIBERTY CITY CONNECTION (WEEKDAY RUSH-HOUR ONLY) Brownsville Metrorail ↔ Seventh Avenue Transit Village
- 51 FLAGLER MAX (WEEKDAYS ONLY) West Dade ↔ Downtown Miami
- 52 Dadeland South Metrorail ↔ South Dade Health Center
- 54 Miami Gardens Dr/NW 87 Ave, Hialeah Gardens ↔ Biscayne Blvd/NE 54 St
- 56 (WEEKDAYS ONLY) West Dade ↔ Miami Children's Hospital
- 57 (WEEKDAYS ONLY) Miami Intl Airport ↔ Jackson South Hospital
- 62 Hialeah ↔ Biscayne Blvd / 62 St
- 71 Dolphin Mall ↔ MDC Kendall Campus
- 72 West Kendall Terminal, Miller Square ↔ South Miami Metrorail
- 73 Miami Gardens Dr & NW 73 Ave Park & Ride ↔ Dadeland South Metrorail
- 75 Miami Lakes Educational Center ↔ FIU Biscayne Bay Campus
- 77 Norwood ↔ Downtown Miami
- 79 79 STREET MAX (WEEKDAY RUSH-HOUR ONLY) Northside Metrorail ↔ 72 St / Miami Beach
- 82 WESTCHESTER CIRCULATOR (NO SUNDAYS) FIU Maidique Campus ↔ Flagami
- 87 Palmetto Metrorail, Doral ↔ Dadeland North Metrorail
- 88 Dadeland North Metrorail ↔ West Kendall Terminal
- 93 BISCAYNE MAX (WEEKDAYS ONLY) Downtown Miami ↔ Aventura Mall
- 95 EXPRESS GOLDEN GLADES (WEEKDAY RUSH-HOUR ONLY) Carol City, Aventura Mall, Golden Glades ↔ Downtown Miami, Civic Center
- 95 EXPRESS DADE BROWARD (WEEKDAY RUSH-HOUR ONLY) ROUTE 195: Broward Blvd ↔ Downtown Miami
- ROUTE 196: Sheridan St ↔ Downtown Miami
- ROUTE 295: Broward Blvd ↔ Civic Center
- ROUTE 296: Sheridan St ↔ Civic Center

- 99 Miami Gardens Dr & NW 73 Ave Park & Ride ↔ Aventura Mall
- A ROUTE 101: Omni ↔ 20th Street & West Avenue / Miami Beach
- B ROUTE 102: Brickell Metrorail ↔ Key Biscayne
- C ROUTE 103: South Beach ↔ Mt. Sinai Medical Center
- 104 West Kendall Terminal ↔ Dadeland North Metrorail
- E ROUTE 105: Golden Glades ↔ Hallandale Beach
- G ROUTE 107: 94 St / Miami Beach ↔ MDC North Campus
- H ROUTE 108: 163 Street Mall ↔ Haulover Park
- J ROUTE 110: Miami Intl Airport ↔ 41 St / Miami Beach
- L ROUTE 112: Lincoln Rd ↔ Hialeah Metrorail
- M ROUTE 113: Civic Center ↔ Mt. Sinai Hospital
- 115 MID-NORTH BEACH CONNECTION - Collins Ave / 88 St ↔ Lincoln Rd
- S ROUTE 119: Downtown Miami ↔ Aventura Mall
- 120 BEACH MAX Downtown Miami ↔ Haulover Park, Aventura Mall
- 132 TRI-RAIL DORAL SHUTTLE (WEEKDAY RUSH-HOUR ONLY): Doral ↔ Hialeah Market Tri-Rail
- 135 Hialeah Metrorail, Miami Lakes ↔ FIU Biscayne Bay Campus
- 136 (WEEKDAY RUSH-HOUR ONLY) SW 136 St / US1 ↔ Douglas Road Metrorail
- 137 WEST DADE CONNECTION Dolphin Mall ↔ South Dade Gov Center
- 150 MIAMI BEACH AIRPORT EXPRESS Miami Intl Airport ↔ South Beach
- 155 BISCAYNE GARDENS CIRCULATOR (WEEKDAYS ONLY)
- 183 Miami Gardens Dr & NW 73 Ave Park & Ride ↔ Aventura Mall
- 200 CUTLER BAY LOCAL
- 202 LITTLE HAITI CONNECTION Biscayne Shopping Plaza, NW 5 Ave / 83 St ↔ Miami Design District
- 204 KILLIAN KAT (WEEKDAY RUSH-HOUR ONLY) West Kendall Terminal ↔ Dadeland North Metrorail
- 207 LITTLE HAVANA CONNECTION (CLOCKWISE) Downtown Miami, Brickell ↔ SW 25 Ave via SW 1 St & SW 7 St
- 208 LITTLE HAVANA CONNECTION (COUNTERCLOCKWISE) Downtown Miami, Brickell ↔ SW 27 Ave via W Flagler St & S
- 210 SKYLAKES CIRCULATOR Skylake Mall ↔ 163 Street Mall
- 211 OVERTOWN CIRCULATOR (WEEKDAYS ONLY)
- 212 SWEETWATER CIRCULATOR (WEEKDAYS ONLY)
- 217 BUNCHE PARK CIRCULATOR (WEEKDAYS ONLY) NW 127 St / 22 Ave ↔ N Dade Health Center
- 238 EAST-WEST CONNECTION (WEEKDAYS ONLY) Dolphin Mall ↔ Miami Intl. Airport
- 246 NIGHT OWL Downtown Miami ↔ 163 St Mall
- 248 PRINCETON CIRCULATOR Southland Mall ↔ SW 264 St, Naranja (Weekdays Only)
- 252 CORAL REEF MAX Country Walk ↔ Dadeland South Metrorail, Zoo Miami (Weekends Only)
- 254 BROWNSVILLE CIRCULATOR (WEEKDAYS ONLY) Caleb Center ↔ Jefferson Reeves Park, Hialeah (Thursday only)
- 267 LUDLAM LIMITED (WEEKDAY RUSH-HOUR ONLY) NW 186 St/87 Ave ↔ Okeechobee Metrorail
- 272 SUNSET KAT (WEEKDAY RUSH-HOUR ONLY) West Kendall Terminal ↔ Dadeland North Metrorail
- 277 NW 7 AVENUE MAX (WEEKDAY RUSH-HOUR ONLY) Downtown Miami ↔ Golden Glades Park & Ride
- 286 NORTH POINTE CIRCULATOR (NO SUNDAYS) Miami Gardens Dr & NW 73 Ave Park & Ride ↔ NW 57 Ave/NW 176 St
- 287 SAGA BAY MAX (WEEKDAY RUSH-HOUR ONLY) S Dade Health Center ↔ Dadeland South Metrorail
- 288 KENDALL CRUISER (WEEKDAY RUSH-HOUR ONLY) West Kendall Terminal, SW 127 Ave Park & Ride ↔ Dadeland North Metrorail
- 297 27th AVE ORANGE MAX (WEEKDAYS ONLY) Miami Intl Airport ↔ Miami Gardens
- 301 DADE-MONROE EXPRESS Florida City ↔ Marathon Key
- 302 CARD SOUND EXPRESS Florida City ↔ Ocean Reef Club
- 338 WEEKEND EXPRESS (WEEKENDS ONLY) Miami Intl Airport ↔ Dolphin Mall
- 344 (WEEKDAYS ONLY) Florida City ↔ MDC Homestead Campus
- 500 MIDNIGHT OWL Dadeland South Metrorail ↔ Downtown Miami

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MDT TRACKER / EASY PAY MIAMI / MDT TRANSIT WATCH





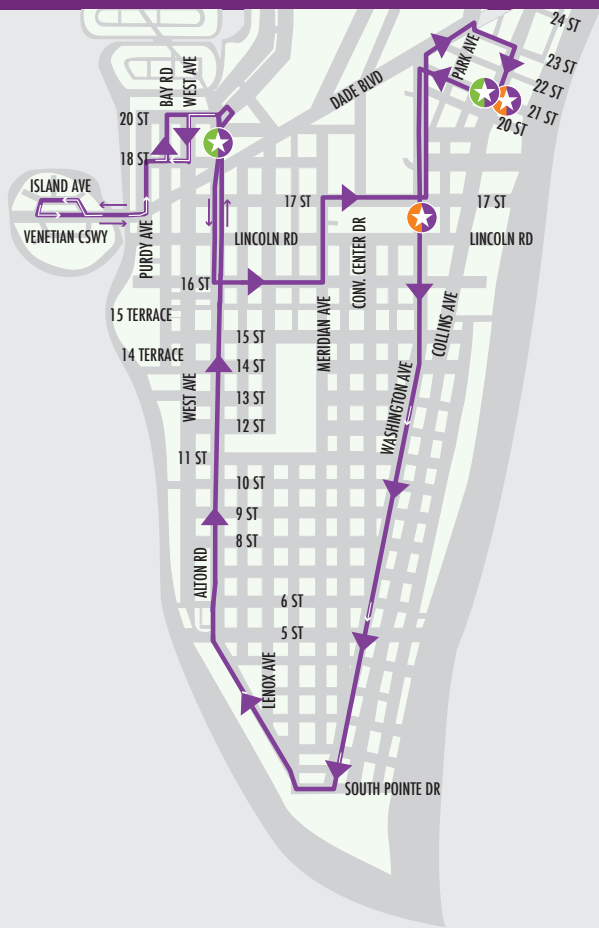
## **APPENDIX C**

### **City of Miami Beach South Beach Trolley Map**



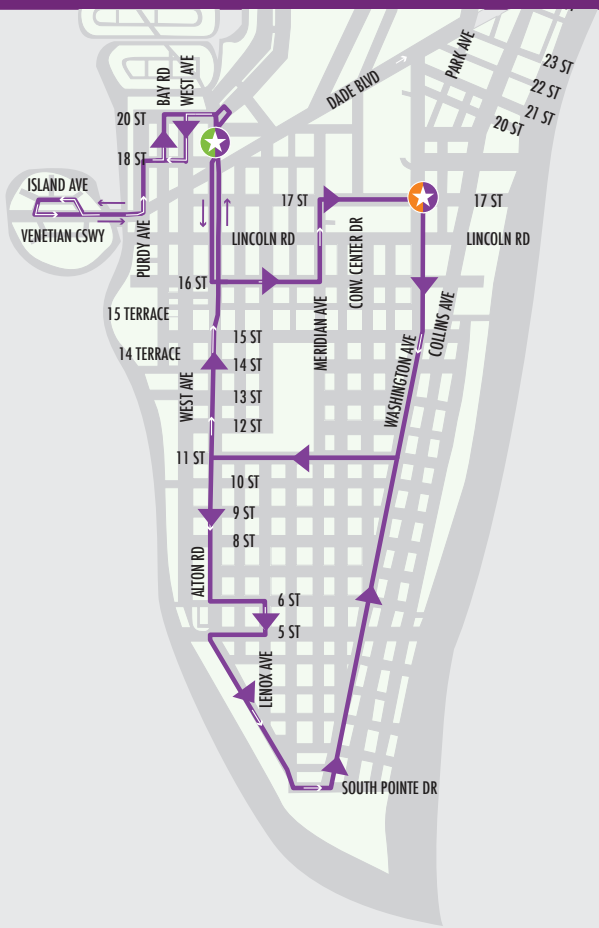
## SOUTH BEACH LOOP - A

(Clockwise - Approximately 20 minutes)



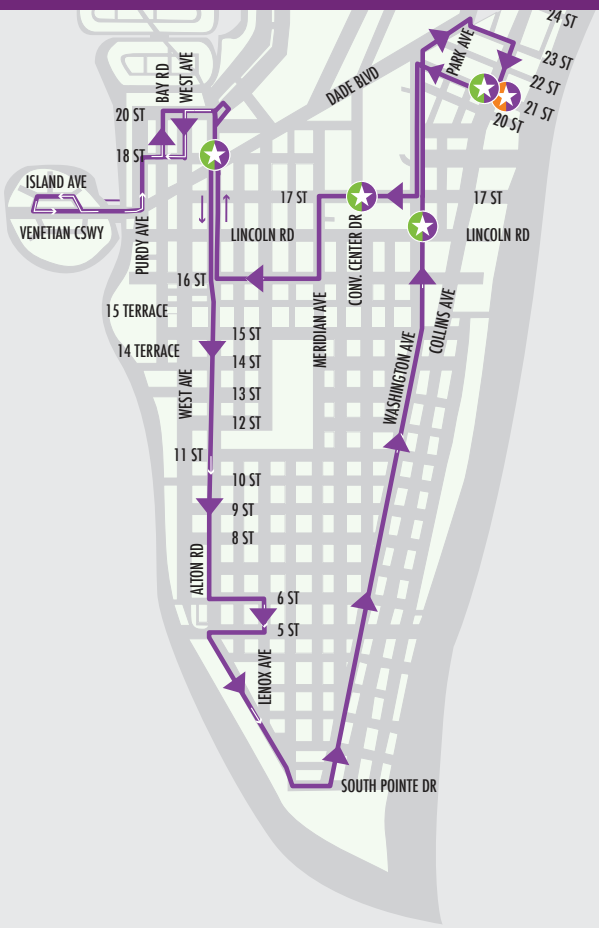
## SOUTH BEACH LOOP - VIA 11 ST

(Approximately 40 minutes)



## SOUTH BEACH LOOP - B

(Counter Clockwise - Approximately 20 minutes)





## **APPENDIX D**

### **Context Location Plan**

## Context Location Plan





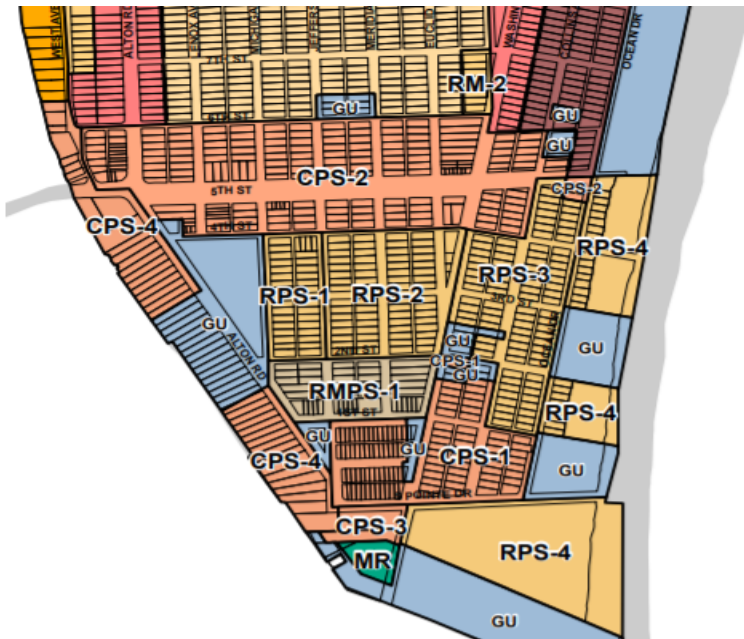
## **APPENDIX E**

### **Land Use Plan**



## APPENDIX E

### Land Use Plan



*A t l a n t i c*  
*O c e a n*

### MIAMI BEACH

#### PLANNING DEPARTMENT

1700 CONVENTION CENTER DRIVE  
MIAMI BEACH, FLORIDA 33139  
P 305.673.7550 F 305.673.7559



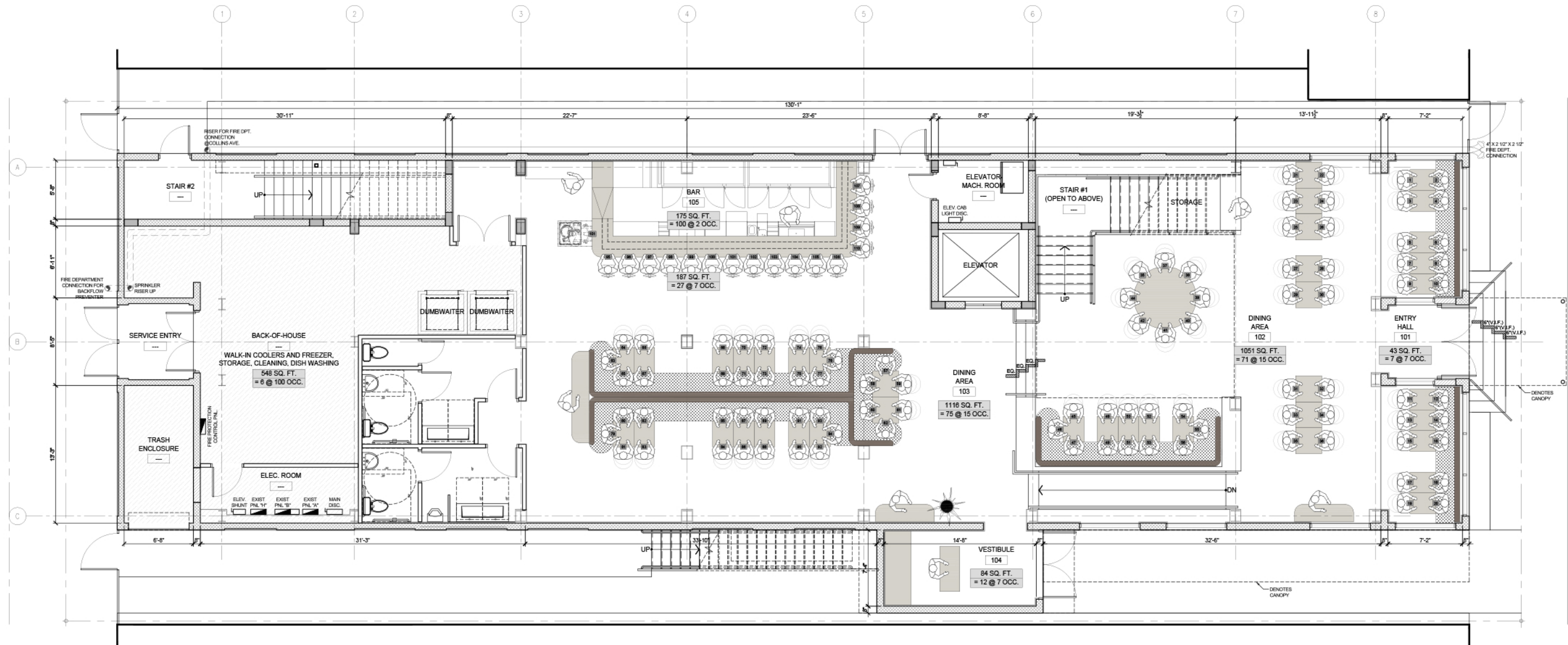
### LAND USE MAP MIAMI-DADE COUNTY





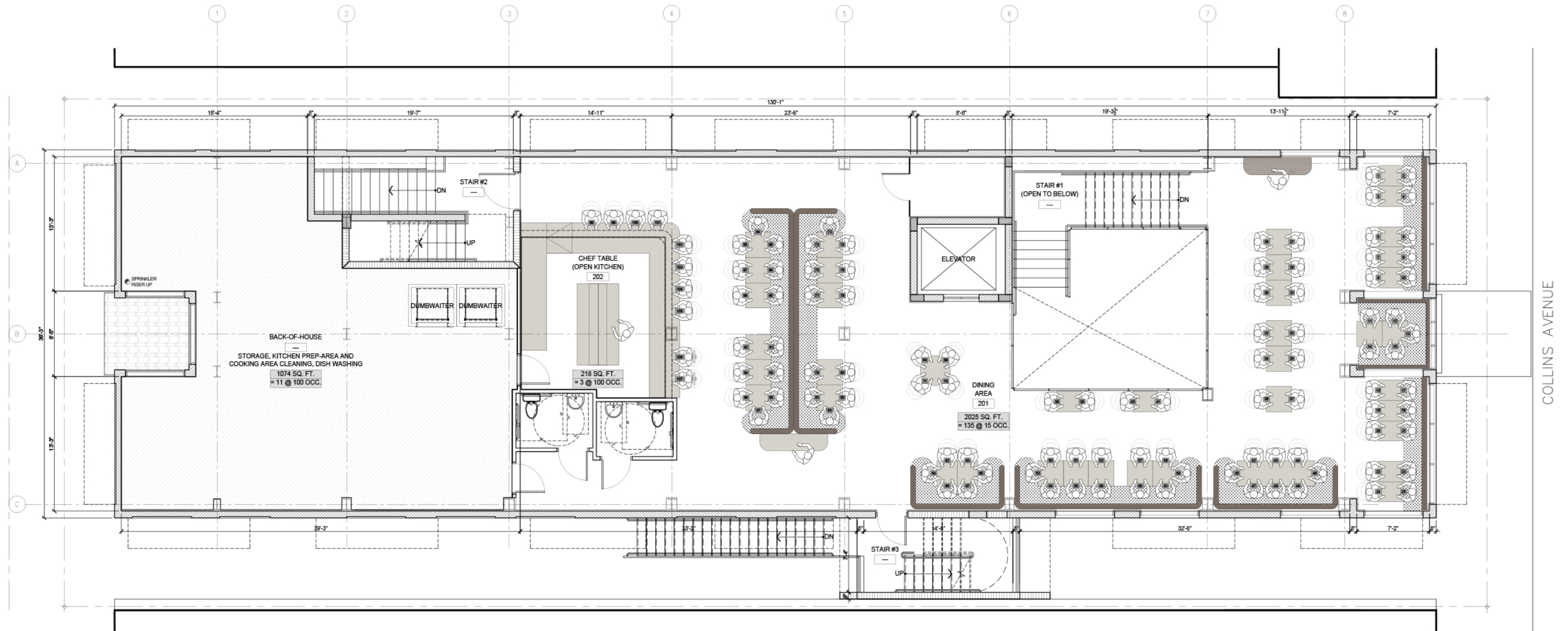
## **APPENDIX F**

### **Site Plan, Floor Plan and Site Access**



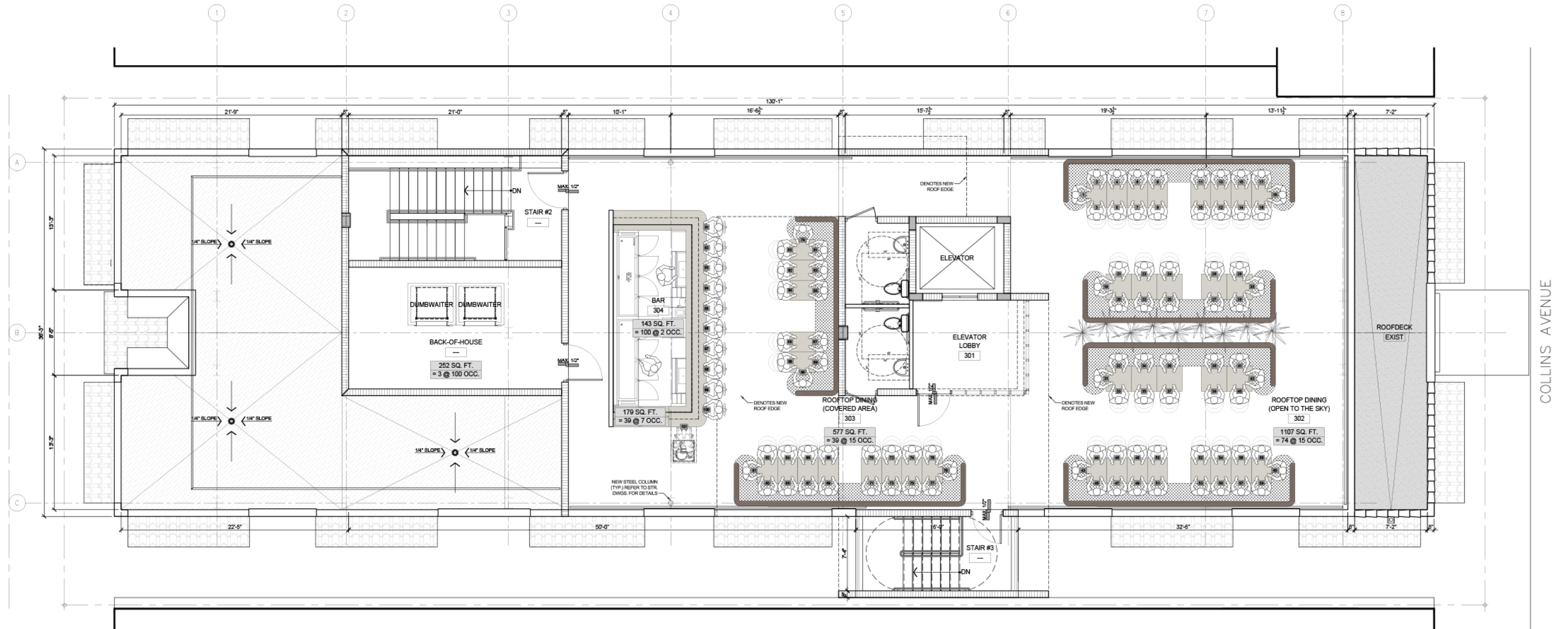
PROPOSED GROUND FLOOR PLAN  
SCALE: 3/16" = 1'-0"





PROPOSED 2ND FLOOR PLAN  
SCALE: 3/16" = 1'-0"

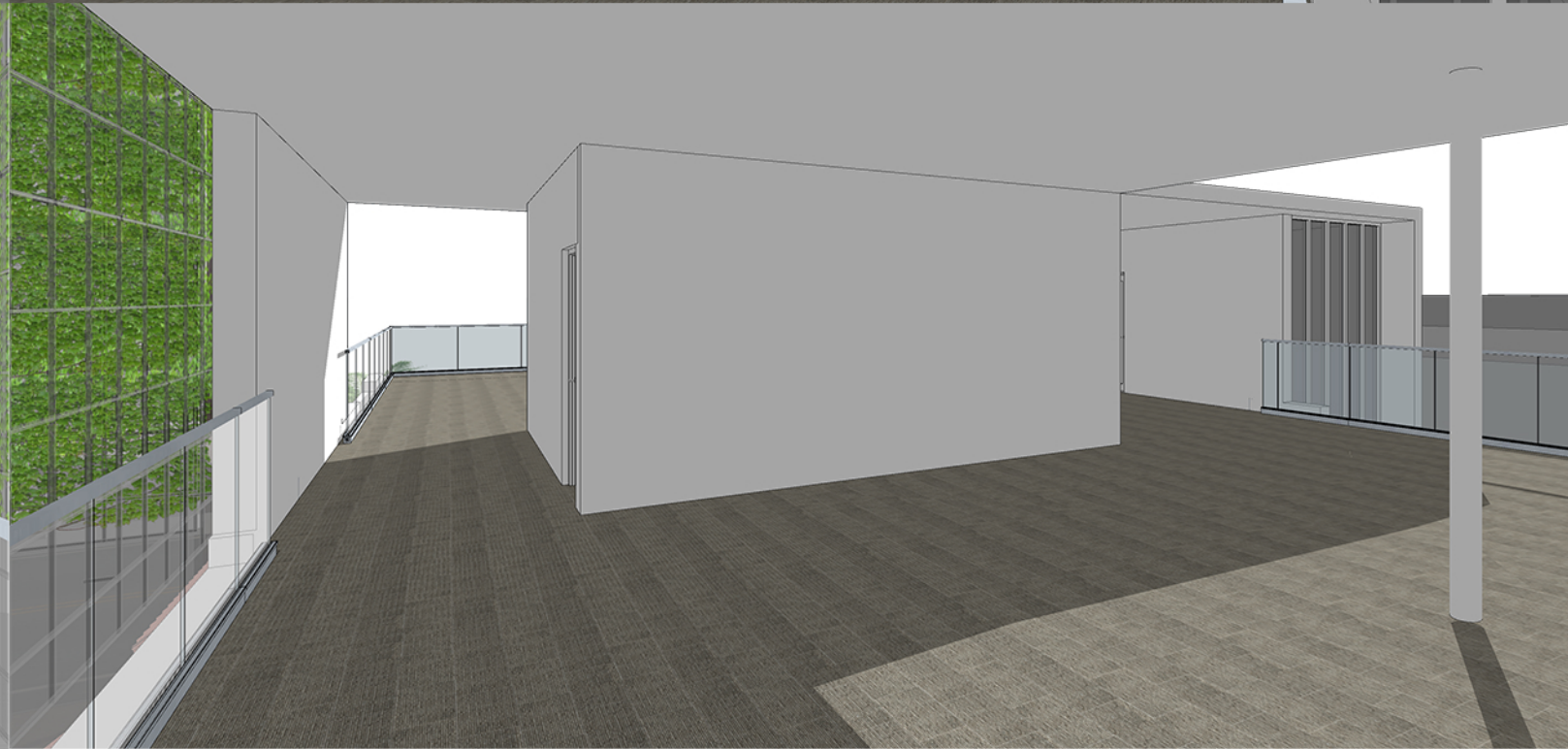
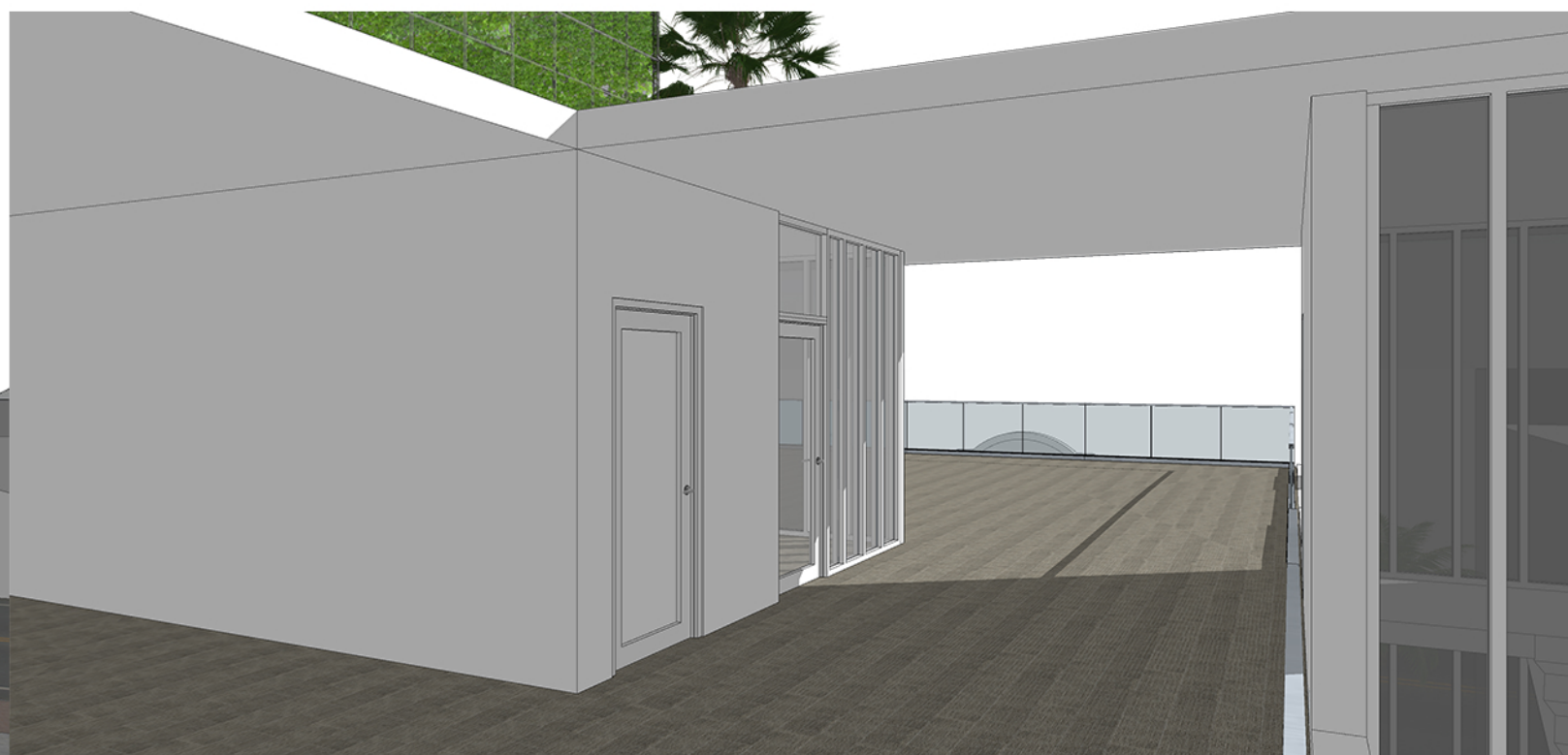
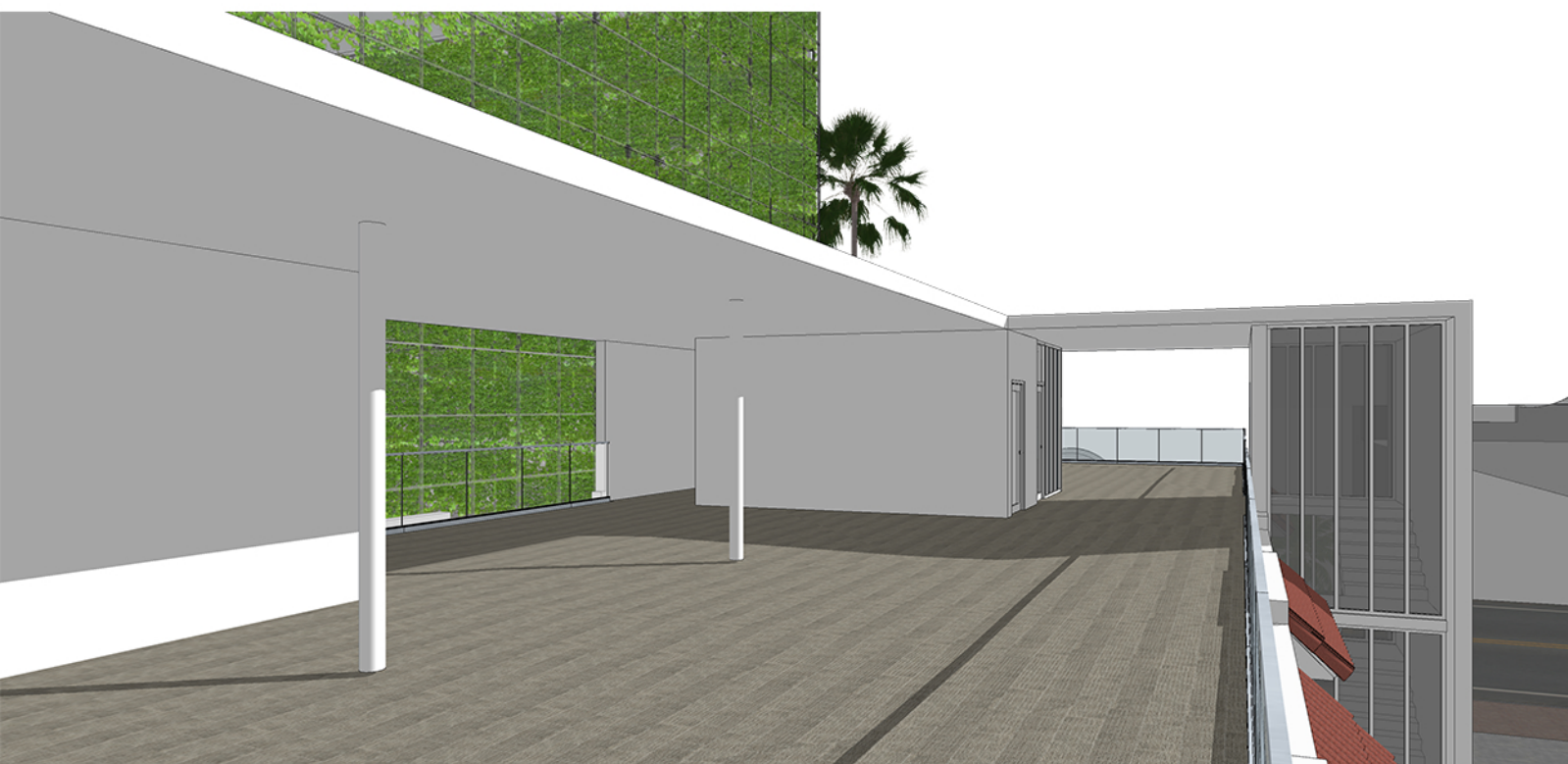


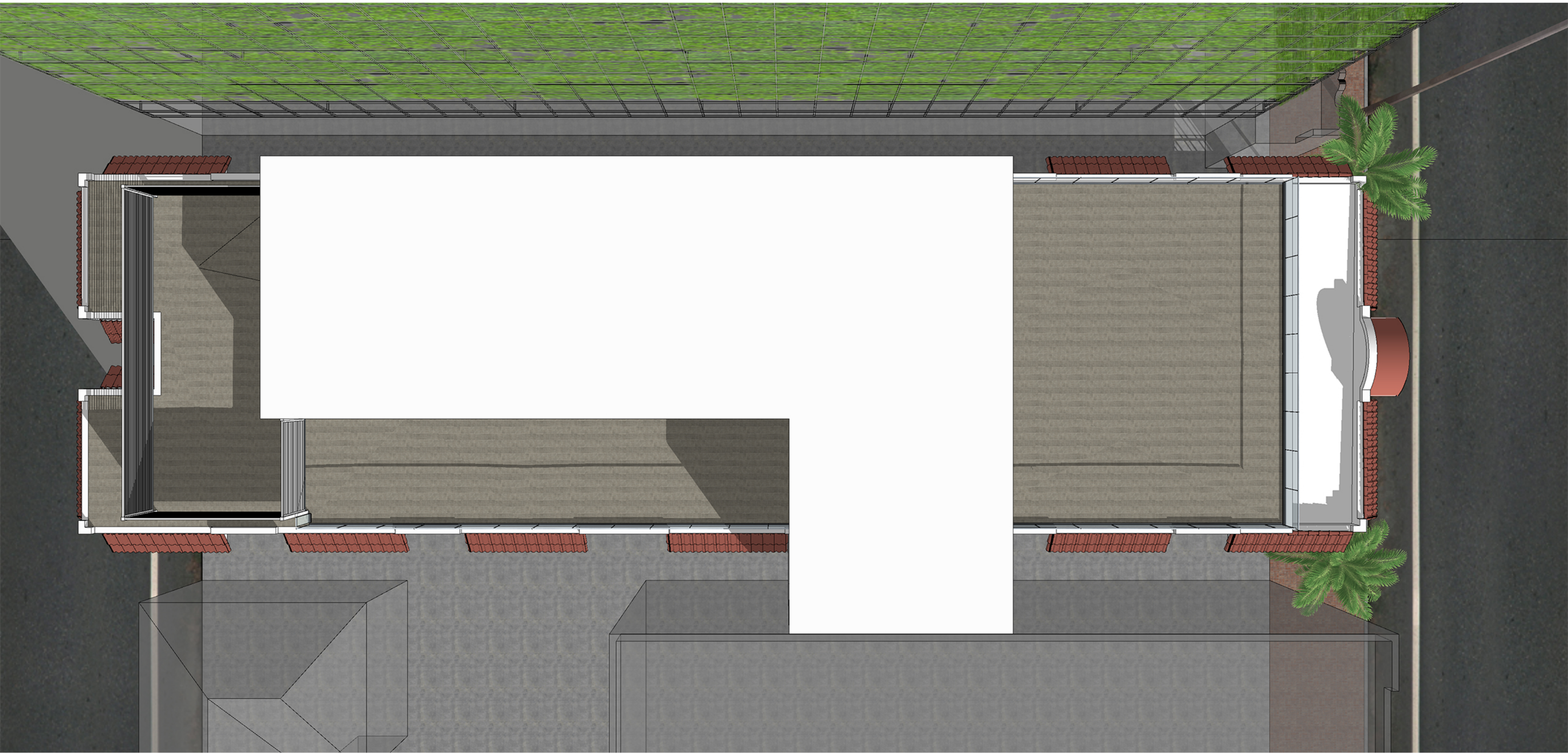


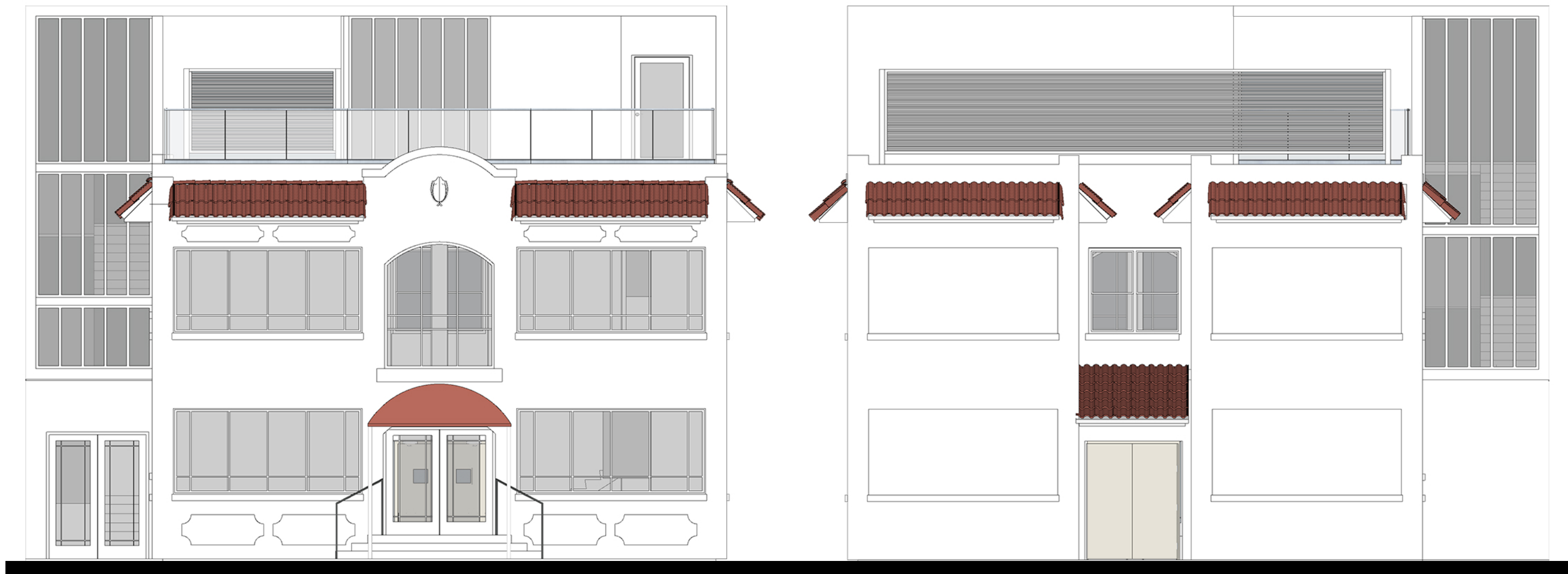
PROPOSED ROOFTOP FLOOR PLAN  
SCALE: 3/16" = 1'-0"

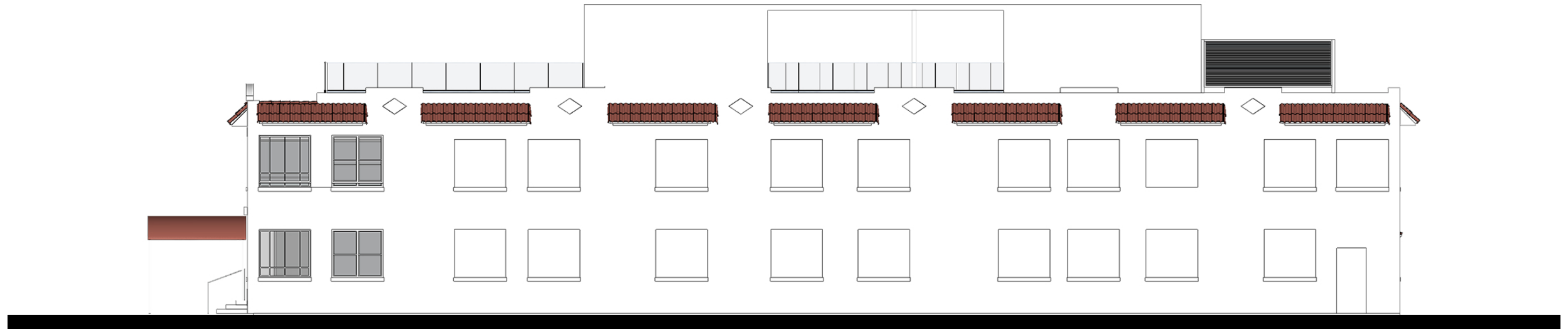
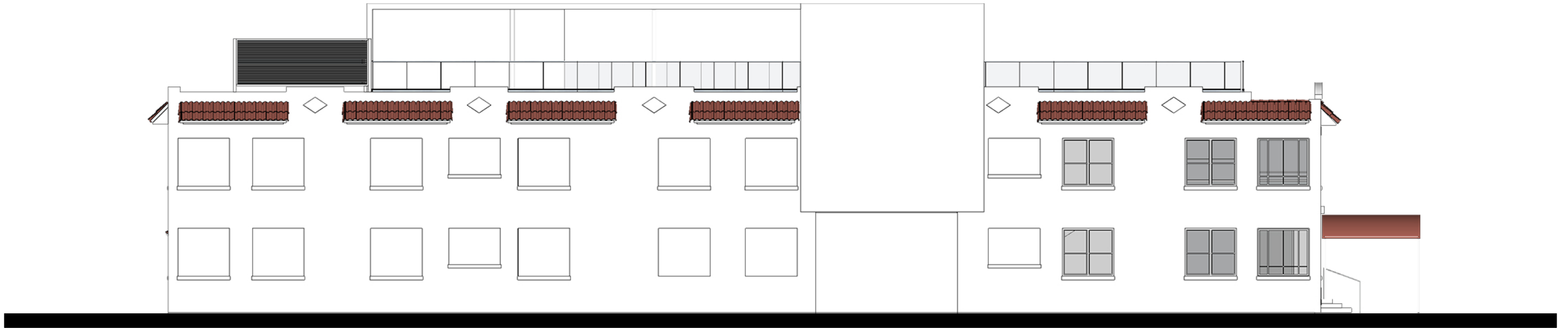
| OCCUPANCY LOAD CALCULATION (PRELIMINARY)                                                                                                                     |                             |                |          |                    |                       |                      |                                            |                       |                      |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|----------|--------------------|-----------------------|----------------------|--------------------------------------------|-----------------------|----------------------|--------------------|
| GROUP A-2: ASSEMBLY OCCUPANCY / SUBGROUP: RESTAURANT                                                                                                         |                             |                |          |                    |                       |                      |                                            |                       |                      |                    |
| NOTE: BASED ON NFPA 101, F.F.P.C. 2020 7th ED TBL. 7.3.1.2 AND 2020 F.B.C. TABLE 1004.1.2<br>OCCUPANCY FACTOR WAS USED TO DETERMINED HIGHEST OCCUPANCY LOAD. |                             |                |          | AS PER F.B.C. 2020 |                       |                      | AS PER F.F.B.C. 2020<br>/ N.F.P.A 101 2020 |                       |                      |                    |
| ID                                                                                                                                                           | ROOM                        | AREA           | FUNCTION | OCUPANT<br>LOAD    | NUMBER OF<br>OCUPANTS | TOTAL OF<br>OCUPANTS | OCUPANT<br>LOAD                            | NUMBER OF<br>OCUPANTS | TOTAL OF<br>OCUPANTS | NUMBER OF<br>SEATS |
| GROUND FLOOR                                                                                                                                                 |                             |                |          |                    |                       |                      |                                            |                       |                      |                    |
| 101                                                                                                                                                          | ENTRY HALL                  | 43.0 SQ.FT.    | ASSEMBLY | 7                  | 6.1                   | 7.0                  | 7                                          | 6.1                   | 7.0                  | -                  |
| 102                                                                                                                                                          | DINING AREA                 | 1,051.0 SQ.FT. | ASSEMBLY | 15                 | 70.1                  | 71.0                 | 15                                         | 70.1                  | 71.0                 | 56.0               |
| 103                                                                                                                                                          | DINING AREA                 | 1,116.0 SQ.FT. | ASSEMBLY | 15                 | 74.4                  | 75.0                 | 15                                         | 74.4                  | 75.0                 | 38.0               |
| 104                                                                                                                                                          | VESTIBULE                   | 84.0 SQ.FT.    | ASSEMBLY | 7                  | 12.0                  | 12.0                 | 7                                          | 12.0                  | 12.0                 | -                  |
| 105                                                                                                                                                          | BAR                         | 175.0 SQ.FT.   | KITCHEN  | 200                | 0.9                   | 1.0                  | 100                                        | 1.8                   | 2.0                  | -                  |
|                                                                                                                                                              | - BAR SEATING AREA          | 187.0 SQ.FT.   | ASSEMBLY | 7                  | 26.7                  | 27.0                 | 7                                          | 26.7                  | 27.0                 | 16.0               |
|                                                                                                                                                              | - BACK-OF-HOUSE             | 560.0 SQ.FT.   | KITCHEN  | 200                | 2.8                   | 3.0                  | 100                                        | 5.6                   | 6.0                  | -                  |
| 106                                                                                                                                                          | MALE RESTROOMS              | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| 107                                                                                                                                                          | FEMALE RESTROOMS            | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| SUB-TOTAL PATRONS / OCCUPANTS                                                                                                                                |                             |                |          |                    |                       | 196.0                |                                            |                       | 200.0                | 110.0              |
| SECOND FLOOR                                                                                                                                                 |                             |                |          |                    |                       |                      |                                            |                       |                      |                    |
| 201                                                                                                                                                          | DINING AREA                 | 2,025.0 SQ.FT. | ASSEMBLY | 15                 | 135.0                 | 135.0                | 15                                         | 135.0                 | 135.0                | 107.0              |
| 202                                                                                                                                                          | CHEF TABLE (OPEN KITCHEN)   | 218.0 SQ.FT.   | KITCHEN  | 200                | 1.1                   | 2.0                  | 100                                        | 2.2                   | 3.0                  | -                  |
|                                                                                                                                                              | - BACK-OF-HOUSE             | 1,074.0 SQ.FT. | KITCHEN  | 200                | 5.4                   | 6.0                  | 100                                        | 10.7                  | 11.0                 | -                  |
| 203                                                                                                                                                          | MALE RESTROOMS              | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| 204                                                                                                                                                          | FEMALE RESTROOMS            | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| SUB-TOTAL PATRONS / OCCUPANTS                                                                                                                                |                             |                |          |                    |                       | 143.0                |                                            |                       | 149.0                | 107.0              |
| ROOFTOP FLOOR                                                                                                                                                |                             |                |          |                    |                       |                      |                                            |                       |                      |                    |
| 301                                                                                                                                                          | LOBBY                       | 94.0 SQ.FT.    | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| 302                                                                                                                                                          | ROOFTOP DINING (OPEN AREA)  | 1,107.0 SQ.FT. | ASSEMBLY | 15                 | 73.8                  | 74.0                 | 15                                         | 73.8                  | 74.0                 | 60.0               |
| 303                                                                                                                                                          | ROOFTOP DINING (COVERED A.) | 577.0 SQ.FT.   | ASSEMBLY | 15                 | 38.5                  | 39.0                 | 15                                         | 38.5                  | 39.0                 | 30.0               |
| 304                                                                                                                                                          | BAR                         | 175.0 SQ.FT.   | KITCHEN  | 200                | 0.9                   | 1.0                  | 100                                        | 1.8                   | 2.0                  | -                  |
|                                                                                                                                                              | - BAR SEATING AREA          | 179.0 SQ.FT.   | ASSEMBLY | 7                  | 25.6                  | 26.0                 | 7                                          | 25.6                  | 26.0                 | 11.0               |
|                                                                                                                                                              | - BACK-OF-HOUSE             | 252.0 SQ.FT.   | KITCHEN  | 200                | 1.3                   | 2.0                  | 100                                        | 2.5                   | 3.0                  | -                  |
| 203                                                                                                                                                          | MALE RESTROOMS              | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| 204                                                                                                                                                          | FEMALE RESTROOMS            | - SQ.FT.       | -        | -                  | -                     | -                    | -                                          | -                     | -                    | -                  |
| SUB-TOTAL PATRONS / OCCUPANTS                                                                                                                                |                             |                |          |                    |                       | 142.0                |                                            |                       | 144.0                | 101.0              |
| TOTAL PATRONS / OCCUPANTS                                                                                                                                    |                             |                |          |                    |                       | 481.0                |                                            |                       | 493.0                | 318.0              |













## **APPENDIX G**

### **ITETripGen Web Application Worksheets and Graphs**

624 Collins Avenue

07/05/23

| ITE Code / Description                               | Quantity | Units | Peak Hour Trips |     |       | Multimodal<br>Reduction | Net Peak Hour Trips |     |       |
|------------------------------------------------------|----------|-------|-----------------|-----|-------|-------------------------|---------------------|-----|-------|
|                                                      |          |       | In              | Out | Total |                         | In                  | Out | Total |
| 931 / Fine Dinning Restaurant - Weekday Daily Total  | 318      | Seats | 413             | 414 | 827   | 20%                     | 330                 | 331 | 661   |
| 931 / Fine Dinning Restaurant - Weekday AM Peak Hour | 318      | Seats | 48              | 33  | 81    | 20%                     | 38                  | 26  | 64    |
| 931 / Fine Dinning Restaurant - Weekday PM Peak Hour | 318      | Seats | 56              | 38  | 94    | 20%                     | 45                  | 30  | 75    |
| 931 / Fine Dinning Restaurant - Weekend Daily Total  | 318      | Seats | 409             | 408 | 817   | 20%                     | 327                 | 326 | 653   |
| 931 / Fine Dinning Restaurant - Weekend Peak Hour    | 318      | Seats | 62              | 43  | 105   | 20%                     | 50                  | 34  | 84    |

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# Land Use: 931

## Fine Dining Restaurant

---

### Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

### Additional Data

If the fine dining restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

### Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976, 1053

Fine Dining Restaurant

(931)

Vehicle Trip Ends vs: Seats

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 9

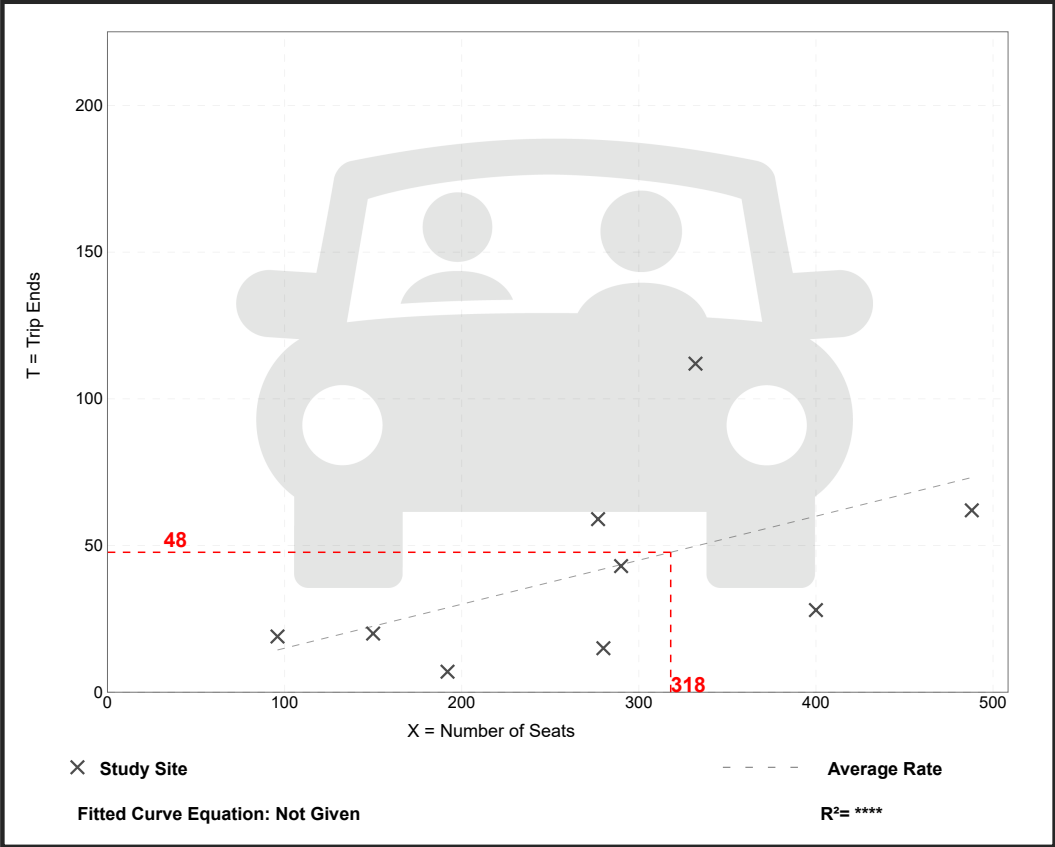
Avg. Num. of Seats: 278

Directional Distribution: 69% entering, 31% exiting

Vehicle Trip Generation per Seat

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.15         | 0.04 - 0.34    | 0.10               |

Data Plot and Equation



## Fine Dining Restaurant (931)

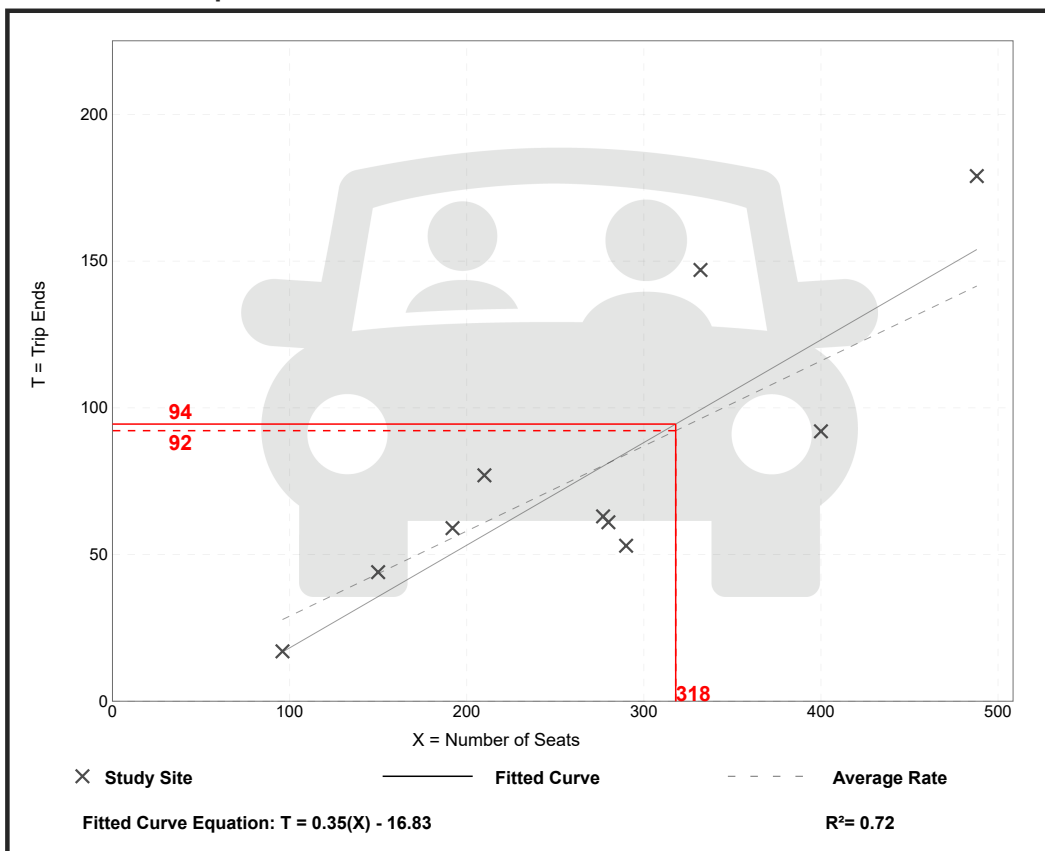
**Vehicle Trip Ends vs:** Seats  
**On a:** Weekday,  
 PM Peak Hour of Generator

**Setting/Location:** General Urban/Suburban  
 Number of Studies: 10  
 Avg. Num. of Seats: 272  
 Directional Distribution: 59% entering, 41% exiting

### Vehicle Trip Generation per Seat

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.29         | 0.18 - 0.44    | 0.09               |

### Data Plot and Equation



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## Fine Dining Restaurant (931)

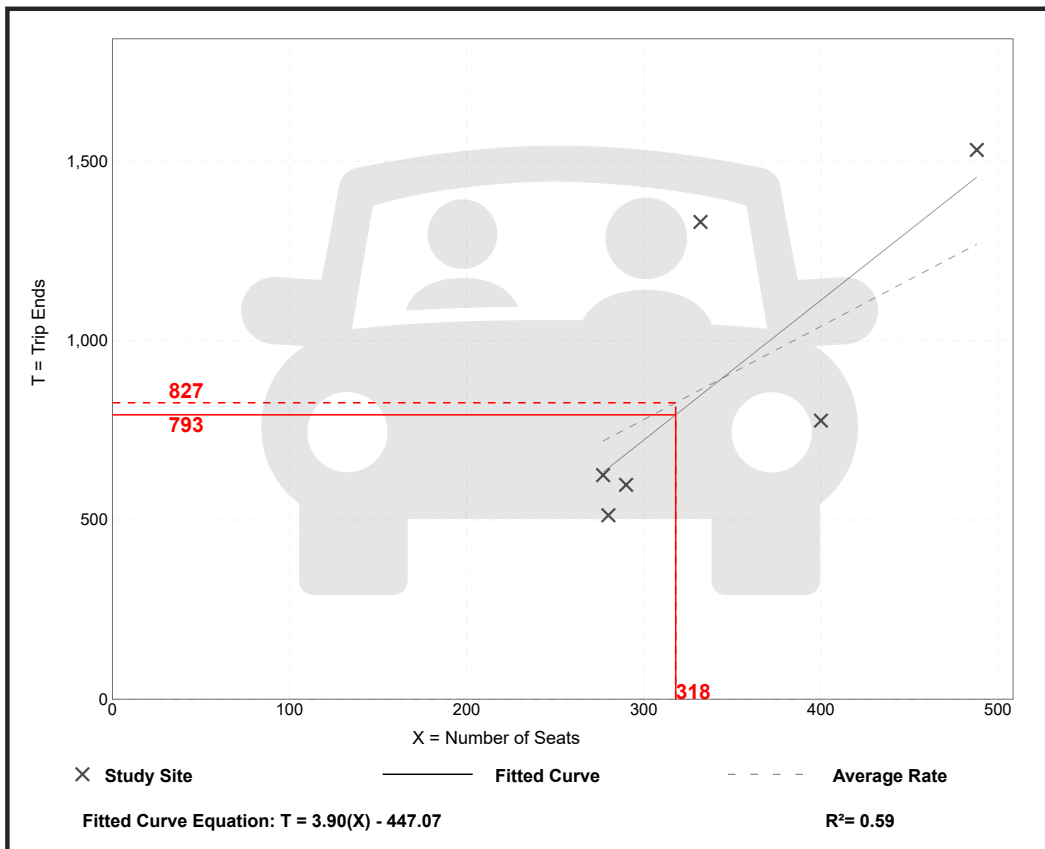
Vehicle Trip Ends vs: **Seats**  
On a: **Weekday**

Setting/Location: **General Urban/Suburban**  
Number of Studies: 6  
Avg. Num. of Seats: 345  
Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per Seat

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 2.60         | 1.83 - 4.01    | 0.85               |

### Data Plot and Equation



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Fine Dining Restaurant

(931)

Vehicle Trip Ends vs: Seats

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 6

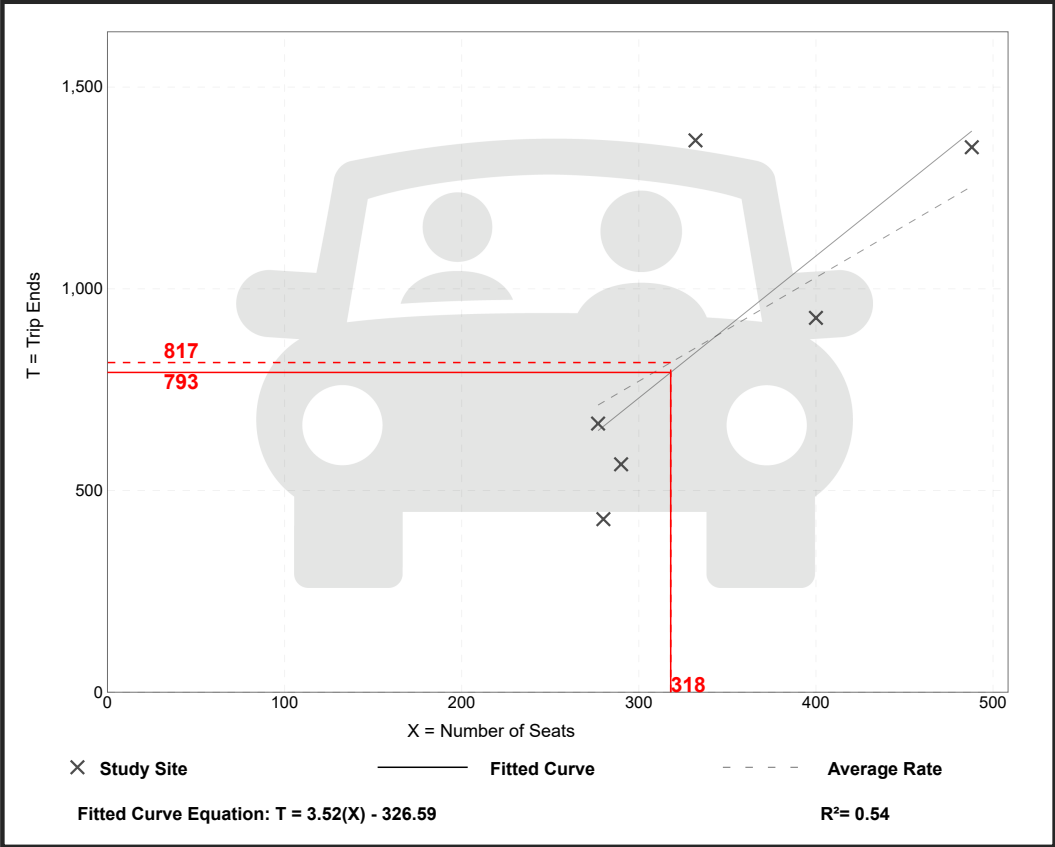
Avg. Num. of Seats: 345

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 2.57         | 1.53 - 4.12    | 0.86               |

Data Plot and Equation



# Land Use: 931

## Fine Dining Restaurant

---

### Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

### Additional Data

If the fine dining restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

### Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976, 1053

## Fine Dining Restaurant (931)

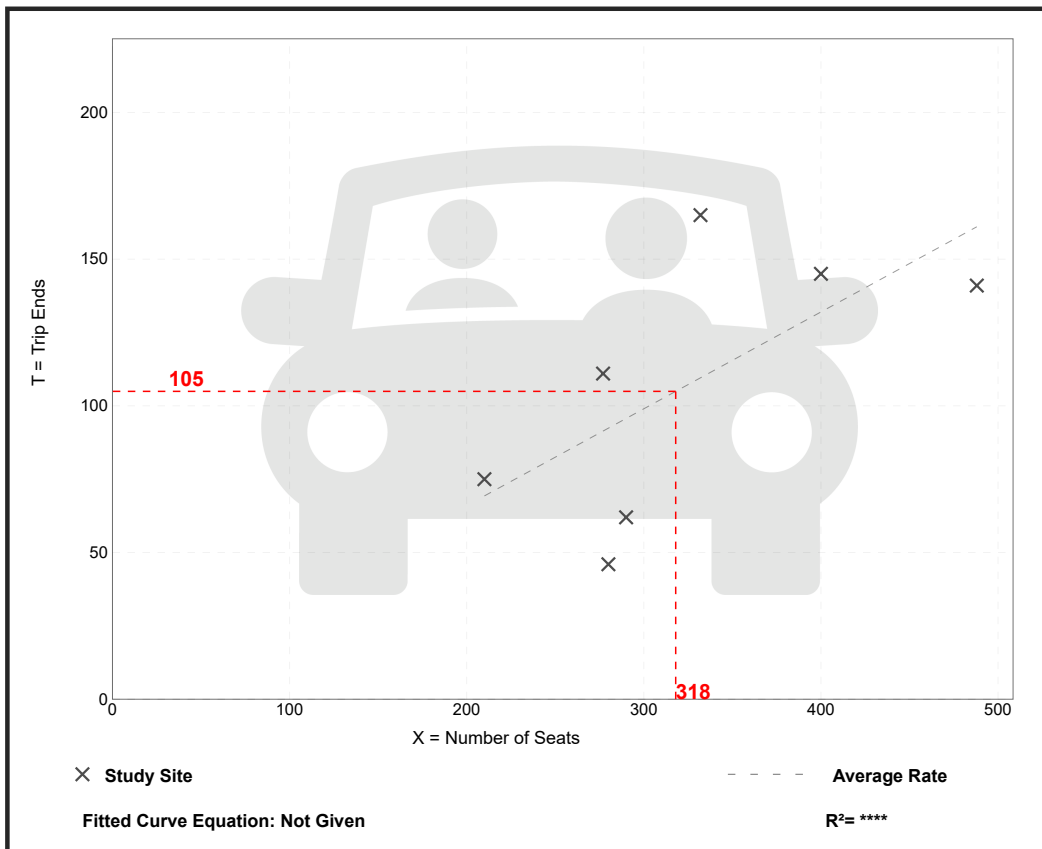
**Vehicle Trip Ends vs: Seats**  
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**  
 Number of Studies: 7  
 Avg. Num. of Seats: 325  
 Directional Distribution: 59% entering, 41% exiting

### Vehicle Trip Generation per Seat

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.33         | 0.16 - 0.50    | 0.11               |

### Data Plot and Equation



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## **APPENDIX H**

### **Coordination with City of Miami Beach Parking Department**



Alfredo Cely &lt;alfredo@alfka.com&gt;

---

**CUP Application No. PB23-0621, 624 Collins Avenue - Meeting with Parking Department re: Valet Operations and Available On and Off-Street Parking Spaces**

---

**Alejandro Moreno** <amoreno@brzoninglaw.com>

Wed, Jul 19, 2023 at 5:13 PM

To: "Beltran, Monica" &lt;MonicaBeltran@miamibeachfl.gov&gt;, "Ventura, Alberto" &lt;AlbertoVentura@miamibeachfl.gov&gt;

Cc: Alfredo Cely &lt;alfredo@alfka.com&gt;, Elvys Penton &lt;epenton@beilinsonarchitectspa.com&gt;, "Marlowe, James" &lt;JamesMarlowe@miamibeachfl.gov&gt;, Ricardo Gijon &lt;rgijon@beilinsonarchitectspa.com&gt;, Yeidy Montesino &lt;ymontesino@brzoninglaw.com&gt;, Diana Ramos &lt;DRamos@brzoninglaw.com&gt;, Aurora Leigh &lt;aleigh@fndev.com&gt;, "Michael W. Larkin" &lt;MLarkin@brzoninglaw.com&gt;, "Webster, Harrison" &lt;HarrisonWebster@miamibeachfl.gov&gt;, "Rodriguez, Otniel" &lt;OtnielRodriguez@miamibeachfl.gov&gt;

Good afternoon Monica and Alberto,

Thank you again for meeting with us today to discuss this project and the potential to rent up to three parking spaces along portion of Collins Avenue that is in front of this property.

During the meeting, you confirmed the permissible use of two spots as valet spots and one spot as a ride-share/passenger loading spot. We also discussed the recent commercial loading space added to the front area of the property which the department will allow us to use as a flex-space, with certain hours used for commercial loading and another set of hours for passenger use.

Again, we appreciate your time and assistance. We will inform you once we have a signed agreement with a valet operator.

Thank you.

-Alejandro



ZONING, LAND USE AND ENVIRONMENTAL LAW

**Alejandro Moreno**

Bercow Radell Fernandez Larkin + Tapanes

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**From:** Alejandro Moreno**Sent:** Tuesday, July 18, 2023 3:36 PM**To:** Marlowe, James <JamesMarlowe@miamibeachfl.gov>; Beltran, Monica <MonicaBeltran@miamibeachfl.gov>**Cc:** Alfredo Cely <alfredo@alfka.com>; Elvys Penton <epenton@beilinsonarchitectspa.com>; Ricardo Gijon <rgijon@beilinsonarchitectspa.com>; Yeidy Montesino <ymontesino@brzoninglaw.com>; Diana Ramos <DRamos@brzoninglaw.com>; Ventura, Alberto <AlbertoVentura@miamibeachfl.gov>**Subject:** RE: CUP Application No. PB23-0621, 624 Collins Avenue - Meeting with Parking Department re: Valet Operations and Available On and Off-Street Parking Spaces

Good afternoon James and Monica,

Ahead of tomorrow's meeting, I wanted to provide you with the latest version of the project plans for your reference.

Thank you.



## **APPENDIX I**

### **Traffic Volume and Turning Movement Counts**

**VOLUME**

Collins Ave/SR A1A Bet. 6th St &amp; 7th St

Day: Thursday  
Date: 7/27/2023City: Miami Beach  
Project #: FL23\_140335\_001

| DAILY TOTALS |       |       |    |     | NB    | SB    |           |       |       |    |     | EB    | WB  |  |  |  |  |  | Total  |
|--------------|-------|-------|----|-----|-------|-------|-----------|-------|-------|----|-----|-------|-----|--|--|--|--|--|--------|
|              |       |       |    |     | 8,457 | 5,292 |           |       |       |    |     | 0     | 0   |  |  |  |  |  | 13,749 |
| AM Period    | NB    | SB    | EB | WB  | TOTAL |       | PM Period | NB    | SB    | EB | WB  | TOTAL |     |  |  |  |  |  |        |
| 0:00         | 73    | 45    |    |     | 118   |       | 12:00     | 124   | 73    |    |     | 197   |     |  |  |  |  |  |        |
| 0:15         | 70    | 28    |    |     | 98    |       | 12:15     | 135   | 68    |    |     | 203   |     |  |  |  |  |  |        |
| 0:30         | 67    | 40    |    |     | 107   |       | 12:30     | 134   | 84    |    |     | 218   |     |  |  |  |  |  |        |
| 0:45         | 47    | 257   | 31 | 144 | 78    | 401   | 12:45     | 115   | 508   | 56 | 281 | 171   | 789 |  |  |  |  |  |        |
| 1:00         | 54    | 24    |    |     | 78    |       | 13:00     | 115   | 84    |    |     | 199   |     |  |  |  |  |  |        |
| 1:15         | 50    | 17    |    |     | 67    |       | 13:15     | 120   | 75    |    |     | 195   |     |  |  |  |  |  |        |
| 1:30         | 44    | 28    |    |     | 72    |       | 13:30     | 118   | 86    |    |     | 204   |     |  |  |  |  |  |        |
| 1:45         | 29    | 177   | 31 | 100 | 60    | 277   | 13:45     | 115   | 468   | 86 | 331 | 201   | 799 |  |  |  |  |  |        |
| 2:00         | 25    | 17    |    |     | 42    |       | 14:00     | 122   | 62    |    |     | 184   |     |  |  |  |  |  |        |
| 2:15         | 31    | 20    |    |     | 51    |       | 14:15     | 120   | 93    |    |     | 213   |     |  |  |  |  |  |        |
| 2:30         | 24    | 22    |    |     | 46    |       | 14:30     | 100   | 74    |    |     | 174   |     |  |  |  |  |  |        |
| 2:45         | 19    | 99    | 25 | 84  | 44    | 183   | 14:45     | 117   | 459   | 80 | 309 | 197   | 768 |  |  |  |  |  |        |
| 3:00         | 27    | 18    |    |     | 45    |       | 15:00     | 115   | 73    |    |     | 188   |     |  |  |  |  |  |        |
| 3:15         | 24    | 26    |    |     | 50    |       | 15:15     | 135   | 88    |    |     | 223   |     |  |  |  |  |  |        |
| 3:30         | 31    | 25    |    |     | 56    |       | 15:30     | 111   | 70    |    |     | 181   |     |  |  |  |  |  |        |
| 3:45         | 21    | 103   | 17 | 86  | 38    | 189   | 15:45     | 118   | 479   | 76 | 307 | 194   | 786 |  |  |  |  |  |        |
| 4:00         | 18    | 28    |    |     | 46    |       | 16:00     | 142   | 78    |    |     | 220   |     |  |  |  |  |  |        |
| 4:15         | 12    | 13    |    |     | 25    |       | 16:15     | 125   | 77    |    |     | 202   |     |  |  |  |  |  |        |
| 4:30         | 25    | 26    |    |     | 51    |       | 16:30     | 123   | 83    |    |     | 206   |     |  |  |  |  |  |        |
| 4:45         | 29    | 84    | 11 | 78  | 40    | 162   | 16:45     | 96    | 486   | 83 | 321 | 179   | 807 |  |  |  |  |  |        |
| 5:00         | 19    | 23    |    |     | 42    |       | 17:00     | 117   | 77    |    |     | 194   |     |  |  |  |  |  |        |
| 5:15         | 21    | 8     |    |     | 29    |       | 17:15     | 130   | 76    |    |     | 206   |     |  |  |  |  |  |        |
| 5:30         | 35    | 15    |    |     | 50    |       | 17:30     | 124   | 80    |    |     | 204   |     |  |  |  |  |  |        |
| 5:45         | 31    | 106   | 21 | 67  | 52    | 173   | 17:45     | 110   | 481   | 70 | 303 | 180   | 784 |  |  |  |  |  |        |
| 6:00         | 42    | 17    |    |     | 59    |       | 18:00     | 120   | 61    |    |     | 181   |     |  |  |  |  |  |        |
| 6:15         | 49    | 26    |    |     | 75    |       | 18:15     | 103   | 77    |    |     | 180   |     |  |  |  |  |  |        |
| 6:30         | 47    | 23    |    |     | 70    |       | 18:30     | 96    | 80    |    |     | 176   |     |  |  |  |  |  |        |
| 6:45         | 69    | 207   | 32 | 98  | 101   | 305   | 18:45     | 86    | 405   | 63 | 281 | 149   | 686 |  |  |  |  |  |        |
| 7:00         | 77    | 34    |    |     | 111   |       | 19:00     | 93    | 67    |    |     | 160   |     |  |  |  |  |  |        |
| 7:15         | 47    | 42    |    |     | 89    |       | 19:15     | 121   | 63    |    |     | 184   |     |  |  |  |  |  |        |
| 7:30         | 86    | 34    |    |     | 120   |       | 19:30     | 107   | 78    |    |     | 185   |     |  |  |  |  |  |        |
| 7:45         | 76    | 286   | 56 | 166 | 132   | 452   | 19:45     | 100   | 421   | 54 | 262 | 154   | 683 |  |  |  |  |  |        |
| 8:00         | 73    | 52    |    |     | 125   |       | 20:00     | 101   | 84    |    |     | 185   |     |  |  |  |  |  |        |
| 8:15         | 85    | 49    |    |     | 134   |       | 20:15     | 126   | 66    |    |     | 192   |     |  |  |  |  |  |        |
| 8:30         | 109   | 54    |    |     | 163   |       | 20:30     | 128   | 57    |    |     | 185   |     |  |  |  |  |  |        |
| 8:45         | 95    | 362   | 43 | 198 | 138   | 560   | 20:45     | 106   | 461   | 84 | 291 | 190   | 752 |  |  |  |  |  |        |
| 9:00         | 93    | 68    |    |     | 161   |       | 21:00     | 112   | 68    |    |     | 180   |     |  |  |  |  |  |        |
| 9:15         | 93    | 65    |    |     | 158   |       | 21:15     | 106   | 63    |    |     | 169   |     |  |  |  |  |  |        |
| 9:30         | 81    | 47    |    |     | 128   |       | 21:30     | 105   | 78    |    |     | 183   |     |  |  |  |  |  |        |
| 9:45         | 90    | 357   | 70 | 250 | 160   | 607   | 21:45     | 119   | 442   | 63 | 272 | 182   | 714 |  |  |  |  |  |        |
| 10:00        | 107   | 61    |    |     | 168   |       | 22:00     | 133   | 57    |    |     | 190   |     |  |  |  |  |  |        |
| 10:15        | 115   | 73    |    |     | 188   |       | 22:15     | 101   | 61    |    |     | 162   |     |  |  |  |  |  |        |
| 10:30        | 115   | 64    |    |     | 179   |       | 22:30     | 103   | 55    |    |     | 158   |     |  |  |  |  |  |        |
| 10:45        | 106   | 443   | 67 | 265 | 173   | 708   | 22:45     | 131   | 468   | 51 | 224 | 182   | 692 |  |  |  |  |  |        |
| 11:00        | 123   | 83    |    |     | 206   |       | 23:00     | 115   | 52    |    |     | 167   |     |  |  |  |  |  |        |
| 11:15        | 117   | 104   |    |     | 221   |       | 23:15     | 108   | 60    |    |     | 168   |     |  |  |  |  |  |        |
| 11:30        | 122   | 95    |    |     | 217   |       | 23:30     | 89    | 46    |    |     | 135   |     |  |  |  |  |  |        |
| 11:45        | 125   | 487   | 83 | 365 | 208   | 852   | 23:45     | 99    | 411   | 51 | 209 | 150   | 620 |  |  |  |  |  |        |
| TOTALS       | 2968  | 1901  |    |     | 4869  |       | TOTALS    | 5489  | 3391  |    |     | 8880  |     |  |  |  |  |  |        |
| SPLIT %      | 61.0% | 39.0% |    |     | 35.4% |       | SPLIT %   | 61.8% | 38.2% |    |     | 64.6% |     |  |  |  |  |  |        |

| DAILY TOTALS    |       |       |       |       | NB    | SB    |                 |       |       |       |       | EB    | WB |  |  |  |  |  | Total  |
|-----------------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|----|--|--|--|--|--|--------|
|                 |       |       |       |       | 8,457 | 5,292 |                 |       |       |       |       | 0     | 0  |  |  |  |  |  | 13,749 |
| AM Peak Hour    | 11:45 | 11:00 |       |       | 11:00 |       | PM Peak Hour    | 12:00 | 13:00 |       |       | 15:45 |    |  |  |  |  |  |        |
| AM Pk Volume    | 518   | 365   |       |       | 852   |       | PM Pk Volume    | 508   | 331   |       |       | 822   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.959 | 0.877 |       |       | 0.964 |       | Pk Hr Factor    | 0.941 | 0.962 |       |       | 0.934 |    |  |  |  |  |  |        |
| 7 - 9 Volume    | 648   | 364   | 0     | 0     | 1012  |       | 4 - 6 Volume    | 967   | 624   | 0     | 0     | 1591  |    |  |  |  |  |  |        |
| 7 - 9 Peak Hour | 8:00  | 7:45  |       |       | 8:00  |       | 4 - 6 Peak Hour | 16:00 | 16:00 |       |       | 16:00 |    |  |  |  |  |  |        |
| 7 - 9 Pk Volume | 362   | 211   | 0     | 0     | 560   |       | 4 - 6 Pk Volume | 486   | 321   | 0     | 0     | 807   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.830 | 0.942 | 0.000 | 0.000 | 0.859 |       | Pk Hr Factor    | 0.856 | 0.967 | 0.000 | 0.000 | 0.917 |    |  |  |  |  |  |        |

**VOLUME**

Collins Ave/SR A1A Bet. 6th St &amp; 7th St

Day: Friday

Date: 7/28/2023

City: Miami Beach

Project #: FL23\_140335\_001

| DAILY TOTALS |       |       |    |     | NB    | SB    |           |       |       |    |     | EB    | WB  |  |  |  |  |  | Total  |
|--------------|-------|-------|----|-----|-------|-------|-----------|-------|-------|----|-----|-------|-----|--|--|--|--|--|--------|
|              |       |       |    |     | 8,957 | 6,166 |           |       |       |    |     | 0     | 0   |  |  |  |  |  | 15,123 |
| AM Period    | NB    | SB    | EB | WB  | TOTAL |       | PM Period | NB    | SB    | EB | WB  | TOTAL |     |  |  |  |  |  |        |
| 0:00         | 97    | 52    |    |     | 149   |       | 12:00     | 118   | 98    |    |     | 216   |     |  |  |  |  |  |        |
| 0:15         | 80    | 41    |    |     | 121   |       | 12:15     | 120   | 86    |    |     | 206   |     |  |  |  |  |  |        |
| 0:30         | 91    | 50    |    |     | 141   |       | 12:30     | 106   | 94    |    |     | 200   |     |  |  |  |  |  |        |
| 0:45         | 70    | 338   | 48 | 191 | 118   | 529   | 12:45     | 131   | 475   | 83 | 361 | 214   | 836 |  |  |  |  |  |        |
| 1:00         | 67    | 44    |    |     | 111   |       | 13:00     | 127   | 65    |    |     | 192   |     |  |  |  |  |  |        |
| 1:15         | 40    | 43    |    |     | 83    |       | 13:15     | 124   | 93    |    |     | 217   |     |  |  |  |  |  |        |
| 1:30         | 47    | 40    |    |     | 87    |       | 13:30     | 100   | 73    |    |     | 173   |     |  |  |  |  |  |        |
| 1:45         | 32    | 186   | 34 | 161 | 66    | 347   | 13:45     | 122   | 473   | 84 | 315 | 206   | 788 |  |  |  |  |  |        |
| 2:00         | 45    | 39    |    |     | 84    |       | 14:00     | 115   | 80    |    |     | 195   |     |  |  |  |  |  |        |
| 2:15         | 47    | 21    |    |     | 68    |       | 14:15     | 128   | 71    |    |     | 199   |     |  |  |  |  |  |        |
| 2:30         | 24    | 27    |    |     | 51    |       | 14:30     | 121   | 87    |    |     | 208   |     |  |  |  |  |  |        |
| 2:45         | 29    | 145   | 35 | 122 | 64    | 267   | 14:45     | 126   | 490   | 79 | 317 | 205   | 807 |  |  |  |  |  |        |
| 3:00         | 30    | 30    |    |     | 60    |       | 15:00     | 123   | 74    |    |     | 197   |     |  |  |  |  |  |        |
| 3:15         | 31    | 22    |    |     | 53    |       | 15:15     | 123   | 75    |    |     | 198   |     |  |  |  |  |  |        |
| 3:30         | 21    | 31    |    |     | 52    |       | 15:30     | 144   | 77    |    |     | 221   |     |  |  |  |  |  |        |
| 3:45         | 16    | 98    | 24 | 107 | 40    | 205   | 15:45     | 146   | 536   | 73 | 299 | 219   | 835 |  |  |  |  |  |        |
| 4:00         | 33    | 35    |    |     | 68    |       | 16:00     | 125   | 79    |    |     | 204   |     |  |  |  |  |  |        |
| 4:15         | 23    | 21    |    |     | 44    |       | 16:15     | 106   | 84    |    |     | 190   |     |  |  |  |  |  |        |
| 4:30         | 25    | 20    |    |     | 45    |       | 16:30     | 120   | 94    |    |     | 214   |     |  |  |  |  |  |        |
| 4:45         | 24    | 105   | 26 | 102 | 50    | 207   | 16:45     | 117   | 468   | 76 | 333 | 193   | 801 |  |  |  |  |  |        |
| 5:00         | 32    | 19    |    |     | 51    |       | 17:00     | 152   | 78    |    |     | 230   |     |  |  |  |  |  |        |
| 5:15         | 39    | 17    |    |     | 56    |       | 17:15     | 118   | 90    |    |     | 208   |     |  |  |  |  |  |        |
| 5:30         | 34    | 26    |    |     | 60    |       | 17:30     | 137   | 99    |    |     | 236   |     |  |  |  |  |  |        |
| 5:45         | 40    | 145   | 28 | 90  | 68    | 235   | 17:45     | 129   | 536   | 83 | 350 | 212   | 886 |  |  |  |  |  |        |
| 6:00         | 34    | 34    |    |     | 68    |       | 18:00     | 129   | 83    |    |     | 212   |     |  |  |  |  |  |        |
| 6:15         | 50    | 30    |    |     | 80    |       | 18:15     | 131   | 84    |    |     | 215   |     |  |  |  |  |  |        |
| 6:30         | 49    | 34    |    |     | 83    |       | 18:30     | 106   | 81    |    |     | 187   |     |  |  |  |  |  |        |
| 6:45         | 66    | 199   | 38 | 136 | 104   | 335   | 18:45     | 118   | 484   | 81 | 329 | 199   | 813 |  |  |  |  |  |        |
| 7:00         | 75    | 43    |    |     | 118   |       | 19:00     | 110   | 92    |    |     | 202   |     |  |  |  |  |  |        |
| 7:15         | 51    | 53    |    |     | 104   |       | 19:15     | 114   | 85    |    |     | 199   |     |  |  |  |  |  |        |
| 7:30         | 95    | 39    |    |     | 134   |       | 19:30     | 81    | 61    |    |     | 142   |     |  |  |  |  |  |        |
| 7:45         | 65    | 286   | 56 | 191 | 121   | 477   | 19:45     | 114   | 419   | 87 | 325 | 201   | 744 |  |  |  |  |  |        |
| 8:00         | 96    | 57    |    |     | 153   |       | 20:00     | 113   | 78    |    |     | 191   |     |  |  |  |  |  |        |
| 8:15         | 84    | 69    |    |     | 153   |       | 20:15     | 117   | 85    |    |     | 202   |     |  |  |  |  |  |        |
| 8:30         | 90    | 80    |    |     | 170   |       | 20:30     | 112   | 79    |    |     | 191   |     |  |  |  |  |  |        |
| 8:45         | 98    | 368   | 54 | 260 | 152   | 628   | 20:45     | 111   | 453   | 87 | 329 | 198   | 782 |  |  |  |  |  |        |
| 9:00         | 94    | 71    |    |     | 165   |       | 21:00     | 118   | 96    |    |     | 214   |     |  |  |  |  |  |        |
| 9:15         | 86    | 64    |    |     | 150   |       | 21:15     | 126   | 86    |    |     | 212   |     |  |  |  |  |  |        |
| 9:30         | 100   | 65    |    |     | 165   |       | 21:30     | 115   | 62    |    |     | 177   |     |  |  |  |  |  |        |
| 9:45         | 85    | 365   | 64 | 264 | 149   | 629   | 21:45     | 122   | 481   | 71 | 315 | 193   | 796 |  |  |  |  |  |        |
| 10:00        | 99    | 84    |    |     | 183   |       | 22:00     | 124   | 56    |    |     | 180   |     |  |  |  |  |  |        |
| 10:15        | 111   | 74    |    |     | 185   |       | 22:15     | 123   | 79    |    |     | 202   |     |  |  |  |  |  |        |
| 10:30        | 102   | 64    |    |     | 166   |       | 22:30     | 124   | 75    |    |     | 199   |     |  |  |  |  |  |        |
| 10:45        | 115   | 427   | 89 | 311 | 204   | 738   | 22:45     | 130   | 501   | 78 | 288 | 208   | 789 |  |  |  |  |  |        |
| 11:00        | 135   | 90    |    |     | 225   |       | 23:00     | 142   | 88    |    |     | 230   |     |  |  |  |  |  |        |
| 11:15        | 115   | 74    |    |     | 189   |       | 23:15     | 127   | 87    |    |     | 214   |     |  |  |  |  |  |        |
| 11:30        | 96    | 99    |    |     | 195   |       | 23:30     | 123   | 59    |    |     | 182   |     |  |  |  |  |  |        |
| 11:45        | 126   | 472   | 91 | 354 | 217   | 826   | 23:45     | 115   | 507   | 82 | 316 | 197   | 823 |  |  |  |  |  |        |
| TOTALS       | 3134  | 2289  |    |     | 5423  |       | TOTALS    | 5823  | 3877  |    |     | 9700  |     |  |  |  |  |  |        |
| SPLIT %      | 57.8% | 42.2% |    |     | 35.9% |       | SPLIT %   | 60.0% | 40.0% |    |     | 64.1% |     |  |  |  |  |  |        |

| DAILY TOTALS    |       |       |       |       | NB    | SB    |                 |       |       |       |       | EB    | WB |  |  |  |  |  | Total  |
|-----------------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|----|--|--|--|--|--|--------|
|                 |       |       |       |       | 8,957 | 6,166 |                 |       |       |       |       | 0     | 0  |  |  |  |  |  | 15,123 |
| AM Peak Hour    | 11:00 | 11:30 |       |       | 11:45 |       | PM Peak Hour    | 15:15 | 12:00 |       |       | 17:00 |    |  |  |  |  |  |        |
| AM Pk Volume    | 472   | 374   |       |       | 839   |       | PM Pk Volume    | 538   | 361   |       |       | 886   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.874 | 0.944 |       |       | 0.967 |       | Pk Hr Factor    | 0.921 | 0.921 |       |       | 0.939 |    |  |  |  |  |  |        |
| 7 - 9 Volume    | 654   | 451   | 0     | 0     | 1105  |       | 4 - 6 Volume    | 1004  | 683   | 0     | 0     | 1687  |    |  |  |  |  |  |        |
| 7 - 9 Peak Hour | 8:00  | 7:45  |       |       | 8:00  |       | 4 - 6 Peak Hour | 17:00 | 17:00 |       |       | 17:00 |    |  |  |  |  |  |        |
| 7 - 9 Pk Volume | 368   | 262   | 0     | 0     | 628   |       | 4 - 6 Pk Volume | 536   | 350   | 0     | 0     | 886   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.939 | 0.819 | 0.000 | 0.000 | 0.924 |       | Pk Hr Factor    | 0.882 | 0.884 | 0.000 | 0.000 | 0.939 |    |  |  |  |  |  |        |

**VOLUME**

Collins Ave/SR A1A Bet. 6th St &amp; 7th St

Day: Saturday  
Date: 7/29/2023City: Miami Beach  
Project #: FL23\_140335\_001

| DAILY TOTALS |       |       |    |     | NB    | SB    |           |       |       |     |     | EB    | WB  |  |  |  |  |  | Total  |
|--------------|-------|-------|----|-----|-------|-------|-----------|-------|-------|-----|-----|-------|-----|--|--|--|--|--|--------|
|              |       |       |    |     | 9,611 | 7,425 |           |       |       |     |     | 0     | 0   |  |  |  |  |  | 17,036 |
| AM Period    | NB    | SB    | EB | WB  | TOTAL |       | PM Period | NB    | SB    | EB  | WB  | TOTAL |     |  |  |  |  |  | TOTAL  |
| 0:00         | 100   | 72    |    |     | 172   |       | 12:00     | 123   | 100   |     |     | 223   |     |  |  |  |  |  | 223    |
| 0:15         | 89    | 62    |    |     | 151   |       | 12:15     | 119   | 107   |     |     | 226   |     |  |  |  |  |  | 226    |
| 0:30         | 81    | 76    |    |     | 157   |       | 12:30     | 129   | 95    |     |     | 224   |     |  |  |  |  |  | 224    |
| 0:45         | 81    | 351   | 80 | 290 | 161   | 641   | 12:45     | 142   | 513   | 90  | 392 | 232   | 905 |  |  |  |  |  |        |
| 1:00         | 85    | 66    |    |     | 151   |       | 13:00     | 128   | 100   |     |     | 228   |     |  |  |  |  |  | 228    |
| 1:15         | 84    | 66    |    |     | 150   |       | 13:15     | 118   | 77    |     |     | 195   |     |  |  |  |  |  | 195    |
| 1:30         | 62    | 57    |    |     | 119   |       | 13:30     | 128   | 103   |     |     | 231   |     |  |  |  |  |  | 231    |
| 1:45         | 63    | 294   | 66 | 255 | 129   | 549   | 13:45     | 107   | 481   | 69  | 349 | 176   | 830 |  |  |  |  |  |        |
| 2:00         | 77    | 53    |    |     | 130   |       | 14:00     | 127   | 89    |     |     | 216   |     |  |  |  |  |  | 216    |
| 2:15         | 78    | 58    |    |     | 136   |       | 14:15     | 131   | 112   |     |     | 243   |     |  |  |  |  |  | 243    |
| 2:30         | 40    | 59    |    |     | 99    |       | 14:30     | 136   | 86    |     |     | 222   |     |  |  |  |  |  | 222    |
| 2:45         | 49    | 244   | 66 | 236 | 115   | 480   | 14:45     | 136   | 530   | 122 | 409 | 258   | 939 |  |  |  |  |  |        |
| 3:00         | 48    | 65    |    |     | 113   |       | 15:00     | 137   | 111   |     |     | 248   |     |  |  |  |  |  | 248    |
| 3:15         | 56    | 52    |    |     | 108   |       | 15:15     | 128   | 100   |     |     | 228   |     |  |  |  |  |  | 228    |
| 3:30         | 58    | 61    |    |     | 119   |       | 15:30     | 124   | 95    |     |     | 219   |     |  |  |  |  |  | 219    |
| 3:45         | 50    | 212   | 58 | 236 | 108   | 448   | 15:45     | 138   | 527   | 105 | 411 | 243   | 938 |  |  |  |  |  |        |
| 4:00         | 42    | 63    |    |     | 105   |       | 16:00     | 127   | 105   |     |     | 232   |     |  |  |  |  |  | 232    |
| 4:15         | 35    | 56    |    |     | 91    |       | 16:15     | 142   | 84    |     |     | 226   |     |  |  |  |  |  | 226    |
| 4:30         | 53    | 48    |    |     | 101   |       | 16:30     | 145   | 104   |     |     | 249   |     |  |  |  |  |  | 249    |
| 4:45         | 44    | 174   | 44 | 211 | 88    | 385   | 16:45     | 125   | 539   | 97  | 390 | 222   | 929 |  |  |  |  |  |        |
| 5:00         | 42    | 37    |    |     | 79    |       | 17:00     | 112   | 112   |     |     | 224   |     |  |  |  |  |  | 224    |
| 5:15         | 36    | 43    |    |     | 79    |       | 17:15     | 139   | 92    |     |     | 231   |     |  |  |  |  |  | 231    |
| 5:30         | 21    | 25    |    |     | 46    |       | 17:30     | 134   | 97    |     |     | 231   |     |  |  |  |  |  | 231    |
| 5:45         | 38    | 137   | 21 | 126 | 59    | 263   | 17:45     | 125   | 510   | 102 | 403 | 227   | 913 |  |  |  |  |  |        |
| 6:00         | 33    | 35    |    |     | 68    |       | 18:00     | 137   | 108   |     |     | 245   |     |  |  |  |  |  | 245    |
| 6:15         | 36    | 29    |    |     | 65    |       | 18:15     | 129   | 116   |     |     | 245   |     |  |  |  |  |  | 245    |
| 6:30         | 56    | 25    |    |     | 81    |       | 18:30     | 136   | 101   |     |     | 237   |     |  |  |  |  |  | 237    |
| 6:45         | 50    | 175   | 35 | 124 | 85    | 299   | 18:45     | 126   | 528   | 111 | 436 | 237   | 964 |  |  |  |  |  |        |
| 7:00         | 41    | 41    |    |     | 82    |       | 19:00     | 129   | 88    |     |     | 217   |     |  |  |  |  |  | 217    |
| 7:15         | 57    | 39    |    |     | 96    |       | 19:15     | 139   | 89    |     |     | 228   |     |  |  |  |  |  | 228    |
| 7:30         | 65    | 45    |    |     | 110   |       | 19:30     | 129   | 104   |     |     | 233   |     |  |  |  |  |  | 233    |
| 7:45         | 81    | 244   | 36 | 161 | 117   | 405   | 19:45     | 136   | 533   | 121 | 402 | 257   | 935 |  |  |  |  |  |        |
| 8:00         | 79    | 54    |    |     | 133   |       | 20:00     | 126   | 115   |     |     | 241   |     |  |  |  |  |  | 241    |
| 8:15         | 77    | 59    |    |     | 136   |       | 20:15     | 130   | 101   |     |     | 231   |     |  |  |  |  |  | 231    |
| 8:30         | 88    | 51    |    |     | 139   |       | 20:30     | 135   | 101   |     |     | 236   |     |  |  |  |  |  | 236    |
| 8:45         | 91    | 335   | 73 | 237 | 164   | 572   | 20:45     | 124   | 515   | 101 | 418 | 225   | 933 |  |  |  |  |  |        |
| 9:00         | 84    | 51    |    |     | 135   |       | 21:00     | 123   | 120   |     |     | 243   |     |  |  |  |  |  | 243    |
| 9:15         | 82    | 61    |    |     | 143   |       | 21:15     | 134   | 89    |     |     | 223   |     |  |  |  |  |  | 223    |
| 9:30         | 82    | 61    |    |     | 143   |       | 21:30     | 125   | 109   |     |     | 234   |     |  |  |  |  |  | 234    |
| 9:45         | 102   | 350   | 55 | 228 | 157   | 578   | 21:45     | 95    | 477   | 79  | 397 | 174   | 874 |  |  |  |  |  |        |
| 10:00        | 131   | 74    |    |     | 205   |       | 22:00     | 133   | 96    |     |     | 229   |     |  |  |  |  |  | 229    |
| 10:15        | 118   | 54    |    |     | 172   |       | 22:15     | 98    | 103   |     |     | 201   |     |  |  |  |  |  | 201    |
| 10:30        | 109   | 58    |    |     | 167   |       | 22:30     | 118   | 87    |     |     | 205   |     |  |  |  |  |  | 205    |
| 10:45        | 130   | 488   | 76 | 262 | 206   | 750   | 22:45     | 100   | 449   | 96  | 382 | 196   | 831 |  |  |  |  |  |        |
| 11:00        | 150   | 89    |    |     | 239   |       | 23:00     | 98    | 101   |     |     | 199   |     |  |  |  |  |  | 199    |
| 11:15        | 159   | 76    |    |     | 235   |       | 23:15     | 108   | 93    |     |     | 201   |     |  |  |  |  |  | 201    |
| 11:30        | 139   | 87    |    |     | 226   |       | 23:30     | 110   | 74    |     |     | 184   |     |  |  |  |  |  | 184    |
| 11:45        | 143   | 591   | 72 | 324 | 215   | 915   | 23:45     | 98    | 414   | 78  | 346 | 176   | 760 |  |  |  |  |  |        |
| TOTALS       | 3595  | 2690  |    |     | 6285  |       | TOTALS    | 6016  | 4735  |     |     | 10751 |     |  |  |  |  |  |        |
| SPLIT %      | 57.2% | 42.8% |    |     | 36.9% |       | SPLIT %   | 56.0% | 44.0% |     |     | 63.1% |     |  |  |  |  |  |        |

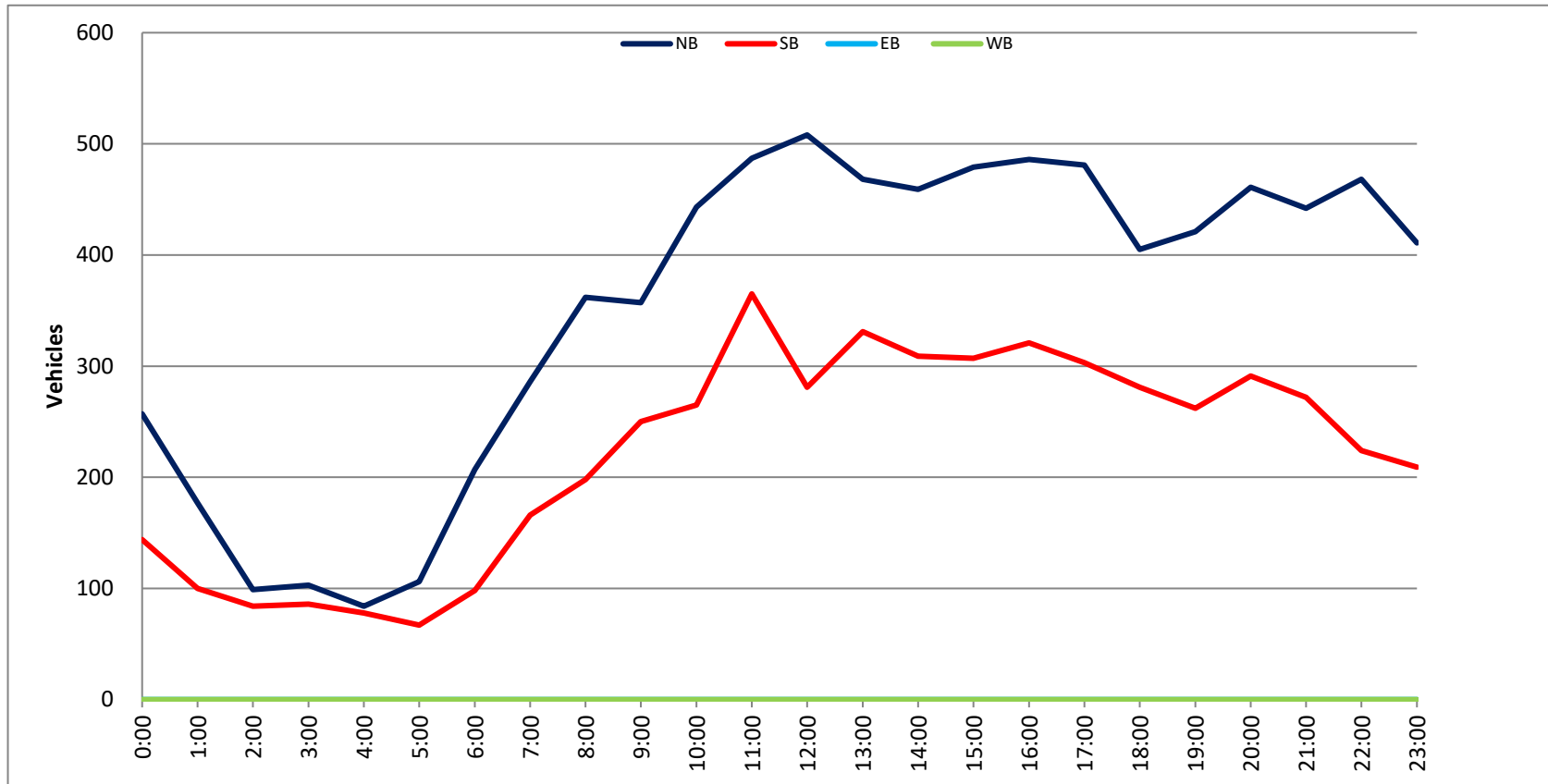
| DAILY TOTALS    |       |       |       |       | NB    | SB    |                 |       |       |       |       | EB    | WB |  |  |  |  |  | Total  |
|-----------------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|----|--|--|--|--|--|--------|
|                 |       |       |       |       | 9,611 | 7,425 |                 |       |       |       |       | 0     | 0  |  |  |  |  |  | 17,036 |
| AM Peak Hour    | 11:00 | 11:45 |       |       | 11:00 |       | PM Peak Hour    | 15:45 | 19:30 |       |       | 14:15 |    |  |  |  |  |  |        |
| AM Pk Volume    | 591   | 374   |       |       | 915   |       | PM Pk Volume    | 552   | 441   |       |       | 971   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.929 | 0.874 |       |       | 0.957 |       | Pk Hr Factor    | 0.952 | 0.911 |       |       | 0.941 |    |  |  |  |  |  |        |
| 7 - 9 Volume    | 579   | 398   | 0     | 0     | 977   |       | 4 - 6 Volume    | 1049  | 793   | 0     | 0     | 1842  |    |  |  |  |  |  |        |
| 7 - 9 Peak Hour | 8:00  | 8:00  |       |       | 8:00  |       | 4 - 6 Peak Hour | 16:00 | 16:30 |       |       | 16:00 |    |  |  |  |  |  |        |
| 7 - 9 Pk Volume | 335   | 237   | 0     | 0     | 572   |       | 4 - 6 Pk Volume | 539   | 405   | 0     | 0     | 929   |    |  |  |  |  |  |        |
| Pk Hr Factor    | 0.920 | 0.812 | 0.000 | 0.000 | 0.872 |       | Pk Hr Factor    | 0.929 | 0.904 | 0.000 | 0.000 | 0.933 |    |  |  |  |  |  |        |

Project #: FL23\_140335\_001

City: Miami Beach

Location: Collins Ave/SR A1A Bet. 6th St & 7th St

Date: 7/27/2023

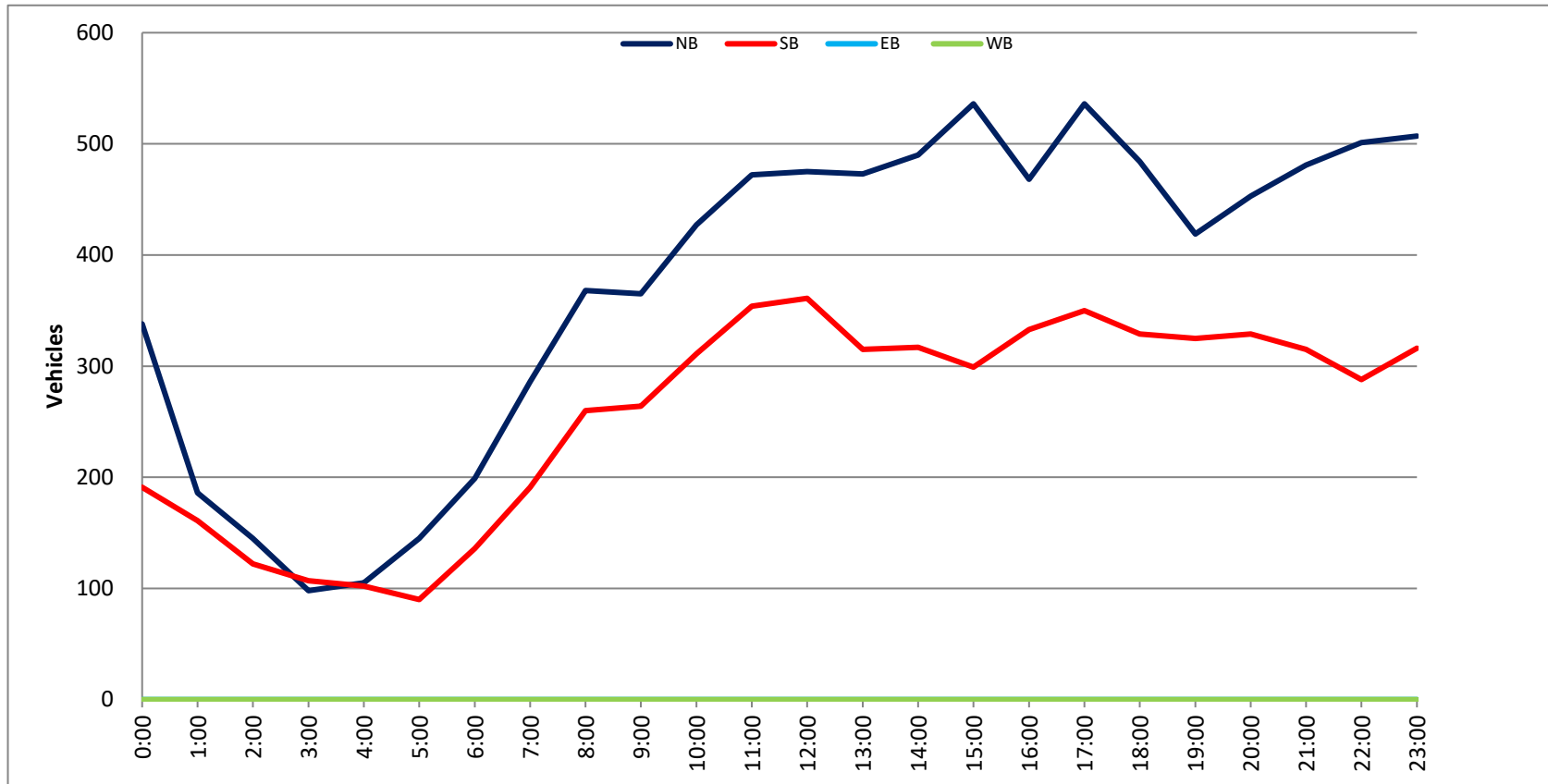


Project #: FL23\_140335\_001

City: Miami Beach

Location: Collins Ave/SR A1A Bet. 6th St & 7th St

Date: 7/28/2023

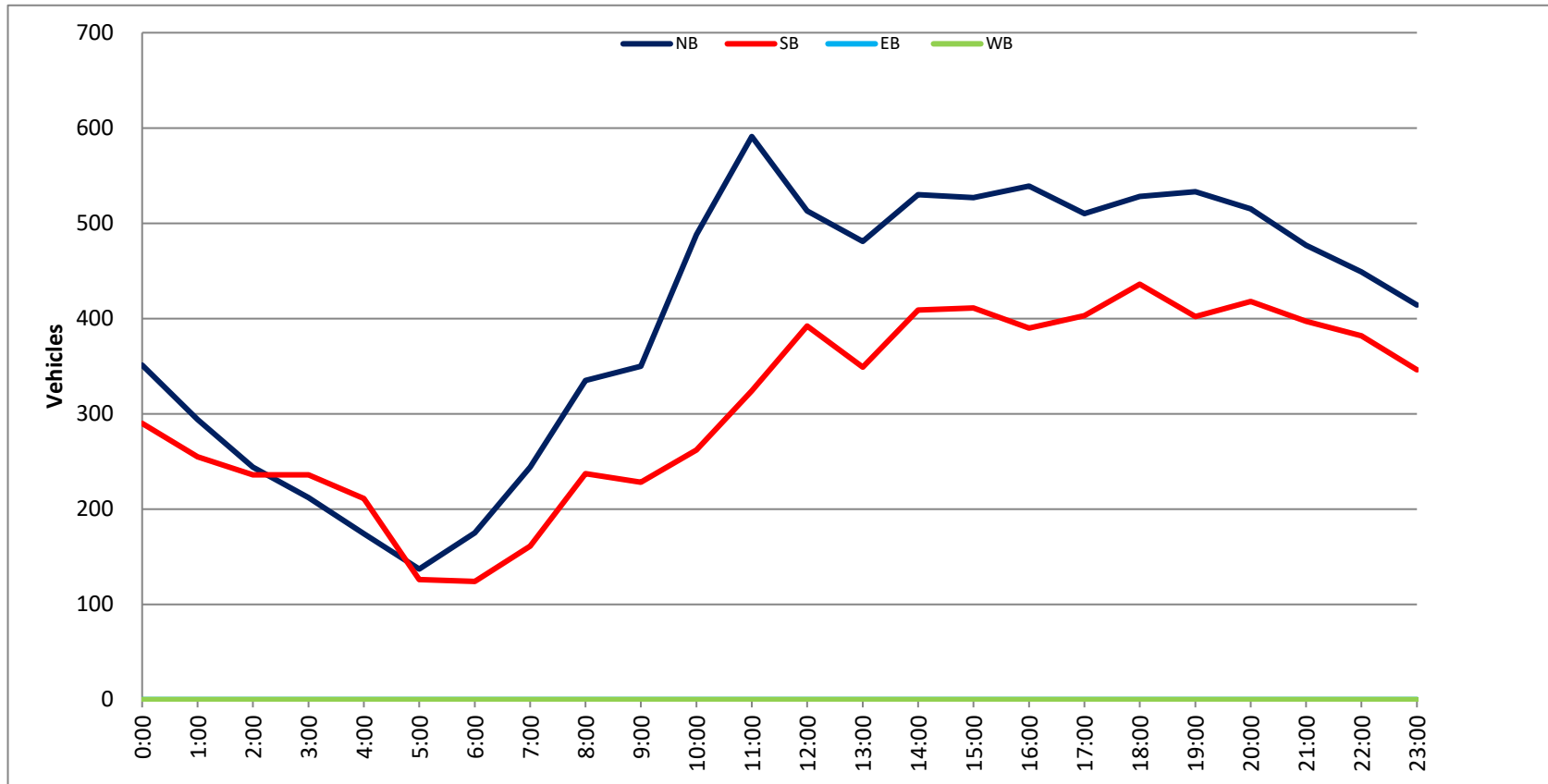


Project #: FL23\_140335\_001

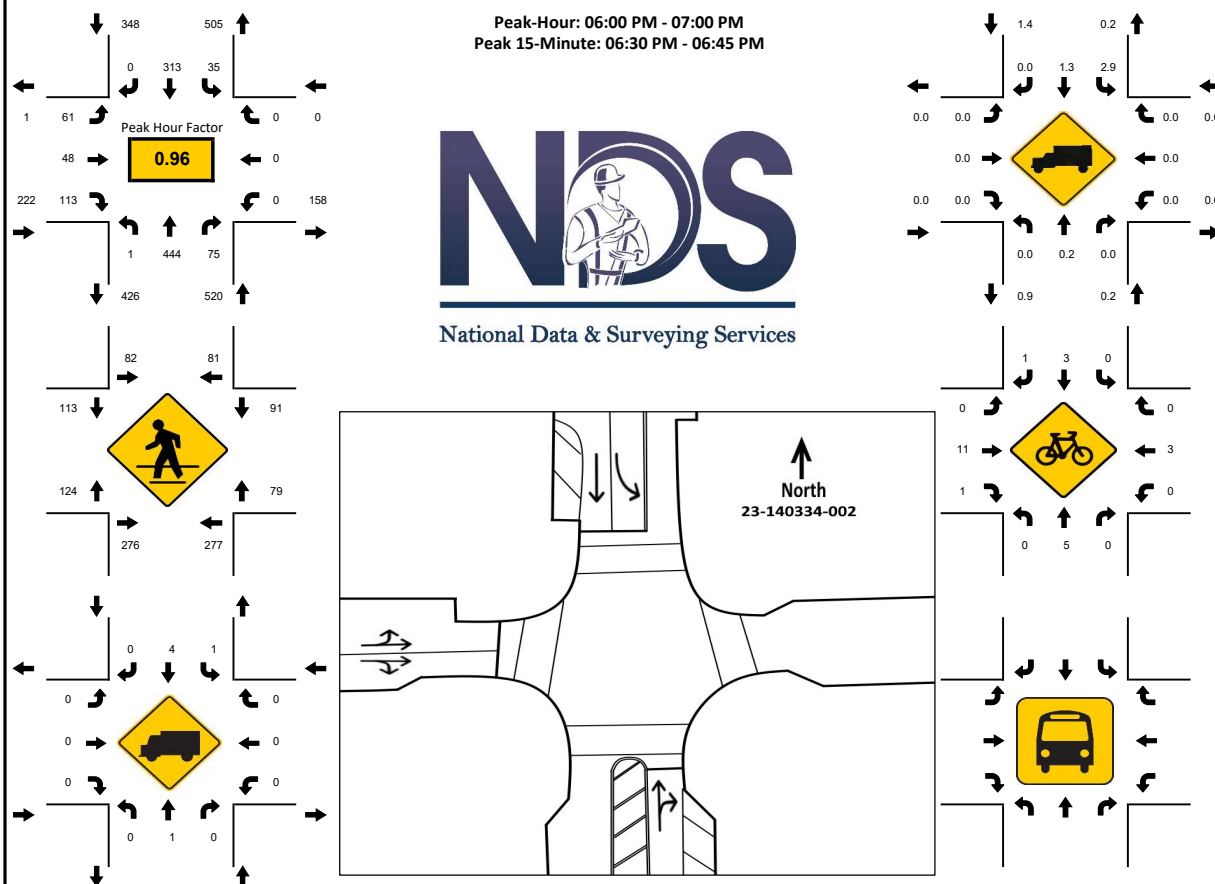
City: Miami Beach

Location: Collins Ave/SR A1A Bet. 6th St & 7th St

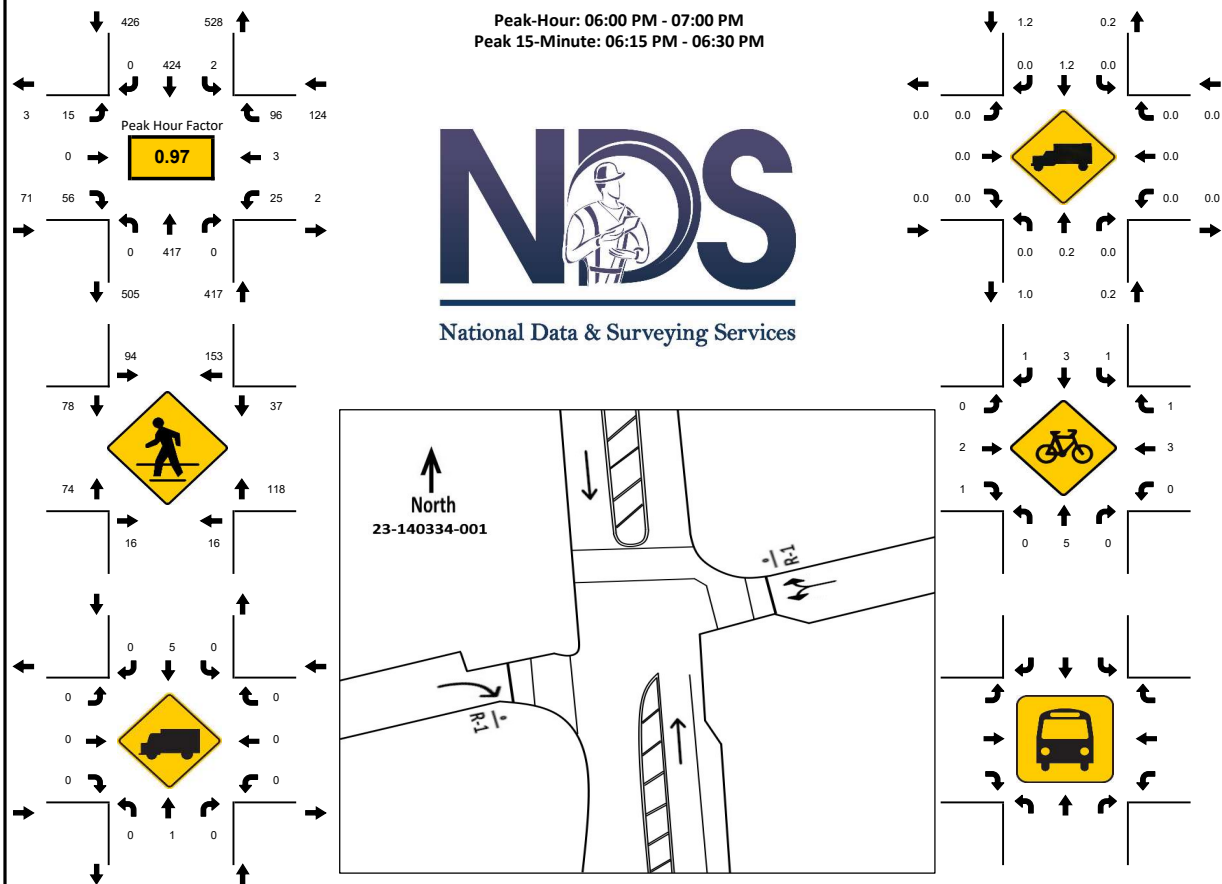
Date: 7/29/2023



PROJECT ID: 23-140334-002  
DATE: Sat, Jul 29, 2023

[illegible]

PROJECT ID: 23-140334-001  
DATE: Sat, Jul 29, 2023

[illegible]



## **APPENDIX J**

### **Miami-Dade County Traffic Signal Operations for Collins at 7<sup>th</sup> Street**

# TOD Schedule Report for 6006: Collins Av&7 St

Print Date:  
7/21/2023

Print Time:  
6:34 PM

| <u>Asset</u> | <u>Intersection</u> | <u>TOD Schedule</u> | <u>Op Mode</u> | <u>Plan #</u>      | <u>Cycle</u> | <u>Offset</u> | <u>TOD Setting</u> | <u>Active PhaseBank</u> | <u>Active Maximum</u> |
|--------------|---------------------|---------------------|----------------|--------------------|--------------|---------------|--------------------|-------------------------|-----------------------|
| 6006         | Collins Av&7 St     | DOW-6               | TOD            | [12] HEAVY PM PEAK | 90           | 0             | N/A                | 1                       | Max 2                 |

## Splits

| <u>PH 1</u> | <u>PH 2</u> | <u>PH 3</u> | <u>PH 4</u> | <u>PH 5</u> | <u>PH 6</u> | <u>PH 7</u> | <u>PH 8</u> |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| -           | SBT         | -           | -           | -           | NBT         | -           | EBT         |
| 0           | 54          | 0           | 0           | 0           | 54          | 0           | 24          |



Active Phase Bank: Phase Bank 1

| <u>Phase</u>      | <u>Walk</u>  | <u>Don't Walk</u> | <u>Min Initial</u> | <u>Veh Ext</u>  | <u>Max Limit</u> | <u>Max 2</u> | <u>Yellow</u> | <u>Red</u> |
|-------------------|--------------|-------------------|--------------------|-----------------|------------------|--------------|---------------|------------|
| <u>Phase Bank</u> |              |                   |                    |                 |                  |              |               |            |
|                   | 1 2 3        | 1 2 3             | 1 2 3              | 1 2 3           | 1 2 3            | 1 2 3        |               |            |
| 1 -               | 0 - 0 - 0    | 0 - 0 - 0         | 0 - 0 - 0          | 0 - 0 - 0       | 0 - 0 - 0        | 0 - 0 - 0    | 0             | 0          |
| 2 SBT             | 7 - 7 - 7    | 8 - 8 - 8         | 7 - 7 - 7          | 1 - 1 - 1       | 50 - 50 - 50     | 0 - 0 - 0    | 4             | 2          |
| 3 -               | 0 - 0 - 0    | 0 - 0 - 0         | 0 - 0 - 0          | 0 - 0 - 0       | 0 - 0 - 0        | 0 - 0 - 0    | 0             | 0          |
| 4 -               | 0 - 0 - 0    | 0 - 0 - 0         | 0 - 0 - 0          | 0 - 0 - 0       | 0 - 0 - 0        | 0 - 0 - 0    | 0             | 0          |
| 5 -               | 0 - 0 - 0    | 0 - 0 - 0         | 0 - 0 - 0          | 0 - 0 - 0       | 0 - 0 - 0        | 0 - 0 - 0    | 0             | 0          |
| 6 NBT             | 7 - 7 - 7    | 8 - 8 - 8         | 7 - 7 - 7          | 1 - 1 - 1       | 50 - 50 - 50     | 0 - 0 - 0    | 4             | 2          |
| 7 -               | 0 - 0 - 0    | 0 - 0 - 0         | 0 - 0 - 0          | 0 - 0 - 0       | 0 - 0 - 0        | 0 - 0 - 0    | 0             | 0          |
| 8 EBT             | 10 - 10 - 10 | 10 - 10 - 10      | 7 - 7 - 7          | 2.5 - 2.5 - 2.5 | 10 - 7 - 7       | 60 - 24 - 24 | 4             | 2          |

Last In Service Date: unknown

## Permitted Phases

**12345678**

|                   |          |
|-------------------|----------|
| Default           | -2---6-8 |
| External Permit 0 | -2---6-8 |
| External Permit 1 | -2---6-8 |
| External Permit 2 | -2---6-8 |

**TOD Schedule Report**  
for 6006: Collins Av&7 St

Print Date:  
7/21/2023

Print Time:  
6:34 PM

|                                |             | <u>Green Time</u> |   |     |   |   |   |     |   |     |  |                    |               |
|--------------------------------|-------------|-------------------|---|-----|---|---|---|-----|---|-----|--|--------------------|---------------|
| <u>Current</u><br>TOD Schedule | <u>Plan</u> | <u>Cycle</u>      | 1 | 2   | 3 | 4 | 5 | 6   | 7 | 8   |  | <u>Ring Offset</u> | <u>Offset</u> |
|                                |             |                   | - | SBT | - | - | - | NBT | - | EBT |  |                    |               |
| 0700                           | 1           | 100               | 0 | 64  | 0 | 0 | 0 | 64  | 0 | 24  |  | 0                  | 95            |
| 1000                           | 8           | 110               | 0 | 74  | 0 | 0 | 0 | 74  | 0 | 24  |  | 0                  | 35            |
| 1500                           | 11          | 120               | 0 | 84  | 0 | 0 | 0 | 84  | 0 | 24  |  | 0                  | 0             |
| 1800                           | 12          | 90                | 0 | 54  | 0 | 0 | 0 | 54  | 0 | 24  |  | 0                  | 0             |
| 2200                           | 6           | 130               | 0 | 88  | 0 | 0 | 0 | 88  | 0 | 30  |  | 0                  | 56            |
|                                | 2           | 100               | 0 | 63  | 0 | 0 | 0 | 63  | 0 | 25  |  | 0                  | 49            |
|                                | 3           | 100               | 0 | 64  | 0 | 0 | 0 | 64  | 0 | 24  |  | 0                  | 4             |
|                                | 4           | 90                | 0 | 54  | 0 | 0 | 0 | 54  | 0 | 24  |  | 0                  | 85            |
|                                | 5           | 110               | 0 | 75  | 0 | 0 | 0 | 75  | 0 | 23  |  | 0                  | 89            |
|                                | 7           | 120               | 0 | 84  | 0 | 0 | 0 | 84  | 0 | 24  |  | 0                  | 22            |
|                                | 9           | 65                | 0 | 29  | 0 | 0 | 0 | 29  | 0 | 24  |  | 0                  | 62            |
|                                | 10          | 100               | 0 | 64  | 0 | 0 | 0 | 64  | 0 | 24  |  | 0                  | 43            |
|                                | 21          | 90                | 0 | 54  | 0 | 0 | 0 | 54  | 0 | 24  |  | 0                  | 53            |
|                                | 22          | 100               | 0 | 64  | 0 | 0 | 0 | 64  | 0 | 24  |  | 0                  | 16            |
|                                | 25          | 140               | 0 | 104 | 0 | 0 | 0 | 104 | 0 | 24  |  | 0                  | 15            |

| <u>Local TOD Schedule</u> |             |              |
|---------------------------|-------------|--------------|
| <u>Time</u>               | <u>Plan</u> | <u>DOW</u>   |
| 0000                      | 1           | Su M T W Th  |
| 0300                      | 22          | M T W Th     |
| 0300                      | 4           | Su           |
| 0700                      | 5           | Su           |
| 0700                      | 1           | M T W Th F S |
| 0930                      | 2           | M T W Th     |
| 1000                      | 8           | Su F S       |
| 1500                      | 11          | Su F S       |
| 1500                      | 3           | M T W Th     |
| 1800                      | 12          | M T W Th F   |
| 1800                      | 6           | Su S         |
| 2200                      | 1           | M T W Th     |
| 2200                      | 6           | F            |

**Current Time of Day Function**

| <u>Time</u> | <u>Function</u> | <u>Settings *</u> | <u>Day of Week</u> |
|-------------|-----------------|-------------------|--------------------|
| 0000        | TOD OUTPUTS     | -----             | SuM T W ThF S      |
| 0000        | PED RECALL      | 8---4---          | ThF S              |
| 0200        | PED RECALL      | -----             | ThF S              |
| 0530        | PED RECALL      | 8---4---          | M T W ThF          |

**Local Time of Day Function**

| <u>Time</u> | <u>Function</u> | <u>Settings *</u> | <u>Day of Week</u> |
|-------------|-----------------|-------------------|--------------------|
| 0000        | TOD OUTPUTS     | -----             | SuM T W ThF S      |
| 0000        | PED RECALL      | 8---4---          | ThF S              |
| 0000        | PED RECALL      | -----             | SuM T W            |
| 0200        | PED RECALL      | -----             | ThF S              |
| 0500        | PED RECALL      | 8---4---          | Su S               |
| 0530        | PED RECALL      | 8---4---          | 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

**No Calendar Defined/Enabled**



## APPENDIX K

### Peak Season Conversion Factor

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
CATEGORY: 8739 MIAMI-DADE I 395

MOCF: 0.94

| WEEK | DATES                   | SF   | PSCF |
|------|-------------------------|------|------|
| 1    | 01/01/2022 - 01/01/2022 | 1.02 | 1.09 |
| 2    | 01/02/2022 - 01/08/2022 | 1.02 | 1.09 |
| 3    | 01/09/2022 - 01/15/2022 | 1.02 | 1.09 |
| 4    | 01/16/2022 - 01/22/2022 | 1.01 | 1.07 |
| 5    | 01/23/2022 - 01/29/2022 | 0.99 | 1.05 |
| 6    | 01/30/2022 - 02/05/2022 | 0.98 | 1.04 |
| 7    | 02/06/2022 - 02/12/2022 | 0.96 | 1.02 |
| * 8  | 02/13/2022 - 02/19/2022 | 0.95 | 1.01 |
| * 9  | 02/20/2022 - 02/26/2022 | 0.94 | 1.00 |
| *10  | 02/27/2022 - 03/05/2022 | 0.94 | 1.00 |
| *11  | 03/06/2022 - 03/12/2022 | 0.93 | 0.99 |
| *12  | 03/13/2022 - 03/19/2022 | 0.93 | 0.99 |
| *13  | 03/20/2022 - 03/26/2022 | 0.93 | 0.99 |
| *14  | 03/27/2022 - 04/02/2022 | 0.94 | 1.00 |
| *15  | 04/03/2022 - 04/09/2022 | 0.94 | 1.00 |
| *16  | 04/10/2022 - 04/16/2022 | 0.95 | 1.01 |
| *17  | 04/17/2022 - 04/23/2022 | 0.95 | 1.01 |
| *18  | 04/24/2022 - 04/30/2022 | 0.95 | 1.01 |
| *19  | 05/01/2022 - 05/07/2022 | 0.95 | 1.01 |
| *20  | 05/08/2022 - 05/14/2022 | 0.96 | 1.02 |
| 21   | 05/15/2022 - 05/21/2022 | 0.96 | 1.02 |
| 22   | 05/22/2022 - 05/28/2022 | 0.98 | 1.04 |
| 23   | 05/29/2022 - 06/04/2022 | 1.00 | 1.06 |
| 24   | 06/05/2022 - 06/11/2022 | 1.01 | 1.07 |
| 25   | 06/12/2022 - 06/18/2022 | 1.03 | 1.10 |
| 26   | 06/19/2022 - 06/25/2022 | 1.02 | 1.09 |
| 27   | 06/26/2022 - 07/02/2022 | 1.02 | 1.09 |
| 28   | 07/03/2022 - 07/09/2022 | 1.01 | 1.07 |
| 29   | 07/10/2022 - 07/16/2022 | 1.00 | 1.06 |
| 30   | 07/17/2022 - 07/23/2022 | 1.01 | 1.07 |
| 31   | 07/24/2022 - 07/30/2022 | 1.01 | 1.07 |
| 32   | 07/31/2022 - 08/06/2022 | 1.02 | 1.09 |
| 33   | 08/07/2022 - 08/13/2022 | 1.02 | 1.09 |
| 34   | 08/14/2022 - 08/20/2022 | 1.03 | 1.10 |
| 35   | 08/21/2022 - 08/27/2022 | 1.04 | 1.11 |
| 36   | 08/28/2022 - 09/03/2022 | 1.06 | 1.13 |
| 37   | 09/04/2022 - 09/10/2022 | 1.08 | 1.15 |
| 38   | 09/11/2022 - 09/17/2022 | 1.10 | 1.17 |
| 39   | 09/18/2022 - 09/24/2022 | 1.08 | 1.15 |
| 40   | 09/25/2022 - 10/01/2022 | 1.07 | 1.14 |
| 41   | 10/02/2022 - 10/08/2022 | 1.05 | 1.12 |
| 42   | 10/09/2022 - 10/15/2022 | 1.04 | 1.11 |
| 43   | 10/16/2022 - 10/22/2022 | 1.04 | 1.11 |
| 44   | 10/23/2022 - 10/29/2022 | 1.04 | 1.11 |
| 45   | 10/30/2022 - 11/05/2022 | 1.04 | 1.11 |
| 46   | 11/06/2022 - 11/12/2022 | 1.04 | 1.11 |
| 47   | 11/13/2022 - 11/19/2022 | 1.05 | 1.12 |
| 48   | 11/20/2022 - 11/26/2022 | 1.04 | 1.11 |
| 49   | 11/27/2022 - 12/03/2022 | 1.03 | 1.10 |
| 50   | 12/04/2022 - 12/10/2022 | 1.03 | 1.10 |
| 51   | 12/11/2022 - 12/17/2022 | 1.02 | 1.09 |
| 52   | 12/18/2022 - 12/24/2022 | 1.02 | 1.09 |
| 53   | 12/25/2022 - 12/31/2022 | 1.02 | 1.09 |

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## APPENDIX L

### Miami-Dade TPO 2045 Directional Trip Distribution

| Miami-Dade 2015 Base Year Direction Trip Distribution Summary |              |                 |                     |     |     |     |       |       |       |       |             |
|---------------------------------------------------------------|--------------|-----------------|---------------------|-----|-----|-----|-------|-------|-------|-------|-------------|
| TAZ of Origin                                                 |              | Trips / Percent | Cardinal Directions |     |     |     |       |       |       |       | Total Trips |
| County TAZ                                                    | Regional TAZ |                 | NNE                 | ENE | ESE | SSE | SSW   | WSW   | WNW   | NNW   |             |
| 651                                                           | 3551         | Trips           | 601                 | 40  | 126 | -   | 25    | 267   | 541   | 390   | 2,069       |
| 651                                                           | 3551         | Percent         | 30.2                | 2.0 | 6.3 | -   | 1.2   | 13.4  | 27.2  | 19.6  |             |
| 652                                                           | 3552         | Trips           | 740                 | 133 | 112 | 92  | 80    | 539   | 627   | 907   | 3,332       |
| 652                                                           | 3552         | Percent         | 22.9                | 4.1 | 3.5 | 2.8 | 2.5   | 16.7  | 19.4  | 28.1  |             |
| 653                                                           | 3553         | Trips           | 597                 | 120 | 187 | 238 | 48    | 604   | 488   | 661   | 2,984       |
| 653                                                           | 3553         | Percent         | 20.3                | 4.1 | 6.4 | 8.1 | 1.6   | 20.5  | 16.6  | 22.5  |             |
| 654                                                           | 3554         | Trips           | 648                 | -   | 246 | 192 | 190   | 739   | 849   | 890   | 3,940       |
| 654                                                           | 3554         | Percent         | 17.3                | -   | 6.6 | 5.1 | 5.1   | 19.7  | 22.6  | 23.7  |             |
| 655                                                           | 3555         | Trips           | 2,579               | -   | -   | -   | 1,029 | 2,523 | 3,354 | 2,903 | 13,375      |
| 655                                                           | 3555         | Percent         | 20.8                | -   | -   | -   | 8.3   | 20.4  | 27.1  | 23.4  |             |
| 656                                                           | 3556         | Trips           | 683                 | -   | -   | -   | 187   | 546   | 1,103 | 960   | 3,541       |
| 656                                                           | 3556         | Percent         | 19.6                | -   | -   | -   | 5.4   | 15.7  | 31.7  | 27.6  |             |

| Miami-Dade 2045 Cost Feasible Plan Direction Trip Distribution Summary |              |                 |                     |     |     |     |     |       |       |       |             |
|------------------------------------------------------------------------|--------------|-----------------|---------------------|-----|-----|-----|-----|-------|-------|-------|-------------|
| TAZ of Origin                                                          |              | Trips / Percent | Cardinal Directions |     |     |     |     |       |       |       | Total Trips |
| County TAZ                                                             | Regional TAZ |                 | NNE                 | ENE | ESE | SSE | SSW | WSW   | WNW   | NNW   |             |
| 651                                                                    | 3551         | Trips           | 500                 | 33  | 118 | -   | 44  | 610   | 964   | 424   | 2,777       |
| 651                                                                    | 3551         | Percent         | 18.6                | 1.2 | 4.4 | -   | 1.6 | 22.7  | 35.8  | 15.8  |             |
| 652                                                                    | 3552         | Trips           | 834                 | 141 | 140 | 71  | 102 | 864   | 1,319 | 966   | 4,613       |
| 652                                                                    | 3552         | Percent         | 18.8                | 3.2 | 3.2 | 1.6 | 2.3 | 19.5  | 29.7  | 21.8  |             |
| 653                                                                    | 3553         | Trips           | 563                 | 73  | 181 | 185 | 40  | 875   | 1,115 | 522   | 3,691       |
| 653                                                                    | 3553         | Percent         | 15.8                | 2.1 | 5.1 | 5.2 | 1.1 | 24.6  | 31.4  | 14.7  |             |
| 654                                                                    | 3554         | Trips           | 527                 | -   | 154 | 189 | 209 | 1,276 | 1,357 | 971   | 4,960       |
| 654                                                                    | 3554         | Percent         | 11.3                | -   | 3.3 | 4.0 | 4.5 | 27.2  | 29.0  | 20.7  |             |
| 655                                                                    | 3555         | Trips           | 2,507               | -   | -   | -   | 984 | 3,119 | 4,529 | 3,116 | 15,245      |
| 655                                                                    | 3555         | Percent         | 17.6                | -   | -   | -   | 6.9 | 21.9  | 31.8  | 21.9  |             |
| 656                                                                    | 3556         | Trips           | 752                 | -   | -   | -   | 201 | 872   | 1,503 | 1,028 | 4,509       |
| 656                                                                    | 3556         | Percent         | 17.3                | -   | -   | -   | 4.6 | 20.0  | 34.5  | 23.6  |             |
| 657                                                                    | 3557         | Trips           | 255                 | 42  | 13  | 51  | 17  | 325   | 482   | 206   | 1,441       |
| 657                                                                    | 3557         | Percent         | 18.4                | 3.0 | 1.0 | 3.7 | 1.2 | 23.4  | 34.6  | 14.8  |             |



## **APPENDIX M**

### **Synchro Intersection Capacity Results**

| Intersection             |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|------|-------------|-----------------------------------------------------------------------------------|--------|-------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 17.1                                                                              |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT  | EBR         | WBL                                                                               | WBT    | WBR   | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |      |             |  |        |       |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 30                                                                                | 0    | 72          | 48                                                                                | 0      | 128   | 0    | 492                                                                               | 0    | 0    | 496                                                                                 | 0    |
| Future Vol, veh/h        | 30                                                                                | 0    | 72          | 48                                                                                | 0      | 128   | 0    | 492                                                                               | 0    | 0    | 496                                                                                 | 0    |
| Conflicting Peds, #/hr   | 247                                                                               | 0    | 32          | 32                                                                                | 0      | 247   | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Stop                                                                              | Stop | Stop        | Stop                                                                              | Stop   | Stop  | Free | Free                                                                              | Free | Free | Free                                                                                | Free |
| RT Channelized           | -                                                                                 | -    | None        | -                                                                                 | -      | None  | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 0                                                                                 | -    | -           | 0                                                                                 | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0    | -           | -                                                                                 | 0      | -     | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0    | -           | -                                                                                 | 0      | -     | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92          | 92                                                                                | 92     | 92    | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2           | 2                                                                                 | 2      | 2     | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 33                                                                                | 0    | 78          | 52                                                                                | 0      | 139   | 0    | 535                                                                               | 0    | 0    | 539                                                                                 | 0    |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
| Major/Minor              | Minor2                                                                            |      | Minor1      |                                                                                   | Major1 |       |      | Major2                                                                            |      |      |                                                                                     |      |
| Conflicting Flow All     | 1391                                                                              | -    | 571         | 1145                                                                              | -      | 782   | -    | 0                                                                                 | -    | -    | -                                                                                   | 0    |
| Stage 1                  | 539                                                                               | -    | -           | 535                                                                               | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Stage 2                  | 852                                                                               | -    | -           | 610                                                                               | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Critical Hdwy            | 7.12                                                                              | -    | 6.22        | 7.12                                                                              | -      | 6.22  | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.12                                                                              | -    | -           | 6.12                                                                              | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.12                                                                              | -    | -           | 6.12                                                                              | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Follow-up Hdwy           | 3.518                                                                             | -    | 3.318       | 3.518                                                                             | -      | 3.318 | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 120                                                                               | 0    | 520         | 177                                                                               | 0      | 394   | 0    | -                                                                                 | 0    | 0    | -                                                                                   | 0    |
| Stage 1                  | 527                                                                               | 0    | -           | 529                                                                               | 0      | -     | 0    | -                                                                                 | 0    | 0    | -                                                                                   | 0    |
| Stage 2                  | 354                                                                               | 0    | -           | 482                                                                               | 0      | -     | 0    | -                                                                                 | 0    | 0    | -                                                                                   | 0    |
| Platoon blocked, %       |                                                                                   |      |             |                                                                                   |        |       |      | -                                                                                 |      |      | -                                                                                   |      |
| Mov Cap-1 Maneuver       | 49                                                                                | -    | 504         | 145                                                                               | -      | 301   | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 49                                                                                | -    | -           | 145                                                                               | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Stage 1                  | 527                                                                               | -    | -           | 529                                                                               | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Stage 2                  | 146                                                                               | -    | -           | 395                                                                               | -      | -     | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
| Approach                 | EB                                                                                |      | WB          |                                                                                   | NB     |       |      | SB                                                                                |      |      |                                                                                     |      |
| HCM Control Delay, s     | 98.6                                                                              |      | 65.8        |                                                                                   | 0      |       |      | 0                                                                                 |      |      |                                                                                     |      |
| HCM LOS                  | F                                                                                 |      | F           |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |      |      |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBT                                                                               |      | EBLn1WBLn1  |                                                                                   | SBT    |       |      |                                                                                   |      |      |                                                                                     |      |
| Capacity (veh/h)         | -                                                                                 |      | 135 233     |                                                                                   | -      |       |      |                                                                                   |      |      |                                                                                     |      |
| HCM Lane V/C Ratio       | -                                                                                 |      | 0.821 0.821 |                                                                                   | -      |       |      |                                                                                   |      |      |                                                                                     |      |
| HCM Control Delay (s)    | -                                                                                 |      | 98.6 65.8   |                                                                                   | -      |       |      |                                                                                   |      |      |                                                                                     |      |
| HCM Lane LOS             | -                                                                                 |      | F F         |                                                                                   | -      |       |      |                                                                                   |      |      |                                                                                     |      |
| HCM 95th %tile Q(veh)    | -                                                                                 |      | 5.1 6.3     |                                                                                   | -      |       |      |                                                                                   |      |      |                                                                                     |      |

Lanes, Volumes, Timings  
3: Collins Avenue & 7th Street

Existing 2023  
Existing Saturday PM Peak

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |                                                                                   |  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)    | 73                                                                                | 69                                                                                | 133                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 493                                                                                 | 86                                                                                  | 52                                                                                  | 373                                                                                 | 0                                                                                   |
| Future Volume (vph)     | 73                                                                                | 69                                                                                | 133                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 493                                                                                 | 86                                                                                  | 52                                                                                  | 373                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)         | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Grade (%)               |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Storage Length (ft)     | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes           | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                 |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor       | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor         |                                                                                   | 0.55                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.95                                                                                |                                                                                     | 0.93                                                                                |                                                                                     |                                                                                     |
| Frt                     |                                                                                   | 0.927                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.980                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected           |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)       | 0                                                                                 | 2038                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1742                                                                                | 0                                                                                   | 1770                                                                                | 1863                                                                                | 0                                                                                   |
| Flt Permitted           |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.346                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)       | 0                                                                                 | 1766                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1742                                                                                | 0                                                                                   | 596                                                                                 | 1863                                                                                | 0                                                                                   |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)       |                                                                                   | 145                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Link Speed (mph)        |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 344                                                                               |                                                                                   |                                                                                   | 342                                                                               |                                                                                   |                                                                                    | 517                                                                                 |                                                                                     |                                                                                     | 153                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                    | 11.8                                                                                |                                                                                     |                                                                                     | 3.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)     | 163                                                                               |                                                                                   | 553                                                                               | 553                                                                               |                                                                                   | 163                                                                               | 237                                                                                |                                                                                     | 167                                                                                 | 167                                                                                 |                                                                                     | 237                                                                                 |
| Confl. Bikes (#/hr)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor        | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                               | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Growth Factor           | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                               | 100%                                                                                | 100%                                                                                | 100%                                                                                | 100%                                                                                | 100%                                                                                |
| Heavy Vehicles (%)      | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Bus Blockages (#/hr)    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Parking (#/hr)          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Mid-Block Traffic (%)   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Adj. Flow (vph)         | 79                                                                                | 75                                                                                | 145                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 536                                                                                 | 93                                                                                  | 57                                                                                  | 405                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)   | 0                                                                                 | 299                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 629                                                                                 | 0                                                                                   | 57                                                                                  | 405                                                                                 | 0                                                                                   |
| Turn Type               | Perm                                                                              | NA                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases        | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 27.0                                                                              | 27.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |
| Total Split (s)         | 36.0                                                                              | 36.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 94.0                                                                                |                                                                                     | 94.0                                                                                | 94.0                                                                                |                                                                                     |
| Total Split (%)         | 27.7%                                                                             | 27.7%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 72.3%                                                                               |                                                                                     | 72.3%                                                                               | 72.3%                                                                               |                                                                                     |
| Yellow Time (s)         | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     | 6.0                                                                                 | 6.0                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Recall Mode             | Max                                                                               | Max                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |

Lanes, Volumes, Timings  
3: Collins Avenue & 7th Street

Existing 2023  
Existing Saturday PM Peak

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.23                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.58                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.53                                                                                |                                                                                     | 0.14                                                                                | 0.32                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 27.2                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12.6                                                                                |                                                                                     | 8.6                                                                                 | 9.5                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 27.2                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12.6                                                                                |                                                                                     | 8.6                                                                                 | 9.5                                                                                 |                                                                                     |
| LOS                     |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | B                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 27.2                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 12.6                                                                                |                                                                                     |                                                                                     | 9.4                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 60                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 246                                                                                 |                                                                                     | 16                                                                                  | 130                                                                                 |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 111                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 338                                                                                 |                                                                                     | 34                                                                                  | 181                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 264                                                                               |                                                                                   |                                                                                   | 262                                                                               |                                                                                   |                                                                                    | 437                                                                                 |                                                                                     |                                                                                     | 73                                                                                  |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 519                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1179                                                                                |                                                                                     | 403                                                                                 | 1261                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.58                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.53                                                                                |                                                                                     | 0.14                                                                                | 0.32                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

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

Natural Cycle: 115

Control Type: Pretimed

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 14.7

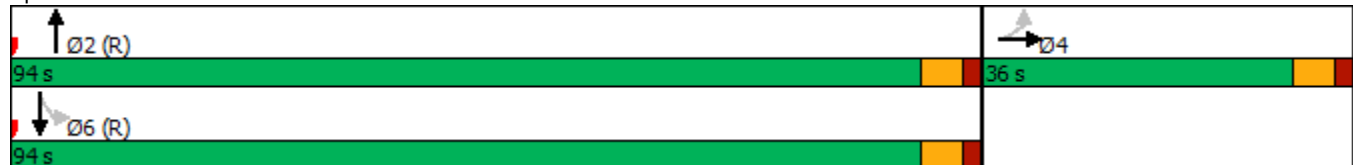
Intersection LOS: B

Intersection Capacity Utilization 68.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Collins Avenue & 7th Street



| Intersection             |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|------|-------------|-----------------------------------------------------------------------------------|--------|-------|------|-----------------------------------------------------------------------------------|--------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 26.7                                                                              |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT  | EBR         | WBL                                                                               | WBT    | WBR   | NBL  | NBT                                                                               | NBR    | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |      |             |  |        |       |      |  |        |      |  |      |
| Traffic Vol, veh/h       | 32                                                                                | 0    | 76          | 51                                                                                | 0      | 136   | 0    | 522                                                                               | 0      | 0    | 526                                                                                 | 0    |
| Future Vol, veh/h        | 32                                                                                | 0    | 76          | 51                                                                                | 0      | 136   | 0    | 522                                                                               | 0      | 0    | 526                                                                                 | 0    |
| Conflicting Peds, #/hr   | 247                                                                               | 0    | 32          | 32                                                                                | 0      | 247   | 0    | 0                                                                                 | 0      | 0    | 0                                                                                   | 0    |
| Sign Control             | Stop                                                                              | Stop | Stop        | Stop                                                                              | Stop   | Stop  | Free | Free                                                                              | Free   | Free | Free                                                                                | Free |
| RT Channelized           | -                                                                                 | -    | None        | -                                                                                 | -      | None  | -    | -                                                                                 | None   | -    | -                                                                                   | None |
| Storage Length           | 0                                                                                 | -    | -           | 0                                                                                 | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0    | -           | -                                                                                 | 0      | -     | -    | 0                                                                                 | -      | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0    | -           | -                                                                                 | 0      | -     | -    | 0                                                                                 | -      | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92          | 92                                                                                | 92     | 92    | 92   | 92                                                                                | 92     | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2           | 2                                                                                 | 2      | 2     | 2    | 2                                                                                 | 2      | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 35                                                                                | 0    | 83          | 55                                                                                | 0      | 148   | 0    | 567                                                                               | 0      | 0    | 572                                                                                 | 0    |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
| Major/Minor              | Minor2                                                                            |      | Minor1      |                                                                                   | Major1 |       |      |                                                                                   | Major2 |      |                                                                                     |      |
| Conflicting Flow All     | 1460                                                                              | -    | 604         | 1213                                                                              | -      | 814   | -    | 0                                                                                 | -      | -    | -                                                                                   | 0    |
| Stage 1                  | 572                                                                               | -    | -           | 567                                                                               | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Stage 2                  | 888                                                                               | -    | -           | 646                                                                               | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Critical Hdwy            | 7.12                                                                              | -    | 6.22        | 7.12                                                                              | -      | 6.22  | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.12                                                                              | -    | -           | 6.12                                                                              | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.12                                                                              | -    | -           | 6.12                                                                              | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Follow-up Hdwy           | 3.518                                                                             | -    | 3.318       | 3.518                                                                             | -      | 3.318 | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 107                                                                               | 0    | 498         | 159                                                                               | 0      | 378   | 0    | -                                                                                 | 0      | 0    | -                                                                                   | 0    |
| Stage 1                  | 505                                                                               | 0    | -           | 508                                                                               | 0      | -     | 0    | -                                                                                 | 0      | 0    | -                                                                                   | 0    |
| Stage 2                  | 338                                                                               | 0    | -           | 460                                                                               | 0      | -     | 0    | -                                                                                 | 0      | 0    | -                                                                                   | 0    |
| Platoon blocked, %       |                                                                                   |      |             |                                                                                   |        |       |      | -                                                                                 |        |      | -                                                                                   |      |
| Mov Cap-1 Maneuver       | 40                                                                                | -    | 483         | 128                                                                               | -      | 289   | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 40                                                                                | -    | -           | 128                                                                               | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Stage 1                  | 505                                                                               | -    | -           | 508                                                                               | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Stage 2                  | 126                                                                               | -    | -           | 370                                                                               | -      | -     | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
| Approach                 | EB                                                                                |      | WB          |                                                                                   | NB     |       |      |                                                                                   | SB     |      |                                                                                     |      |
| HCM Control Delay, s     | 168                                                                               |      | 94.7        |                                                                                   | 0      |       |      |                                                                                   | 0      |      |                                                                                     |      |
| HCM LOS                  | F                                                                                 |      | F           |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
|                          |                                                                                   |      |             |                                                                                   |        |       |      |                                                                                   |        |      |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBT                                                                               |      | EBLn1WBLn1  |                                                                                   | SBT    |       |      |                                                                                   |        |      |                                                                                     |      |
| Capacity (veh/h)         | -                                                                                 |      | 113 215     |                                                                                   | -      |       |      |                                                                                   |        |      |                                                                                     |      |
| HCM Lane V/C Ratio       | -                                                                                 |      | 1.039 0.945 |                                                                                   | -      |       |      |                                                                                   |        |      |                                                                                     |      |
| HCM Control Delay (s)    | -                                                                                 |      | 168 94.7    |                                                                                   | -      |       |      |                                                                                   |        |      |                                                                                     |      |
| HCM Lane LOS             | -                                                                                 |      | F F         |                                                                                   | -      |       |      |                                                                                   |        |      |                                                                                     |      |
| HCM 95th %tile Q(veh)    | -                                                                                 |      | 6.9 8       |                                                                                   | -      |       |      |                                                                                   |        |      |                                                                                     |      |

# Lanes, Volumes, Timings

## 3: Collins Avenue & 7th Street

Background 2024  
without Project

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |                                                                                   |  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)    | 77                                                                                | 73                                                                                | 141                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 523                                                                                 | 91                                                                                  | 55                                                                                  | 395                                                                                 | 0                                                                                   |
| Future Volume (vph)     | 77                                                                                | 73                                                                                | 141                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 523                                                                                 | 91                                                                                  | 55                                                                                  | 395                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)         | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Grade (%)               |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Storage Length (ft)     | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes           | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                 |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor       | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor         |                                                                                   | 0.55                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.95                                                                                |                                                                                     | 0.94                                                                                |                                                                                     |                                                                                     |
| Frt                     |                                                                                   | 0.927                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.980                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected           |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)       | 0                                                                                 | 2040                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1741                                                                                | 0                                                                                   | 1770                                                                                | 1863                                                                                | 0                                                                                   |
| Flt Permitted           |                                                                                   | 0.987                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.324                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)       | 0                                                                                 | 1766                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1741                                                                                | 0                                                                                   | 565                                                                                 | 1863                                                                                | 0                                                                                   |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)       |                                                                                   | 153                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Link Speed (mph)        |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 344                                                                               |                                                                                   |                                                                                   | 342                                                                               |                                                                                   |                                                                                    | 517                                                                                 |                                                                                     |                                                                                     | 153                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                    | 11.8                                                                                |                                                                                     |                                                                                     | 3.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)     | 163                                                                               |                                                                                   | 553                                                                               | 553                                                                               |                                                                                   | 163                                                                               | 237                                                                                |                                                                                     | 167                                                                                 | 167                                                                                 |                                                                                     | 237                                                                                 |
| Confl. Bikes (#/hr)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor        | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                               | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Growth Factor           | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                              | 100%                                                                               | 100%                                                                                | 100%                                                                                | 100%                                                                                | 100%                                                                                | 100%                                                                                |
| Heavy Vehicles (%)      | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Bus Blockages (#/hr)    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Parking (#/hr)          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Mid-Block Traffic (%)   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Adj. Flow (vph)         | 84                                                                                | 79                                                                                | 153                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 568                                                                                 | 99                                                                                  | 60                                                                                  | 429                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)   | 0                                                                                 | 316                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 667                                                                                 | 0                                                                                   | 60                                                                                  | 429                                                                                 | 0                                                                                   |
| Turn Type               | Perm                                                                              | NA                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases        | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 27.0                                                                              | 27.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |
| Total Split (s)         | 36.0                                                                              | 36.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 94.0                                                                                |                                                                                     | 94.0                                                                                | 94.0                                                                                |                                                                                     |
| Total Split (%)         | 27.7%                                                                             | 27.7%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 72.3%                                                                               |                                                                                     | 72.3%                                                                               | 72.3%                                                                               |                                                                                     |
| Yellow Time (s)         | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     | 6.0                                                                                 | 6.0                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Recall Mode             | Max                                                                               | Max                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |

Lanes, Volumes, Timings  
3: Collins Avenue & 7th Street

Background 2024  
without Project

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                 | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.23                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.60                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0.57                                                                                |                                                                                     | 0.16                                                                                | 0.34                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 27.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 13.3                                                                                |                                                                                     | 8.8                                                                                 | 9.7                                                                                 |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 27.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 13.3                                                                                |                                                                                     | 8.8                                                                                 | 9.7                                                                                 |                                                                                     |
| LOS                     |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | B                                                                                   |                                                                                     | A                                                                                   | A                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 27.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 13.3                                                                                |                                                                                     |                                                                                     | 9.6                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 64                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 270                                                                                 |                                                                                     | 17                                                                                  | 139                                                                                 |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 117                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 371                                                                                 |                                                                                     | 36                                                                                  | 194                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 264                                                                               |                                                                                   |                                                                                   | 262                                                                               |                                                                                   |                                                                                     | 437                                                                                 |                                                                                     |                                                                                     | 73                                                                                  |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 525                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 1178                                                                                |                                                                                     | 382                                                                                 | 1261                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.60                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | 0.57                                                                                |                                                                                     | 0.16                                                                                | 0.34                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

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

Natural Cycle: 115

Control Type: Pretimed

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 15.2

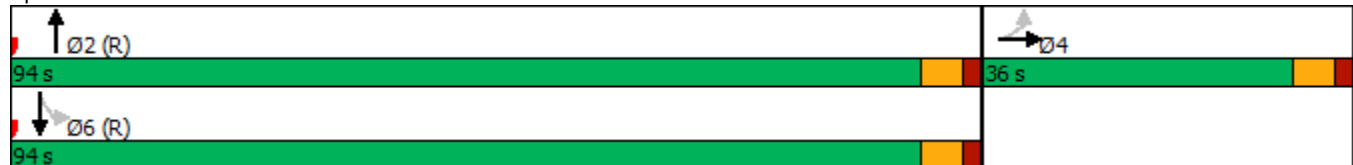
Intersection LOS: B

Intersection Capacity Utilization 70.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Collins Avenue & 7th Street



| Intersection             |        |      |             |       |        |       |        |      |      |      |      |      |
|--------------------------|--------|------|-------------|-------|--------|-------|--------|------|------|------|------|------|
| Int Delay, s/veh         | 27.5   |      |             |       |        |       |        |      |      |      |      |      |
| Movement                 | EBL    | EBT  | EBR         | WBL   | WBT    | WBR   | NBL    | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↰      |      |             | ↰     |        |       |        | ↱    |      |      | ↱    |      |
| Traffic Vol, veh/h       | 32     | 0    | 76          | 51    | 0      | 128   | 0      | 522  | 0    | 0    | 580  | 0    |
| Future Vol, veh/h        | 32     | 0    | 76          | 51    | 0      | 128   | 0      | 522  | 0    | 0    | 580  | 0    |
| Conflicting Peds, #/hr   | 247    | 0    | 32          | 32    | 0      | 247   | 0      | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop | Stop        | Stop  | Stop   | Stop  | Free   | Free | Free | Free | Free | Free |
| RT Channelized           | -      | -    | None        | -     | -      | None  | -      | -    | None | -    | -    | None |
| Storage Length           | 0      | -    | -           | 0     | -      | -     | -      | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -      | 0    | -           | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Grade, %                 | -      | 0    | -           | -     | 0      | -     | -      | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92     | 92   | 92          | 92    | 92     | 92    | 92     | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2      | 2    | 2           | 2     | 2      | 2     | 2      | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 35     | 0    | 83          | 55    | 0      | 139   | 0      | 567  | 0    | 0    | 630  | 0    |
|                          |        |      |             |       |        |       |        |      |      |      |      |      |
| Major/Minor              | Minor2 |      | Minor1      |       | Major1 |       | Major2 |      |      |      |      |      |
| Conflicting Flow All     | 1514   | -    | 662         | 1271  | -      | 814   | -      | 0    | -    | -    | -    | 0    |
| Stage 1                  | 630    | -    | -           | 567   | -      | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | 884    | -    | -           | 704   | -      | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy            | 7.12   | -    | 6.22        | 7.12  | -      | 6.22  | -      | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 1      | 6.12   | -    | -           | 6.12  | -      | -     | -      | -    | -    | -    | -    | -    |
| Critical Hdwy Stg 2      | 6.12   | -    | -           | 6.12  | -      | -     | -      | -    | -    | -    | -    | -    |
| Follow-up Hdwy           | 3.518  | -    | 3.318       | 3.518 | -      | 3.318 | -      | -    | -    | -    | -    | -    |
| Pot Cap-1 Maneuver       | 98     | 0    | 462         | 145   | 0      | 378   | 0      | -    | 0    | 0    | -    | 0    |
| Stage 1                  | 470    | 0    | -           | 508   | 0      | -     | 0      | -    | 0    | 0    | -    | 0    |
| Stage 2                  | 340    | 0    | -           | 428   | 0      | -     | 0      | -    | 0    | 0    | -    | 0    |
| Platoon blocked, %       |        |      |             |       |        |       |        | -    |      |      | -    |      |
| Mov Cap-1 Maneuver       | 39     | -    | 448         | 115   | -      | 289   | -      | -    | -    | -    | -    | -    |
| Mov Cap-2 Maneuver       | 39     | -    | -           | 115   | -      | -     | -      | -    | -    | -    | -    | -    |
| Stage 1                  | 470    | -    | -           | 508   | -      | -     | -      | -    | -    | -    | -    | -    |
| Stage 2                  | 135    | -    | -           | 338   | -      | -     | -      | -    | -    | -    | -    | -    |
|                          |        |      |             |       |        |       |        |      |      |      |      |      |
|                          |        |      |             |       |        |       |        |      |      |      |      |      |
| Approach                 | EB     |      | WB          |       | NB     |       | SB     |      |      |      |      |      |
| HCM Control Delay, s     | 183    |      | 102.8       |       | 0      |       | 0      |      |      |      |      |      |
| HCM LOS                  | F      |      | F           |       |        |       |        |      |      |      |      |      |
|                          |        |      |             |       |        |       |        |      |      |      |      |      |
| Minor Lane/Major Mvmt    | NBT    |      | EBLn1WBLn1  |       | SBT    |       |        |      |      |      |      |      |
| Capacity (veh/h)         | -      |      | 109 202     |       | -      |       |        |      |      |      |      |      |
| HCM Lane V/C Ratio       | -      |      | 1.077 0.963 |       | -      |       |        |      |      |      |      |      |
| HCM Control Delay (s)    | -      |      | 183 102.8   |       | -      |       |        |      |      |      |      |      |
| HCM Lane LOS             | -      |      | F F         |       | -      |       |        |      |      |      |      |      |
| HCM 95th %tile Q(veh)    | -      |      | 7.2 8.1     |       | -      |       |        |      |      |      |      |      |

# Lanes, Volumes, Timings

## 3: Collins Avenue & 7th Street

Future 2024  
with Project

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |                                                                                   |  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |  |                                                                                     |  |  |                                                                                     |
| Traffic Volume (vph)    | 73                                                                                | 69                                                                                | 182                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 493                                                                                 | 86                                                                                  | 52                                                                                  | 405                                                                                 | 0                                                                                   |
| Future Volume (vph)     | 73                                                                                | 69                                                                                | 182                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 493                                                                                 | 86                                                                                  | 52                                                                                  | 405                                                                                 | 0                                                                                   |
| Ideal Flow (vphpl)      | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                              | 1900                                                                               | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                | 1900                                                                                |
| Lane Width (ft)         | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                | 12                                                                                 | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  | 12                                                                                  |
| Grade (%)               |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Storage Length (ft)     | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes           | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                  |                                                                                     | 0                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                |                                                                                   |                                                                                   | 25                                                                                 |                                                                                     |                                                                                     | 25                                                                                  |                                                                                     |                                                                                     |
| Lane Util. Factor       | 0.95                                                                              | 0.95                                                                              | 0.95                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                               | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                | 1.00                                                                                |
| Ped Bike Factor         |                                                                                   | 0.51                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.95                                                                                |                                                                                     | 0.94                                                                                |                                                                                     |                                                                                     |
| Frt                     |                                                                                   | 0.916                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.980                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Flt Protected           |                                                                                   | 0.989                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.950                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (prot)       | 0                                                                                 | 1830                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1741                                                                                | 0                                                                                   | 1770                                                                                | 1863                                                                                | 0                                                                                   |
| Flt Permitted           |                                                                                   | 0.989                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 0.324                                                                               |                                                                                     |                                                                                     |
| Satd. Flow (perm)       | 0                                                                                 | 1622                                                                              | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 1741                                                                                | 0                                                                                   | 565                                                                                 | 1863                                                                                | 0                                                                                   |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                    |                                                                                     | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Satd. Flow (RTOR)       |                                                                                   | 176                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Link Speed (mph)        |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |                                                                                   |                                                                                    | 30                                                                                  |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 344                                                                               |                                                                                   |                                                                                   | 342                                                                               |                                                                                   |                                                                                    | 517                                                                                 |                                                                                     |                                                                                     | 153                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                   | 7.8                                                                               |                                                                                   |                                                                                    | 11.8                                                                                |                                                                                     |                                                                                     | 3.5                                                                                 |                                                                                     |
| Confl. Peds. (#/hr)     | 163                                                                               |                                                                                   | 553                                                                               | 553                                                                               |                                                                                   | 163                                                                               | 237                                                                                |                                                                                     | 167                                                                                 | 167                                                                                 |                                                                                     | 237                                                                                 |
| Confl. Bikes (#/hr)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Peak Hour Factor        | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                               | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                | 0.92                                                                                |
| Growth Factor           | 106%                                                                              | 106%                                                                              | 106%                                                                              | 106%                                                                              | 106%                                                                              | 106%                                                                              | 106%                                                                               | 106%                                                                                | 106%                                                                                | 106%                                                                                | 106%                                                                                | 106%                                                                                |
| Heavy Vehicles (%)      | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                | 2%                                                                                 | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  | 2%                                                                                  |
| Bus Blockages (#/hr)    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Parking (#/hr)          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Mid-Block Traffic (%)   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                   | 0%                                                                                |                                                                                   |                                                                                    | 0%                                                                                  |                                                                                     |                                                                                     | 0%                                                                                  |                                                                                     |
| Adj. Flow (vph)         | 84                                                                                | 80                                                                                | 210                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 568                                                                                 | 99                                                                                  | 60                                                                                  | 467                                                                                 | 0                                                                                   |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lane Group Flow (vph)   | 0                                                                                 | 374                                                                               | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 667                                                                                 | 0                                                                                   | 60                                                                                  | 467                                                                                 | 0                                                                                   |
| Turn Type               | Perm                                                                              | NA                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | NA                                                                                  |                                                                                     | Perm                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |
| Permitted Phases        | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     | 6                                                                                   |                                                                                     |                                                                                     |
| Detector Phase          | 4                                                                                 | 4                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     | 6                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 5.0                                                                                 |                                                                                     | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 27.0                                                                              | 27.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |
| Total Split (s)         | 36.0                                                                              | 36.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 94.0                                                                                |                                                                                     | 94.0                                                                                | 94.0                                                                                |                                                                                     |
| Total Split (%)         | 27.7%                                                                             | 27.7%                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 72.3%                                                                               |                                                                                     | 72.3%                                                                               | 72.3%                                                                               |                                                                                     |
| Yellow Time (s)         | 4.0                                                                               | 4.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 4.0                                                                                 |                                                                                     | 4.0                                                                                 | 4.0                                                                                 |                                                                                     |
| All-Red Time (s)        | 2.0                                                                               | 2.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 2.0                                                                                 |                                                                                     | 2.0                                                                                 | 2.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     |                                                                                   | 6.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 6.0                                                                                 |                                                                                     | 6.0                                                                                 | 6.0                                                                                 |                                                                                     |
| Lead/Lag                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Lead-Lag Optimize?      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Recall Mode             | Max                                                                               | Max                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | Max                                                                                 |                                                                                     | Max                                                                                 | Max                                                                                 |                                                                                     |
| Act Effect Green (s)    |                                                                                   | 30.0                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 88.0                                                                                |                                                                                     | 88.0                                                                                | 88.0                                                                                |                                                                                     |

Lanes, Volumes, Timings  
3: Collins Avenue & 7th Street

Future 2024  
with Project

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                                | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Actuated g/C Ratio      |                                                                                   | 0.23                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.68                                                                                |                                                                                     | 0.68                                                                                | 0.68                                                                                |                                                                                     |
| v/c Ratio               |                                                                                   | 0.73                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.57                                                                                |                                                                                     | 0.16                                                                                | 0.37                                                                                |                                                                                     |
| Control Delay           |                                                                                   | 33.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 13.3                                                                                |                                                                                     | 8.8                                                                                 | 10.1                                                                                |                                                                                     |
| Queue Delay             |                                                                                   | 0.0                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.0                                                                                 |                                                                                     | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Delay             |                                                                                   | 33.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 13.3                                                                                |                                                                                     | 8.8                                                                                 | 10.1                                                                                |                                                                                     |
| LOS                     |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | B                                                                                   |                                                                                     | A                                                                                   | B                                                                                   |                                                                                     |
| Approach Delay          |                                                                                   | 33.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 13.3                                                                                |                                                                                     |                                                                                     | 9.9                                                                                 |                                                                                     |
| Approach LOS            |                                                                                   | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | B                                                                                   |                                                                                     |                                                                                     | A                                                                                   |                                                                                     |
| Queue Length 50th (ft)  |                                                                                   | 83                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 270                                                                                 |                                                                                     | 17                                                                                  | 156                                                                                 |                                                                                     |
| Queue Length 95th (ft)  |                                                                                   | 147                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 371                                                                                 |                                                                                     | 36                                                                                  | 216                                                                                 |                                                                                     |
| Internal Link Dist (ft) |                                                                                   | 264                                                                               |                                                                                   |                                                                                   | 262                                                                               |                                                                                   |                                                                                    | 437                                                                                 |                                                                                     |                                                                                     | 73                                                                                  |                                                                                     |
| Turn Bay Length (ft)    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Base Capacity (vph)     |                                                                                   | 509                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 1178                                                                                |                                                                                     | 382                                                                                 | 1261                                                                                |                                                                                     |
| Starvation Cap Reductn  |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Spillback Cap Reductn   |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Storage Cap Reductn     |                                                                                   | 0                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0                                                                                   |                                                                                     | 0                                                                                   | 0                                                                                   |                                                                                     |
| Reduced v/c Ratio       |                                                                                   | 0.73                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    | 0.57                                                                                |                                                                                     | 0.16                                                                                | 0.37                                                                                |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

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

Natural Cycle: 115

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 17.0

Intersection LOS: B

Intersection Capacity Utilization 72.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Collins Avenue & 7th Street

