Project Traffic Analysis Report

TOWN OF BAY HARBOR ISLANDS

BROAD CAUSEWAY BRIDGE REPLACEMENT
PROJECT DEVELOPMENT & ENVIRONMENT STUDY

Prepared for:

Town of Bay Harbor Islands, Florida

March 20, 2023

BAY HARBOR ISLANDS

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Project Traffic Analysis Report

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The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated May 26, 2022, and executed by Federal Highway Administration (FHWA) and FDOT.

Prepared for:
Town of Bay Harbor Islands

Prepared by:
AtkinsRéalis

PROFESSIONAL ENGINEERING CERTIFICATION

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PROJECT: BROAD CAUSEWAY BRIDGE REPLACEMENT PD&E

FPID NO: 452428-1-01

CONTRACT NO: TOWN OF BAY HARBOR ISLANDS NO: BC-160

REPORT: PROJECT TRAFFIC ANALYSIS REPORT (PTAR) FINAL REPORT

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EXECUTIVE SUMMARY

This traffic analysis report has been prepared on behalf of the Town of Bay Harbor Islands and serves as a Project Traffic Analysis Report (PTAR) for the improvement of Broad Causeway in Miami-Dade County, Florida, from east of Bayshore Drive and West Broadview Drive. The report provides the traffic data collection, existing operational analysis, existing safety analysis, traffic forecasting, future operational analysis, and future safety analysis.

The 0.78-mile study segment of Broad Causeway is an urban minor arterial that begins east of North Bayshore Drive (North Miami) and extends east to the intersection of SR-922 and West Broadview Drive (Bay Harbor Islands). The project ties into state-maintained facilities on either end with the same 4-lane typical section to match the existing condition.

The purpose of this project PTAR is to evaluate the mobility, operations, and safety of Broad Causeway and summarize the travel impacts of proposed typical sections, project limit tie-ins, access changes near the existing Chevron gas station, and proposed Shared Use Path (SUP) along the Broad Causeway.

The years for corridor and intersection performance was Existing 2023, Opening 2030, and Design 2050.

A historical safety review was conducted using five years of complete crash records occurring within the study limits between January 1, 2018 and March 1, 2023. Crash data and crash reports were obtained from the Signal Four Analytics (Signal4) database and reviewed in accordance with FDOT Safety Crash Data Guidance.

Future traffic design volumes were developed by applying a growth rate derived from Southeast Florida Regional Planning Model (SERPM) travel demand forecasting, historical growth rates, and population projections to the existing 2023 traffic volume counts.

The project included opening and design year build alternatives. The objective of the build alternatives was to evaluate the mobility, operations, and safety impacts of the Broad Causeway improvement. The proposed four-lane divided bridge typical section includes increasing the travel lanes from 10-feet to11-feet, introduction of a concrete median, increasing inside shoulder width to 4-feet and outside shoulder to 8-feet. In addition, a 14-foot shared use path would be included on the north side of the bridge, separated from the shoulder by a concrete barrier wall.

The build alternative also changes the way traffic enters and exits the Chevron gas station. Due to the elevation change from the bridge improvement the build now includes frontage roads that provide access between the Broad Causeway mainline and the gas station access driveways. The analysis needs due to these new movements include locations where traffic merge and diverge, as well as two stopped-controlled intersections between vehicles entering and exiting the frontage roads. For future year analysis, the no-build and build through volumes along Broad Causeway were assumed to be equal due to the number of travel lanes remaining the same.

Based on the traffic performance analysis, when comparing the no-build and build alternatives the entire project limit Level of Service (LOS) and travel speed is improved and within FDOT performance targets. In the no-build alternative 2050 delays at Chevron gas station access driveways are at LOS D or better. In the proposed build alternative, the merge and diverge areas on the frontage roads

around the gas station are estimated to operate as LOS B or better, the proposed stop-controlled intersections are estimated to operate as a LOS A, and the overall segment is a LOS A based on arterial travel speeds.

The impacts to multimodal mobility were conducted for existing and build configurations. Based on the multimodal analysis, the proposed build reconfigurations improve the Level of Traffic Stress (LTS) for pedestrians and bicyclist. The LTS for pedestrians and bicyclist improved to a LTS of 1 with the proposed addition of a shared use path, which is separated from Broad Causeway, improving the safety and comfortability for multimodal movement.

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ACRONYMS AND ABBREVIATIONS

A	**AADT**	Annual Average Daily Traffic
C	**CMF**	Crash Modification Factor
D	**D-Factor**	Directional Distribution Factor
	DHV	Design Hour Volume
	DDHV	Directional Design Hourly Volume
F	**FDEM**	Florida Division of Emergency Management
	FDOT	Florida Department of Transportation
	FHWA	Federal Highway Administration
H	**HCM**	Highway Capacity Manual
	HCS	Highway Capacity Software
	HSM	Highway Safety Manual
I	**ICWW**	Intracoastal Waterway
K	**K-Factor**	Design Hour Factor
L	**LOS**	Level of Service
	LTS	Level of Traffic Stress
P	**PD&E**	Project Development and Environment
	PER	Preliminary Engineering Report
	PHF	Peak Hour Factor
	PTAR	Project Traffic Analysis Report
R	**RRFB**	Rectangular Rapid Flashing Beacon
S	**SERPM**	Southeast Florida Regional Planning Model
	SPF	Safety Performance Function
	SR	State Road
	SUP	Shared Use Path
T	**TAMR**	Traffic Analysis Methodology Report
	TEM	Traffic Engineering Manual (by FDOT)
	TMC	Turning Movement Count
	TSM&O	Transportation Systems Management and Operations

1.0 Introduction

This traffic analysis report has been prepared on behalf of the Town of Bay Harbor Islands and serves as a Project Traffic Analysis Report (PTAR) for the improvement of Broad Causeway in Miami-Dade County, Florida, from Bayshore Drive and West Broadview Drive. The report provides the traffic data collection, existing operational analysis, existing safety analysis. traffic forecasting, future operational analysis, and future safety analysis.

The analysis will document existing and future conditions and follow the process outlined in FDOT's *Project Development and Environment (PD&E) Manual*. The results of the PTAR will be prepared and documented as part of the Broad Causeway Bridge Replacement PD&E study. All raw data and supporting information referenced in the analysis will be included with the PTAR deliverable. A traffic analysis methodology, which was approved by the Town of Bay Harbor Islands, is included in **Appendix 7.1**.

1.1 Purpose and Need

The purpose of this project is to address the structural and functional deficiencies of the existing Broad Causeway Bridge. The need for the project is to improve bridge deficiencies because the 73-year-old bridge is structurally deficient, functionally obsolete, and contains fracture critical components; improve safety since there have been several vehicular crashes in the project corridor, many involving bicycles and pedestrians that resulted in injuries; improve flow of traffic along the project corridor which has high traffic volumes and frequent bridge openings; and to maintain emergency evacuation.

The feasibility of continued rehabilitation and repair versus replacement of the bridge will be evaluated through the Project Development and Environment (PD&E) study. The need for the project is based on the identified bridge deficiencies provided in the final PER Preliminary Engineering Report.

The purpose of this PTAR is to evaluate the mobility, operations, and safety of Broad Causeway and summarize the travel impacts of proposed typical sections, access changes near the existing Chevron gas station, and proposed Shared Use Path (SUP) along the Broad Causeway. Serving as part of the emergency evacuation route network designated by the Florida Division of Emergency Management (FDEM) and Miami-Dade County, Broad Causeway Bridge plays a critical role in facilitating traffic between the beaches and the mainland of Miami during emergency evacuation periods. Traffic analysis will consider the positive impacts that this project will have on all traffic, including traffic during evacuation.

The traffic analysis process includes:

- Review of existing roadway characteristics
- Collection of recent traffic data
- Analysis of existing year traffic operations and safety performance
- Development of future year traffic volumes
- Analysis of future year traffic operations and safety performance

1.2 Project Description

The project involves the potential replacement of the Broad Causeway Bridge connecting the Town of Bay Harbor Islands (Town) with the City of North Miami, within Miami-Dade County. The bridge is part of the Broad Causeway, a roadway classified as "Urban Minor Arterial". This arterial also begins in Bal Harbour/Surfside and connects those commuters to the mainland. The specific limits of the project extend from the Broad Causeway Island (25°53'19.41"N, 80° 8'54.52"W) on the west side and (25°53'11.30"N, 80° 8'18.93"W) to east of West Broadview Drive. The improvements include the bridge approaches and Broad Causeway Island circulation. The Florida Department of Transportation (FDOT) Bridge Identification (ID) Number (No.) is 875101. A graphic depicting the location of the bridge is provided as **Figure 1-1**. The project is approximately 0.77 mile in length.

The existing bridge consists of four lanes, undivided (two in each direction), the four travel lanes are 10 ft. wide, without a raised median. The outside travel lanes also include shared-use markings to accommodate bicycles. In addition, pedestrians use a raised maintenance area on each side of the bridge, with a width that varies from 22 to 36 inches. There are no guardrails separating the sidewalk from the travel lane. Crossing over the Intracoastal Waterway (ICWW), the bridge has a horizontal clearance of 79.7 ft., a maximum vertical clearance of 18.0 ft. at Mean Low Water (MLW) and a minimum vertical clearance of 15.7 ft. at Mean High Water (MHW) at the Bascule crossing. The ICWW at the bridge crossings is deemed a navigable waterway by the United States Coast Guard (USCG). The bridge bascule is required by the USCG to open twice per hour on the quarter and three-quarter hour but only opens if vessels are waiting.

The existing bridge, constructed in 1951, has been determined to be functionally obsolete with fracture critical components based on a Bridge Inspection Report prepared in January 2023 and determined to be structurally deficient based on a Bridge Inspection Report prepared in January 2024 by FDOT. In 2017, major structural repairs were performed to the bridge at a construction cost of approximately $17 million. As a result of a 2020 inspection carried out by FDOT, a design to address additional repairs has been completed and it has been determined that the cost to perform these repairs will amount to $3.0 million. As a result of the 2024 inspection, temporary emergency repairs will be completed. One lane of the bridge is closed until repairs are complete. It is expected that major costly repairs will be needed more frequently as the bridge ages to prevent closure or severe damages. Because of the structure type, the number of structural deficiencies, and high maintenance costs, the Town is considering replacement of the bridge.

This Project Development and Environment (PD&E) Study has been conducted to address the structural and functional deficiencies of the existing Broad Causeway Bridge and to evaluate and compare the feasibility of continued rehabilitation and repair versus replacement of the bridge. The project limits for the PTAR coincide with the limits of the overall project.

The project context classification is not specified since most of the project falls outside FDOT limits. To the west of the project the roadway is classified as C4 Urban General and to the east C5 Urban Center.

There are existing unsignalized movements at the northern and southern Chevron driveways that were analyzed as part of this study.

There are no signalized intersections within the analysis and project limits.

In the preferred alternative the traffic analysis includes multiple stop-controlled intersections and merging and diverging movements between the island developments and causeway mainline.

Additionally, in the preferred alternative there is a mid-block pedestrian crosswalk proposed just east of West Broadview Avenue. For this crosswalk justification and criteria reference the FDOT Traffic Engineering Manual guidance.

Bridge concepts will include provisions for new pedestrian and bicycle accommodations to comply with Americans with Disabilities Act (ADA) requirements and guardrails for the safety of pedestrians.

Existing right-of way (ROW), owned by the Town, is anticipated to accommodate the replacement bridge and approaches. Included in the Town Charter by the 1953 Senate Bill No. 865, the State of Florida surrendered and granted to the Town any claim or control over all tidewaters and other lands, and all bayous and bay bottoms, beaches, waters, waterways and water bottoms, and all riparian rights within and adjacent to the Town limits for municipal purposes only, a strip of 300 ft. wide from Kane Concourse, westwardly across Biscayne Bay to approximately 123rd Street in the City of North Miami. This 300-ft. wide strip is shown in **Figure 1-2** a bright yellow highlight. Therefore, the replacement bridge will be built within the 300 ft. strip over Biscayne Bay under claim or control by the Town.

Figure 1-1 Project Location Map

Figure 1-2 Depiction of 300-ft. wide strip from Kane Concourse to North Miami

1.3 Study Methodology Summary

1.3.1 Study Period

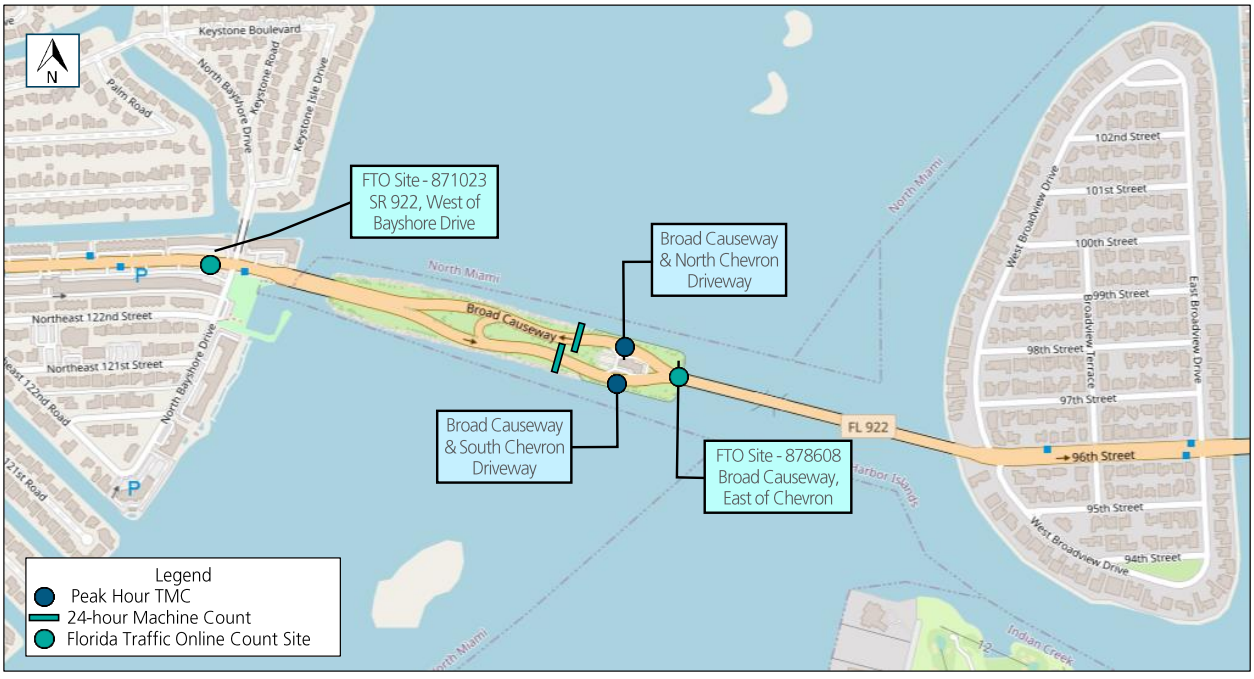
The following years represent the existing year, opening year, and design year for the corridor and intersection performance evaluation.

- Existing Year = 2023
- Opening Year = 2030
- Design Year = 2050

1.3.2 Data Collection

Data is collected within the study limits along Broad Causeway, east of the Chevron Gas station and at intersection locations between the Broad Causeway mainline and Chevron Gas Station. **Figure 1-3** provides a location map of each count location used for the study.

Figure 1-3 Count Location Map



1.3.3 Performance Measures

Performance measures for evaluation were selected based on the FDOT policy of target level of service (LOS) for State Highway System arterials in urban areas. The target LOS for intersections and corridors is LOS D.

Segments

The operations along study area roadway segments were evaluated based on the following list of performance metrics which are developed using AADT and DHV.

- Travel Time
- Average Speed
- Arterial Level of Service
  - Peak hour analyses using HCM procedures
  - Daily analysis using FDOT's 2023 Generalized Tables based on Context Classification (note: there is no daily analysis option using the HCM process)
- Volume to Capacity Ratio

Intersections

To assess the performance of intersections, the subsequent metrics were employed to evaluate each intersection's movement, approach, and overall dynamics during the AM, Mid-day (MID), and PM peak hours.

- Control Delay
- Level of Service
- Volume to Capacity Ratio
- 95th percentile Queue Length

Multimodal

The multimodal network performance was evaluated by quantifying the level of traffic stress. The following list of data inputs were reviewed to evaluate the quality of travel for people walking and biking.

- Facility Type
- Lane Width
- Vehicular Posted Speed
- Vehicular Volume
- Separation from Traffic
- Level of Traffic Stress

1.3.4 Traffic Analysis Tools

Segment and intersection traffic analysis was completed using operational performance methodologies of the *Highway Capacity Manual, 6th Edition (HCM6)*, For intersections Synchro with HCM was used and for segment analysis HCS7 and Synchro-SimTraffic analysis programs were used. Both of these programs utilize and have the ability to generate the performance measures listed above. Where applicable, HCM reports will be provided for all study intersections.

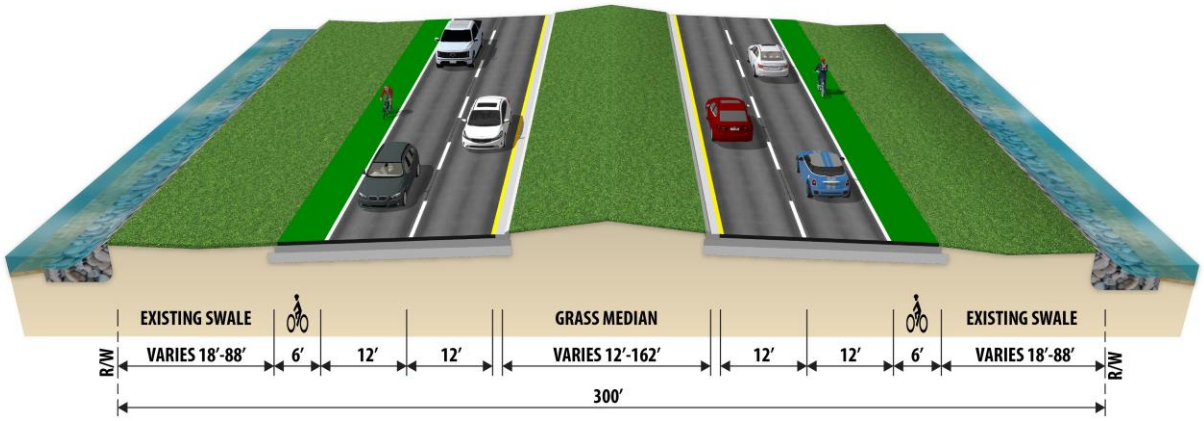
Multimodal analysis is completed using the FDOT's *2023 Multimodal Quality Level of Service Handbook*. The handbook uses Level of Traffic Stress (LTS) to evaluate the quality of travel for people walking and biking. LTS is segmented into four levels of classification, which vary based on the user type's comfort levels when using the facility.

2.0 Existing Conditions Analysis

2.1 Roadway Typical Sections

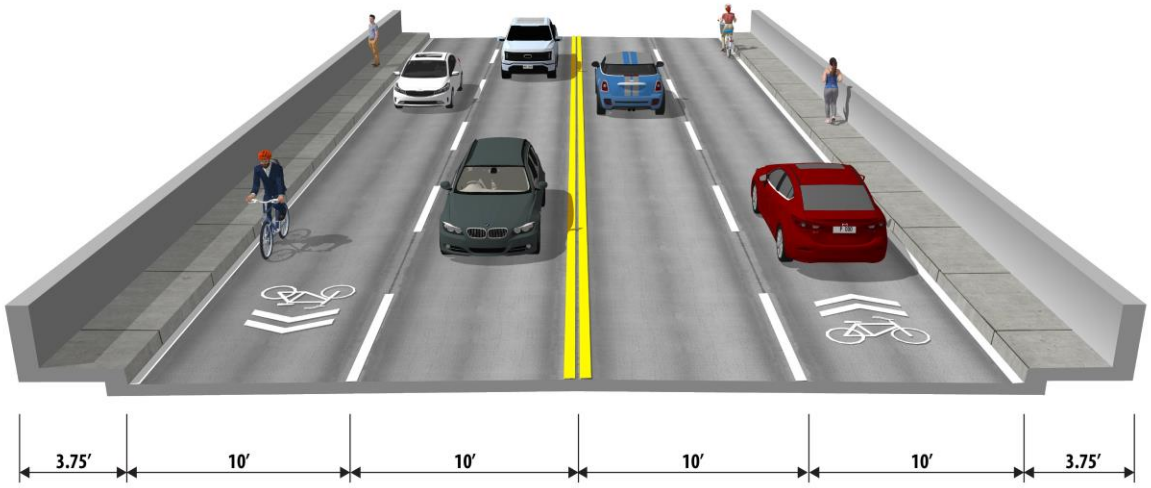
There are three existing typical sections within the project limits. The first typical is the existing roadway on the man-made causeway island from Sta. 105+21.37 to Sta. 123+85.28. The typical includes four, 12 ft. travel lanes and 6 ft. shoulders/bike lanes in both directions and no sidewalks. There is a grassed median that varies in width and inside curbs of 2 ft. On the outside of the shoulder there are grassed swales that vary in width and tie to an existing seawall/rip rap. The entire typical fits within the existing ROW owned by the Town (**Figure 2-1**).

Figure 2-1 Existing Roadway Typical Section – Causeway Island



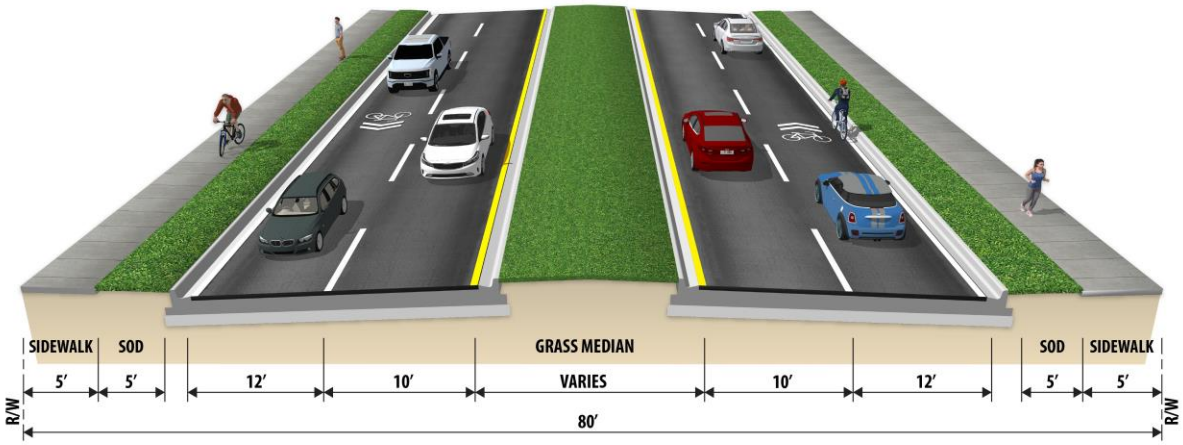
The second typical is the existing bridge with four 10 ft. travel lanes, no shoulders, and a raised 3.75 ft. maintenance section that includes 22 to 36 inches of walkable area and an outside barrier wall. This maintenance section is used as a path for pedestrians and includes a bridge railing. The outside lanes of the existing bridge typical are striped as sharrows for bicycle use (**Figure 2-2**).

Figure 2-2 Existing Bridge Typical Section



The third typical is the approach roadway on the eastern end of the existing bridge on SR 922/Kane Concourse from Sta. 141+41.25 to Sta. 146+25.69 and consists of four travel lanes with widths of 10 ft. (inside) and 12 ft. (outside). The typical also includes a landscaped median varying in width and two 2 ft. curbs on both its sides. On the outside are 2 ft. curbs with 5 ft. sidewalks and 5 ft. of existing sod on each side. The outside lanes are striped as sharrows for bicycle use (**Figure 2-3**).

Figure 2-3 Existing Roadway Typical Section – SR 922/Kane Concourse



2.2 Historical Average Daily Traffic

FDOT's Florida Traffic Online (FTO) web application was utilized to supplement collected traffic data. Two portable traffic monitoring sites from FTO count information includes historical AADT, directional hourly volumes, vehicle classification, and truck factors. Refer to **Figure 1-3** for location map of each count location used for the study. **Table 2-1** below provides a summary of the FTO count information. FTO Reports are provided in **Appendix 7-4**.

Table 2-1 Florida Traffic Online Summary

Count Location (FDOT Site # - Location Proximity)	K Factor	D Factor	T Factor	2022 AADT
878608 – SR 922, 200' E of Chevron	9.0	56.5	2.6	22,000
871023 – Broad Cswy, 200' W of Bayshore Dr	9.0	54.7	7.8	24,500

2.3 Existing Segment Volumes

Machine counts (7-day, 24-hour) were collected at Broad Causeway for the eastbound and westbound approaches. The counts were used to determine the segment traffic throughout the day and to identify weekday traffic patterns. The counts were conducted by National Data & Surveying Services (NDS) between February 11 and 17, 2023. The counts were evaluated for applicable seasonal adjustments, with the season factor for the corresponding count week being 0.96. A season factor below 1.00 indicates that the data was gathered during the peak season, thus it was decided to not apply a seasonal factor. Peak hours were identified as follows: AM = 8:15-9:15, Mid = 12:15-1:15, and PM = 5:15-6:15.

The weekday and weekend AADT volumes are listed in **Table 2-2**. The raw count data and summarized tube count data are provided in **Appendix 7.2**.

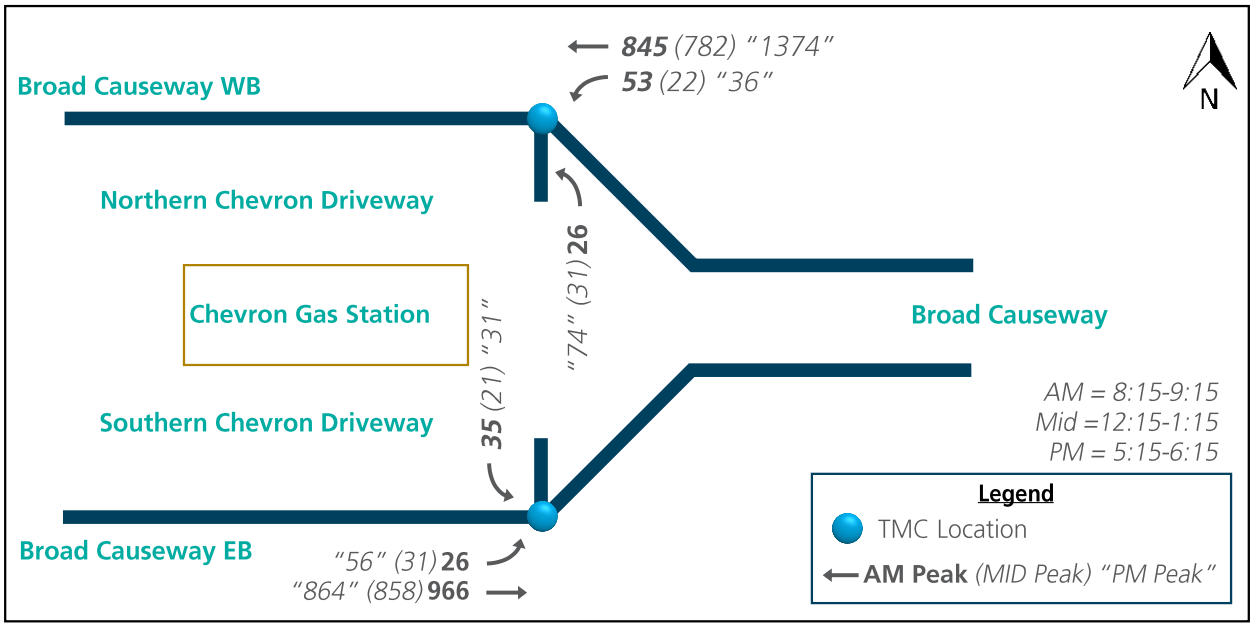
Table 2-2 Collected Daily Traffic Counts

Count Station	Count Location	2023 Weekday AADT	2023 Weekend AADT
1	Broad Causeway, West of Chevron Gas Station	25,100	17,600

2.4 Existing Intersection Volumes

Intersection Turning Movement Counts (TMCs) were collected at the study intersection for seven weekday hours by National Data & Surveying Services (NDS) on February 14, 2023. The peak hour turning movement counts are illustrated in **Figure 2-4**. The original TMC reports and TMC summaries used for traffic model input are provided in **Appendix 7.2**. The TMC locations on the TMC diagrams represent combined inbound and outbound movements for both driveways in each approach. The U-turn driveway west of the retail development was not counted as it was negligible based on local knowledge. The only logical users of this U-turn are drivers from the town/beach visiting the gas station and returning back to town. Based on collected westbound inbound trips the U-turn movement is not estimated to be more than 40 vehicles in the peak hour. At this rate it would have no impact on the proposed traffic analysis.

Figure 2-4 2023 Existing Turning Movement Counts



2.5 Existing Multimodal Volumes

Pedestrians and cyclist travel across the non-bridge portion of the Broad Causeway using the existing green bike lanes provided in both directions. To cross the bridge, bicycles are transitioned to share the vehicular travel lanes and pedestrians elevated curb that serves as a sidewalk.

Pedestrian and bicycle counts were collected at two locations outside of the Chevron Gas Station for twelve weekend hours on Saturday, February 11, 2023, and twelve weekday hours on Tuesday, February 14, 2023, by National Data & Surveying Services. The daily pedestrian and bicyclist counts from the two count locations are listed below in **Table 2-3** and provided in **Appendix 7.2**.

Table 2-3 Multimodal Traffic Counts

Date	Time	Type	Eastbound	Westbound
Saturday, February 11th, 2023	*7:00 AM – 7:00 PM*	*Pedestrians*	*119*	*122*
		Bikes	*216*	*176*
Tuesday, February 14th, 2023	*7:00 AM – 7:00 PM*	*Pedestrians*	*103*	*95*
		Bikes	*105*	*91*

2.6 Existing Segment Analysis

The 2023 existing condition segment analysis provides a baseline to review no-build and build conditions. The Broad Causeway peak hour segment volumes were obtained from the turning movement counts and daily volumes on the segment were obtained from the 7-day, 24-hour machine counts. Analysis tools included the SimTraffic Arterial Level of Service Reports compared to HCM Urban Street LOS tables for peak hours counts and 2023 FDOT Generalized Service Volume Tables for a reasonableness check of daily volumes.

Table 2-4 summarizes level of service and volume to capacity for daily using the 2023 FDOT Generalized Service Volume Tables. **Table 2-5** summarizes level of service and travel speed using the SimTraffic Arterial Level of Service Reports and provided in **Appendix 7.5**.

The existing daily segment volumes are compared to the 2023 FDOT Generalized Service Volume Table for a general review of daily operations[1]. This check for reasonableness results in a V/C ratio below 0.69 for daily volumes.

The existing peak hour segment analysis was based on existing travel speed collected from SimTraffic, in which, each peak period and approach exceed 80% of the base free-flow speed. The LOS criteria

1 The FDOT 2023 Multimodal Quality/Level of Service Handbook serves as a good generalized-planning tool, however it does not provide sufficient detail for project development and environment (PD&E) traffic analysis. The GSVT comparison is provided as a reasonableness check.

from HCM urban street facilities results in a LOS of A for all existing conditions. All existing conditions are within the target of LOS D.

Since the segment analysis is intended to evaluate typical peak hour operations the existing drawbridge interruption to traffic is not included in the segment analysis or models. This is due to the drawbridge operations not occurring on a recurring consistent basis like a traffic signal or stop-controlled intersection would have.

2.6.1 Simulation Model Validation

The project limits of this study create a unique analysis conundrum when attempting to use traditional HCM methods. The entire segment speed is posted at 30 mph, which is less than 45 mph minimum speed to be analyzed as a highway. Within the limits of this roughly 0.7-mile segment there are no stop or signal controlled intersections however, to use the HCM method at segment must be bound by a signal or traffic control on the boundaries. For this project there are signals beyond either end of the project limits; of which neither is included in any project improvements. All feasible project alternatives still include the same number of through lanes as in the existing condition. With all these considerations it is proposed that peak hour segment LOS be determined based using SimTraffic travel speeds compared to HCM LOS Travel Speed Threshold Criteria for Urban Street Segments (HCM 6: Exhibit 18-1).

SimTraffic models were calibrated by programming existing posted speeds and input volumes and comparing the model output values for consistency. In the existing PM model, there were 2450 vehicles with a PHF of 0.92, which equates to 2,663 vehicles. The SimTraffic Simulation Summary (provided in **Appendix 7.5.1**) shows that 2,655 vehicles were modeled into the network with 2,643 exiting the network, which represents a model input difference less than 0.5%.

Table 2-4 Existing Segment Volume Analysis Summary (Daily)

Roadway	Extents	Scenario	Volume	Service Volume Capacity	v/c	LOS	Targeted LOS
Broad Causeway	Bayshore Dr to West Broadview Dr	2023 Existing	25,100	36,100	0.70	D	D

Sources: FDOT 2023 Quality/Level of Service Handbook Generalized Tables (C4)

Table 2-5 Existing SimTraffic Segment Volume Analysis (Peak Hour)

Roadway	Extents	Peak Period	Travel Speed (mph)		Level of Service (LOS)		Target LOS
			EB	WB	EB	WB	
Broad Causeway	Bayshore Dr to West Broadview Dr	AM	28	27	A	A	D
		MID	28	28	A	A	D
		PM	28	26	A	A	D

2.7 Existing Intersection Analysis

Intersection capacity analysis utilized the Highway Capacity Manual (HCM6) methodology and was completed using Synchro software for the study intersections. Each study intersection includes a yield-controlled traffic movement exiting the Chevron Gas Station. To conservatively model the impacts of the intersections and obtain Synchro HCM6 reports, each intersection was modelled as stop-controlled.

Based on the results from **Table 2-6**, each intersection results in a LOS of C or better.

Table 2-6 Existing Intersection Volume LOS Analysis Summary

Intersection	Intersection Control	Peak Period	Approach Delay (LOS)				Intersection Delay (LOS)
			EB	WB	NB	SB	
Broad Cswy & Northern Chevron Dwy	TWSC	AM	--	0.0 (A)	12.3 (B)	--	12.3 (B)
		MID	--	0.0 (A)	11.8 (B)	--	11.8 (B)
		PM	--	0.0 (A)	18.2 (C)	--	18.2 (C)
Broad Cswy & Southern Chevron Dwy	TWSC	AM	0.0 (A)	--	--	13.0 (B)	13.0 (B)
		MID	0.0 (A)	--	--	12.0 (B)	12.0 (B)
		PM	0.0 (A)	--	--	12.6 (B)	12.6 (B)

2.8 Existing Multimodal Analysis

The existing multimodal operations were assessed by using the Level of Traffic Stress (LTS) metric. LTS is an approach developed by the Mineta Transportation Institute that focuses on classifying the comfort pedestrians and bicyclists experience while using a roadway. The practice has been adopted by FDOT to quantify the impacts of a facilities features have on multimodal users' comfort levels. Roadways were assigned a stress level of one to four with LTS 1 signifying very low stress and LTS 4 signifying high stress.

Determining LTS for a facility is based on a variety of factors and conditions, such as the presence and configuration of dedicated or mixed traffic facilities.

The criteria for determining the LTS for the facility encompassed inventory of dedicated continuous sidewalks proportion, posted speed limit, horizontal separation, and vertical separation. Since there is no sidewalk present along the Broad Causeway Island, the LTS for pedestrians was Level of Traffic Stress 4. This facility would feel uncomfortable for most users traveling without a bicycle since only a bike lane is present.

The evaluation criteria used to analyze bicyclist were type of bicycle facility, posted speed limit, AADT, on-street parking, and width of bicycle lane. After reviewing each roadway characteristic, the level of traffic stress for a pedestrian and bicyclist crossing the bridge was LTS 4 (which is defined as a route that is impassable by a wheeled mobility device or represents a level tolerated only by those with limited route choice or tolerated by a cycling enthusiast).

3.0 Existing Traffic Safety Analysis

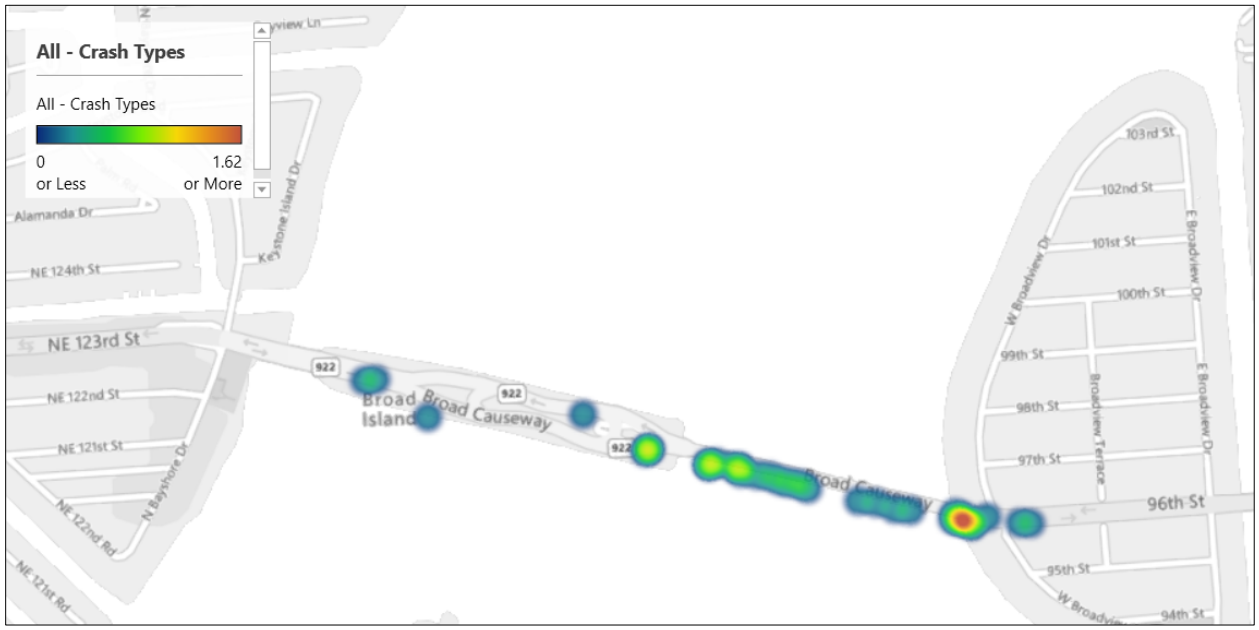
3.1 Historical Crash Summary

A historical safety review was conducted within the study limits using five years of available crash records occurring between January 1, 2018 and December 31, 2022. Crash data and crash reports were obtained from the Signal Four Analytics (Signal4) database and reviewed in accordance with FDOT Safety Crash Data Guidance. The Signal4 database uses crash records obtained from the FLHSMV crash records and is maintained by the GeoPlan Center at the University of Florida.

Detailed crash data, including crash type, crash severity, lighting conditions, roadway surface conditions, etc., was reviewed and summarized in text, tabular, and graphical forms to convey critical trends experienced in the historical cash data. For safety analysis purposes, the study area includes crashes occurring within 250-feet of intersections in the project limits.

Within the study limits a total of 47 crashes were reported over the five-year period. A summary of the crash analysis is provided in this section. A heat map of the crash locations can be found below in **Figure 3-1**.

Figure 3-1 Heat Map of All Crashes



3.2 Crash Type and Severity

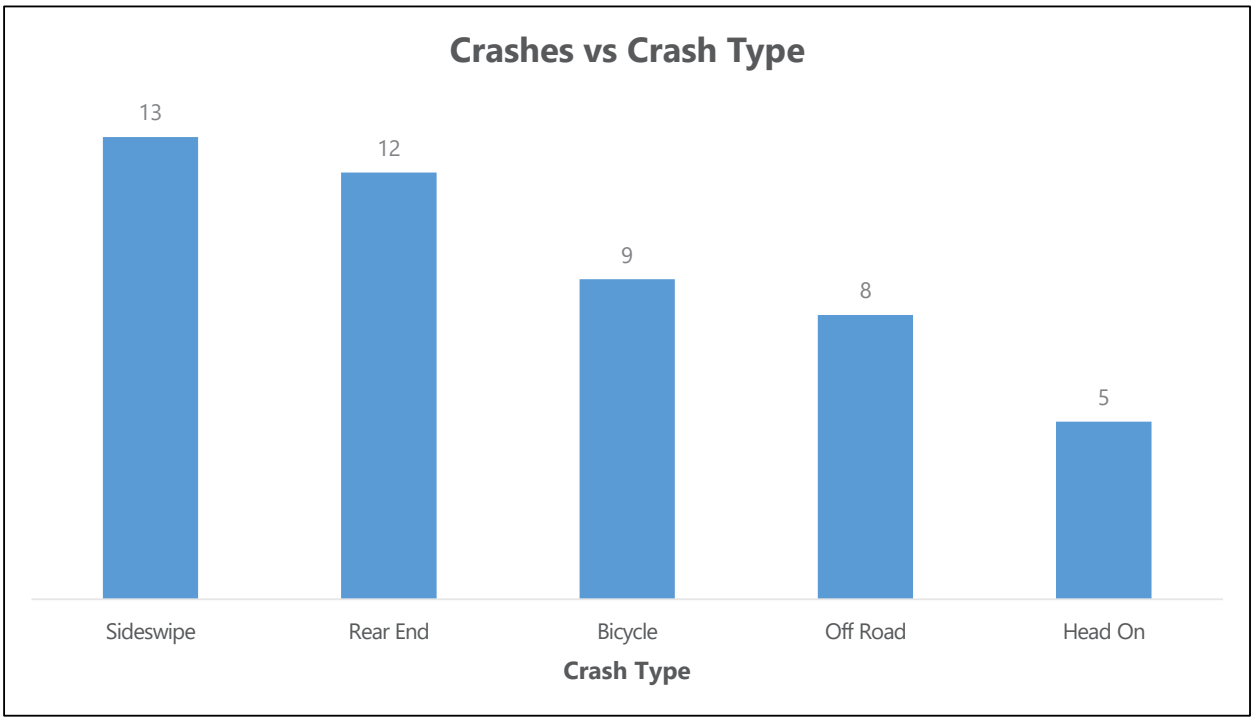
Crash data was reviewed to record the severity of crashes and contributing factors. Of the 47crashes, 2 resulted in serious injury, 18 resulted in injury, and 27 resulted in property damage only.

In the five-year crash history, there were 13 sideswipe crashes, which accounted for 28% of the total crashes. The next most common crashes were rear-end crashes (12) and bicycle crashes (9).

Table 3-1 Crash Type by Level of Severity

Crash Type	Severity				
	No Injury	Possible Injury	Non-Incapacitating Injury	Incapacitating Injury	Grand Total
Sideswipe	*13*				*13*
Rear End	*6*	*4*	*2*		*12*
Off Road	*6*	*2*			*8*
Bicycle			*8*	*1*	*9*
Head On	*2*	*1*	*1*	*1*	*5*
Grand Total	***27***	***7***	***11***	***2***	***47***

Figure 3-2 Crash Type Frequency



3.3 Detailed Serious Injury Crash Review

Within the study period, two crashes resulted in incapacitating injuries. This section provides a contextual summary of those crashes which provided additional insight for recommending crash countermeasures and safety design improvements.

- In September 2018 at approximately 7:30 AM, vehicle 1 was traveling eastbound on the Broad Causeway Bridge just east of the Chevron gas station. Vehicle 1 entered the inner westbound travel lane striking vehicle 2 head-on which resulted in serious injuries for the driver of vehicle 2.
- In February 2020 at approximately 7:00 AM during clear and dry weather conditions, a bicyclist traveling eastbound on Broad Causeway Bridge/SR 922 near W Broadview Drive rear-ended by a vehicle also traveling eastbound. The bicyclist sustained incapacitating injuries.

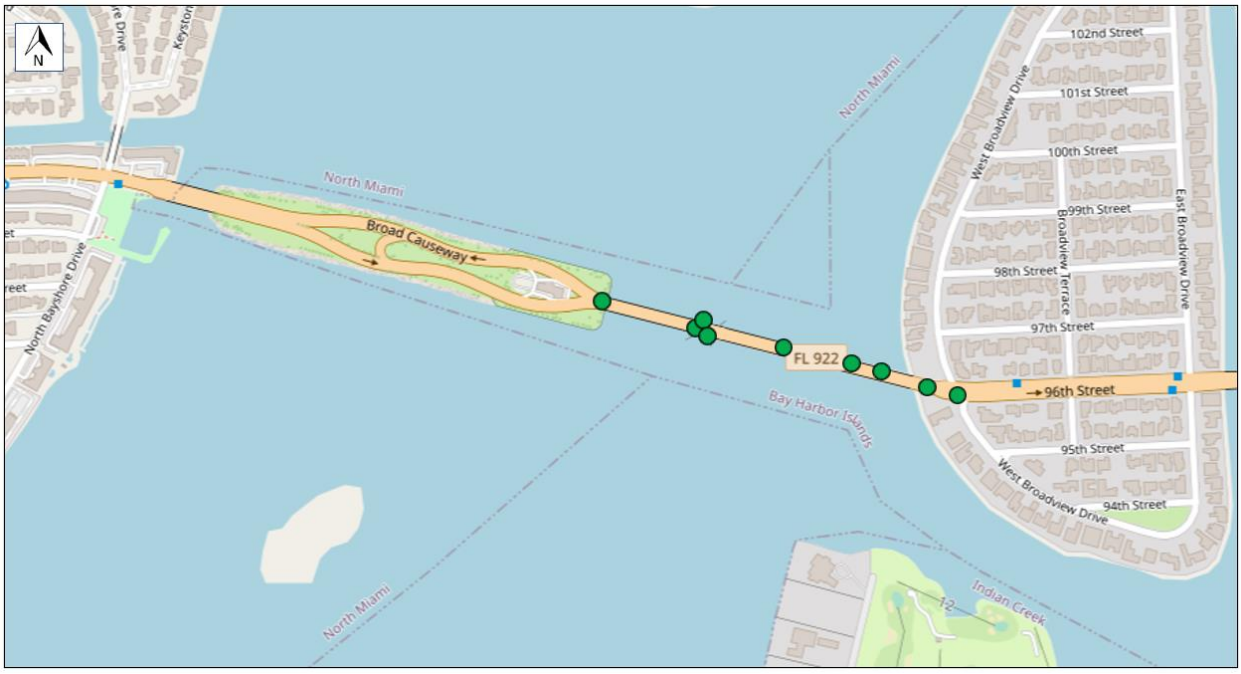
3.4 Detailed Bicycle and Pedestrian Crashes

Of the total crashes, nine reported crashes involved bicycles and resulted with injuries. There were no reported pedestrian crashes. The location of the bicycle crashes are shown in **Figure 3-3**. A detailed summary of each bicycle crash is provided below:

- In February 2020 at approximately 7:00 AM, a bicyclist traveling eastbound on Broad Causeway Bridge/SR 922 near W Broadview Drive was struck from behind by a vehicle also traveling eastbound. The bicyclist sustained incapacitating injuries. At the time of the crash the weather was clear and pavement was dry.
- In March 2020 at approximately 11:00 PM, a bicyclist was traveling eastbound on Broad Causeway Bridge when a vehicle collided into the bicyclist with the right-side view mirror. The bicycle was totaled in the crash. The crash occurred during nighttime with poor lighting conditions.
- In August 2020 at approximately 1:05 PM, a push scooter that had been upgraded with a motor lost control of the scooter while crossing the metal grate. The scooter was traveling eastbound and had to use maximum speed to travel up the bridge. The pavement was wet.
- In October 2020 at approximately 3:13 PM, a motorist utilizing a motor scooter adjusted his sideview mirror resulting in him losing control of the motor scooter and falling onto the roadway. Weather conditions were clear and the pavement was dry.
- In March 2021 at approximately 9:45 PM, a vehicle traveling eastbound rear ended a bicyclist. The side view mirror of the vehicle also struck the bicycle and bicyclist. The crash occurred during nighttime with poor lighting conditions.
- In October 2021 at approximately 9:27 PM, a vehicle traveling westbound on the Broad Causeway Bridge struck a non-motorized scooter. The crash occurred during nighttime with poor lighting conditions.
- In February 2022 at approximately 2:00 PM, a vehicle traveling eastbound struck a bicyclist traveling eastbound. Weather conditions were clear and the pavement was dry.

- In April 2022 at approximately 11:00 PM, a motorist utilizing a scooter was travelling westbound on the Broad Causeway Bridge and slid on the metal grating causing the driver to fall off of the scooter. The crash occurred during nighttime with cloudy weather conditions and wet pavement.
- In May 2022 at approximately 7:18 PM, a motorcyclist was travelling westbound on the Broad Causeway Bridge and lost control of the vehicle causing the driver to fall over on their left side. The weather was clear and the pavement was dry.

Figure 3-3 Bicycle Crash Map



Legend: Map points represent approximate locations of bicycle crashes.

3.5 Temporal Crash Trends

Crash data and reports were assessed to determine temporal trends in the statistics. This review included crash year, month, day of the week, and time-of-day.

The five-year historical crash trends peaked in 2020 and remained consistent throughout 2022 with 11 or 12 crashes each year, as seen in **Figure 3-4**.

Friday was the most common day for crash occurrences with 11 crashes, as seen in **Figure 3-5**. Tuesday had the second highest crash occurrence with 10 crashes. The average per weekday count was 8 crashes. There is a decrease in crashes over the weekend which aligns with a typical school and work week.

For time-of-day analysis, the crash frequency was highest during the 2 PM hour with 6 crashes as seen in **Figure 3-6**. There is a secondary peak at the 11 AM and the 5 PM hour with 5 crashes. Overall, the hourly crash trends correlate with typical fluctuations in traffic volumes observed throughout the day.

Figure 3-4 Crashes per Year

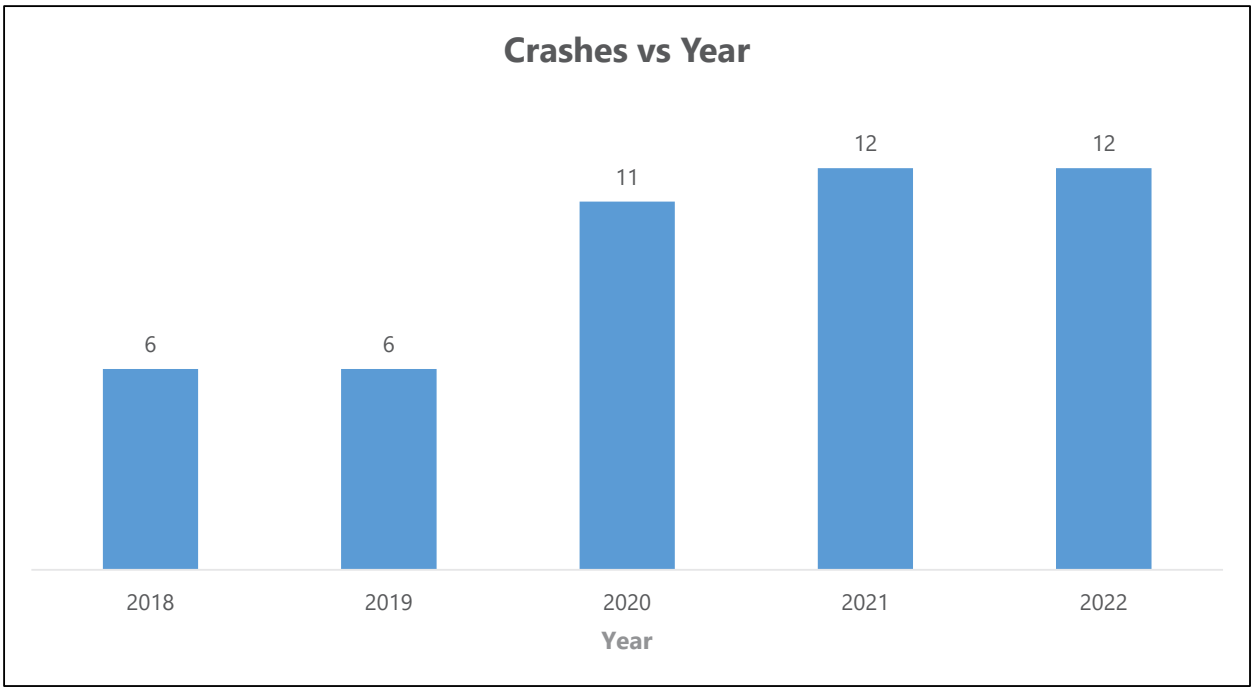


Figure 3-5 Crashes per Day of the Week

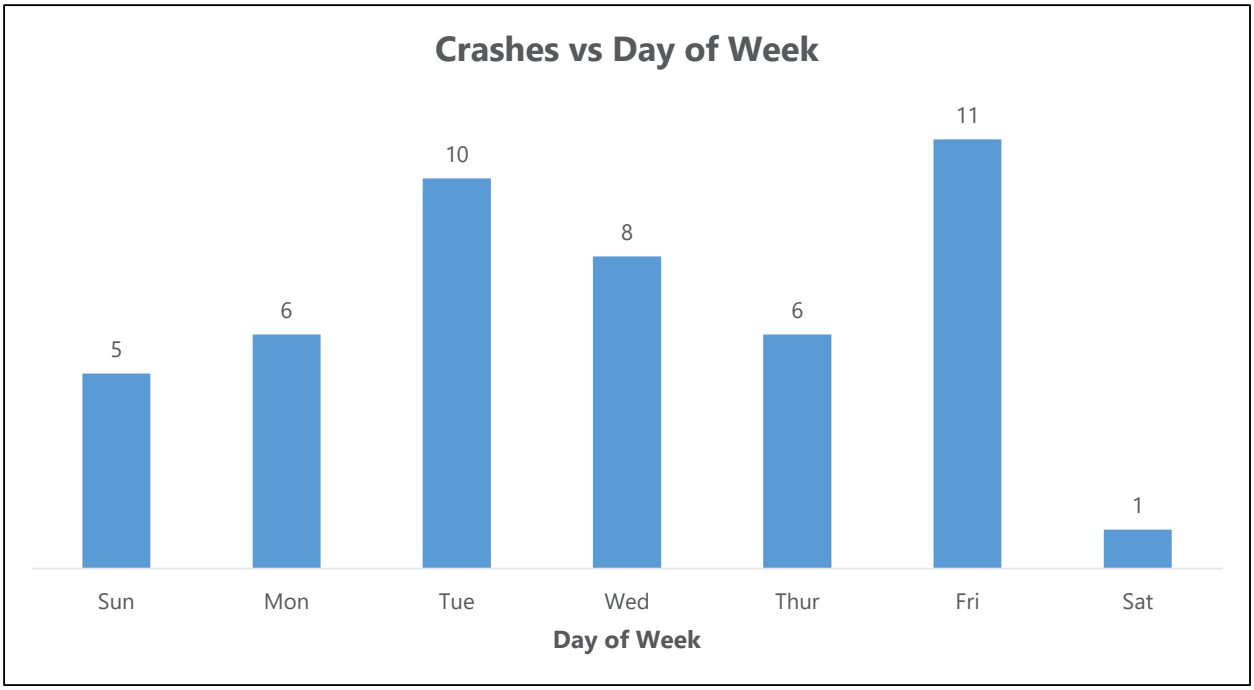
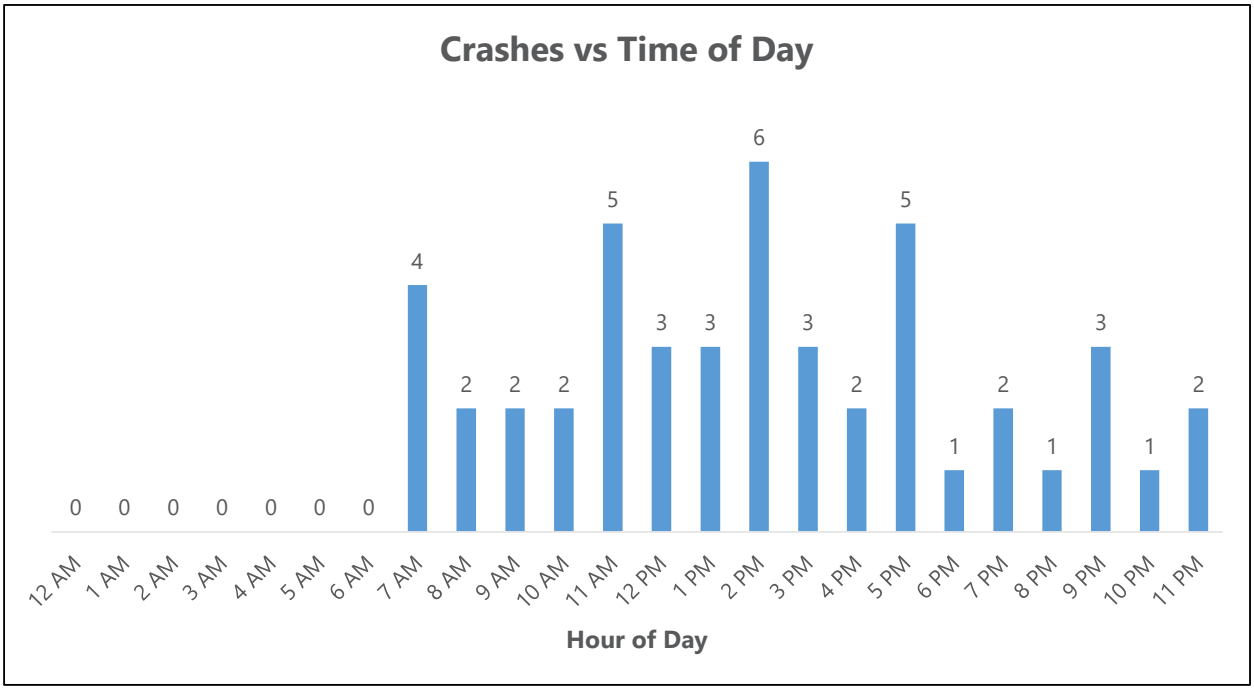


Figure 3-6 Crashes per Time of Day



3.6 Crash Condition Trends

Weather Conditions

Crash data records the prevailing weather conditions at the time of crash occurrence. The majority of the crashes within the study area occurred during clear weather conditions (90%), as seen in **Figure 3-7**. The remaining crashes occurred in cloudy (8%) or rain (2%) weather conditions.

Light Conditions

Crash data includes the prevailing lighting condition estimated at the time of the crash. The majority of crashes occurred during daylight conditions (80%) as summarized in **Figure 3-8**. The remaining crashes (20%) occurred during "dark-lighted" conditions.

Road Surface Conditions

Approximately 90% of the total crashes occurred during dry road surface conditions as seen in **Figure 3-9.** The remaining 10% of the crashes occurred during wet surface conditions.

Figure 3-7 Weather Condition at Time of Crash

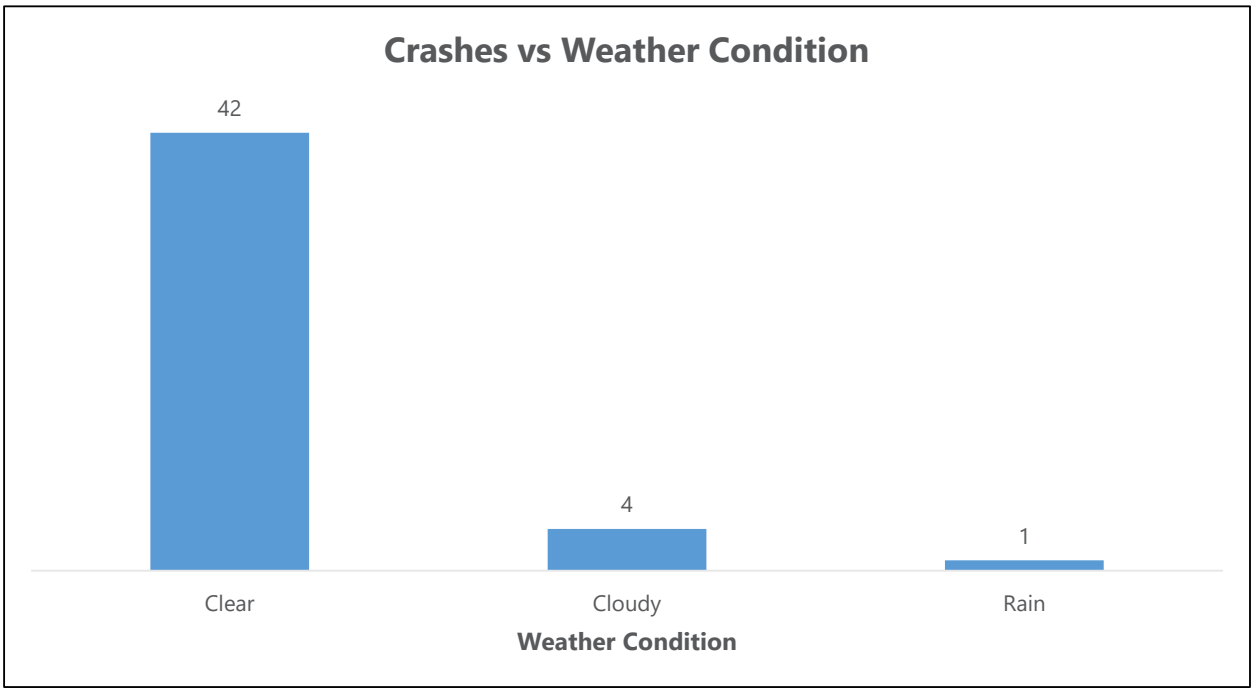


Figure 3-8 Lighting Condition at time of Crash

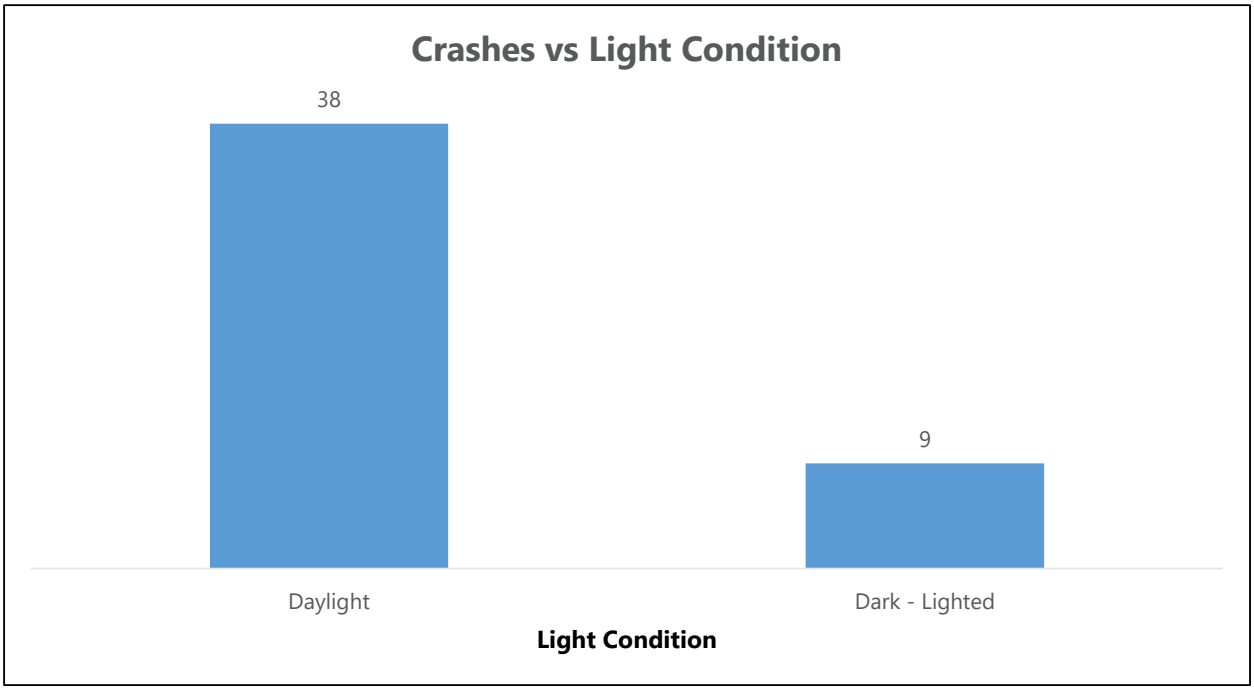
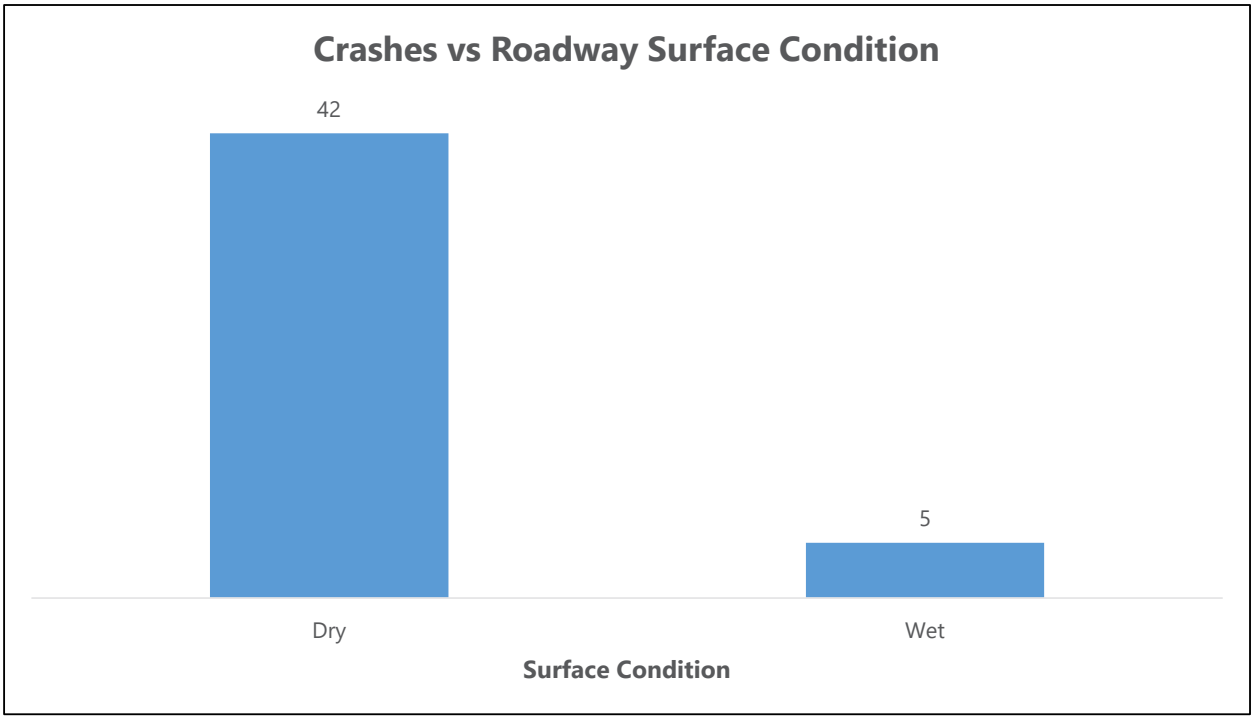


Figure 3-9 Roadway Surface Condition at time of Crash



3.7 Segment Crash Rates

Crash rates for the study corridor were calculated for the entire project limits. The segment was analyzed from 250-feet east of North Bayshore Drive to 500 feet west of East Broadview Drive.

The context classification of the town maintained Broad Causeway is not specified since most of the project falls outside FDOT of limits. To the west of the project the roadway is classified as C4 Urban General and to the east C5 Urban Center. For safety analysis purposes and to compare study area to the statewide average crash rates Broad Causeway is identified as an urban, four-lane, roadway with either raised divided or undivided medians. The study area was then broken up into 3 segments based on the roadway median type. A map displaying the roadway segment classifications can be found in **Figure 3-10**. Crash rates per million vehicle miles traveled (MVMT) were calculated for each year from 2018 through 2022 for the study area.

The number of crashes along the segment, the associated crash rate based on crashes per million vehicle miles traveled, and the statewide average for similar facilities for years 2018 through 2022 are summarized in **Table 3-2** below. At the time of this report, 2020 through 2022 statewide average crash rates for segment analysis were not available. The 5-year average crash rate (2018-2022) for the divided and undivided roadway segments were below the 2016-2019 statewide average crash rates.

Figure 3-10 Segment Classification for Safety Analysis

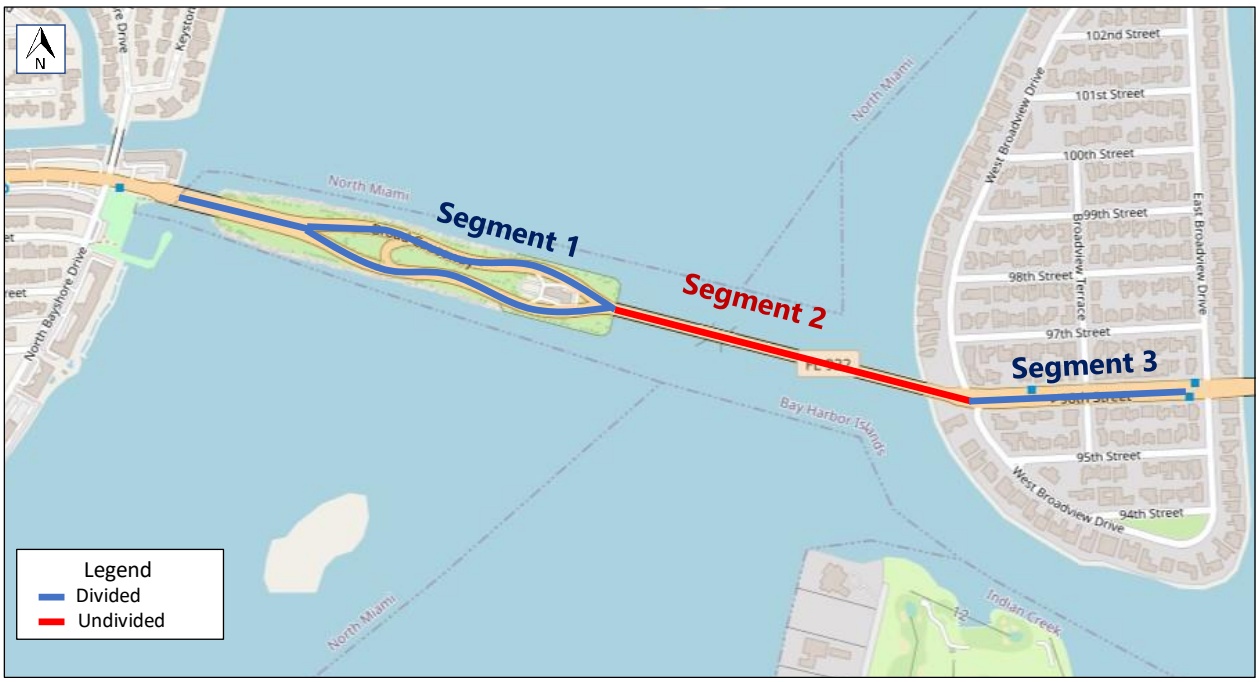


Table 3-2 Historical Crash Rates

Context & Median Type	Limits	Mile Post		Metric	Year					Average
		Begin	End		2018	2019	2020	2021	2022	
Urban General (C4) Divided Raised	250-ft E of N Bayshore Dr to East of gas station access	3.764	4.216	AADT	21,000	21,000	22,000	21,000	22,000	
				Crashes	2	2	2	3	3	
				Crash Rate	0.58	0.58	.055	0.87	0.83	0.68
				Statewide avg Crash Rate	3.92	3.89				3.88
Urban Center (C4) Undivided	E of gas station access to east shore of bridge	4.216	4.566	Crashes	3	4	6	8	5	
				Crash Rate	1.12	1.49	2.14	2.98	1.78	1.90
				Statewide avg Crash Rate	7.31	7.34				7.30
Urban Center (C4) Divided Raised	East shore of bridge to 500 ft west of E Broadview Dr	4.566	4.736	Crashes	1	0	3	1	4	
				Crash Rate	0.77	0	2.20	0.77	2.93	1.36
				Statewide avg Crash Rate	3.92	3.89				3.88

Roadway ID: 87066000, Note: AADT from FTO site 878608. Crash Rates shown in crashes per 100 million vehicles miles of travel.

3.8 Crash Analysis Summary

In summary, over the five-year analysis period from 2018 to 2022, the study area exhibited a majority of the crashes to be sideswipe crashes (28%) and rear end crashes (26%). The high occurrence of rear-end and sideswipe crashes occurred on the approaches to the bridge (segment 2) and may be related to stopping conditions caused by drawbridge interruptions to traffic. Monthly, weekly, and hourly crash trends observed based reflect that which would be expected due to the neighboring schools and commerce patterns. The Historical Crash Rate analysis indicates that all three segments of the corridor are experiencing fewer crash frequencies the statewide average. A crash summary is provided in **Appendix 7.3**.

4.0 Development of Traffic Forecast

4.1 Traffic Forecasting Methodology

The Southeast Florida Regional Planning Model (SERPM), turning movement counts, and 24-hour machine counts collected in the field were used to forecast future year volumes for this study.

Future traffic was developed using the growth rate derived from travel demand forecasting, historical growth rates and population projections to forecast a future year (2050) design volume based on the existing volume estimates.

The steps used in developing the growth rate are listed below:

1. Growth rates were obtained from the Southeast Florida Regional Planning Model
2. Historical AADT volumes were obtained to review historical traffic trends
3. Population projections from the Florida Department of Transportation (FDOT) were obtained to understand the population growth in the study area
4. Population projections from the Bureau of Business and Economic Research (BEBR) were obtained as an additional resource to understand the future growth in the study area
5. Based on all the above information, a growth rate was determined and recommended for use in future traffic projections
6. The Opening (2030) and Design (2050) Year segment and intersection volumes were generated by applying the selected annual average growth rate to Existing Year 2023 traffic volumes

To determine an average growth rate, each step of the traffic forecasting methodology was considered.

4.2 Demand Model

Travel Demand Forecasting analysis was incorporated into the PTAR to develop future-year design traffic volumes. The Southeast Florida Regional Planning Model (SERPM) Version 8.524 was utilized in the development of future travel demand. The SERPM has a base year of 2015 and a horizon year of 2045 and projects traffic by assumed growth rates and adding constructed and committed roadway improvements. Between 2015 and 2045 years the demand model represents a 0.29% annual growth rate in traffic volumes. Model outputs are provided in **Appendix 7-4**.

To validate the appropriateness of the model, actual 2015 AADT volumes and 2015 base year model volumes were compared to evaluate the model's ability to reasonably replicate actual traffic volumes.

The SERPM 2015 Total Daily two-way volume was reported as 29,235. Florida Traffic Online Count site 878608, which is located within the study limits, reported the AADT for this segment to be 19,300. According to the *FDOT FSUTMS-Model Calibration and Validation Standards* the acceptable percent error between a demand model and actual counts for 4-lane facilities between 10,000 and 30,000 vehicles per day is 30% (20% preferred). Given the 2015 actual counts were 50% lower than the model estimated values, it's determined that the model unreasonably overestimates volumes along the Broad Causeway. Even though the model volumes are not reasonable, the annual growth rate is shown in this analysis as a possible tool to compare growth rates against.

4.3 Historical Growth

Historical AADT counts published on FDOT's Florida Traffic Online were referenced to determine a growth rate that reflects how traffic has changed in recent years. **Table 4-1** illustrates historical AADT and growth rates. The AADT counts are provided in **Appendix 7-4**.

Table 4-1 Historical AADT Counts

Year	AADT	AADT
	Broad Causeway, Site 878608, 200' East of Gas Station Access	Broad Causeway, Site 871023, 200' West of Bayshore Drive
2022	22,000	24,500
2021	21,000	23,000
2020	22,000	21,500
2019	21,000	23,500
2018	21,000	22,000
2017	24,000	22,500
2016	24,000	24,000
2015	19,300	25,000
2014	19,500	23,000
2013	19,700	24,000

4.4 Regression Analysis Using Historical Traffic Data

The FDOT Trends Analysis Tool was used to estimate future growth rates. The growth trends that occurred between 2013 and 2022 were assumed to be representative of future growth to forecast traffic for the year 2030 and 2050.

When performing regression analysis, there are multiple 'best-fit' lines used to determine a growth rate for traffic. The types of growth used for this analysis were linear growth and decaying exponential growth. Each growth is explained briefly below:

- Linear growth is a method that assumes a constant amount of growth each year and does not consider a capacity restraint.
- Decaying exponential growth is a method used in mature areas when build-out is approaching.

Table 4-2 represents the linear and decaying exponential growth percentages for the nearby count stations. Trend's worksheets and graphs documenting this analysis are provided in **Appendix 7-4**

Table 4-2 Regression Analysis Summary

FDOT Trends Growth Type	*Broad Causeway, 200' East of Gas Station Access*	*Broad Causeway, 125; West of Bayshore Drive*
Linear	*0.90%*	*-0.44%*
Decaying Exponential	*0.22%*	*-0.10%*

4.5 Populations Projections

In the FDOT Project Traffic Forecasting Handbook, there are two supported resources for projecting population: (1) the Bureau of Economic and Business Research (BEBR) and (2) the FDOT Forecasting and Trends Office. BEBR provides population forecasts to 2050 in five-year increments on its Demographic Analysis Website. The BEBR projections supply a low, medium, and high forecast while the FDOT publishes one population projection by county and district. The population projection summary for Miami-Dade County from the BEBR data and the Florida Department of Transportation (FDOT) is provided in **Table 4-3** and **Table 4-4**.

Population data sources are provided in **Appendix 7.4**.

Table 4-3 BEBR Population Projections Summary

Population Projections Tool	Range	2025	2050	Annual Rate
The Bureau of Economic and Business Research (BEBR)	Low	2,685,500	2,549,500	-0.20%
	Medium	2,826,900	3,186,900	0.51%
	High	2,968,200	3,824,300	1.15%

Table 4-4 FDOT Population Projections Summary

Population Projections Tool	2020	2050	Annual Rate
FDOT	2,849,900	3,714,000	1.01%

4.6 Recommended Annual Model Volume Growth Rates

After reviewing the study area's historical growth trends and population projections, it is determined that all growth rate estimates fell between an annual range of -0.57% and 1.01%.

Taking into consideration each data estimate, the recommended annual growth rate for use in developing future volumes is 1.00% per year linear growth rate, as presented in **Table 4-5**.

Table 4-5 Annual Growth Rate Summary and Recommendations

Facility	Count Location	Linear Growth	Decaying Exponential Growth	SERPM[2]	BEBR Projection	FDOT Projection	Suggested Annual Growth
Broad Cswy	E of Gas Station	0.90%	0.22%	0.29%	0.51%	1.01%	1.00%
Broad Cswy	W of Bayshore Dr	-0.44%	-0.57%				

2 SERPM outputs were not validated for this project corridor. Given the model's significant overestimation of volume, caution should be used when considering growth rates generated by the model. Model growth rates are shown for comparison purposes.

5.0 Future Conditions Analysis

Future conditions analysis represents evaluation of the study area performance metrics for the Opening and Design years for the existing, no-build, and alternative build configurations. The future condition traffic analysis is based on growing the existing volumes by the recommended annual 1.0% growth rate. The same performance measures used in the existing analysis, **Section 2.5,** were also used to analyze the Opening and Design year for both No-Build and Build scenarios. The Broad Causeway mainline no-build and build volumes are assumed to be the same in both analysis scenarios. The Build scenario alternatives include opening and design year build alternatives. The objective of the build alternatives was to evaluate the mobility, operations, and safety impacts of the Broad Causeway improvements.

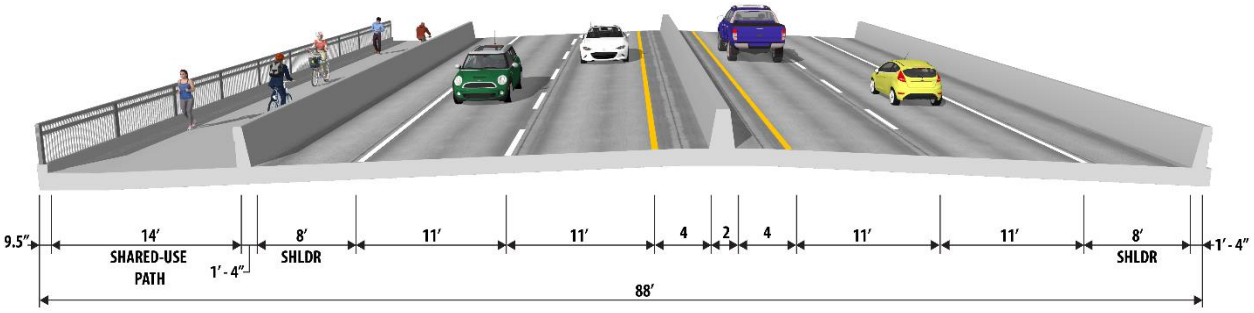
5.1 Alternative Design Concepts

The Preliminary Engineering Report (PER) for this same project has identified a preferred alternative, which will be used for future build year analysis in the following sections. For organizational purposes, the design alternatives are separated between bridge typical section changes and Causeway Island circulation changes.

Bridge Typical Section

A four-lane divided roadway typical section was developed for the project. This typical section consists of two 11-foot lanes in each direction separated by 4-foot, inside shoulders and a 2-foot, concrete barrier wall. The outside shoulders are 8-foot and are adjacent to concrete barrier walls, and a 14-foot shared use path is proposed along the north side of the bridge with a 42-inch-high pedestrian/bicycle railing. The proposed bridge typical section is shown in **Figure 5-1.** The Design speed for all proposed typical sections is 30 mph, maintaining the existing posted speed of 30 mph. Additionally, the PER identifies the preferred alternative for the bridge deck is a 65-foot High-Level Fixed-Bridge with no drawbridge.

Figure 5-1 Example of Bridge Typical Section Alternative



65 ft. High-Level Fixed Bridge Alternative Typical Section

Causeway Island Vehicular Circulation plans:

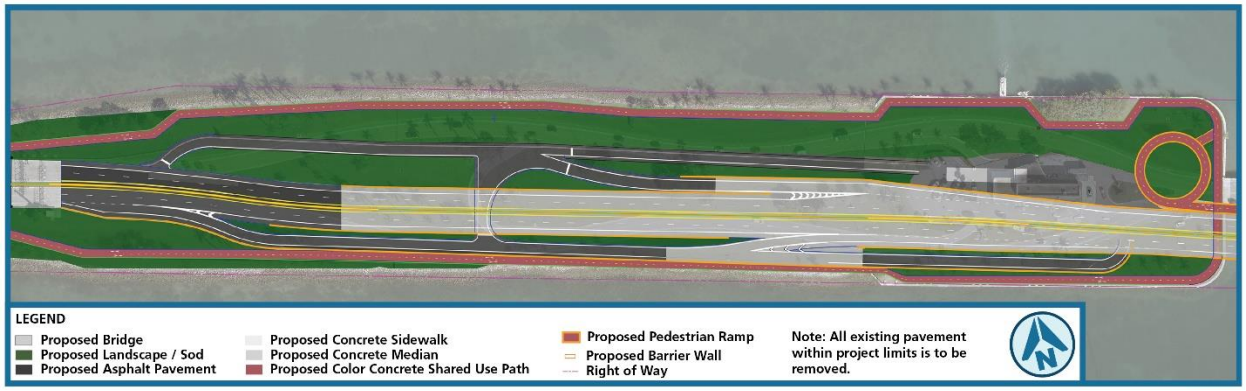
The PER identified a preferred concept that proposes modifications to the causeway island that includes new access ramps to and from the existing service station.

This concept also includes two-way ingress/egress to the existing service station, provides safer pedestrian facilities (no pedestrian crossings on causeway island), and circulation within the causeway island proposed under the mainline (providing even more greenspace). The new movements and revised access to the Chevron gas station are illustrated in **Figure 5-2.**

From an intersection perspective, the build alternative changes how vehicles enter and exit the Chevron gas station. The new vehicle interactions include locations where traffic merge and diverge with the proposed frontage road ramps and stopped controlled intersections from the gas station driveways and frontage roads. A description of operational changes for entering and existing the gas station is provided below:

- Entering Chevron development: Vehicles accessing the development from the west diverge onto a deceleration lane approximately 300' after entering the island. These vehicles remain on a one-lane, one-way roadway on the south side of the island until reaching the development on the east side of the island. Vehicles accessing the development from the east diverge onto a deceleration lane approximately 550' after entering the island. These vehicles combine with the exiting vehicles from Chevron. They then diverge southbound underneath Broad Causeway to the stopped controlled intersection that combines them with the entering vehicles from the west.
- Exiting Chevron development: Vehicles exiting west travel on a one-lane, one-way roadway on the north side of the island. Approximately 300' from the east side of the island these vehicles merge with the mainline westbound through vehicles. Vehicles exiting east initially travel on the same roadway as the westbound exiting vehicles before diverging onto a one-lane one-way road traveling underneath Broad Causeway. After reaching the south side of the island, this roadway intersects with the eastbound frontage road at a stopped controlled intersection. After completing a southbound left-turn, vehicles then merge onto Broad Causeway using a 350' acceleration lane.

Figure 5-2 Causeway Island Circulation Concept



Project Limits and State Road Tie-ins

The project ties into state-maintained facilities on either end with the same 4-lane typical section to match the existing condition. The specific limits of the project extend from the Broad Causeway Island (25°53'19.41"N, 80° 8'54.52"W) on the west side, which is just east of the existing cashless tolling location, and 25°53'11.30"N, 80° 8'18.93"W), which is just east of West Broadview Drive.

- Western Project Limit Tie In

  East of the western project limit there is a new proposed westbound merge and eastbound diverge to and from the median access, however there are no anticipated transportation impacts. Merge and diverge analysis are provided in the sub-sequent sections.

- Eastern Project Limit Tie In

  At the eastern project limit tie in there are no geometric concerns as the typical section will match existing typical sections. The bridge vertical will match existing grade at a location close to where the existing bridge does. The PER states the preferred alternative alignment is proposed adjacent to the existing bridge and is offset from the existing alignment to the south by approximately 85 ft. at the ICWW. The horizontal geometry will utilize the Town's empty lot on the east end of the project and stay on the south side of the causeway island to provide ample greenspace for optional recreational space. The key component of the vertical geometry is clearing the ICWW by the USCG required 65 ft. and staying above the existing service station. To achieve this the proposed design will utilize roadway slopes of 5.78% east of the ICWW and 4.95% west of the ICWW. Proposed horizontal and vertical geometry is shown in detail on the concept plans in the PER. A graphic of the layout is provided in **Figure 5-3**.

Mid-block Pedestrian Crosswalk

To provide complete connectivity for pedestrians a midblock crossing is proposed in the Preferred Alternative to be located just east of West Broadview Drive at Station 144+80 (**Figure 5-3** and **Figure 5-4).** The midblock crossing will connect pedestrians to the south sidewalk east of the project and will include warning signs and other special emphasis features to alert drivers of the upcoming crossing. During design the mid-block crossing will be further analyzed to determine what the safest and most efficient option will be for pedestrian and bicycle crossing. The conceptual design options include special emphasis crosswalk pavement markings at the proposed crossing location. Wayfinding signs will be included to direct pedestrian and bicycle movement in the vicinity of the bridge.

- Mid-Block Crosswalk Justification:

  The current version of the FDOT Traffic Engineering Manual (TEM) Section 5.2 establishes criteria and guidelines for the consistent installation and operation of pedestrian treatments at midblock and unsignalized intersections on the State Highway System. These TEM criteria were referenced to facilitate decisions related the crosswalk proximity to generators and section of appropriate traffic control.

  The crosswalk meets the TEM strategic plan and validation criteria for placement of marked crosswalks at midblock locations (TEM 5.2.5.1). The crosswalk will connect pedestrians on the south side of SR 922 to the sidewalk connecting to the shared use path across the Broad Causeway. The context classification at this location is C4-Urban General, for which the TEM states does not require a minimum pedestrian volume threshold.

- Mid-Block Crosswalk Control Type Selection:

  The crosswalk location shown in the concept figures was chosen to accommodate two considerations; to avoid crossing within the eastbound turn lane at E. Broadview Drive and to maximize the distance between the crossing and the bridge vertical curve.

  Based on TEM 5.2.5.2 the crosswalk location meets criteria for an RRFB application. This location has a posted speed below 35 mph and cross-section is four through lanes with a refuge island in the median. Due to the proximity of this crosswalk location to the bridge design could consider In-Roadway Warning Lights to enhance the crosswalk awareness.

  With this crosswalk location approximated at 300-400 feet east of the proposed new alignment of the Broad Causeway Bridge vertical curve there is concern that a higher emphasis crossing control, such as a midblock traffic control, would be more appropriate. Because the context classification of this location is C4-Urban General this control type can be accommodated without need to meet Warrant 4 of the MUTCD. Additionally, there is not currently a pedestrian crossing here, so it is unexpected to achieve minimum pedestrian crossing volumes until a crossing is installed.

  In the design phase of this project all safety and design considerations with respect to stopping sight distances, illumination levels, and corresponding signing, marking, and signal treatments will be designed and documented.

Figure 5-3 Eastern Project Limits Concept

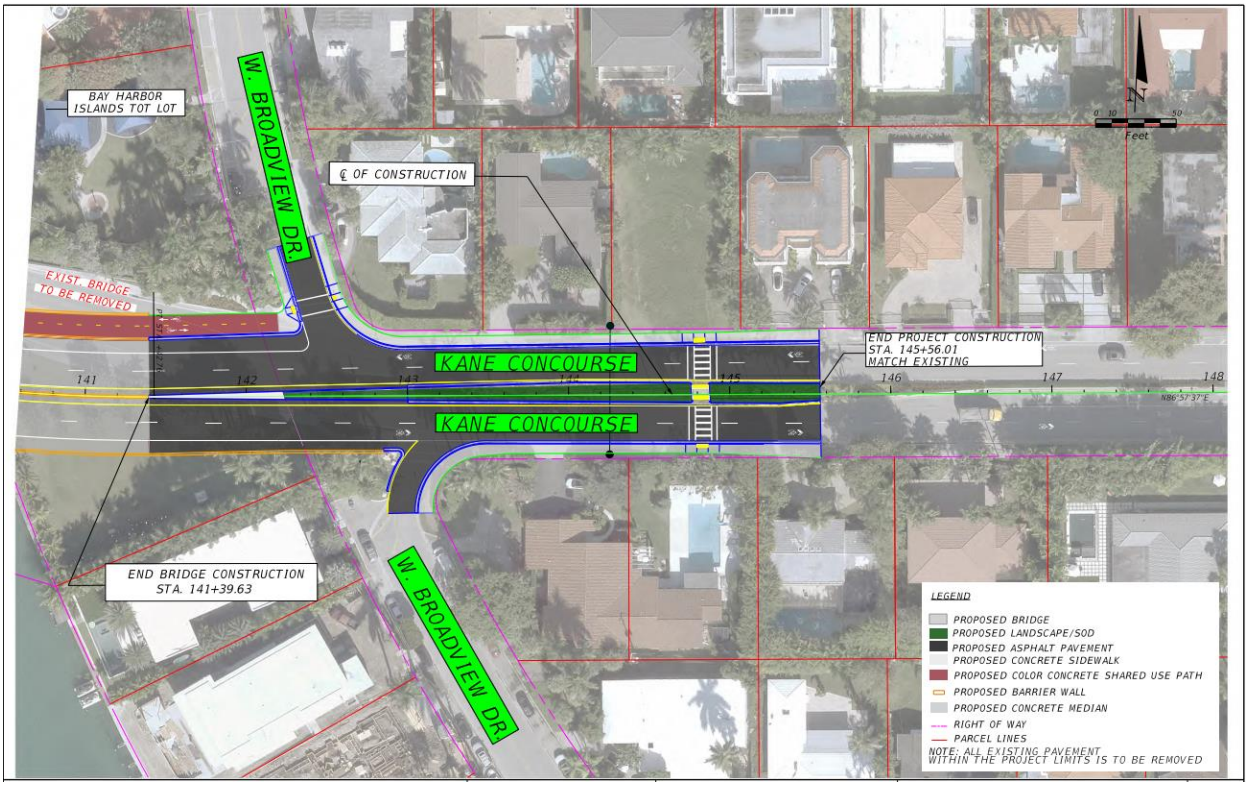
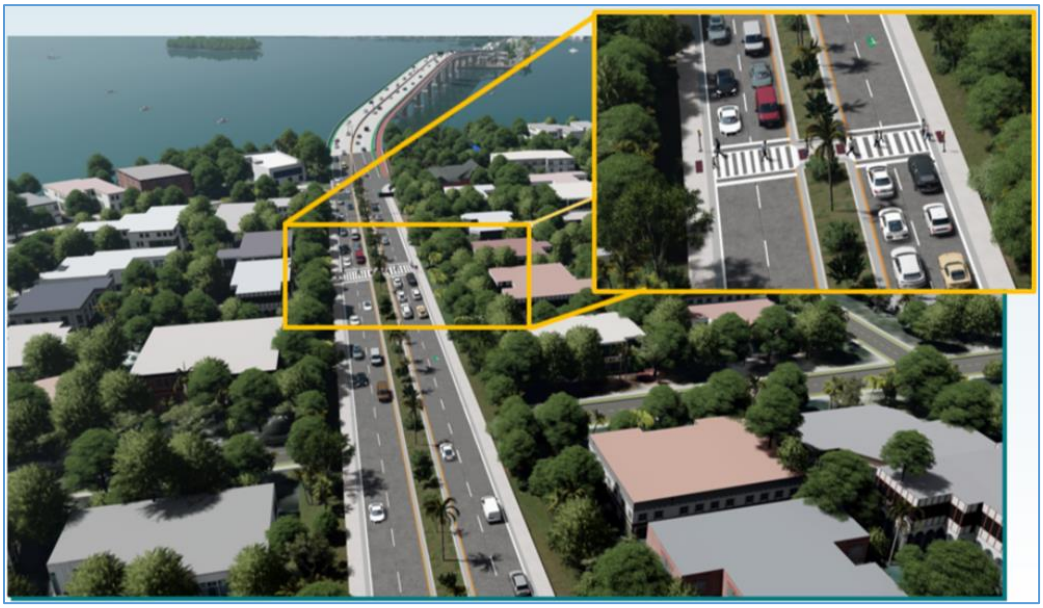


Figure 5-4 Pedestrian Mid-Block Crossing east of W. Broadview Drive



5.2 Future Segment Volumes

Table 5-1 provides the estimated 2030 opening and 2050 design volumes for the weekday and weekend AADT. These forecasted volumes are based on the selected 1% annual linear growth rate.

Table 5-1 Estimated Future Daily Traffic Counts

Count Station	Count Location	Scenario	Weekday AADT	Weekend AADT
1	Broad Cswy, West of Chevron Gas Station	2030 Opening	26,900	18,800
		2050 Design	31,900	22,300

5.3 Future Intersection Volumes

Intersection volumes for opening year and design year No-Build and Build scenarios are illustrated in **Figure 5-5** through **Figure 5-8**. Opening and Design year figures include the freeway merge locations and the stopped-controlled intersection locations. As stated at the beginning of Section 5.0 the stopped-controlled intersections in the Build model are developed from vehicles entering and exiting Chevron, both on the frontage road.

Figure 5-5 2030 No-Build Turning Movement Volumes

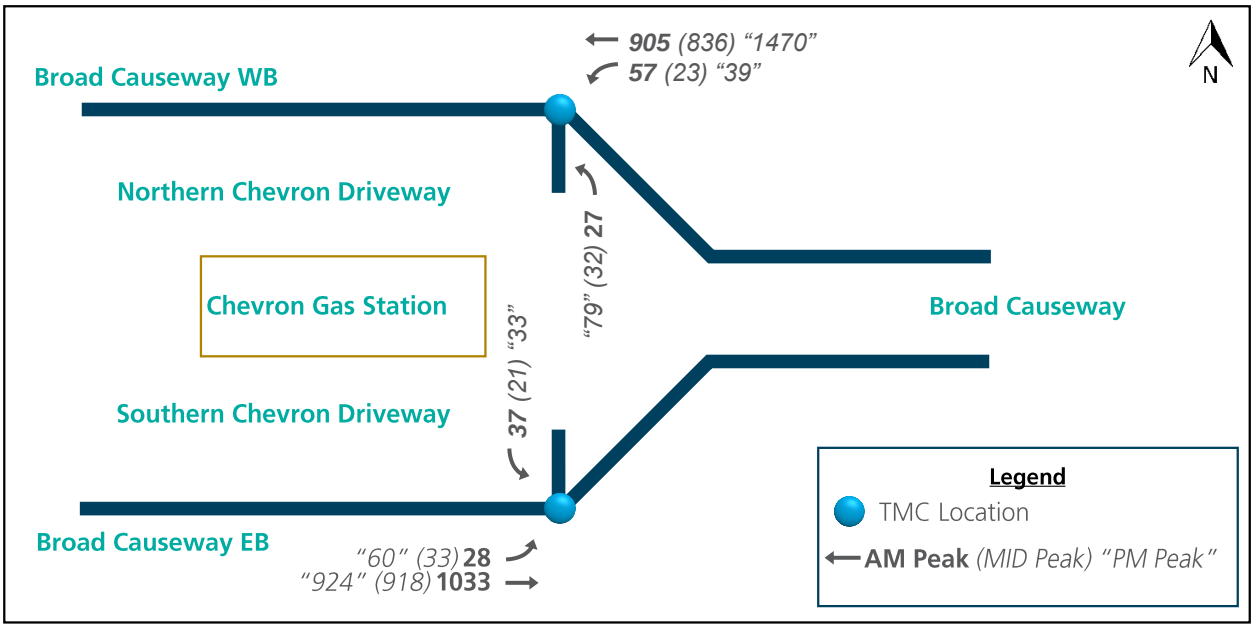


Figure 5-6 2050 No-Build Turning Movement Volumes

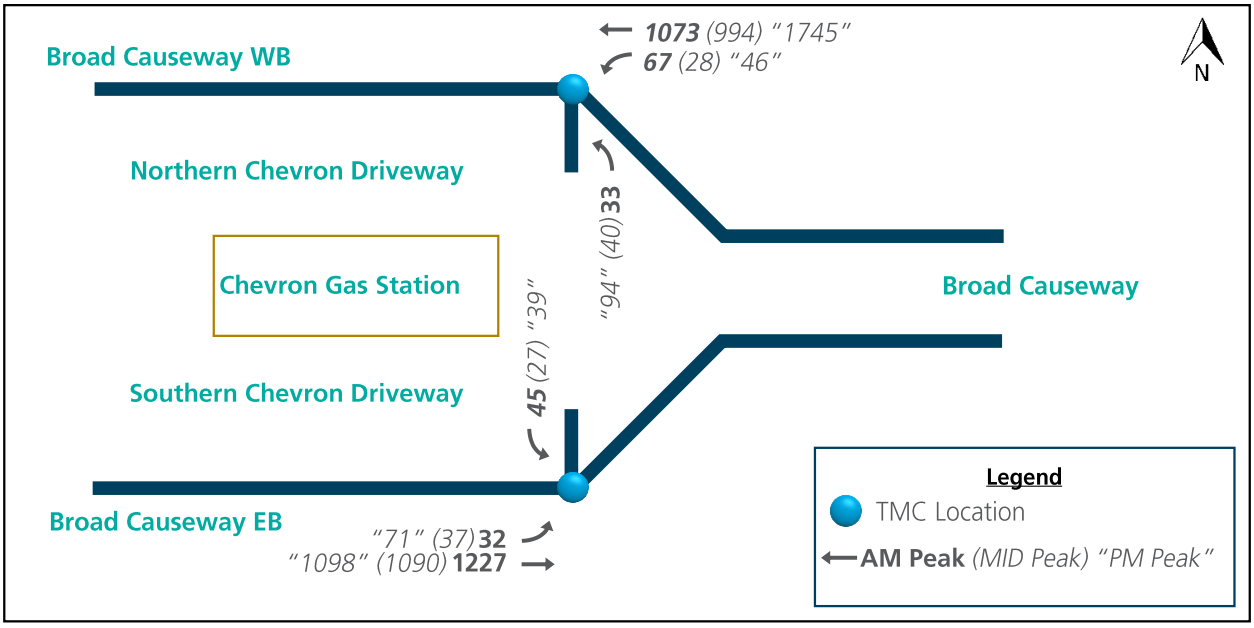


Figure 5-7 2030 Build Turning Movement Volumes

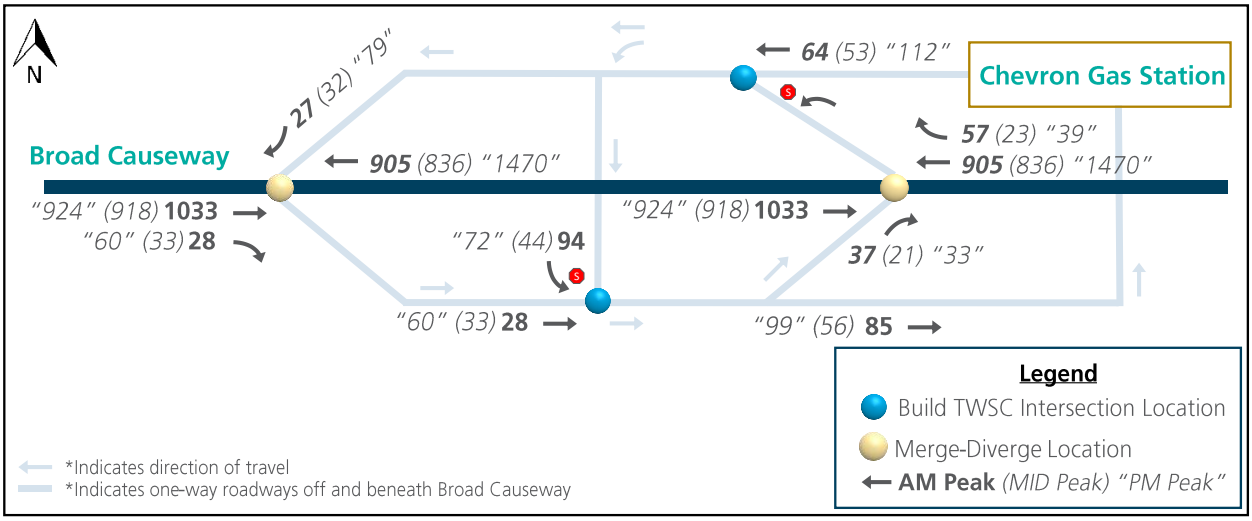
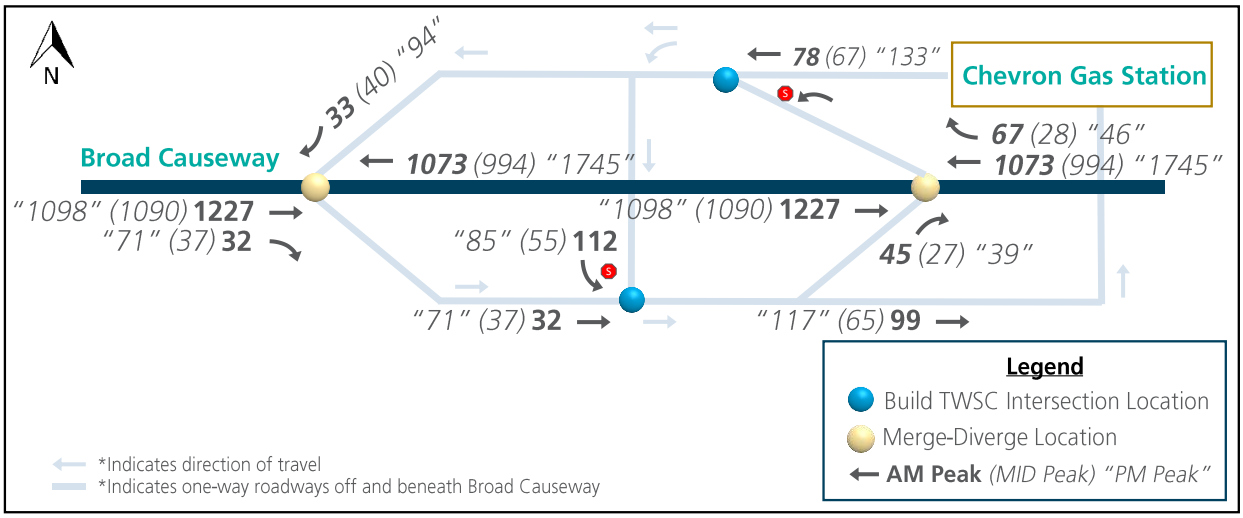


Figure 5-8 2050 Build Turning Movement Volumes



5.4 Future Segment Analysis

For future year segment analysis for both the no-build and build scenarios are analyzed using peak hour and daily segment volumes. The segment volumes were obtained by growing existing counts by an 1.0% annual growth factor. **Table 5-2** summarizes level of service and volume to capacity for daily volumes using 2023 FDOT Generalized Service Volume Tables. **Table 5-3** summarizes level of service and travel speed using the SimTraffic Arterial Level of Service Reports

The future segment analysis, which is based on volume comparison to the 2023 FDOT Generalized Service Volume Tables, results in a daily V/C ratio below 0.87.

The future peak hour future segment analysis was based on future travel speed collected from SimTraffic, each peak period and approach exceed 80% of the base free-flow speed. The LOS criteria from HCM urban street facilities results in a LOS of A for all conditions. All future conditions are within the target of LOS D.

Table 5-2 Future Segment Volume Analysis Summary (Daily)

Roadway	Extents	Scenario	Volume	Service Volume Capacity	v/c	LOS	Targeted LOS
Broad Causeway	Bayshore Dr to West Broadview Dr	2030 Build	26,900	36,100	0.74	D	D
		2050 Build	31,900	36,100	0.88	D	D

Sources: FDOT 2023 Quality/Level of Service Handbook Generalized Tables (C4)

Table 5-3 Future Segment Volume Analysis (Peak Hour)

Roadway	Extents	Scenario	Peak Period	Travel Speed (mph)		Level of Service (LOS)		Target LOS
				EB	WB	EB	WB	
Broad Causeway	Bayshore Dr to West Broadview Dr	2030 No-Build	AM	28	27	A	A	D
			MID	28	28	A	A	D
			PM	28	26	A	A	D
		2050 No-Build	AM	27	27	A	A	D
			MID	28	27	A	A	D
			PM	28	26	A	A	D
		2030 Build	AM	28	28	A	A	D
			MID	28	28	A	A	D
			PM	28	26	A	A	D
		2050 Build	AM	28	27	A	A	D
			MID	28	28	A	A	D
			PM	28	26	A	A	D

5.5 Future Intersection Analysis

Intersection capacity analysis for the future year no-build scenario utilized the Highway Capacity Manual (HCM6) methodology and was completed using Synchro software. The no-build analysis for the stop-controlled access to and from the Chevron gas station is presented in **Table 5-4** and **Table 5-5**. All movements result in a LOS of C or better except for the 2050 No-Build PM stop at the northern driveway access along the westbound direction, which resulted in an LOS D.

For the Build scenarios merging points, Freeway Merge and Diverge Level of Service (LOS) was completed using HCS7 software. Build year demand volumes for the intersection and merge location on each approach was illustrated in **Figure 5-5** through **Figure 5-8**.

Based on the results, each build scenario intersection results in a LOS of A or better and each merge and diverge report results in a LOS of C or better. The results from the future Build analysis are presented in **Table 5-6** through **Table 5-9** . Given the design year analysis for each peak period was within acceptable LOS ranges year 2030 merge and diverge analysis was removed for brevity.

The unique features of Broad Causeway generated a final speed adjustment in the analysis. In HCM the freeway merge and diverge procedure, the minimum free-flow speed is 45 mph. The posted speed limit along Broad Causeway is 30 mph. To replicate field conditions, a 0.9 final speed factor was applied to the freeway free-flow speed.

Table 5-4 No Build - Broad Cswy & Northern Chevron Driveway LOS Analysis

Intersection Control	Scenario	Approach Delay (LOS)				Intersection Delay (LOS)
		EB	WB	NB	SB	
TWSC	2030 No-Build AM	--	0.0	12.8 (B)	--	12.8 (B)
	2030 No-Build MID	--	0.0	12.1 (B)	--	12.1 (B)
	2030 No-Build PM	--	0.0	20.0 (C)	--	20.0 (C)
TWSC	2050 No-Build AM	--	0.0	14.1 (B)	--	14.1 (B)
	2050 No-Build MID	--	0.0	13.2 (B)	--	13.2 (B)
	2050 No-Build PM	--	0.0	27.3 (D)	--	27.3 (D)

Table 5-5 No-Build - Broad Cswy & Southern Chevron Driveway LOS Analysis

Intersection Control	Scenario	Approach Delay (LOS)				Intersection Delay (LOS)
		EB	WB	NB	SB	
TWSC	2030 No-Build AM	0.0	--	--	13.5 (B)	13.5 (B)
	2030 No-Build MID	0.0	--	--	12.3 (B)	12.3 (B)
	2030 No-Build PM	0.0	--	--	13.1 (B)	13.1 (B)
TWSC	2050 No-Build AM	0.0	--	--	15.3 (C)	15.3 (C)
	2050 No-Build MID	0.0	--	--	13.5 (B)	13.5 (B)
	2050 No-Build PM	0.0	--	--	14.6 (B)	14.6 (B)

Table 5-6 Build - Broad Causeway EB Off Ramp & Chevron EB Exit LOS Analysis

Intersection Control	Scenario	Approach Delay (LOS)				Intersection Delay (LOS)
		EB	WB	NB	SB	
TWSC	2030 Build AM	0.0	--	--	9.1 (A)	9.1 (A)
	2030 Build MID	0.0	--	--	8.8 (A)	8.8 (A)
	2030 Build PM	0.0	--	--	9.2 (A)	9.2 (A)
TWSC	2050 Build AM	0.0	--	--	9.2 (A)	9.2 (A)
	2050 Build MID	0.0	--	--	8.9 (A)	8.9 (A)
	2050 Build PM	0.0	--	--	9.4 (A)	9.4 (A)

Table 5-7 Build - Broad Causeway WB Off Ramp & Chevron Exit LOS Analysis

Intersection Control	Scenario	Approach Delay (LOS)				Intersection Delay (LOS)
		EB	WB	NB	SB	
TWSC	2030 Build AM	--	0.0	9.1 (A)	--	9.1 (A)
	2030 Build MID	--	0.0	8.9 (A)	--	8.9 (A)
	2030 Build PM	--	0.0	9.3 (A)	--	9.3 (A)
TWSC	2050 Build AM	--	0.0	9.3 (A)	--	9.3 (A)
	2050 Build MID	--	0.0	9.0 (A)	--	9.0 (A)
	2050 Build PM	--	0.0	9.5 (A)	--	9.5 (A)

Table 5-8 Build - Future Merge Area Volume LOS Analysis

Intersection	Control	Scenario	Mainline Volume	Ramp Volume	Level of Service (LOS)
Broad Causeway & EB Merge Area	Merge	2050 Build AM	1,227	45	B
		2050 Build MID	1,090	27	B
		2050 Build PM	1,098	33	B
Broad Causeway & WB Merge Area	Merge	2050 Build AM	1,073	33	B
		2050 Build MID	994	40	B
		2050 Build PM	1,745	94	C

Table 5-9 Build - Future Diverge Area Volume LOS Analysis

Intersection	Control	Scenario	Mainline Volume	Ramp Volume	Level of Service (LOS)
Broad Causeway & EB Diverge to Frontage Road	Diverge	2050 Build AM	1,259	32	B
		2050 Build MID	1,127	37	B
		2050 Build PM	1,169	71	B
Broad Causeway & WB Diverge to Frontage Road	Diverge	2050 Build AM	1,140	67	B
		2050 Build MID	1,024	28	B
		2050 Build PM	1,791	46	B

5.6 Future Multimodal Analysis

Determining LTS for a facility is based on a variety of factors and conditions, such as the presence and configuration of dedicated or mixed traffic facilities. Roadways were assigned a stress level of one to four, with LTS 1 signifying very low stress and LTS 4 signifying high stress. The design plans for the bridge reconstruction increased the bridge shoulder that bicycles are permitted to use and develops a shared use path vertically separated from the roadway.

In the existing conditions the level of traffic stress for a pedestrian and bicyclist crossing the bridge was LTS 4 (which is defined as a route that is impassable by a wheeled mobility device or a level tolerated only by those with limited route choice and/or a cycling enthusiast After reviewing each characteristic in future build conditions, the level of traffic stress for pedestrians and bicyclist is expected to be LTS 1, which is a level that can be tolerated by all users. The installation of a shared use path separated from Broad Causeway is expected to provide a safe and comfortable facility for all users willing to use the shared path, which improved the LTS score. Additionally, if bicyclists would prefer to use the roadway, they are permitted to ride within the newly installed 8-foot shoulder. The width of the shoulder concludes cyclist utilizing the shoulder along the roadway is expected to be Level of Traffic Stress 3 (which is a level tolerated by confident cyclists who still prefer having their own dedicated space for riding).

Illustration of the Level of Stress flow chart is provided in **Appendix 7.5**.

5.7 Predictive Crash Analysis

The future year design alternative safety analysis is preformed using the predicted average crash frequency process outlined in the Highway Safety Manual (HSM) 1st Edition. This HSM provides a predictive method for estimating expected average crash frequencies at individual sites and corridors. This method relies on safety performance functions (SPF) that estimate predicted average crash frequency as a function of traffic volume and roadway characteristics (e.g., number of lanes, median type, shoulder width, etc). The goals of this process are to evaluate the safety effects of roadway improvements and to compare relative safety performance of design alternatives.

Although there are design recommendations throughout the project study area, the segment with the most significant changes to the typical section is the bridge segment of the Broad Causeway from east of the Chevron Gas Station to the eastern edge of the bridge; or essentially the undivided portion of the corridor. This coincides with Segment 2 identified in **Figure 3-10** . Therefore, the predictive method is only performed for this segment. For HSM analysis purposes this corridor was assumed to be an urban arterial (HSM Chapter 12).

The existing conditions of the study area were inventoried by visual observation and verified by survey in the field. The proposed design elements are included as part of the design alternative and illustrated in the preliminary engineering reports associated with this project. **Table 5-10** provides a list of design elements comparing the design of the existing bridge typical section versus the proposed redesign typical section. These elements are used in the HSM analysis.

Table 5-10 Geometric Elements Impacting HSM (Bridge Segment Only)

Design Element	Existing	Proposed Design
Lane Width	10-feet	11-feet
Median Treatment	Undivided	Barrier
Inside Shoulder	None	4-feet
Outside Shoulder Width	2.5-feet	8-feet
Bicycle Lanes	Shared with Traffic	May ride on bridge shoulder or on 14-foot physically separated shared used path

The safety performance functions (SPF) were used for estimating predicted average crash frequency as a function of traffic volume. Existing and design year volumes developed in Section 4 of this report are used for analysis. The predicted crash frequencies summary results are provided in **Table 5-11** . It's noted that the intent of the predictive analysis is to show impacts of the design decisions for the wider shoulders and separated medians. Therefore, FDOT HSM calibration factors were not used in this analysis given this bridge segment is not similar to the typical state roads where these calibration factors were developed from. The results show that with the design changes proposed in this study the previously undivided segment of the Broad Causeway is predicted to go from 3.4 crashes per year to 2.3 crashes per year by the design year 2050. It's noted that for the Design Year Build the median width was set to the lowest option of 10 feet; actual median width total is 10 feet but 4 feet on either side of the barrier wall.

HSM worksheet output summary files are provided in **Appendix 7.6**.

Table 5-11 HSM Predictive Crash Analysis Results

Crash Severity Level	Design Year No Build (Predicted crashes/year)	Design Year Build (Predicted crashes/year)
Property Damage Only	2.4	1.6
Fatal and Injury	1.0	0.7
Total Crashes	3.4	2.3

HSM Commentary

Although the HSM predictive analysis shows a decrease in crashes these results should be further examined with the actual project improvements in mind. The current version of the HSM does not account for introduction of a separated bicycle facility or the elimination of the draw bridge interruptions to traffic.

The following examples further examine the logical benefits to safety that are not well reflected in the HSM process. The crash values used include 5-years of crash history for the undivided segment of the study area.

- Separated Bicycle Facility: In the existing condition there were 4 bicycle crashes (all resulting in injury) and in the proposed condition there is a physically separated shared use path crossing the bridge, thus eliminating vehicle and bicycle interactions.
- Separated Median: In the existing condition there were 2 head-on crashes (both resulting in an injury), and in the proposed condition there is expected to be zero head on crashes with the physical separation between opposing travel lanes. As for other crash types, installing a median barrier has a documented Crash Modification Factor of 0.14 (or 86% reduction for all crash types and severities. Source: cmfclearinghouse.org CMF ID# 974)
- Removal of Bridge Stop Control: In the existing condition there was 9 rear-end crashes, which were partially resulting from there being a stop control on the bridge. However, in a possible proposed condition includes fixed bridge, meaning the interruptions will be removed, and is reasonable to expect the rear-end crashes to also decrease.

This additional summary is provided to show that the unique elements of the proposed conditions are not well reflected in the current HSM, thus indicating that results of the HSM methodology are also not appropriately representative of all the safety benefits expected from the proposed improvements.

5.8 Future Evacuation Plans

The Broad Causeway serves as part of the emergency evacuation route network designated by the Florida Division of Emergency Management (FDEM) and Miami-Dade County. Use of the Causeway plays a critical role in facilitating traffic between the beaches and the mainland of Miami during emergency evacuation periods.

While evacuation planning is not typical of average day or typical peak hour analysis it's important to this facility due to its proximity and limited access options to and from the coastal neighborhoods.

One evacuation strategy to increase the eastbound capacity of the Causeway is to consider contra-flow operations, or partial contra-flow operations. The Town of Bay Harbor Islands shared that any procedure to allow 3-lane/1-lane configuration during evacuation would be handled by the Police Department. Discussion with team decided that the Police Department could develop a protocol considering a rigid median traffic barrier and the protocol would extend beyond project limits (stoplight to stoplight) to ensure safety. Because this operation would be executed only in times of extreme needs its impacts are not analyzed in this project.

6.0 Summary of Analysis Results

Based on the traffic performance analysis, it is determined that build reconfigurations of the Broadway Causeway Bridge and adjacent improvements to the Chevron Gas Station results in a beneficial impact. The improvements to the bridge cross section, such as increased bicycle width and separated multimodal shared use path results in improving the Level of Traffic Stress to 1, a level that can be tolerated by all users.

Improvements at the gas station access results in a LOS C or better. The reconfigurations occur from new locations where traffic merge and diverge as well as a stopped controlled intersection between entering and exiting vehicles. The design merge and diverge areas resulted in LOS of B and design stopped controlled intersection resulted in LOS A.

Based on the multimodal analysis, it is determined that the build reconfigurations improve traffic operations as well as the level of traffic stress for pedestrians and bicyclist. The shared use path separated from Broad Causeway improves the safety and comfortability for multimodal movement.

7.0 APPENDICES

7.1 Methodology Letter

ATKINS

Member of the SNC-Lavalin Group

Traffic Analysis Methodology Report

SR-922 (Broad Causeway)

Town of Bay Harbor Islands

June 2023

DRAFT

Notice

This document and its contents have been prepared and are intended solely as information for Town of Bay Harbor Islands and use in relation to Project Traffic Analysis Report Methodology

WS Atkins, Inc. assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 10 pages including the cover.

Document history

Document title: SR-922 (Broad Causeway)

Document reference: Broad Causeway PD&E

Revision	Purpose description	Originated	Checked	Reviewed	Authorized	Date
1.0	Methodology Report Draft	CSR	KJB	GV	<initials>	5-1-23

Client signoff

Client	Town of Bay Harbor Islands
Project	Traffic Analysis Methodology Report
Job Number	
Client signature/date	

DRAFT

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Figures

Figure 1-1 - Study Area Map and TMC Location 5

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1. Introduction

The purpose of this Traffic Analysis Methodology Report (TAMR) is to outline the project limits, assumptions, and analysis methodologies that will be employed in the development of the Project Traffic Analysis Report (PTAR) along (SR-922) Broad Causeway in Miami-Dade County, Florida. The analysis will document existing and future conditions and follow the process outlined in FDOT's *Project Development and Environmental (PD&E) Manual*. The results of the PTAR will be prepared and documented as part of the Broad Causeway Bridge Replacement PD&E study. All raw data and supporting information referenced in the analysis will be included with the PTAR deliverable.

1.1. Project Description & Objective

This project involves an approximate 0.78 mile in length segment of SR-922 (Broad Causeway) from Broad Causeway Island on the west side and to the east at the intersection with West Broadview Drive. The SR-922 (Broad Causeway) study segment roadway classified as an urban minor arterial and connects the Town of Bay Harbor Islands and Bal Harbor/Surfside with the City of North Miami, within Miami-Dade County.

The existing bridge consists of four 10-foot wide travel lanes (two in each direction) without a raised median. The outside travel lanes also include shared-use markings to accommodate bicycles. In addition, a raised sidewalk is present on each side of the bridge, with a width that varies from 22 to 36 inches. The sidewalks run adjacent to the travel lanes and are not buffered with green space or guardrails.

The proposed project is intended to improve the mobility, operations, and safety of SR-922 and reduce the travel impacts of the Chevron gas station and existing drawbridge. Additional consideration of bicycle lanes and sidewalks will be evaluated along SR-922. SR-922 also serves as a primary hurricane evacuation route.

1.2. Study Area

The 0.78 mile study segment of SR-922 (Broad Causeway) is an urban minor arterial that begins at the intersection of SR-922 and Bayshore Drive and extends east to the intersection of SR-922 and West Broadview Drive.

The existing intersections listed below will be analyzed as part of this study.

- SR-922 (Broad Causeway) and Northern Chevron Driveway
- SR-922 (Broad Causeway) and Southern Chevron Driveway

A map of the study area is presented in **Figure 1-1**.

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Figure 1-1 - Study Area Map and TMC Location

2. Traffic Analysis Assumptions

A traffic operations analysis of the corridor and previously identified intersections will be performed based on methodologies included in the FDOT *Traffic Analysis Handbook* (2021) and the FDOT *2023 Multimodal Quality/Level of Service Handbook*. The analysis will include the performance metrics for the existing conditions, no build alternative, and build alternatives as described in the following sections.

2.1. Analysis Years

The following years represent the existing year, opening year, and design year for corridor and intersection performance evaluation. Analysis years for regional demand model runs are explained further in the Project Traffic Forecasting section of this report.

- Existing Year = 2023
- Opening Year = 2030
- Design Year = 2050

2.2. Analysis Periods

Daily, AM peak, MID peak, PM, and Weekend peak traffic periods will be evaluated consistent with the analysis years. Intersection and corridors traffic data collections will be adjusted based on the appropriate seasonal factors.

2.3. Project Alternatives

The Opening Year, and Design Year operational analyses for this study will include an evaluation of a No-Build scenario and a Build scenario. The No-Build scenario will reflect the 10-foot wide, four-lane existing roadway facility from Bayshore Drive to West Broadview Drive. TSM&O strategies will be taken into consideration throughout the study as well.

2.4. Performance Measures

Performance measures will be based on the FDOT policy of target level of service (LOS) for State Highway System arterials in urban areas. The target LOS for intersections and corridors will be LOS D.

Segments

For segment performance measures the following list will be developed using AADT and DHV.

- Travel Time
- Average Speed
- Arterial Level of Service
  - Daily will use FDOT's Generalized Tables based on Context Classification
  - AM, MID, PM, and Weekend Peak will use HCM procedures
- Volume to Capacity Ratios
- Multimodal LOS

Intersections

For intersection performance measures the following list will be developed based on the intersection movement, approach, and overall intersection during the AM, MID, and PM peak hours.

- Control Delay
- Level of Service
- Volume to Capacity Ratios
- 95th percentile Queue Length

2.5. Traffic Analysis Tools

Segment and intersection traffic analysis will be completed using HCS7 and Synchro with SimTraffic analysis programs. Both of these programs utilize operational performance methodologies of the *Highway Capacity Manual*, 6th Edition (HCM6), and have the ability to generate the performance measures listed above. Where applicable, HCM reports will be provided for all intersections and corridors. Where HCM6 methodologies are not applicable due to intersection geometry or phasing, previous versions of HCM will be used and will be documented in the analysis and reporting.

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3. Data Collection

Data collection will consist of existing geometric conditions, existing and historical traffic data, and historical crash data. The following sections describe each in more detail.

3.1. Existing Conditions

Data related to the existing site conditions and geometry will be detailed in the full PTAR. These data and analysis processes will include the following:

Existing Geometric Review

- Aerial photo and/or field drawing of roadway geometry: An existing conditions plan will be provided.
- Existing geometry and movements of each study intersection (including number/types of lanes): A site location map depicting the study area will be provided. Existing lane striping facilitating present traffic movements will be marked.
- Lengths of right & left turn lanes/tapers: Tables will be provided for all links in the analysis detailing actual lengths of auxiliary lanes, and median opening locations.

3.2. Traffic Data

Traffic data will be collected in the field, and may be supplemented by data obtained from FDOT, the Miami-Dade County Open Data Hub, and relevant recent transportation studies. Existing site traffic data to be collected will include:

Turning Movement Counts

Seven-hour Turning Movement Counts (TMCs) will be conducted at two (2) intersections:

- SR-922 (Broad Causeway) and Northern Chevron Driveway
- SR-922 (Broad Causeway) and Southern Chevron Driveway

The TMCs will be conducted during a typical weekday from 7:30-9:30 am, 12:00-2:00 pm, and 3:00-6:00 pm based on the review of recent FDOT count station reports in the study vicinity.

Multi-modal data including pedestrians, bicycles, and heavy vehicles will be classified separately. All counts will be summarized in 15-minute intervals with hourly totals and AM, MID, and PM peak hour summaries for the overall intersection.

Directional Approach Counts

24-hour directional approach counts will be conducted on each approach of the two study intersections. The approach counts will be conducted during a week period and will coincide with the TMC collection. Counts will be balanced between adjacent intersections where minimal traffic breaks exist between the intersections. All counts will be summarized in 15-minute intervals with hourly and daily totals for each direction and the combined total. Additionally, the Town will provide directional counts that are collected by the all-electronic toll collection system. These counts will be used to validate 24-hour directional approach counts.

Vehicle Classification Counts

24-hour Vehicle Classification Counts will be conducted at two locations on the SR-922 mainline (west of the Chevron driveway). The classification counts will be conducted during a week period. ATRs with road tubes will be used. Vehicles will be classified into the 13 FHWA categories, with daily percentages calculated for each category. All counts will be summarized in 15-minute intervals with hourly and daily totals for each direction and the combined total.

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3.3. Safety Data and Analysis

Detailed crash data will be obtained from Signal Four Analytics, which as of April 2023 is the exclusive FDOT statewide crash database. Crash information for the most recent five years (2018-2022) will be obtained for the Broad Causeway mainline and side street intersection influence/driveway areas. The data will include but not be limited to: the number and location of crashes, crash types, and severity (fatalities, injuries, property damage), and contributing causes

4. Project Traffic Forecasting

Travel Demand Model

Travel Demand Forecasting analysis will be incorporated into the PTAR to develop future-year design traffic volumes. The Southeast Florida Regional Planning Model (SEFRPM) Version 8.524 will be utilized in the development of future travel demand. The SEFRPM has a base year of 2015 and a horizon year of 2045 and projects traffic by assumed growth rates and adding constructed and committed roadway improvements. Actual 2015 AADT volumes and 2015 base year model volumes on SR-922 will be compared to evaluate the ability of the model to replicate actual traffic volumes. A 2030 and 2050 model network will be interpolated by using the 2015 base year network and the 2045 forecast.

Proposed Growth Rate

Historical traffic counts, 2023 data collection efforts, travel demand model forecasting, and forecasted population projections will all be referenced to provide a reasonableness check to the model's future year traffic projections. Based on all available data a proposed growth rate will be presented for future volume development use.

4.1. Development of Directional Design Hour Volumes

Directional design hour volumes (DDHVs) will be developed for the two intersection limits of SR-922 using the TURNS5 program, which applies K and D factors to the projected AADTs. Observed turn percentages are then applied and the program calculates balanced intersection volumes. The TURNS5 output will be reviewed for reasonableness and volumes will be smoothed where necessary. AM, MID, and PM peak hour DDHVs will be developed for 2030, 2040, and 2050, for No-Build and Build alternatives.

Standard peak hour (K) factors (9.0% for urban areas) will be used for the peak hour conditions. Directional (D) factors will be obtained from Florida Traffic Online. D factors will also be calculated from the 24-hour approach count and eight-hour TMC data. If calculated D factors vary significantly from FDOT D factors, adjustments to the factors will be recommended. Truck factors will be developed based on classification counts performed along Pensacola Street.

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5. Traffic and Safety Analysis

Existing Operational Analysis

The existing analysis will be performed using existing signal timings at signalized intersections. Each of the peak-hour traffic scenarios collected during the data collection task will be applied to the model and operational performance measures.

Future Operational Analysis (No-Build and Build Alternatives)

For future segment analysis, the forecasted volume AADT and DHV will be used to analyze corridor-level performance measures as described earlier. For intersections, the future model analysis will use the demand model generated and refined turning movement counts for each scenario to generate Synchro intersections models of the anticipated traffic conditions. Future analysis will be performed with reasonably expected signal timing parameters based on geometry changes and volume growth. The performance measures noted above will also be utilized for future conditions.

The potential network modifications will each be tested in proposed conditions models and revised performance measures reported to assess the potential effectiveness of different improvement scenarios. All scenarios tested will be summarized in a report of the analysis methodologies, assumptions, and outputs.

Safety Analysis

For safety analysis individual crash records will be reviewed to identify patterns of recurring crashes, to determine underlying causes, and to identify countermeasures to improve safety.

Where typical sections or geometric changes are proposed anticipated changes in crash patterns will be analyzed and documented in the PTAR. Where applicable, safety analysis will be performed using the *Highway Safety Manual* (HSM) predictive crash analysis methods utilizing the Safety Performance Functions. For proposed improvements that are not included in the HSM, applicable Crash Modification Factors (CMF), either published by FDOT or the national CMF Clearinghouse will be utilized.

DRAFT

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7.2 Data Collection

7.2.1 Miami Dade Peak Season Report

7.2.2 Pedestrian Counts

7.2.3 Tube Count Reports

7.2.4 Tube Count Summary

7.2.5 Turning Movement Count Reports

7.2.6 Turning Movement Count Summary

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.96

WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	1.06	1.10
2	01/02/2022 - 01/08/2022	1.04	1.08
3	01/09/2022 - 01/15/2022	1.02	1.06
4	01/16/2022 - 01/22/2022	1.01	1.05
5	01/23/2022 - 01/29/2022	1.00	1.04
6	01/30/2022 - 02/05/2022	0.98	1.02
7	02/06/2022 - 02/12/2022	0.97	1.01
* 8	02/13/2022 - 02/19/2022	0.96	1.00
* 9	02/20/2022 - 02/26/2022	0.96	1.00
*10	02/27/2022 - 03/05/2022	0.96	1.00
*11	03/06/2022 - 03/12/2022	0.96	1.00
*12	03/13/2022 - 03/19/2022	0.96	1.00
*13	03/20/2022 - 03/26/2022	0.96	1.00
*14	03/27/2022 - 04/02/2022	0.96	1.00
*15	04/03/2022 - 04/09/2022	0.96	1.00
*16	04/10/2022 - 04/16/2022	0.95	0.99
*17	04/17/2022 - 04/23/2022	0.96	1.00
*18	04/24/2022 - 04/30/2022	0.96	1.00
*19	05/01/2022 - 05/07/2022	0.97	1.01
*20	05/08/2022 - 05/14/2022	0.97	1.01
21	05/15/2022 - 05/21/2022	0.98	1.02
22	05/22/2022 - 05/28/2022	0.99	1.03
23	05/29/2022 - 06/04/2022	0.99	1.03
24	06/05/2022 - 06/11/2022	1.00	1.04
25	06/12/2022 - 06/18/2022	1.01	1.05
26	06/19/2022 - 06/25/2022	1.01	1.05
27	06/26/2022 - 07/02/2022	1.01	1.05
28	07/03/2022 - 07/09/2022	1.02	1.06
29	07/10/2022 - 07/16/2022	1.02	1.06
30	07/17/2022 - 07/23/2022	1.02	1.06
31	07/24/2022 - 07/30/2022	1.02	1.06
32	07/31/2022 - 08/06/2022	1.01	1.05
33	08/07/2022 - 08/13/2022	1.01	1.05
34	08/14/2022 - 08/20/2022	1.01	1.05
35	08/21/2022 - 08/27/2022	1.03	1.07
36	08/28/2022 - 09/03/2022	1.04	1.08
37	09/04/2022 - 09/10/2022	1.05	1.09
38	09/11/2022 - 09/17/2022	1.07	1.11
39	09/18/2022 - 09/24/2022	1.05	1.09
40	09/25/2022 - 10/01/2022	1.03	1.07
41	10/02/2022 - 10/08/2022	1.01	1.05
42	10/09/2022 - 10/15/2022	0.99	1.03
43	10/16/2022 - 10/22/2022	1.00	1.04
44	10/23/2022 - 10/29/2022	1.01	1.05
45	10/30/2022 - 11/05/2022	1.01	1.05
46	11/06/2022 - 11/12/2022	1.02	1.06
47	11/13/2022 - 11/19/2022	1.03	1.07
48	11/20/2022 - 11/26/2022	1.04	1.08
49	11/27/2022 - 12/03/2022	1.05	1.09
50	12/04/2022 - 12/10/2022	1.05	1.09
51	12/11/2022 - 12/17/2022	1.06	1.10
52	12/18/2022 - 12/24/2022	1.04	1.08
53	12/25/2022 - 12/31/2022	1.02	1.06

* PEAK SEASON

Prepared by National Data & Surveying Services

Pedestrian Study

Location: Broad Causeway E/O Chevron Gas Station
City: Bay Harbor Islands

Date 2/11/2023
Day Saturday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	1	2	**3**	1	0	**1**	0	0	**0**	0	2	**2**
7:15 AM	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	1	1	**2**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	1	0	**1**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
8:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	1	**6**	4	1	**5**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	4	1	**5**	1	1	**2**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	2	1	**3**
8:45 AM	2	0	**2**	0	0	**0**	0	0	**0**	2	0	**2**	0	1	**1**	3	2	**5**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	4	1	**5**
9:15 AM	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	5	2	**7**
9:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	3	**3**	2	2	**4**
9:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	2	2	**4**
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10:15 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	2	2	**4**	1	2	**3**
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11:15 AM	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	3	0	**3**
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12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
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1:15 PM	0	0	**0**	1	0	**1**	0	1	**1**	0	0	**0**	0	0	**0**	2	0	**2**
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2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
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5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	1	0	**1**
5:15 PM	0	3	**3**	1	0	**1**	0	0	**0**	0	0	**0**	1	0	**1**	1	2	**3**
5:30 PM	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	2	**2**	0	1	**1**
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6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	0	**1**	0	0	**0**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	0	**0**
Totals	***2***	***6***	***8***	***2***	***0***	***2***	***3***	***11***	***14***	***7***	***4***	***11***	***29***	***46***	***75***	***67***	***50***	***117***

Prepared by National Data & Surveying Services

Bikes Study

Location: Broad Causeway E/O Chevron Gas Station
City: Bay Harbor Islands

Date 2/11/2023
Day Saturday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	15	0	**15**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	0	**3**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	23	0	**23**	0	4	**4**	7	0	**7**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15	0	**15**
8:00 AM	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	4	**4**	2	0	**2**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	3	**3**	2	0	**2**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	4	0	**4**
8:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	2	0	**2**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	9	0	**9**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	6	0	**6**
9:30 AM	0	0	**0**	0	0	**0**	0	15	**15**	1	0	**1**	0	7	**7**	9	0	**9**
9:45 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	10	**10**	8	0	**8**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	2	0	**2**
10:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	7	**7**	3	0	**3**
10:30 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	6	**6**	5	0	**5**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	4	0	**4**
11:00 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	3	**3**	5	0	**5**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	2	0	**2**
11:30 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	3	**3**	3	0	**3**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	7	0	**7**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	4	0	**4**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	0	**4**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	2	0	**2**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	3	0	**3**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	1	**5**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	1	**3**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	1	**1**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	4	**5**	0	0	**0**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	0	**3**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	2	**3**
2:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	1	0	**1**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	3	**3**	4	0	**4**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	3	0	**3**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	1	0	**1**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	2	**3**	5	0	**5**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
4:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	0	**1**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	4	**4**	4	0	**4**
5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	1	0	**1**
5:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**	0	6	**6**	3	0	**3**
5:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	2	0	**2**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	6	**6**	1	0	**1**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	7	**7**	1	0	**1**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
6:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	4	**4**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	1	0	**1**
Totals	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***25***	***25***	***42***	***0***	***42***	***2***	***139***	***141***	***171***	***5***	***176***

Prepared by National Data & Surveying Services

Pedestrian Study

Location: Broad Causeway E/O Chevron Gas Station
City: Bay Harbor Islands

Date 2/14/2023
Day Tuesday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	3	0	**3**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	2	**4**
7:30 AM	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**
7:45 AM	2	0	**2**	0	0	**0**	0	0	**0**	1	0	**1**	3	0	**3**	1	0	**1**
8:00 AM	0	4	**4**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	1	0	**1**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	2	**6**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**
8:45 AM	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	1	**5**
9:00 AM	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	2	**2**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	2	4	**6**
9:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	4	1	**5**
9:45 AM	1	1	**2**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
10:15 AM	0	0	**0**	1	0	**1**	1	0	**1**	0	0	**0**	0	1	**1**	0	0	**0**
10:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**
10:45 AM	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
11:00 AM	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	1	**1**	1	0	**1**
11:30 AM	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	1	**3**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	2	0	**2**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	1	**1**	0	0	**0**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
3:30 PM	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	1	**5**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	0	**3**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
4:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	2	0	**2**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	2	2	**4**
5:00 PM	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	0	2	**2**	0	0	**0**
5:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	0	**3**
5:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	2	0	**2**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	1	1	**2**
6:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	4	**4**	2	1	**3**
6:30 PM	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	1	0	**1**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	2	0	**2**
Totals	***8***	***7***	***15***	***5***	***1***	***6***	***1***	***2***	***3***	***6***	***5***	***11***	***14***	***43***	***57***	***59***	***24***	***83***

Prepared by National Data & Surveying Services

Bikes Study

Location: Broad Causeway E/O Chevron Gas Station
City: Bay Harbor Islands

Date 2/14/2023
Day Tuesday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	1	**4**
8:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	0	**1**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	4	**4**	2	0	**2**
8:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	4	**4**	5	0	**5**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	4	0	**4**
9:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
9:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**
10:15 AM	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	2	0	**2**
10:30 AM	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	1	0	**1**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
11:00 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	1	0	**1**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**
11:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	4	0	**4**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	2	**2**	1	0	**1**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	1	0	**1**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	0	1	**1**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	0	**0**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	0	0	**0**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	4	**4**	1	0	**1**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	0	**5**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
3:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	4	0	**4**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	3	**5**	1	0	**1**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	1	1	**2**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	1	0	**1**
4:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	0	**2**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	0	**1**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	0	0	**0**
5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	5	0	**5**
5:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	5	**5**	2	0	**2**
5:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	3	**3**	1	0	**1**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	1	0	**1**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
Totals	***0***	***0***	***0***	***0***	***0***	***0***	***1***	***5***	***6***	***19***	***0***	***19***	***3***	***82***	***85***	***82***	***4***	***86***

Prepared by National Data & Surveying Services

Pedestrian Study

Location: Broad Causeway W/O Chevron Gas Station
City: Broad Causeway

Date 2/11/2023
Day Saturday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	1	2	**3**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
7:45 AM	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	2	1	**3**	2	0	**2**
8:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	2	**9**	4	1	**5**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	2	0	**2**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	2	2	**4**
8:45 AM	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	3	**7**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	6	0	**6**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	2	2	**4**
9:30 AM	0	2	**2**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	2	**3**
9:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	3	3	**6**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	2	1	**3**
10:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	2	7	**9**
10:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	12	**16**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
11:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	1	**1**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**
11:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	3	**3**
11:45 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	1	0	**1**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	5	0	**5**
12:45 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	3	2	**5**	2	0	**2**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	1	0	**1**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	0	**0**
2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	3	0	**3**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	1	4	**5**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
4:15 PM	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	2	1	**3**
4:30 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	2	**2**	1	1	**2**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	2	1	**3**
5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	1	**3**
5:15 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	1	**1**	0	1	**1**
5:30 PM	0	3	**3**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	3	**4**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	1	0	**1**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	0	**1**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
6:45 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	2	3	**5**	0	0	**0**
Totals	***2***	***6***	***8***	***4***	***0***	***4***	***0***	***3***	***3***	***0***	***0***	***0***	***41***	***56***	***97***	***72***	***57***	***129***

Prepared by National Data & Surveying Services

Bikes Study

Location: Broad Causeway W/O Chevron Gas Station
City: Broad Causeway

Date 2/11/2023
Day Saturday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	15	0	**15**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	22	0	**22**	0	3	**3**	7	0	**7**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	1	**1**	12	0	**12**
8:00 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	5	**5**	3	0	**3**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	0	**3**
8:30 AM	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	3	**3**	3	0	**3**
8:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	2	0	**2**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	6	0	**6**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	8	0	**8**
9:30 AM	0	0	**0**	0	0	**0**	0	7	**7**	0	0	**0**	0	14	**14**	8	0	**8**
9:45 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	11	**11**	7	0	**7**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**	2	0	**2**
10:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	8	**9**	4	0	**4**
10:30 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	6	**7**	5	0	**5**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	2	0	**2**
11:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	3	**3**	8	0	**8**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**
11:30 AM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	4	**4**	5	0	**5**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	5	0	**5**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	6	0	**6**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	0	**4**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	0	**4**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	4	0	**4**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	3	1	**4**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	1	**4**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	1	**1**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	1	0	**1**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	2	**2**
2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	5	0	**5**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	0	**3**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	5	**6**	4	0	**4**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
4:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	0	**3**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	2	0	**2**
5:00 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	3	0	**3**
5:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	6	**7**	4	0	**4**
5:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	2	0	**2**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	1	1	**2**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	1	0	**1**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	2	0	**2**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	6	**6**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
Totals	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***16***	***16***	***28***	***0***	***28***	***7***	***154***	***161***	***181***	***6***	***187***

Prepared by National Data & Surveying Services

Pedestrian Study

Location: Broad Causeway W/O Chevron Gas Station
City: Broad Causeway

Date 2/14/2023
Day Tuesday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	5	0	**5**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	3	**5**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	0	**4**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	0	**5**	1	0	**1**
8:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	4	2	**6**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	3	2	**5**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
8:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	4	1	**5**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	2	**2**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	2	**6**	3	4	**7**
9:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	4	3	**7**
9:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	0	1	**1**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	3	1	**4**
10:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	1	**2**
10:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	1	1	**2**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
11:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
11:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	1	**3**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
1:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
1:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
2:15 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
2:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	1	**1**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
3:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
4:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	4	0	**4**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	1	**2**
5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	3	0	**3**
5:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	1	**4**
5:30 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
6:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	1	**4**	3	1	**4**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	1	6	**7**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	4	1	**5**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	3	**4**	0	1	**1**
Totals	***0***	***0***	***0***	***2***	***0***	***2***	***0***	***0***	***0***	***0***	***0***	***0***	***26***	***54***	***80***	***75***	***41***	***116***

Prepared by National Data & Surveying Services

Bikes Study

Location: Broad Causeway W/O Chevron Gas Station
City: Broad Causeway

Date 2/14/2023
Day Tuesday

TIME	Sidewalk						Street						Bikes Lane					
	North Side		Total	South Side		Total	North Side		Total	South Side		Total	North Side		Total	South Side		Total
	EB	WB		EB	WB		EB	WB		EB	WB		EB	WB		EB	WB	
7:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	3	0	**3**
7:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
7:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	1	**3**
7:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	3	1	**4**
8:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**
8:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
8:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	3	0	**3**
8:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	0	**2**
9:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	6	0	**6**
9:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**
9:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
9:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
10:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
10:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
10:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	1	0	**1**
10:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
11:00 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
11:15 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**
11:30 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	4	0	**4**
11:45 AM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
12:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	2	**2**	2	0	**2**
12:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**
12:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	0	**1**
12:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	1	1	**2**
1:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**
1:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	2	0	**2**
1:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	3	**3**	2	0	**2**
1:45 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	2	0	**2**
2:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	0	**5**
2:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
2:30 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	0	**2**
2:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**
3:00 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	1	**2**	1	0	**1**
3:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	1	**7**
3:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	3	**5**	2	0	**2**
3:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	1	**2**
4:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4	**4**	1	0	**1**
4:15 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	0	**2**
4:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	0	**1**
4:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	2	0	**2**
5:00 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	6	0	**6**
5:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	5	**5**	5	0	**5**
5:30 PM	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	0	2	**2**	1	0	**1**
5:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	1	0	**1**
6:00 PM	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	1	1	**2**
6:15 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**
6:30 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
6:45 PM	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
Totals	***0***	***0***	***0***	***1***	***0***	***1***	***0***	***6***	***6***	***2***	***0***	***2***	***4***	***79***	***83***	***96***	***6***	***102***

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Saturday
Date: 2/11/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	9,286	9,286

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	49		49		12:00	0	0	0	176		176	
0:15	0	0	0	47		47		12:15	0	0	0	148		148	
0:30	0	0	0	30		30		12:30	0	0	0	165		165	
0:45	0	0	0	24	150	24	150	12:45	0	0	0	136	625	136	625
1:00	0	0	0	28		28		13:00	0	0	0	138		138	
1:15	0	0	0	18		18		13:15	0	0	0	138		138	
1:30	0	0	0	17		17		13:30	0	0	0	161		161	
1:45	0	0	0	19	82	19	82	13:45	0	0	0	140	577	140	577
2:00	0	0	0	15		15		14:00	0	0	0	165		165	
2:15	0	0	0	13		13		14:15	0	0	0	144		144	
2:30	0	0	0	10		10		14:30	0	0	0	129		129	
2:45	0	0	0	10	48	10	48	14:45	0	0	0	157	595	157	595
3:00	0	0	0	8		8		15:00	0	0	0	148		148	
3:15	0	0	0	8		8		15:15	0	0	0	172		172	
3:30	0	0	0	7		7		15:30	0	0	0	174		174	
3:45	0	0	0	13	36	13	36	15:45	0	0	0	151	645	151	645
4:00	0	0	0	7		7		16:00	0	0	0	160		160	
4:15	0	0	0	6		6		16:15	0	0	0	162		162	
4:30	0	0	0	7		7		16:30	0	0	0	175		175	
4:45	0	0	0	5	25	5	25	16:45	0	0	0	189	686	189	686
5:00	0	0	0	9		9		17:00	0	0	0	188		188	
5:15	0	0	0	12		12		17:15	0	0	0	195		195	
5:30	0	0	0	5		5		17:30	0	0	0	177		177	
5:45	0	0	0	12	38	12	38	17:45	0	0	0	206	766	206	766
6:00	0	0	0	18		18		18:00	0	0	0	152		152	
6:15	0	0	0	19		19		18:15	0	0	0	242		242	
6:30	0	0	0	25		25		18:30	0	0	0	187		187	
6:45	0	0	0	34	96	34	96	18:45	0	0	0	214	795	214	795
7:00	0	0	0	49		49		19:00	0	0	0	178		178	
7:15	0	0	0	51		51		19:15	0	0	0	109		109	
7:30	0	0	0	64		64		19:30	0	0	0	177		177	
7:45	0	0	0	49	213	49	213	19:45	0	0	0	120	584	120	584
8:00	0	0	0	79		79		20:00	0	0	0	120		120	
8:15	0	0	0	90		90		20:15	0	0	0	94		94	
8:30	0	0	0	94		94		20:30	0	0	0	103		103	
8:45	0	0	0	116	379	116	379	20:45	0	0	0	107	424	107	424
9:00	0	0	0	113		113		21:00	0	0	0	86		86	
9:15	0	0	0	116		116		21:15	0	0	0	68		68	
9:30	0	0	0	131		131		21:30	0	0	0	77		77	
9:45	0	0	0	136	496	136	496	21:45	0	0	0	51	282	51	282
10:00	0	0	0	155		155		22:00	0	0	0	70		70	
10:15	0	0	0	134		134		22:15	0	0	0	96		96	
10:30	0	0	0	140		140		22:30	0	0	0	86		86	
10:45	0	0	0	150	579	150	579	22:45	0	0	0	49	301	49	301
11:00	0	0	0	152		152		23:00	0	0	0	51		51	
11:15	0	0	0	139		139		23:15	0	0	0	65		65	
11:30	0	0	0	191		191		23:30	0	0	0	54		54	
11:45	0	0	0	166	648	166	648	23:45	0	0	0	46	216	46	216
TOTALS					2790		2790	TOTALS					6496		6496
SPLIT %					100.0%		30.0%	SPLIT %					100.0%		70.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	9,286	9,286

AM Peak Hour					11:30		11:30	PM Peak Hour					18:15		18:15
AM Pk Volume					681		681	PM Pk Volume					821		821
Pk Hr Factor					0.891		0.891	Pk Hr Factor					0.848		0.848
7 - 9 Volume	0	0	0		592		592	4 - 6 Volume	0	0	0		1452		1452
7 - 9 Peak Hour					8:00		8:00	4 - 6 Peak Hour					17:00		17:00
7 - 9 Pk Volume	0	0	0		379		379	4 - 6 Pk Volume	0	0	0		766		766
Pk Hr Factor	0.000	0.000	0.000		0.817		0.817	Pk Hr Factor	0.000	0.000	0.000		0.930		0.930

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Sunday
Date: 2/12/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	8,126	8,126

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	51		51		12:00	0	0	0	154		154	
0:15	0	0	0	46		46		12:15	0	0	0	176		176	
0:30	0	0	0	35		35		12:30	0	0	0	150		150	
0:45	0	0	0	38	170	38	170	12:45	0	0	0	155	635	155	635
1:00	0	0	0	32		32		13:00	0	0	0	161		161	
1:15	0	0	0	28		28		13:15	0	0	0	151		151	
1:30	0	0	0	19		19		13:30	0	0	0	143		143	
1:45	0	0	0	22	101	22	101	13:45	0	0	0	177	632	177	632
2:00	0	0	0	17		17		14:00	0	0	0	150		150	
2:15	0	0	0	16		16		14:15	0	0	0	163		163	
2:30	0	0	0	14		14		14:30	0	0	0	179		179	
2:45	0	0	0	9	56	9	56	14:45	0	0	0	141	633	141	633
3:00	0	0	0	9		9		15:00	0	0	0	171		171	
3:15	0	0	0	9		9		15:15	0	0	0	173		173	
3:30	0	0	0	9		9		15:30	0	0	0	140		140	
3:45	0	0	0	9	36	9	36	15:45	0	0	0	152	636	152	636
4:00	0	0	0	6		6		16:00	0	0	0	174		174	
4:15	0	0	0	9		9		16:15	0	0	0	163		163	
4:30	0	0	0	11		11		16:30	0	0	0	136		136	
4:45	0	0	0	5	31	5	31	16:45	0	0	0	185	658	185	658
5:00	0	0	0	8		8		17:00	0	0	0	155		155	
5:15	0	0	0	7		7		17:15	0	0	0	160		160	
5:30	0	0	0	7		7		17:30	0	0	0	145		145	
5:45	0	0	0	7	29	7	29	17:45	0	0	0	175	635	175	635
6:00	0	0	0	15		15		18:00	0	0	0	162		162	
6:15	0	0	0	13		13		18:15	0	0	0	144		144	
6:30	0	0	0	22		22		18:30	0	0	0	149		149	
6:45	0	0	0	22	72	22	72	18:45	0	0	0	125	580	125	580
7:00	0	0	0	45		45		19:00	0	0	0	108		108	
7:15	0	0	0	30		30		19:15	0	0	0	109		109	
7:30	0	0	0	44		44		19:30	0	0	0	85		85	
7:45	0	0	0	42	161	42	161	19:45	0	0	0	68	370	68	370
8:00	0	0	0	56		56		20:00	0	0	0	64		64	
8:15	0	0	0	62		62		20:15	0	0	0	55		55	
8:30	0	0	0	69		69		20:30	0	0	0	41		41	
8:45	0	0	0	97	284	97	284	20:45	0	0	0	76	236	76	236
9:00	0	0	0	98		98		21:00	0	0	0	66		66	
9:15	0	0	0	99		99		21:15	0	0	0	50		50	
9:30	0	0	0	97		97		21:30	0	0	0	44		44	
9:45	0	0	0	122	416	122	416	21:45	0	0	0	46	206	46	206
10:00	0	0	0	112		112		22:00	0	0	0	44		44	
10:15	0	0	0	145		145		22:15	0	0	0	76		76	
10:30	0	0	0	144		144		22:30	0	0	0	78		78	
10:45	0	0	0	139	540	139	540	22:45	0	0	0	50	248	50	248
11:00	0	0	0	139		139		23:00	0	0	0	36		36	
11:15	0	0	0	162		162		23:15	0	0	0	44		44	
11:30	0	0	0	158		158		23:30	0	0	0	35		35	
11:45	0	0	0	164	623	164	623	23:45	0	0	0	23	138	23	138
TOTALS					2519		**2519**	**TOTALS**					5607		**5607**
SPLIT %					100.0%		**31.0%**	**SPLIT %**					100.0%		**69.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	8,126	8,126

AM Peak Hour					11:30		**11:30**	**PM Peak Hour**					13:45		**13:45**
AM Pk Volume					652		**652**	**PM Pk Volume**					669		**669**
Pk Hr Factor					0.926		**0.926**	**Pk Hr Factor**					0.934		**0.934**
7 - 9 Volume	0	0	0		445		**445**	**4 - 6 Volume**	0	0	0		1293		**1293**
7 - 9 Peak Hour					8:00		**8:00**	**4 - 6 Peak Hour**					16:00		**16:00**
7 - 9 Pk Volume	0	0	0		284		**284**	**4 - 6 Pk Volume**	0	0	0		658		**658**
Pk Hr Factor	0.000	0.000	0.000		0.732		**0.732**	**Pk Hr Factor**	0.000	0.000	0.000		0.889		**0.889**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Monday
Date: 2/13/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,005	12,005

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	21		21		12:00	0	0	0	177		177	
0:15	0	0	0	25		25		12:15	0	0	0	203		203	
0:30	0	0	0	23		23		12:30	0	0	0	209		209	
0:45	0	0	0	15	84	15	84	12:45	0	0	0	190	779	190	779
1:00	0	0	0	19		19		13:00	0	0	0	185		185	
1:15	0	0	0	10		10		13:15	0	0	0	164		164	
1:30	0	0	0	9		9		13:30	0	0	0	181		181	
1:45	0	0	0	6	44	6	44	13:45	0	0	0	178	708	178	708
2:00	0	0	0	7		7		14:00	0	0	0	199		199	
2:15	0	0	0	8		8		14:15	0	0	0	178		178	
2:30	0	0	0	10		10		14:30	0	0	0	217		217	
2:45	0	0	0	4	29	4	29	14:45	0	0	0	184	778	184	778
3:00	0	0	0	4		4		15:00	0	0	0	212		212	
3:15	0	0	0	4		4		15:15	0	0	0	298		298	
3:30	0	0	0	2		2		15:30	0	0	0	312		312	
3:45	0	0	0	3	13	3	13	15:45	0	0	0	304	1126	304	1126
4:00	0	0	0	6		6		16:00	0	0	0	302		302	
4:15	0	0	0	5		5		16:15	0	0	0	323		323	
4:30	0	0	0	9		9		16:30	0	0	0	301		301	
4:45	0	0	0	17	37	17	37	16:45	0	0	0	309	1235	309	1235
5:00	0	0	0	12		12		17:00	0	0	0	334		334	
5:15	0	0	0	18		18		17:15	0	0	0	269		269	
5:30	0	0	0	19		19		17:30	0	0	0	297		297	
5:45	0	0	0	25	74	25	74	17:45	0	0	0	285	1185	285	1185
6:00	0	0	0	34		34		18:00	0	0	0	246		246	
6:15	0	0	0	31		31		18:15	0	0	0	219		219	
6:30	0	0	0	47		47		18:30	0	0	0	222		222	
6:45	0	0	0	65	177	65	177	18:45	0	0	0	216	903	216	903
7:00	0	0	0	114		114		19:00	0	0	0	179		179	
7:15	0	0	0	101		101		19:15	0	0	0	152		152	
7:30	0	0	0	113		113		19:30	0	0	0	142		142	
7:45	0	0	0	141	469	141	469	19:45	0	0	0	119	592	119	592
8:00	0	0	0	175		175		20:00	0	0	0	89		89	
8:15	0	0	0	216		216		20:15	0	0	0	102		102	
8:30	0	0	0	221		221		20:30	0	0	0	96		96	
8:45	0	0	0	186	798	186	798	20:45	0	0	0	70	357	70	357
9:00	0	0	0	155		155		21:00	0	0	0	75		75	
9:15	0	0	0	183		183		21:15	0	0	0	68		68	
9:30	0	0	0	150		150		21:30	0	0	0	65		65	
9:45	0	0	0	165	653	165	653	21:45	0	0	0	46	254	46	254
10:00	0	0	0	181		181		22:00	0	0	0	65		65	
10:15	0	0	0	159		159		22:15	0	0	0	66		66	
10:30	0	0	0	168		168		22:30	0	0	0	46		46	
10:45	0	0	0	187	695	187	695	22:45	0	0	0	30	207	30	207
11:00	0	0	0	171		171		23:00	0	0	0	36		36	
11:15	0	0	0	150		150		23:15	0	0	0	44		44	
11:30	0	0	0	123		123		23:30	0	0	0	25		25	
11:45	0	0	0	230	674	230	674	23:45	0	0	0	29	134	29	134
TOTALS					3747		**3747**	**TOTALS**					8258		**8258**
SPLIT %					100.0%		**31.2%**	**SPLIT %**					100.0%		**68.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,005	12,005

AM Peak Hour					11:45		**11:45**	**PM Peak Hour**					16:15		**16:15**
AM Pk Volume					819		**819**	**PM Pk Volume**					1267		**1267**
Pk Hr Factor					0.890		**0.890**	**Pk Hr Factor**					0.948		**0.948**
7 - 9 Volume	0	0	0		1267		**1267**	**4 - 6 Volume**	0	0	0		2420		**2420**
7 - 9 Peak Hour					8:00		**8:00**	**4 - 6 Peak Hour**					16:15		**16:15**
7 - 9 Pk Volume	0	0	0		798		**798**	**4 - 6 Pk Volume**	0	0	0		1267		**1267**
Pk Hr Factor	0.000	0.000	0.000		0.903		**0.903**	**Pk Hr Factor**	0.000	0.000	0.000		0.948		**0.948**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Tuesday
Date: 2/14/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	13,407	13,407

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	33		33		12:00	0	0	0	169		169	
0:15	0	0	0	28		28		12:15	0	0	0	213		213	
0:30	0	0	0	26		26		12:30	0	0	0	184		184	
0:45	0	0	0	24	111	24	111	12:45	0	0	0	191	757	191	757
1:00	0	0	0	13		13		13:00	0	0	0	222		222	
1:15	0	0	0	3		3		13:15	0	0	0	171		171	
1:30	0	0	0	5		5		13:30	0	0	0	196		196	
1:45	0	0	0	10	31	10	31	13:45	0	0	0	206	795	206	795
2:00	0	0	0	7		7		14:00	0	0	0	216		216	
2:15	0	0	0	6		6		14:15	0	0	0	209		209	
2:30	0	0	0	5		5		14:30	0	0	0	216		216	
2:45	0	0	0	3	21	3	21	14:45	0	0	0	189	830	189	830
3:00	0	0	0	5		5		15:00	0	0	0	198		198	
3:15	0	0	0	5		5		15:15	0	0	0	346		346	
3:30	0	0	0	2		2		15:30	0	0	0	329		329	
3:45	0	0	0	3	15	3	15	15:45	0	0	0	292	1165	292	1165
4:00	0	0	0	3		3		16:00	0	0	0	352		352	
4:15	0	0	0	5		5		16:15	0	0	0	321		321	
4:30	0	0	0	7		7		16:30	0	0	0	322		322	
4:45	0	0	0	17	32	17	32	16:45	0	0	0	357	1352	357	1352
5:00	0	0	0	14		14		17:00	0	0	0	392		392	
5:15	0	0	0	19		19		17:15	0	0	0	322		322	
5:30	0	0	0	23		23		17:30	0	0	0	369		369	
5:45	0	0	0	39	95	39	95	17:45	0	0	0	309	1392	309	1392
6:00	0	0	0	34		34		18:00	0	0	0	205		205	
6:15	0	0	0	41		41		18:15	0	0	0	349		349	
6:30	0	0	0	53		53		18:30	0	0	0	232		232	
6:45	0	0	0	84	212	84	212	18:45	0	0	0	255	1041	255	1041
7:00	0	0	0	80		80		19:00	0	0	0	211		211	
7:15	0	0	0	119		119		19:15	0	0	0	194		194	
7:30	0	0	0	110		110		19:30	0	0	0	142		142	
7:45	0	0	0	177	486	177	486	19:45	0	0	0	143	690	143	690
8:00	0	0	0	162		162		20:00	0	0	0	105		105	
8:15	0	0	0	250		250		20:15	0	0	0	132		132	
8:30	0	0	0	246		246		20:30	0	0	0	144		144	
8:45	0	0	0	171	829	171	829	20:45	0	0	0	111	492	111	492
9:00	0	0	0	196		196		21:00	0	0	0	102		102	
9:15	0	0	0	200		200		21:15	0	0	0	110		110	
9:30	0	0	0	166		166		21:30	0	0	0	79		79	
9:45	0	0	0	173	735	173	735	21:45	0	0	0	72	363	72	363
10:00	0	0	0	207		207		22:00	0	0	0	66		66	
10:15	0	0	0	181		181		22:15	0	0	0	79		79	
10:30	0	0	0	179		179		22:30	0	0	0	57		57	
10:45	0	0	0	173	740	173	740	22:45	0	0	0	47	249	47	249
11:00	0	0	0	192		192		23:00	0	0	0	44		44	
11:15	0	0	0	193		193		23:15	0	0	0	53		53	
11:30	0	0	0	206		206		23:30	0	0	0	55		55	
11:45	0	0	0	191	782	191	782	23:45	0	0	0	40	192	40	192
TOTALS					4089		**4089**	**TOTALS**					9318		**9318**
SPLIT %					100.0%		**30.5%**	**SPLIT %**					100.0%		**69.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	13,407	13,407

AM Peak Hour					8:15		**8:15**	**PM Peak Hour**					16:45	**16:45**
AM Pk Volume					863		**863**	**PM Pk Volume**					1440	**1440**
Pk Hr Factor					0.863		**0.863**	**Pk Hr Factor**					0.918	**0.918**
7 - 9 Volume	0	0	0		1315		**1315**	**4 - 6 Volume**	0	0	0		2744	**2744**
7 - 9 Peak Hour					7:45		**7:45**	**4 - 6 Peak Hour**					16:45	**16:45**
7 - 9 Pk Volume	0	0	0		835		**835**	**4 - 6 Pk Volume**	0	0	0		1440	**1440**
Pk Hr Factor	0.000	0.000	0.000		0.835		**0.835**	**Pk Hr Factor**	0.000	0.000	0.000		0.918	**0.918**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Wednesday
Date: 2/15/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,887	12,887

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	38		38		12:00	0	0	0	187		187	
0:15	0	0	0	30		30		12:15	0	0	0	212		212	
0:30	0	0	0	29		29		12:30	0	0	0	193		193	
0:45	0	0	0	21	118	21	118	12:45	0	0	0	121	713	121	713
1:00	0	0	0	18		18		13:00	0	0	0	208		208	
1:15	0	0	0	10		10		13:15	0	0	0	187		187	
1:30	0	0	0	12		12		13:30	0	0	0	177		177	
1:45	0	0	0	3	43	3	43	13:45	0	0	0	199	771	199	771
2:00	0	0	0	11		11		14:00	0	0	0	288		288	
2:15	0	0	0	10		10		14:15	0	0	0	254		254	
2:30	0	0	0	5		5		14:30	0	0	0	226		226	
2:45	0	0	0	6	32	6	32	14:45	0	0	0	219	987	219	987
3:00	0	0	0	6		6		15:00	0	0	0	252		252	
3:15	0	0	0	5		5		15:15	0	0	0	254		254	
3:30	0	0	0	2		2		15:30	0	0	0	332		332	
3:45	0	0	0	1	14	1	14	15:45	0	0	0	243	1081	243	1081
4:00	0	0	0	3		3		16:00	0	0	0	326		326	
4:15	0	0	0	6		6		16:15	0	0	0	286		286	
4:30	0	0	0	6		6		16:30	0	0	0	312		312	
4:45	0	0	0	11	26	11	26	16:45	0	0	0	306	1230	306	1230
5:00	0	0	0	15		15		17:00	0	0	0	362		362	
5:15	0	0	0	18		18		17:15	0	0	0	365		365	
5:30	0	0	0	27		27		17:30	0	0	0	294		294	
5:45	0	0	0	36	96	36	96	17:45	0	0	0	284	1305	284	1305
6:00	0	0	0	33		33		18:00	0	0	0	280		280	
6:15	0	0	0	40		40		18:15	0	0	0	290		290	
6:30	0	0	0	52		52		18:30	0	0	0	186		186	
6:45	0	0	0	80	205	80	205	18:45	0	0	0	272	1028	272	1028
7:00	0	0	0	84		84		19:00	0	0	0	195		195	
7:15	0	0	0	85		85		19:15	0	0	0	191		191	
7:30	0	0	0	110		110		19:30	0	0	0	186		186	
7:45	0	0	0	134	413	134	413	19:45	0	0	0	135	707	135	707
8:00	0	0	0	199		199		20:00	0	0	0	127		127	
8:15	0	0	0	213		213		20:15	0	0	0	113		113	
8:30	0	0	0	257		257		20:30	0	0	0	100		100	
8:45	0	0	0	247	916	247	916	20:45	0	0	0	75	415	75	415
9:00	0	0	0	191		191		21:00	0	0	0	77		77	
9:15	0	0	0	147		147		21:15	0	0	0	76		76	
9:30	0	0	0	180		180		21:30	0	0	0	68		68	
9:45	0	0	0	167	685	167	685	21:45	0	0	0	44	265	44	265
10:00	0	0	0	167		167		22:00	0	0	0	60		60	
10:15	0	0	0	148		148		22:15	0	0	0	61		61	
10:30	0	0	0	187		187		22:30	0	0	0	88		88	
10:45	0	0	0	182	684	182	684	22:45	0	0	0	45	254	45	254
11:00	0	0	0	174		174		23:00	0	0	0	54		54	
11:15	0	0	0	14		14		23:15	0	0	0	47		47	
11:30	0	0	0	326		326		23:30	0	0	0	44		44	
11:45	0	0	0	194	708	194	708	23:45	0	0	0	46	191	46	191
TOTALS					3940		**3940**	**TOTALS**					8947		**8947**
SPLIT %					100.0%		**30.6%**	**SPLIT %**					100.0%		**69.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,887	12,887

AM Peak Hour				11:30	**11:30**	**PM Peak Hour**	16:30	**16:30**
AM Pk Volume				919	**919**	**PM Pk Volume**	1345	**1345**
Pk Hr Factor				0.705	**0.705**	**Pk Hr Factor**	0.921	**0.921**
7 - 9 Volume	0	0	0	1329	**1329**	**4 - 6 Volume**	0 0 0 2535	**2535**
7 - 9 Peak Hour				8:00	**8:00**	**4 - 6 Peak Hour**	16:30	**16:30**
7 - 9 Pk Volume	0	0	0	916	**916**	**4 - 6 Pk Volume**	0 0 0 1345	**1345**
Pk Hr Factor	0.000	0.000	0.000	0.891	**0.891**	**Pk Hr Factor**	0.000 0.000 0.000 0.921	**0.921**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Thursday
Date: 2/16/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,909	12,909

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	24		24		12:00	0	0	0	198		198	
0:15	0	0	0	20		20		12:15	0	0	0	219		219	
0:30	0	0	0	25		25		12:30	0	0	0	171		171	
0:45	0	0	0	24	93	24	93	12:45	0	0	0	203	791	203	791
1:00	0	0	0	17		17		13:00	0	0	0	183		183	
1:15	0	0	0	8		8		13:15	0	0	0	184		184	
1:30	0	0	0	4		4		13:30	0	0	0	199		199	
1:45	0	0	0	13	42	13	42	13:45	0	0	0	188	754	188	754
2:00	0	0	0	9		9		14:00	0	0	0	225		225	
2:15	0	0	0	6		6		14:15	0	0	0	185		185	
2:30	0	0	0	4		4		14:30	0	0	0	213		213	
2:45	0	0	0	9	28	9	28	14:45	0	0	0	197	820	197	820
3:00	0	0	0	9		9		15:00	0	0	0	247		247	
3:15	0	0	0	2		2		15:15	0	0	0	308		308	
3:30	0	0	0	5		5		15:30	0	0	0	328		328	
3:45	0	0	0	5	21	5	21	15:45	0	0	0	283	1166	283	1166
4:00	0	0	0	2		2		16:00	0	0	0	302		302	
4:15	0	0	0	7		7		16:15	0	0	0	321		321	
4:30	0	0	0	10		10		16:30	0	0	0	281		281	
4:45	0	0	0	11	30	11	30	16:45	0	0	0	330	1234	330	1234
5:00	0	0	0	11		11		17:00	0	0	0	360		360	
5:15	0	0	0	15		15		17:15	0	0	0	310		310	
5:30	0	0	0	17		17		17:30	0	0	0	326		326	
5:45	0	0	0	34	77	34	77	17:45	0	0	0	319	1315	319	1315
6:00	0	0	0	31		31		18:00	0	0	0	291		291	
6:15	0	0	0	48		48		18:15	0	0	0	254		254	
6:30	0	0	0	62		62		18:30	0	0	0	257		257	
6:45	0	0	0	79	220	79	220	18:45	0	0	0	197	999	197	999
7:00	0	0	0	94		94		19:00	0	0	0	238		238	
7:15	0	0	0	100		100		19:15	0	0	0	207		207	
7:30	0	0	0	114		114		19:30	0	0	0	164		164	
7:45	0	0	0	145	453	145	453	19:45	0	0	0	126	735	126	735
8:00	0	0	0	189		189		20:00	0	0	0	130		130	
8:15	0	0	0	210		210		20:15	0	0	0	109		109	
8:30	0	0	0	247		247		20:30	0	0	0	71		71	
8:45	0	0	0	191	837	191	837	20:45	0	0	0	97	407	97	407
9:00	0	0	0	172		172		21:00	0	0	0	69		69	
9:15	0	0	0	189		189		21:15	0	0	0	79		79	
9:30	0	0	0	167		167		21:30	0	0	0	70		70	
9:45	0	0	0	172	700	172	700	21:45	0	0	0	62	280	62	280
10:00	0	0	0	150		150		22:00	0	0	0	72		72	
10:15	0	0	0	186		186		22:15	0	0	0	74		74	
10:30	0	0	0	182		182		22:30	0	0	0	56		56	
10:45	0	0	0	151	669	151	669	22:45	0	0	0	55	257	55	257
11:00	0	0	0	186		186		23:00	0	0	0	59		59	
11:15	0	0	0	180		180		23:15	0	0	0	43		43	
11:30	0	0	0	200		200		23:30	0	0	0	60		60	
11:45	0	0	0	207	773	207	773	23:45	0	0	0	46	208	46	208
TOTALS					3943		**3943**	**TOTALS**					8966		**8966**
SPLIT %					100.0%		**30.5%**	**SPLIT %**					100.0%		**69.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	12,909	12,909

AM Peak Hour					8:00		**8:00**	**PM Peak Hour**					16:45	**16:45**
AM Pk Volume					837		**837**	**PM Pk Volume**					1326	**1326**
Pk Hr Factor					0.847		**0.847**	**Pk Hr Factor**					0.921	**0.921**
7 - 9 Volume	0	0	0		1290		**1290**	**4 - 6 Volume**	0	0	0		2549	**2549**
7 - 9 Peak Hour					8:00		**8:00**	**4 - 6 Peak Hour**					16:45	**16:45**
7 - 9 Pk Volume	0	0	0		837		**837**	**4 - 6 Pk Volume**	0	0	0		1326	**1326**
Pk Hr Factor	0.000	0.000	0.000		0.847		**0.847**	**Pk Hr Factor**	0.000	0.000	0.000		0.921	**0.921**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Friday
Date: 2/17/2023

City: Bay Harbor Islands
Project #: FL23_140077_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	13,213	13,213

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
0:00	0	0	0	39		39		12:00	0	0	0	263		263	
0:15	0	0	0	24		24		12:15	0	0	0	237		237	
0:30	0	0	0	29		29		12:30	0	0	0	233		233	
0:45	0	0	0	13	105	13	105	12:45	0	0	0	231	964	231	964
1:00	0	0	0	16		16		13:00	0	0	0	237		237	
1:15	0	0	0	9		9		13:15	0	0	0	240		240	
1:30	0	0	0	23		23		13:30	0	0	0	204		204	
1:45	0	0	0	12	60	12	60	13:45	0	0	0	236	917	236	917
2:00	0	0	0	7		7		14:00	0	0	0	233		233	
2:15	0	0	0	8		8		14:15	0	0	0	220		220	
2:30	0	0	0	9		9		14:30	0	0	0	209		209	
2:45	0	0	0	2	26	2	26	14:45	0	0	0	187	849	187	849
3:00	0	0	0	6		6		15:00	0	0	0	238		238	
3:15	0	0	0	9		9		15:15	0	0	0	320		320	
3:30	0	0	0	10		10		15:30	0	0	0	307		307	
3:45	0	0	0	8	33	8	33	15:45	0	0	0	282	1147	282	1147
4:00	0	0	0	7		7		16:00	0	0	0	339		339	
4:15	0	0	0	12		12		16:15	0	0	0	319		319	
4:30	0	0	0	11		11		16:30	0	0	0	148		148	
4:45	0	0	0	9	39	9	39	16:45	0	0	0	436	1242	436	1242
5:00	0	0	0	7		7		17:00	0	0	0	335		335	
5:15	0	0	0	13		13		17:15	0	0	0	301		301	
5:30	0	0	0	21		21		17:30	0	0	0	360		360	
5:45	0	0	0	23	64	23	64	17:45	0	0	0	325	1321	325	1321
6:00	0	0	0	38		38		18:00	0	0	0	266		266	
6:15	0	0	0	39		39		18:15	0	0	0	269		269	
6:30	0	0	0	37		37		18:30	0	0	0	197		197	
6:45	0	0	0	94	208	94	208	18:45	0	0	0	197	929	197	929
7:00	0	0	0	109		109		19:00	0	0	0	216		216	
7:15	0	0	0	101		101		19:15	0	0	0	139		139	
7:30	0	0	0	97		97		19:30	0	0	0	109		109	
7:45	0	0	0	123	430	123	430	19:45	0	0	0	124	588	124	588
8:00	0	0	0	161		161		20:00	0	0	0	107		107	
8:15	0	0	0	218		218		20:15	0	0	0	108		108	
8:30	0	0	0	240		240		20:30	0	0	0	77		77	
8:45	0	0	0	218	837	218	837	20:45	0	0	0	77	369	77	369
9:00	0	0	0	163		163		21:00	0	0	0	85		85	
9:15	0	0	0	154		154		21:15	0	0	0	68		68	
9:30	0	0	0	174		174		21:30	0	0	0	56		56	
9:45	0	0	0	183	674	183	674	21:45	0	0	0	57	266	57	266
10:00	0	0	0	168		168		22:00	0	0	0	81		81	
10:15	0	0	0	191		191		22:15	0	0	0	86		86	
10:30	0	0	0	208		208		22:30	0	0	0	60		60	
10:45	0	0	0	211	778	211	778	22:45	0	0	0	75	302	75	302
11:00	0	0	0	202		202		23:00	0	0	0	70		70	
11:15	0	0	0	192		192		23:15	0	0	0	39		39	
11:30	0	0	0	227		227		23:30	0	0	0	50		50	
11:45	0	0	0	250	871	250	871	23:45	0	0	0	35	194	35	194
TOTALS					4125		**4125**	**TOTALS**					9088		**9088**
SPLIT %					100.0%		**31.2%**	**SPLIT %**					100.0%		**68.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	13,213	13,213

AM Peak Hour					11:45		**11:45**	**PM Peak Hour**					16:45		**16:45**
AM Pk Volume					983		**983**	**PM Pk Volume**					1432		**1432**
Pk Hr Factor					0.934		**0.934**	**Pk Hr Factor**					0.821		**0.821**
7 - 9 Volume	0	0	0		1267		**1267**	**4 - 6 Volume**	0	0	0		2563		**2563**
7 - 9 Peak Hour					8:00		**8:00**	**4 - 6 Peak Hour**					16:45		**16:45**
7 - 9 Pk Volume	0	0	0		837		**837**	**4 - 6 Pk Volume**	0	0	0		1432		**1432**
Pk Hr Factor	0.000	0.000	0.000		0.872		**0.872**	**Pk Hr Factor**	0.000	0.000	0.000		0.821		**0.821**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Saturday
Date: 2/11/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,308	0	9,308

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	31		0	31		12:00	0	0	162		0	162	
0:15	0	0	16		0	16		12:15	0	0	190		0	190	
0:30	0	0	32		0	32		12:30	0	0	165		0	165	
0:45	0	0	17	96	0	17	96	12:45	0	0	187	704	0	187	704
1:00	0	0	21		0	21		13:00	0	0	174		0	174	
1:15	0	0	17		0	17		13:15	0	0	211		0	211	
1:30	0	0	15		0	15		13:30	0	0	189		0	189	
1:45	0	0	17	70	0	17	70	13:45	0	0	220	794	0	220	794
2:00	0	0	13		0	13		14:00	0	0	179		0	179	
2:15	0	0	7		0	7		14:15	0	0	207		0	207	
2:30	0	0	8		0	8		14:30	0	0	193		0	193	
2:45	0	0	15	43	0	15	43	14:45	0	0	186	765	0	186	765
3:00	0	0	11		0	11		15:00	0	0	168		0	168	
3:15	0	0	7		0	7		15:15	0	0	169		0	169	
3:30	0	0	10		0	10		15:30	0	0	182		0	182	
3:45	0	0	8	36	0	8	36	15:45	0	0	190	709	0	190	709
4:00	0	0	9		0	9		16:00	0	0	169		0	169	
4:15	0	0	5		0	5		16:15	0	0	184		0	184	
4:30	0	0	8		0	8		16:30	0	0	150		0	150	
4:45	0	0	5	27	0	5	27	16:45	0	0	164	667	0	164	667
5:00	0	0	6		0	6		17:00	0	0	154		0	154	
5:15	0	0	16		0	16		17:15	0	0	175		0	175	
5:30	0	0	12		0	12		17:30	0	0	130		0	130	
5:45	0	0	27	61	0	27	61	17:45	0	0	154	613	0	154	613
6:00	0	0	23		0	23		18:00	0	0	160		0	160	
6:15	0	0	26		0	26		18:15	0	0	154		0	154	
6:30	0	0	36		0	36		18:30	0	0	149		0	149	
6:45	0	0	50	135	0	50	135	18:45	0	0	130	593	0	130	593
7:00	0	0	48		0	48		19:00	0	0	153		0	153	
7:15	0	0	51		0	51		19:15	0	0	130		0	130	
7:30	0	0	79		0	79		19:30	0	0	116		0	116	
7:45	0	0	71	249	0	71	249	19:45	0	0	139	538	0	139	538
8:00	0	0	67		0	67		20:00	0	0	110		0	110	
8:15	0	0	72		0	72		20:15	0	0	115		0	115	
8:30	0	0	92		0	92		20:30	0	0	121		0	121	
8:45	0	0	115	346	0	115	346	20:45	0	0	90	436	0	90	436
9:00	0	0	93		0	93		21:00	0	0	65		0	65	
9:15	0	0	103		0	103		21:15	0	0	108		0	108	
9:30	0	0	118		0	118		21:30	0	0	88		0	88	
9:45	0	0	120	434	0	120	434	21:45	0	0	76	337	0	76	337
10:00	0	0	138		0	138		22:00	0	0	67		0	67	
10:15	0	0	132		0	132		22:15	0	0	72		0	72	
10:30	0	0	157		0	157		22:30	0	0	74		0	74	
10:45	0	0	159	586	0	159	586	22:45	0	0	77	290	0	77	290
11:00	0	0	139		0	139		23:00	0	0	56		0	56	
11:15	0	0	150		0	150		23:15	0	0	47		0	47	
11:30	0	0	143		0	143		23:30	0	0	44		0	44	
11:45	0	0	158	590	0	158	590	23:45	0	0	42	189	0	42	189
TOTALS			2673			**2673**		**TOTALS**			6635			**6635**	
SPLIT %			100.0%			**28.7%**		**SPLIT %**			100.0%			**71.3%**	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,308	0	9,308

AM Peak Hour			11:45			**11:45**		**PM Peak Hour**			13:15			**13:15**	
AM Pk Volume			675			**675**		**PM Pk Volume**			799			**799**	
Pk Hr Factor			0.888			**0.888**		**Pk Hr Factor**			0.908			**0.908**	
7 - 9 Volume	0	0	595	0		**595**		**4 - 6 Volume**	0	0	1280	0		**1280**	
7 - 9 Peak Hour			8:00			**8:00**		**4 - 6 Peak Hour**			16:00			**16:00**	
7 - 9 Pk Volume	0	0	346	0		**346**		**4 - 6 Pk Volume**	0	0	667	0		**667**	
Pk Hr Factor	0.000	0.000	0.752	0.000		**0.752**		**Pk Hr Factor**	0.000	0.000	0.906	0.000		**0.906**	

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Sunday
Date: 2/12/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,468	0	8,468

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	51		0	51		12:00	0	0	182		0	182	
0:15	0	0	50		0	50		12:15	0	0	200		0	200	
0:30	0	0	22		0	22		12:30	0	0	169		0	169	
0:45	0	0	32	155	0	32	155	12:45	0	0	174	725	0	174	725
1:00	0	0	22		0	22		13:00	0	0	168		0	168	
1:15	0	0	19		0	19		13:15	0	0	158		0	158	
1:30	0	0	30		0	30		13:30	0	0	162		0	162	
1:45	0	0	13	84	0	13	84	13:45	0	0	172	660	0	172	660
2:00	0	0	11		0	11		14:00	0	0	157		0	157	
2:15	0	0	7		0	7		14:15	0	0	169		0	169	
2:30	0	0	7		0	7		14:30	0	0	198		0	198	
2:45	0	0	6	31	0	6	31	14:45	0	0	179	703	0	179	703
3:00	0	0	8		0	8		15:00	0	0	196		0	196	
3:15	0	0	11		0	11		15:15	0	0	190		0	190	
3:30	0	0	9		0	9		15:30	0	0	155		0	155	
3:45	0	0	10	38	0	10	38	15:45	0	0	152	693	0	152	693
4:00	0	0	4		0	4		16:00	0	0	179		0	179	
4:15	0	0	15		0	15		16:15	0	0	180		0	180	
4:30	0	0	10		0	10		16:30	0	0	155		0	155	
4:45	0	0	14	43	0	14	43	16:45	0	0	172	686	0	172	686
5:00	0	0	7		0	7		17:00	0	0	163		0	163	
5:15	0	0	9		0	9		17:15	0	0	162		0	162	
5:30	0	0	12		0	12		17:30	0	0	155		0	155	
5:45	0	0	20	48	0	20	48	17:45	0	0	158	638	0	158	638
6:00	0	0	21		0	21		18:00	0	0	175		0	175	
6:15	0	0	29		0	29		18:15	0	0	138		0	138	
6:30	0	0	34		0	34		18:30	0	0	129		0	129	
6:45	0	0	34	118	0	34	118	18:45	0	0	116	558	0	116	558
7:00	0	0	37		0	37		19:00	0	0	100		0	100	
7:15	0	0	34		0	34		19:15	0	0	99		0	99	
7:30	0	0	48		0	48		19:30	0	0	87		0	87	
7:45	0	0	59	178	0	59	178	19:45	0	0	84	370	0	84	370
8:00	0	0	53		0	53		20:00	0	0	78		0	78	
8:15	0	0	54		0	54		20:15	0	0	77		0	77	
8:30	0	0	82		0	82		20:30	0	0	70		0	70	
8:45	0	0	94	283	0	94	283	20:45	0	0	55	280	0	55	280
9:00	0	0	79		0	79		21:00	0	0	71		0	71	
9:15	0	0	79		0	79		21:15	0	0	69		0	69	
9:30	0	0	98		0	98		21:30	0	0	59		0	59	
9:45	0	0	103	359	0	103	359	21:45	0	0	51	250	0	51	250
10:00	0	0	113		0	113		22:00	0	0	54		0	54	
10:15	0	0	127		0	127		22:15	0	0	66		0	66	
10:30	0	0	148		0	148		22:30	0	0	73		0	73	
10:45	0	0	149	537	0	149	537	22:45	0	0	63	256	0	63	256
11:00	0	0	162		0	162		23:00	0	0	55		0	55	
11:15	0	0	137		0	137		23:15	0	0	45		0	45	
11:30	0	0	149		0	149		23:30	0	0	36		0	36	
11:45	0	0	166	614	0	166	614	23:45	0	0	25	161	0	25	161
TOTALS			2488			**2488**		**TOTALS**			5980			**5980**	
SPLIT %			100.0%			**29.4%**		**SPLIT %**			100.0%			**70.6%**	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,468	0	8,468

AM Peak Hour			11:45			**11:45**		**PM Peak Hour**			14:30			**14:30**	
AM Pk Volume			717			**717**		**PM Pk Volume**			763			**763**	
Pk Hr Factor			0.896			**0.896**		**Pk Hr Factor**			0.963			**0.963**	
7 - 9 Volume	0	0	461	0		**461**		**4 - 6 Volume**	0	0	1324	0		**1324**	
7 - 9 Peak Hour			8:00			**8:00**		**4 - 6 Peak Hour**			16:00			**16:00**	
7 - 9 Pk Volume	0	0	283	0		**283**		**4 - 6 Pk Volume**	0	0	686	0		**686**	
Pk Hr Factor	0.000	0.000	0.753	0.000		**0.753**		**Pk Hr Factor**	0.000	0.000	0.953	0.000		**0.953**	

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Monday
Date: 2/13/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,526	0	11,526

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	30		0	30		12:00	0	0	143		0	143	
0:15	0	0	18		0	18		12:15	0	0	194		0	194	
0:30	0	0	16		0	16		12:30	0	0	176		0	176	
0:45	0	0	13	77	0	13	77	12:45	0	0	153	666	0	153	666
1:00	0	0	11		0	11		13:00	0	0	194		0	194	
1:15	0	0	7		0	7		13:15	0	0	192		0	192	
1:30	0	0	4		0	4		13:30	0	0	197		0	197	
1:45	0	0	5	27	0	5	27	13:45	0	0	176	759	0	176	759
2:00	0	0	8		0	8		14:00	0	0	177		0	177	
2:15	0	0	4		0	4		14:15	0	0	172		0	172	
2:30	0	0	2		0	2		14:30	0	0	188		0	188	
2:45	0	0	3	17	0	3	17	14:45	0	0	217	754	0	217	754
3:00	0	0	5		0	5		15:00	0	0	216		0	216	
3:15	0	0	7		0	7		15:15	0	0	221		0	221	
3:30	0	0	5		0	5		15:30	0	0	175		0	175	
3:45	0	0	7	24	0	7	24	15:45	0	0	175	787	0	175	787
4:00	0	0	6		0	6		16:00	0	0	196		0	196	
4:15	0	0	7		0	7		16:15	0	0	203		0	203	
4:30	0	0	5		0	5		16:30	0	0	217		0	217	
4:45	0	0	9	27	0	9	27	16:45	0	0	204	820	0	204	820
5:00	0	0	9		0	9		17:00	0	0	198		0	198	
5:15	0	0	16		0	16		17:15	0	0	179		0	179	
5:30	0	0	20		0	20		17:30	0	0	173		0	173	
5:45	0	0	24	69	0	24	69	17:45	0	0	187	737	0	187	737
6:00	0	0	56		0	56		18:00	0	0	142		0	142	
6:15	0	0	71		0	71		18:15	0	0	199		0	199	
6:30	0	0	72		0	72		18:30	0	0	198		0	198	
6:45	0	0	123	322	0	123	322	18:45	0	0	157	696	0	157	696
7:00	0	0	94		0	94		19:00	0	0	168		0	168	
7:15	0	0	129		0	129		19:15	0	0	171		0	171	
7:30	0	0	183		0	183		19:30	0	0	154		0	154	
7:45	0	0	254	660	0	254	660	19:45	0	0	162	655	0	162	655
8:00	0	0	277		0	277		20:00	0	0	131		0	131	
8:15	0	0	233		0	233		20:15	0	0	131		0	131	
8:30	0	0	208		0	208		20:30	0	0	122		0	122	
8:45	0	0	250	968	0	250	968	20:45	0	0	107	491	0	107	491
9:00	0	0	211		0	211		21:00	0	0	98		0	98	
9:15	0	0	191		0	191		21:15	0	0	98		0	98	
9:30	0	0	216		0	216		21:30	0	0	80		0	80	
9:45	0	0	198	816	0	198	816	21:45	0	0	59	335	0	59	335
10:00	0	0	211		0	211		22:00	0	0	50		0	50	
10:15	0	0	180		0	180		22:15	0	0	65		0	65	
10:30	0	0	214		0	214		22:30	0	0	48		0	48	
10:45	0	0	176	781	0	176	781	22:45	0	0	52	215	0	52	215
11:00	0	0	200		0	200		23:00	0	0	39		0	39	
11:15	0	0	167		0	167		23:15	0	0	29		0	29	
11:30	0	0	122		0	122		23:30	0	0	23		0	23	
11:45	0	0	218	707	0	218	707	23:45	0	0	25	116	0	25	116
TOTALS			4495				4495	TOTALS			7031				7031
SPLIT %			100.0%				39.0%	SPLIT %			100.0%				61.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,526	0	11,526

AM Peak Hour			7:45				7:45	PM Peak Hour			14:30				14:30
AM Pk Volume			972				972	PM Pk Volume			842				842
Pk Hr Factor			0.877				0.877	Pk Hr Factor			0.952				0.952
7 - 9 Volume	0	0	1628		0		1628	4 - 6 Volume	0	0	1557		0		1557
7 - 9 Peak Hour			7:45				7:45	4 - 6 Peak Hour			16:15				16:15
7 - 9 Pk Volume	0	0	972		0		972	4 - 6 Pk Volume	0	0	822		0		822
Pk Hr Factor	0.000	0.000	0.877		0.000		0.877	Pk Hr Factor	0.000	0.000	0.947		0.000		0.947

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Tuesday
Date: 2/14/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,858	0	12,858

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	24		0	24		12:00	0	0	182		0	182	
0:15	0	0	13		0	13		12:15	0	0	213		0	213	
0:30	0	0	19		0	19		12:30	0	0	192		0	192	
0:45	0	0	11	67	0	11	67	12:45	0	0	214	801	0	214	801
1:00	0	0	13		0	13		13:00	0	0	211		0	211	
1:15	0	0	8		0	8		13:15	0	0	232		0	232	
1:30	0	0	6		0	6		13:30	0	0	223		0	223	
1:45	0	0	11	38	0	11	38	13:45	0	0	215	881	0	215	881
2:00	0	0	4		0	4		14:00	0	0	207		0	207	
2:15	0	0	5		0	5		14:15	0	0	206		0	206	
2:30	0	0	3		0	3		14:30	0	0	185		0	185	
2:45	0	0	4	16	0	4	16	14:45	0	0	253	851	0	253	851
3:00	0	0	5		0	5		15:00	0	0	213		0	213	
3:15	0	0	5		0	5		15:15	0	0	185		0	185	
3:30	0	0	5		0	5		15:30	0	0	214		0	214	
3:45	0	0	5	20	0	5	20	15:45	0	0	199	811	0	199	811
4:00	0	0	9		0	9		16:00	0	0	191		0	191	
4:15	0	0	2		0	2		16:15	0	0	183		0	183	
4:30	0	0	11		0	11		16:30	0	0	196		0	196	
4:45	0	0	14	36	0	14	36	16:45	0	0	228	798	0	228	798
5:00	0	0	9		0	9		17:00	0	0	196		0	196	
5:15	0	0	24		0	24		17:15	0	0	254		0	254	
5:30	0	0	26		0	26		17:30	0	0	223		0	223	
5:45	0	0	45	104	0	45	104	17:45	0	0	205	878	0	205	878
6:00	0	0	51		0	51		18:00	0	0	218		0	218	
6:15	0	0	50		0	50		18:15	0	0	191		0	191	
6:30	0	0	87		0	87		18:30	0	0	212		0	212	
6:45	0	0	118	306	0	118	306	18:45	0	0	218	839	0	218	839
7:00	0	0	125		0	125		19:00	0	0	180		0	180	
7:15	0	0	146		0	146		19:15	0	0	159		0	159	
7:30	0	0	174		0	174		19:30	0	0	198		0	198	
7:45	0	0	248	693	0	248	693	19:45	0	0	162	699	0	162	699
8:00	0	0	272		0	272		20:00	0	0	148		0	148	
8:15	0	0	263		0	263		20:15	0	0	125		0	125	
8:30	0	0	207		0	207		20:30	0	0	153		0	153	
8:45	0	0	254	996	0	254	996	20:45	0	0	142	568	0	142	568
9:00	0	0	246		0	246		21:00	0	0	103		0	103	
9:15	0	0	217		0	217		21:15	0	0	110		0	110	
9:30	0	0	216		0	216		21:30	0	0	107		0	107	
9:45	0	0	236	915	0	236	915	21:45	0	0	91	411	0	91	411
10:00	0	0	246		0	246		22:00	0	0	63		0	63	
10:15	0	0	204		0	204		22:15	0	0	73		0	73	
10:30	0	0	245		0	245		22:30	0	0	59		0	59	
10:45	0	0	208	903	0	208	903	22:45	0	0	47	242	0	47	242
11:00	0	0	231		0	231		23:00	0	0	40		0	40	
11:15	0	0	180		0	180		23:15	0	0	54		0	54	
11:30	0	0	181		0	181		23:30	0	0	31		0	31	
11:45	0	0	232	824	0	232	824	23:45	0	0	36	161	0	36	161
TOTALS			4918			**4918**		**TOTALS**			7940			**7940**	
SPLIT %			100.0%			**38.2%**		**SPLIT %**			100.0%			**61.8%**	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,858	0	12,858

AM Peak Hour			8:00			**8:00**		**PM Peak Hour**			16:45			**16:45**	
AM Pk Volume			996			**996**		**PM Pk Volume**			901			**901**	
Pk Hr Factor			0.915			**0.915**		**Pk Hr Factor**			0.887			**0.887**	
7 - 9 Volume	0	0	1689	0		**1689**		**4 - 6 Volume**	0	0	1676	0		**1676**	
7 - 9 Peak Hour			8:00			**8:00**		**4 - 6 Peak Hour**			16:45			**16:45**	
7 - 9 Pk Volume	0	0	996	0		**996**		**4 - 6 Pk Volume**	0	0	901	0		**901**	
Pk Hr Factor	0.000	0.000	0.915	0.000		**0.915**		**Pk Hr Factor**	0.000	0.000	0.887	0.000		**0.887**	

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Wednesday
Date: 2/15/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,114	0	12,114

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	23		0	23		12:00	0	0	190		0	190	
0:15	0	0	18		0	18		12:15	0	0	194		0	194	
0:30	0	0	8		0	8		12:30	0	0	181		0	181	
0:45	0	0	15	64	0	15	64	12:45	0	0	126	691	0	126	691
1:00	0	0	16		0	16		13:00	0	0	239		0	239	
1:15	0	0	6		0	6		13:15	0	0	225		0	225	
1:30	0	0	6		0	6		13:30	0	0	208		0	208	
1:45	0	0	7	35	0	7	35	13:45	0	0	223	895	0	223	895
2:00	0	0	1		0	1		14:00	0	0	205		0	205	
2:15	0	0	4		0	4		14:15	0	0	177		0	177	
2:30	0	0	4		0	4		14:30	0	0	185		0	185	
2:45	0	0	7	16	0	7	16	14:45	0	0	208	775	0	208	775
3:00	0	0	4		0	4		15:00	0	0	170		0	170	
3:15	0	0	5		0	5		15:15	0	0	195		0	195	
3:30	0	0	7		0	7		15:30	0	0	193		0	193	
3:45	0	0	3	19	0	3	19	15:45	0	0	211	769	0	211	769
4:00	0	0	9		0	9		16:00	0	0	189		0	189	
4:15	0	0	7		0	7		16:15	0	0	215		0	215	
4:30	0	0	8		0	8		16:30	0	0	177		0	177	
4:45	0	0	17	41	0	17	41	16:45	0	0	201	782	0	201	782
5:00	0	0	8		0	8		17:00	0	0	176		0	176	
5:15	0	0	15		0	15		17:15	0	0	212		0	212	
5:30	0	0	20		0	20		17:30	0	0	178		0	178	
5:45	0	0	30	73	0	30	73	17:45	0	0	190	756	0	190	756
6:00	0	0	37		0	37		18:00	0	0	190		0	190	
6:15	0	0	67		0	67		18:15	0	0	193		0	193	
6:30	0	0	97		0	97		18:30	0	0	202		0	202	
6:45	0	0	125	326	0	125	326	18:45	0	0	152	737	0	152	737
7:00	0	0	100		0	100		19:00	0	0	182		0	182	
7:15	0	0	114		0	114		19:15	0	0	153		0	153	
7:30	0	0	182		0	182		19:30	0	0	172		0	172	
7:45	0	0	263	659	0	263	659	19:45	0	0	138	645	0	138	645
8:00	0	0	279		0	279		20:00	0	0	133		0	133	
8:15	0	0	242		0	242		20:15	0	0	147		0	147	
8:30	0	0	240		0	240		20:30	0	0	122		0	122	
8:45	0	0	216	977	0	216	977	20:45	0	0	113	515	0	113	515
9:00	0	0	260		0	260		21:00	0	0	116		0	116	
9:15	0	0	209		0	209		21:15	0	0	92		0	92	
9:30	0	0	228		0	228		21:30	0	0	84		0	84	
9:45	0	0	209	906	0	209	906	21:45	0	0	76	368	0	76	368
10:00	0	0	213		0	213		22:00	0	0	60		0	60	
10:15	0	0	227		0	227		22:15	0	0	74		0	74	
10:30	0	0	231		0	231		22:30	0	0	59		0	59	
10:45	0	0	245	916	0	245	916	22:45	0	0	61	254	0	61	254
11:00	0	0	209		0	209		23:00	0	0	41		0	41	
11:15	0	0	69		0	69		23:15	0	0	23		0	23	
11:30	0	0	276		0	276		23:30	0	0	45		0	45	
11:45	0	0	192	746	0	192	746	23:45	0	0	40	149	0	40	149
TOTALS			4778				**4778**	**TOTALS**			7336				**7336**
SPLIT %			100.0%				**39.4%**	**SPLIT %**			100.0%				**60.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,114	0	12,114

AM Peak Hour			7:45				**7:45**	**PM Peak Hour**			13:00				**13:00**
AM Pk Volume			1024				**1024**	**PM Pk Volume**			895				**895**
Pk Hr Factor			0.918				**0.918**	**Pk Hr Factor**			0.936				**0.936**
7 - 9 Volume	0	0	1636		0		**1636**	**4 - 6 Volume**	0	0	1538		0		**1538**
7 - 9 Peak Hour			7:45				**7:45**	**4 - 6 Peak Hour**			16:00				**16:00**
7 - 9 Pk Volume	0	0	1024		0		**1024**	**4 - 6 Pk Volume**	0	0	782		0		**782**
Pk Hr Factor	0.000	0.000	0.918		0.000		**0.918**	**Pk Hr Factor**	0.000	0.000	0.909		0.000		**0.909**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Thursday
Date: 2/16/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,039	0	12,039

AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	30		0	30		12:00	0	0	239		0	239	
0:15	0	0	22		0	22		12:15	0	0	216		0	216	
0:30	0	0	25		0	25		12:30	0	0	213		0	213	
0:45	0	0	13	90	0	13	90	12:45	0	0	212	880	0	212	880
1:00	0	0	9		0	9		13:00	0	0	193		0	193	
1:15	0	0	11		0	11		13:15	0	0	194		0	194	
1:30	0	0	11		0	11		13:30	0	0	203		0	203	
1:45	0	0	6	37	0	6	37	13:45	0	0	184	774	0	184	774
2:00	0	0	3		0	3		14:00	0	0	159		0	159	
2:15	0	0	4		0	4		14:15	0	0	191		0	191	
2:30	0	0	10		0	10		14:30	0	0	216		0	216	
2:45	0	0	4	21	0	4	21	14:45	0	0	244	810	0	244	810
3:00	0	0	6		0	6		15:00	0	0	224		0	224	
3:15	0	0	3		0	3		15:15	0	0	210		0	210	
3:30	0	0	2		0	2		15:30	0	0	183		0	183	
3:45	0	0	4	15	0	4	15	15:45	0	0	180	797	0	180	797
4:00	0	0	6		0	6		16:00	0	0	196		0	196	
4:15	0	0	4		0	4		16:15	0	0	171		0	171	
4:30	0	0	11		0	11		16:30	0	0	182		0	182	
4:45	0	0	7	28	0	7	28	16:45	0	0	163	712	0	163	712
5:00	0	0	12		0	12		17:00	0	0	222		0	222	
5:15	0	0	17		0	17		17:15	0	0	168		0	168	
5:30	0	0	23		0	23		17:30	0	0	189		0	189	
5:45	0	0	35	87	0	35	87	17:45	0	0	149	728	0	149	728
6:00	0	0	51		0	51		18:00	0	0	165		0	165	
6:15	0	0	78		0	78		18:15	0	0	178		0	178	
6:30	0	0	90		0	90		18:30	0	0	180		0	180	
6:45	0	0	112	331	0	112	331	18:45	0	0	181	704	0	181	704
7:00	0	0	106		0	106		19:00	0	0	166		0	166	
7:15	0	0	143		0	143		19:15	0	0	164		0	164	
7:30	0	0	188		0	188		19:30	0	0	147		0	147	
7:45	0	0	245	682	0	245	682	19:45	0	0	141	618	0	141	618
8:00	0	0	309		0	309		20:00	0	0	140		0	140	
8:15	0	0	236		0	236		20:15	0	0	116		0	116	
8:30	0	0	224		0	224		20:30	0	0	139		0	139	
8:45	0	0	225	994	0	225	994	20:45	0	0	136	531	0	136	531
9:00	0	0	222		0	222		21:00	0	0	101		0	101	
9:15	0	0	207		0	207		21:15	0	0	105		0	105	
9:30	0	0	185		0	185		21:30	0	0	78		0	78	
9:45	0	0	210	824	0	210	824	21:45	0	0	76	360	0	76	360
10:00	0	0	210		0	210		22:00	0	0	86		0	86	
10:15	0	0	225		0	225		22:15	0	0	60		0	60	
10:30	0	0	200		0	200		22:30	0	0	43		0	43	
10:45	0	0	150	785	0	150	785	22:45	0	0	37	226	0	37	226
11:00	0	0	252		0	252		23:00	0	0	49		0	49	
11:15	0	0	208		0	208		23:15	0	0	38		0	38	
11:30	0	0	191		0	191		23:30	0	0	31		0	31	
11:45	0	0	202	853	0	202	853	23:45	0	0	34	152	0	34	152
TOTALS			4747			4747		TOTALS			7292			7292	
SPLIT %			100.0%			39.4%		SPLIT %			100.0%			60.6%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,039	0	12,039

AM Peak Hour			7:45			7:45		PM Peak Hour			14:30			14:30	
AM Pk Volume			1014			1014		PM Pk Volume			894			894	
Pk Hr Factor			0.820			0.820		Pk Hr Factor			0.916			0.916	
7 - 9 Volume	0	0	1676		0	1676		4 - 6 Volume	0	0	1440		0	1440	
7 - 9 Peak Hour			7:45			7:45		4 - 6 Peak Hour			16:45			16:45	
7 - 9 Pk Volume	0	0	1014		0	1014		4 - 6 Pk Volume	0	0	742		0	742	
Pk Hr Factor	0.000	0.000	0.820		0.000	0.820		Pk Hr Factor	0.000	0.000	0.836		0.000	0.836	

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Broad Causeway W/O Chevron Gas Station

Day: Friday
Date: 2/17/2023

City: Bay Harbor Islands
Project #: FL23_140077_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,611	0	12,611

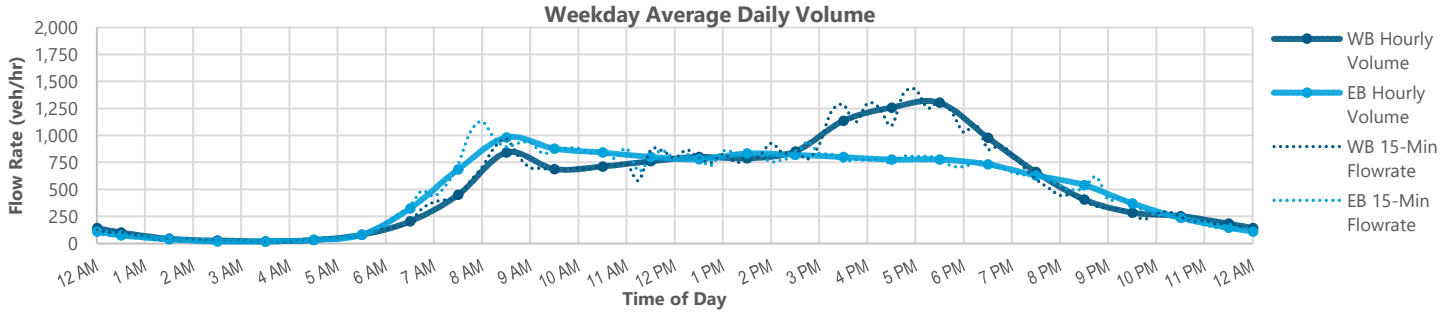
AM Period	NB	SB	EB		WB	TOTAL		PM Period	NB	SB	EB		WB	TOTAL	
0:00	0	0	20		0	20		12:00	0	0	235		0	235	
0:15	0	0	20		0	20		12:15	0	0	212		0	212	
0:30	0	0	23		0	23		12:30	0	0	218		0	218	
0:45	0	0	16	79	0	16	79	12:45	0	0	200	865	0	200	865
1:00	0	0	13		0	13		13:00	0	0	232		0	232	
1:15	0	0	13		0	13		13:15	0	0	208		0	208	
1:30	0	0	11		0	11		13:30	0	0	185		0	185	
1:45	0	0	14	51	0	14	51	13:45	0	0	230	855	0	230	855
2:00	0	0	8		0	8		14:00	0	0	197		0	197	
2:15	0	0	6		0	6		14:15	0	0	228		0	228	
2:30	0	0	8		0	8		14:30	0	0	234		0	234	
2:45	0	0	3	25	0	3	25	14:45	0	0	255	914	0	255	914
3:00	0	0	3		0	3		15:00	0	0	221		0	221	
3:15	0	0	5		0	5		15:15	0	0	223		0	223	
3:30	0	0	6		0	6		15:30	0	0	188		0	188	
3:45	0	0	7	21	0	7	21	15:45	0	0	206	838	0	206	838
4:00	0	0	5		0	5		16:00	0	0	191		0	191	
4:15	0	0	3		0	3		16:15	0	0	208		0	208	
4:30	0	0	10		0	10		16:30	0	0	160		0	160	
4:45	0	0	10	28	0	10	28	16:45	0	0	215	774	0	215	774
5:00	0	0	9		0	9		17:00	0	0	214		0	214	
5:15	0	0	19		0	19		17:15	0	0	197		0	197	
5:30	0	0	20		0	20		17:30	0	0	215		0	215	
5:45	0	0	28	76	0	28	76	17:45	0	0	166	792	0	166	792
6:00	0	0	49		0	49		18:00	0	0	176		0	176	
6:15	0	0	66		0	66		18:15	0	0	176		0	176	
6:30	0	0	90		0	90		18:30	0	0	155		0	155	
6:45	0	0	131	336	0	131	336	18:45	0	0	176	683	0	176	683
7:00	0	0	122		0	122		19:00	0	0	129		0	129	
7:15	0	0	144		0	144		19:15	0	0	148		0	148	
7:30	0	0	191		0	191		19:30	0	0	129		0	129	
7:45	0	0	277	734	0	277	734	19:45	0	0	129	535	0	129	535
8:00	0	0	274		0	274		20:00	0	0	120		0	120	
8:15	0	0	246		0	246		20:15	0	0	101		0	101	
8:30	0	0	238		0	238		20:30	0	0	108		0	108	
8:45	0	0	217	975	0	217	975	20:45	0	0	273	602	0	273	602
9:00	0	0	230		0	230		21:00	0	0	91		0	91	
9:15	0	0	221		0	221		21:15	0	0	125		0	125	
9:30	0	0	234		0	234		21:30	0	0	82		0	82	
9:45	0	0	251	936	0	251	936	21:45	0	0	85	383	0	85	383
10:00	0	0	221		0	221		22:00	0	0	67		0	67	
10:15	0	0	213		0	213		22:15	0	0	65		0	65	
10:30	0	0	187		0	187		22:30	0	0	63		0	63	
10:45	0	0	206	827	0	206	827	22:45	0	0	52	247	0	52	247
11:00	0	0	208		0	208		23:00	0	0	45		0	45	
11:15	0	0	213		0	213		23:15	0	0	42		0	42	
11:30	0	0	233		0	233		23:30	0	0	35		0	35	
11:45	0	0	228	882	0	228	882	23:45	0	0	31	153	0	31	153
TOTALS			4970			**4970**		**TOTALS**			7641			**7641**	
SPLIT %			100.0%			**39.4%**		**SPLIT %**			100.0%			**60.6%**	

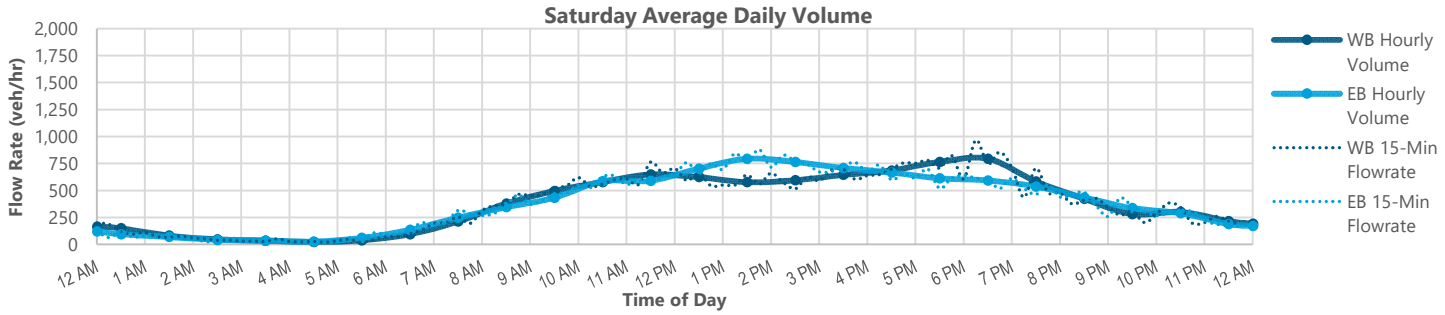
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,611	0	12,611

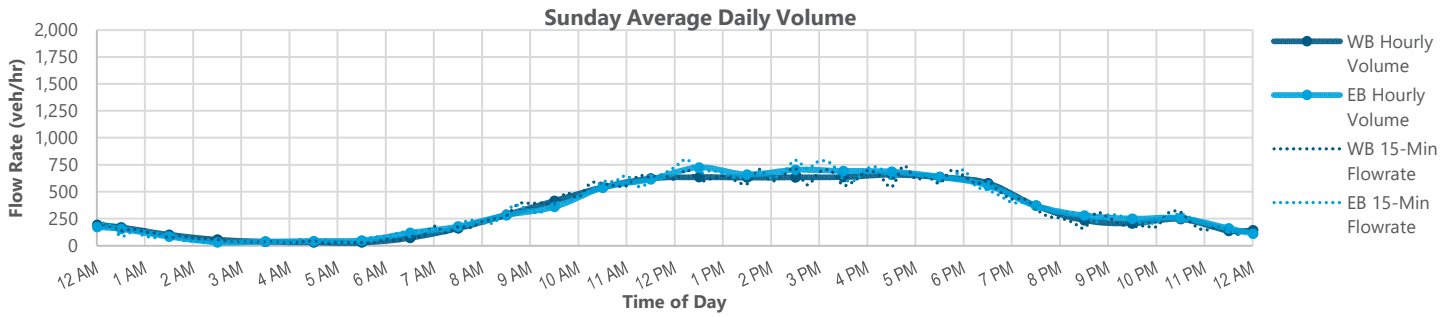
AM Peak Hour			7:45		**7:45**	**PM Peak Hour**			14:15		**14:15**
AM Pk Volume			1035		**1035**	**PM Pk Volume**			938		**938**
Pk Hr Factor			0.934		**0.934**	**Pk Hr Factor**			0.920		**0.920**
7 - 9 Volume	0	0	1709	0	**1709**	**4 - 6 Volume**	0	0	1566	0	**1566**
7 - 9 Peak Hour			7:45		**7:45**	**4 - 6 Peak Hour**			16:45		**16:45**
7 - 9 Pk Volume	0	0	1035	0	**1035**	**4 - 6 Pk Volume**	0	0	841	0	**841**
Pk Hr Factor	0.000	0.000	0.934	0.000	**0.934**	**Pk Hr Factor**	0.000	0.000	0.978	0.000	**0.978**

Broad Csy West of Chevron Gas Station

Period		Weekday Average		Saturday		Sunday	
From	To	WB	EB	WB	EB	WB	EB
0:00	1:00	102	75	150	96	170	155
1:00	2:00	44	38	82	70	101	84
2:00	3:00	27	19	48	43	56	31
3:00	4:00	19	20	36	36	36	38
4:00	5:00	33	32	25	27	31	43
5:00	6:00	81	82	38	61	29	48
6:00	7:00	204	324	96	135	72	118
7:00	8:00	450	686	213	249	161	178
8:00	9:00	843	982	379	346	284	283
9:00	10:00	689	879	496	434	416	359
10:00	11:00	713	842	579	586	540	537
11:00	12:00	762	802	648	590	623	614
12:00	13:00	801	781	625	704	635	725
13:00	14:00	789	833	577	794	632	660
14:00	15:00	853	821	595	765	633	703
15:00	16:00	1,137	800	645	709	636	693
16:00	17:00	1,259	777	686	667	658	686
17:00	18:00	1,304	778	766	613	635	638
18:00	19:00	980	732	795	593	580	558
19:00	20:00	662	630	584	538	370	370
20:00	21:00	408	541	424	436	236	280
21:00	22:00	286	371	282	337	206	250
22:00	23:00	254	237	301	290	248	256
23:00	24:00	184	146	216	189	138	161
Direction Total		**12,884**	**12,228**	**9,286**	**9,308**	**8,126**	**8,468**
2-way Total		**25,112**		**18,594**		**16,594**	







Prepared by: ATKINS
Member of the SNC-Lavalin Group

Location: Broad Csy West of Chevron Gas Station
Ref :
City: Bay Barbor Islands **County:** Miami-Dade **State:** Florida
Count by: National Data & Surveying Services **Count Start Date:** 2/11/23
Sta #: 1 **Site ID:** 23-140077-001/002 **Growth Factor:** 1

Figure B1
7-Day, 24-Hour Volume Count

National Data & Surveying Services Intersection Turning Movement Count

Location: Southern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(SB)

Project ID: 23-140076-002
Date: 2/14/2023

Data - Total

NS/EW Streets:	Southern Chevron Dwy				Southern Chevron Dwy				Broad Causeway					Broad Causeway				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	4	0	0	0	1	174	0	0	0	0	0	0	0	179
7:45 AM	0	0	0	0	5	0	0	0	9	248	0	0	0	0	0	0	0	262
8:00 AM	0	0	0	0	10	0	0	0	8	260	0	0	0	0	0	0	0	278
8:15 AM	0	0	0	0	13	0	0	0	5	254	0	0	0	0	0	0	0	272
8:30 AM	0	0	0	0	7	0	0	0	4	204	0	0	0	0	0	0	0	215
8:45 AM	0	0	0	0	6	0	0	0	7	239	0	0	0	0	0	0	0	252
9:00 AM	0	0	0	0	13	0	0	0	8	238	0	0	0	0	0	0	0	259
9:15 AM	0	0	0	0	6	0	0	0	4	216	0	0	0	0	0	0	0	226
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	64	0	0	0	46	1833	0	0	0	0	0	0	0	1943
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	2.45%	97.55%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	35	0	0	0	26	966	0	0	0	0	0	0	0	1027
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.673	0.000	0.000	0.000	0.722	0.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.924
					0.673						0.925							

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	14	0	0	0	8	168	0	0	0	0	0	0	0	190
12:15 PM	0	0	0	0	15	0	0	0	4	213	0	0	1	0	0	0	0	233
12:30 PM	0	0	0	0	8	0	0	0	6	181	0	0	0	0	0	0	0	195
12:45 PM	0	0	0	0	5	0	0	0	8	212	0	0	1	0	0	0	0	226
1:00 PM	0	0	0	0	6	0	0	0	5	200	0	0	1	0	0	0	0	212
1:15 PM	0	0	0	0	7	0	0	0	5	229	0	0	1	0	0	0	0	242
1:30 PM	0	0	0	0	3	0	0	0	9	216	0	0	0	0	0	0	0	228
1:45 PM	0	0	0	0	5	0	0	0	9	213	0	0	1	0	0	0	0	228
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	63	0	0	0	54	1632	0	0	5	0	0	0	0	1754
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	3.19%	96.51%	0.00%	0.00%	0.30%					
PEAK HR :	01:00 PM - 02:00 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	21	0	0	0	28	858	0	0	3	0	0	0	0	910
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.778	0.937	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.940
					0.750						0.946							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	6	0	0	0	2	222	0	0	0	0	0	0	0	230
3:15 PM	0	0	0	0	4	0	0	0	1	184	0	0	0	0	0	0	0	189
3:30 PM	0	0	0	0	5	0	0	0	2	213	0	0	0	0	0	0	0	220
3:45 PM	0	0	0	0	8	0	0	0	5	187	0	0	2	0	0	0	0	202
4:00 PM	0	0	0	0	4	0	0	0	4	195	0	0	0	0	0	0	0	203
4:15 PM	0	0	0	0	5	0	0	0	3	181	0	0	0	0	0	0	0	189
4:30 PM	0	0	0	0	5	0	0	0	6	185	0	0	0	0	0	0	0	196
4:45 PM	0	0	0	0	12	0	0	0	10	228	0	0	1	0	0	0	0	251
5:00 PM	0	0	0	0	7	0	0	0	8	184	0	0	1	0	0	0	0	200
5:15 PM	0	0	0	0	4	0	0	0	2	260	0	0	1	0	0	0	0	267
5:30 PM	0	0	0	0	8	0	0	0	29	192	0	0	4	0	0	0	0	233
5:45 PM	0	0	0	0	9	0	0	0	15	188	0	0	2	0	0	0	0	214
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	77	0	0	0	87	2419	0	0	11	0	0	0	0	2594
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	3.46%	96.11%	0.00%	0.00%	0.44%					
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	31	0	0	0	49	864	0	0	7	0	0	0	0	951
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.646	0.000	0.000	0.000	0.422	0.831	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.890
					0.646						0.875							

National Data & Surveying Services Intersection Turning Movement Count

Location: Southern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(SB)

Project ID: 23-140076-002
Date: 2/14/2023

Data - Cars

NS/EW Streets:	Southern Chevron Dwy				Southern Chevron Dwy				Broad Causeway					Broad Causeway				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	4	0	0	0	1	162	0	0	0	0	0	0	0	167
7:45 AM	0	0	0	0	5	0	0	0	9	244	0	0	0	0	0	0	0	258
8:00 AM	0	0	0	0	10	0	0	0	8	254	0	0	0	0	0	0	0	272
8:15 AM	0	0	0	0	13	0	0	0	5	244	0	0	0	0	0	0	0	262
8:30 AM	0	0	0	0	7	0	0	0	4	192	0	0	0	0	0	0	0	203
8:45 AM	0	0	0	0	6	0	0	0	7	231	0	0	0	0	0	0	0	244
9:00 AM	0	0	0	0	13	0	0	0	8	227	0	0	0	0	0	0	0	248
9:15 AM	0	0	0	0	6	0	0	0	4	211	0	0	0	0	0	0	0	221
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	64	0	0	0	46	1765	0	0	0	0	0	0	0	1875
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	2.54%	97.46%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	35	0	0	0	26	934	0	0	0	0	0	0	0	995
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.673	0.000	0.000	0.000	0.722	0.919	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.915
					0.673						0.916							

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	14	0	0	0	8	162	0	0	0	0	0	0	0	184
12:15 PM	0	0	0	0	15	0	0	0	4	209	0	0	1	0	0	0	0	229
12:30 PM	0	0	0	0	8	0	0	0	6	175	0	0	0	0	0	0	0	189
12:45 PM	0	0	0	0	5	0	0	0	7	207	0	0	1	0	0	0	0	220
1:00 PM	0	0	0	0	6	0	0	0	5	191	0	0	1	0	0	0	0	203
1:15 PM	0	0	0	0	7	0	0	0	5	224	0	0	1	0	0	0	0	237
1:30 PM	0	0	0	0	3	0	0	0	9	212	0	0	0	0	0	0	0	224
1:45 PM	0	0	0	0	5	0	0	0	9	205	0	0	1	0	0	0	0	220
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	63	0	0	0	53	1585	0	0	5	0	0	0	0	1706
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	3.23%	96.47%	0.00%	0.00%	0.30%					
PEAK HR :	01:00 PM - 02:00 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	21	0	0	0	28	832	0	0	3	0	0	0	0	884
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.778	0.929	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.932
					0.750						0.938							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	5	0	0	0	2	218	0	0	0	0	0	0	0	225
3:15 PM	0	0	0	0	4	0	0	0	1	178	0	0	0	0	0	0	0	183
3:30 PM	0	0	0	0	5	0	0	0	2	213	0	0	0	0	0	0	0	220
3:45 PM	0	0	0	0	8	0	0	0	5	183	0	0	2	0	0	0	0	198
4:00 PM	0	0	0	0	4	0	0	0	4	191	0	0	0	0	0	0	0	199
4:15 PM	0	0	0	0	5	0	0	0	3	174	0	0	0	0	0	0	0	182
4:30 PM	0	0	0	0	5	0	0	0	6	184	0	0	0	0	0	0	0	195
4:45 PM	0	0	0	0	12	0	0	0	10	226	0	0	1	0	0	0	0	249
5:00 PM	0	0	0	0	7	0	0	0	8	183	0	0	1	0	0	0	0	199
5:15 PM	0	0	0	0	4	0	0	0	2	259	0	0	1	0	0	0	0	266
5:30 PM	0	0	0	0	7	0	0	0	29	191	0	0	4	0	0	0	0	231
5:45 PM	0	0	0	0	9	0	0	0	15	188	0	0	2	0	0	0	0	214
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	75	0	0	0	87	2388	0	0	11	0	0	0	0	2561
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	3.50%	96.06%	0.00%	0.00%	0.44%					
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	30	0	0	0	49	859	0	0	7	0	0	0	0	945
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.422	0.829	0.000	0.000	0.438	0.000	0.000	0.000	0.000	0.888
					0.625						0.873							

National Data & Surveying Services Intersection Turning Movement Count

Location: Southern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(SB)

Project ID: 23-140076-002
Date: 2/14/2023

Data - HT

NS/EW Streets:	Southern Chevron Dwy				Southern Chevron Dwy				Broad Causeway					Broad Causeway				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12
7:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
8:30 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12
8:45 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8
9:00 AM	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	11
9:15 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	68	0	0	0	0	0	0	0	68
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	32
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667
											0.667							

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
12:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
12:30 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
12:45 PM	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	6
1:00 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
1:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
1:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
1:45 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	47	0	0	0	0	0	0	0	48
APPROACH %'s :									2.08%	97.92%	0.00%	0.00%	0.00%					
PEAK HR :	01:00 PM - 02:00 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	26
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.722
											0.722							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	5
3:15 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
4:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	0	31	0	0	0	0	0	0	0	33
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
							0.250				0.625							

National Data & Surveying Services Intersection Turning Movement Count

Location: Southern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(SB)

Project ID: 23-140076-002
Date: 2/14/2023

Data - Bikes

NS/EW Streets:	Southern Chevron Dwy				Southern Chevron Dwy				Broad Causeway					Broad Causeway				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
9:15 AM	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	1	21	0	0	0	0	1	0	0	24
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	4.55%	95.45%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	9
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.750
											0.667				0.250			

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	12	0	0	0	0	1	0	0	14
APPROACH %'s :									7.69%	92.31%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
											0.625							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
3:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
4:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	EL2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	0	28	0	0	0	0	1	0	0	30
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	13
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.542
											0.542							

National Data & Surveying Services Intersection Turning Movement Count

Location: Southern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands

Project ID: 23-140076-002
Date: 2/14/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Southern Chevron Dwy		Southern Chevron Dwy		Broad Causeway		Broad Causeway				
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
7:30 AM	0	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	2	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	2	0	1	1	0	0	4
9:15 AM	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	2	2	1	0	0	7
APPROACH %'s :					50.00%	50.00%	66.67%	33.33%			
PEAK HR :	07:45 AM - 08:45 AM										TOTAL
PEAK HR VOL :	0	0	0	0	0	2	0	0	0	0	2
PEAK HR FACTOR :						0.250					0.250
					0.250						

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
12:00 PM	0	0	0	0	0	0	2	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	2	0	0	0	2
APPROACH %'s :							100.00%	0.00%			
PEAK HR :	01:00 PM - 02:00 PM										TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :											

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :											
PEAK HR :	04:45 PM - 05:45 PM										TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :											

Prepared by National Data & Surveying Services

Southern Chevron Dwy & Broad Causeway

Peak Hour Turning Movement Count

ID: 23-140076-002
City: Bay Harbor Islands

Day: Tuesday
Date: 2/14/2023

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	01:00 PM - 02:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:30 AM - 09:30 AM
NOON	12:00 PM - 02:00 PM
PM	3:00 PM - 06:00 PM

SOUTHBOUND (Southern Chevron Dwy)

AM	0	0	35	0	26	AM
NOON	0	0	21	0	28	NOON
PM	0	0	31	0	49	PM

EASTBOUND (Broad Causeway)

AM	NOON	PM	
0	0	0	⇦
0	0	0	↶ 0
26	28	49	↱ 0
966	858	864	→ 0
0	0	0	↷ 0
AM	NOON	PM	

WESTBOUND (Broad Causeway)

PM	NOON	AM	
0	0	0	↰ 0
0	0	0	← 0
0	0	0	↶ 0
0	0	0	↷ 0
895	879	1001	⇨
PM	NOON	AM	

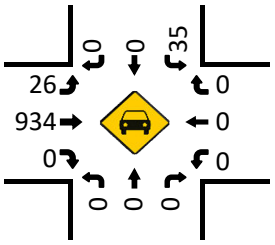
NORTHBOUND (Southern Chevron Dwy)

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

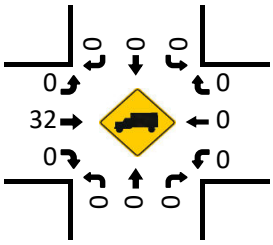
CONTROL: 1-Way Yield(SB)

	AM	NOON	PM
TEV	1027	907	944
PHF	0.92	0.94	0.89

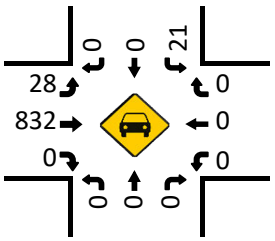
Cars (AM)



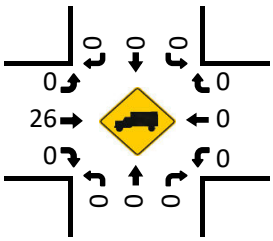
HT (AM)



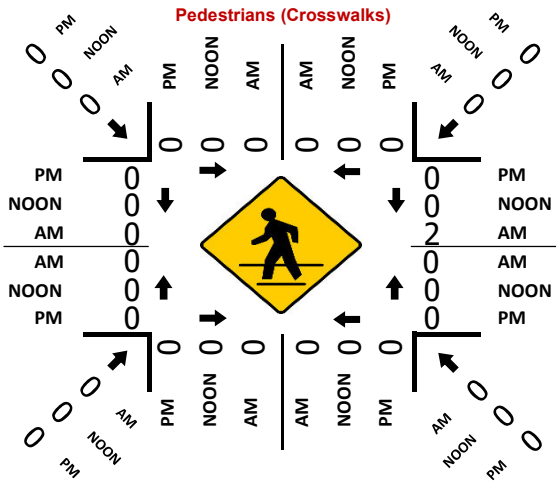
Cars (NOON)



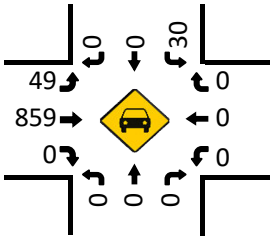
HT (NOON)



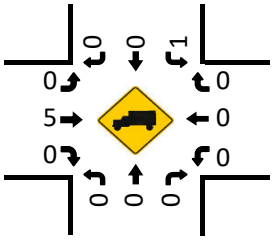
Pedestrians (Crosswalks)



Cars (PM)



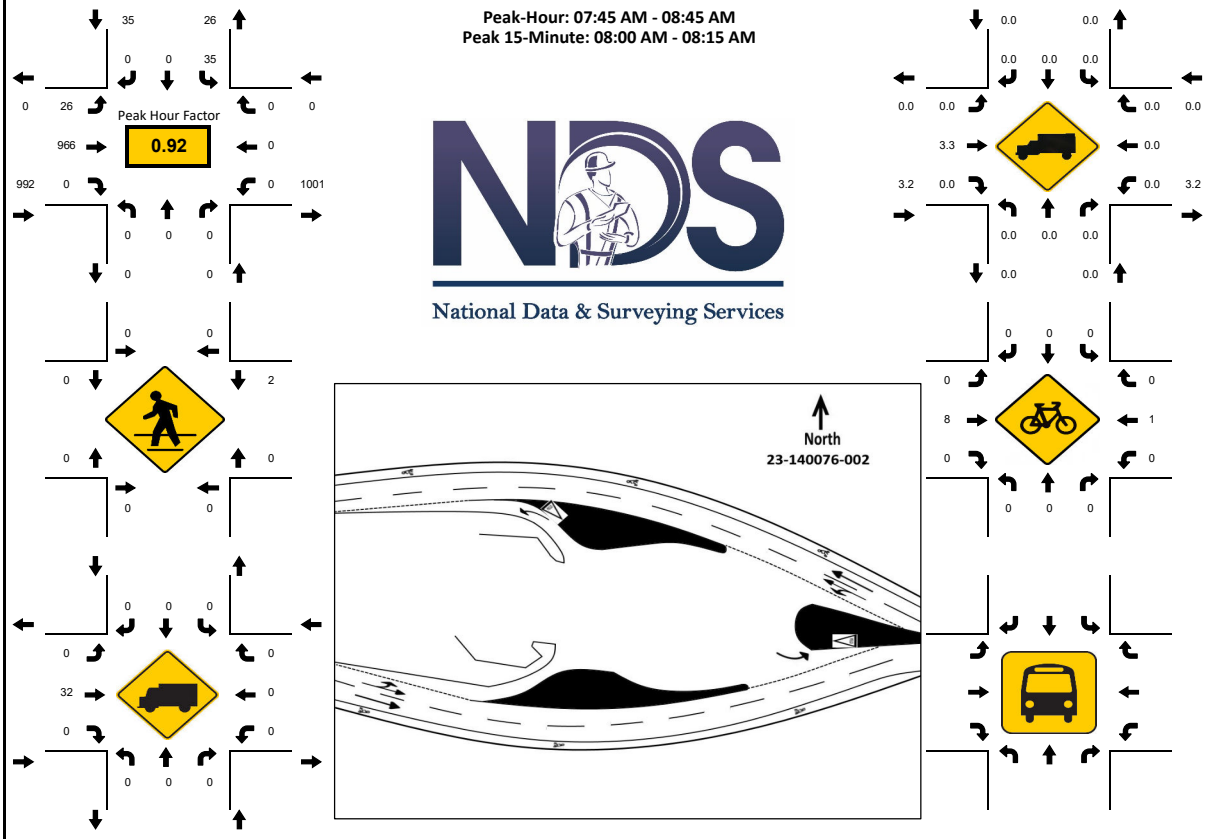
HT (PM)



LOCATION: Southern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-002
DATE: Tue, Feb 14, 2023

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



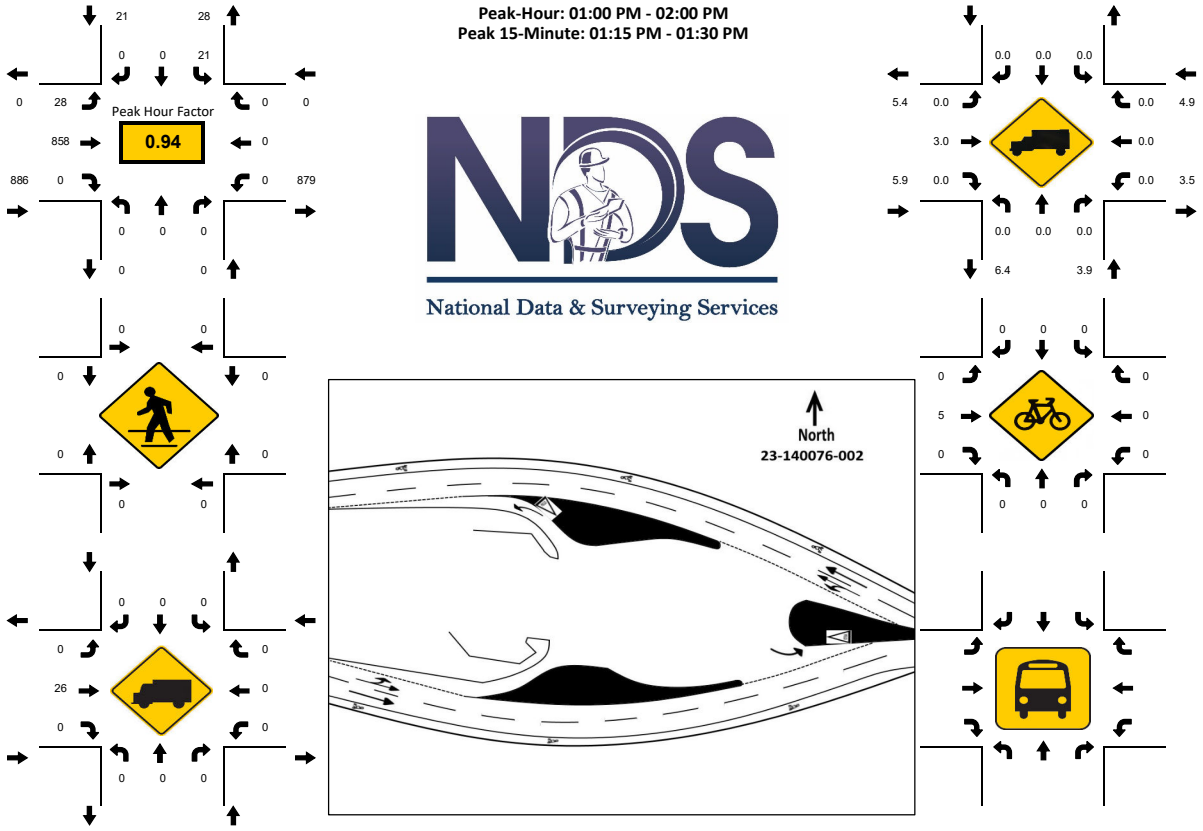
National Data & Surveying Services

15-Min Count Period Beginning At	Southern Chevron Dwy Northbound					Southern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:30 AM	0	0	0	0		4	0	0	0		1	174	0	0		0	0	0	0		179	991
07:45 AM	0	0	0	0		5	0	0	0		9	248	0	0		0	0	0	0		262	1027
08:00 AM	0	0	0	0		10	0	0	0		8	260	0	0		0	0	0	0		278	1017
08:15 AM	0	0	0	0		13	0	0	0		5	254	0	0		0	0	0	0		272	998
08:30 AM	0	0	0	0		7	0	0	0		4	204	0	0		0	0	0	0		215	952
08:45 AM	0	0	0	0		6	0	0	0		7	239	0	0		0	0	0	0		252	737
09:00 AM	0	0	0	0		13	0	0	0		8	238	0	0		0	0	0	0		259	485
09:15 AM	0	0	0	0		6	0	0	0		4	216	0	0		0	0	0	0		226	226
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0		52	0	0	0		36	1040	0	0		0	0	0	0		**1128**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	48	0	0		0	0	0	0		**48**	
Pedestrians		0					0					0					8				**8**	
Bicycles	0	0	0	0		0	0	0	0		0	12	0	0		0	4	0	0		**16**	
Buses																						
Stopped Buses																						

LOCATION: Southern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-002
DATE: Tue, Feb 14, 2023

Peak-Hour: 01:00 PM - 02:00 PM
Peak 15-Minute: 01:15 PM - 01:30 PM



National Data & Surveying Services

15-Min Count Period Beginning At	Southern Chevron Dwy Northbound					Southern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
12:00 PM	0	0	0	0		14	0	0	0		8	168	0	0		0	0	0	0		190	842
12:15 PM	0	0	0	0		15	0	0	0		4	213	0	0		0	0	0	0		232	863
12:30 PM	0	0	0	0		8	0	0	0		6	181	0	0		0	0	0	0		195	872
12:45 PM	0	0	0	0		5	0	0	0		8	212	0	0		0	0	0	0		225	905
01:00 PM	0	0	0	0		6	0	0	0		5	200	0	0		0	0	0	0		211	907
01:15 PM	0	0	0	0		7	0	0	0		5	229	0	0		0	0	0	0		241	696
01:30 PM	0	0	0	0		3	0	0	0		9	216	0	0		0	0	0	0		228	455
01:45 PM	0	0	0	0		5	0	0	0		9	213	0	0		0	0	0	0		227	227
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0		28	0	0	0		36	916	0	0		0	0	0	0		**980**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	36	0	0		0	0	0	0		**36**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	8	0	0		0	0	0	0		**8**	
Buses																						
Stopped Buses																						

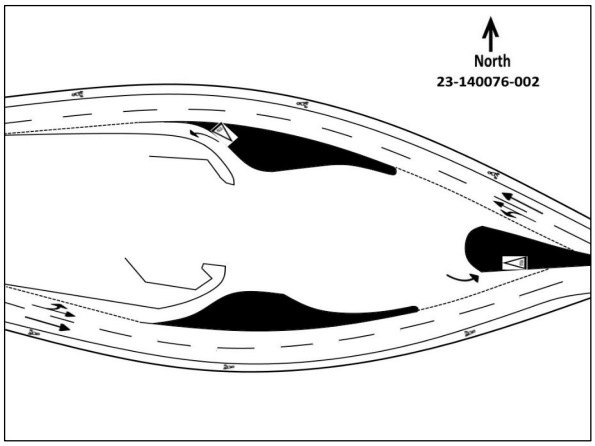
LOCATION: Southern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-002
DATE: Tue, Feb 14, 2023

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

Peak Hour Factor: **0.89**

National Data & Surveying Services



15-Min Count Period Beginning At	Southern Chevron Dwy Northbound					Southern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
03:00 PM	0	0	0	0		6	0	0	0		2	222	0	0		0	0	0	0		230	839
03:15 PM	0	0	0	0		4	0	0	0		1	184	0	0		0	0	0	0		189	812
03:30 PM	0	0	0	0		5	0	0	0		2	213	0	0		0	0	0	0		220	812
03:45 PM	0	0	0	0		8	0	0	0		5	187	0	0		0	0	0	0		200	788
04:00 PM	0	0	0	0		4	0	0	0		4	195	0	0		0	0	0	0		203	838
04:15 PM	0	0	0	0		5	0	0	0		3	181	0	0		0	0	0	0		189	834
04:30 PM	0	0	0	0		5	0	0	0		6	185	0	0		0	0	0	0		196	911
04:45 PM	0	0	0	0		12	0	0	0		10	228	0	0		0	0	0	0		250	944
05:00 PM	0	0	0	0		7	0	0	0		8	184	0	0		0	0	0	0		199	906
05:15 PM	0	0	0	0		4	0	0	0		2	260	0	0		0	0	0	0		266	707
05:30 PM	0	0	0	0		8	0	0	0		29	192	0	0		0	0	0	0		229	441
05:45 PM	0	0	0	0		9	0	0	0		15	188	0	0		0	0	0	0		212	212
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0		48	0	0	0		116	1040	0	0		0	0	0	0		**1204**	
Heavy Trucks	0	0	0	0		4	0	0	0		0	8	0	0		0	0	0	0		**12**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	24	0	0		0	0	0	0		**24**	
Buses																						
Stopped Buses																						

National Data & Surveying Services Intersection Turning Movement Count

Location: Northern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(NB)

Project ID: 23-140076-001
Date: 2/14/2023

Data - Total

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:30 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	5	106	0	0	116
7:45 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	5	170	0	0	178
8:00 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	14	150	0	0	172
8:15 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	15	242	0	0	264
8:30 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	10	238	0	0	256
8:45 AM	3	0	0	0	1	0	0	0	0	0	0	0	0	12	170	0	0	186
9:00 AM	6	0	0	0	1	0	0	0	0	0	0	0	0	16	195	0	0	218
9:15 AM	9	0	0	0	3	0	0	0	0	0	0	0	0	9	190	0	0	211
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	0	0	0	5	0	0	0	0	0	0	0	0	86	1461	0	0	1601
APPROACH %'s :	90.74%	0.00%	0.00%	0.00%	9.26%									5.56%	94.44%	0.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																	TOTAL
PEAK HR VOL :	24	0	0	0	2	0	0	0	0	0	0	0	0	53	845	0	0	924
PEAK HR FACTOR :	0.750	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.828	0.873	0.000	0.000	0.875
			0.813												0.874			

NOON	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	11	166	0	0	181
12:15 PM	7	0	0	0	1	0	0	0	0	0	0	0	0	5	206	0	0	219
12:30 PM	4	0	0	0	2	0	0	0	0	0	0	0	0	6	180	0	0	192
12:45 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	8	190	0	0	204
1:00 PM	11	0	0	0	0	0	0	0	0	0	0	0	0	3	206	0	0	220
1:15 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	11	166	0	0	183
1:30 PM	8	0	0	0	1	0	0	0	0	0	0	0	0	8	186	0	0	203
1:45 PM	6	0	0	0	2	0	0	0	0	0	0	0	0	7	205	0	0	220
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	0	0	0	8	0	0	0	0	0	0	0	0	59	1505	0	0	1622
APPROACH %'s :	86.21%	0.00%	0.00%	0.00%	13.79%									3.77%	96.23%	0.00%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																	TOTAL
PEAK HR VOL :	28	0	0	0	3	0	0	0	0	0	0	0	0	22	782	0	0	835
PEAK HR FACTOR :	0.636	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.688	0.949	0.000	0.000	0.949
			0.705												0.953			

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	3	0	0	0	2	0	0	0	0	0	0	0	0	7	200	0	0	212
3:15 PM	7	0	0	0	2	0	0	0	0	0	0	0	0	11	335	0	0	355
3:30 PM	3	0	0	0	1	0	0	0	0	0	0	0	0	6	332	0	0	342
3:45 PM	3	0	0	0	2	0	0	0	0	0	0	0	0	9	286	0	0	300
4:00 PM	14	0	0	0	2	0	0	0	0	0	0	0	0	12	333	0	0	361
4:15 PM	4	0	0	0	1	0	0	0	0	0	0	0	0	10	309	0	0	324
4:30 PM	9	0	0	0	2	0	0	0	0	0	0	0	0	12	321	0	0	344
4:45 PM	10	0	0	0	1	0	0	0	0	0	0	0	0	11	349	0	0	371
5:00 PM	12	0	0	0	1	0	0	0	0	0	0	0	0	7	380	0	0	400
5:15 PM	12	0	0	0	3	0	0	0	0	0	0	0	0	10	315	0	0	340
5:30 PM	32	0	0	0	3	0	0	0	0	0	0	0	0	8	330	0	0	373
5:45 PM	15	0	0	0	0	0	0	0	0	0	0	0	0	12	300	0	0	327
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	0	0	0	20	0	0	0	0	0	0	0	0	115	3790	0	0	4049
APPROACH %'s :	86.11%	0.00%	0.00%	0.00%	13.89%									2.94%	97.06%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	66	0	0	0	8	0	0	0	0	0	0	0	0	36	1374	0	0	1484
PEAK HR FACTOR :	0.516	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.818	0.904	0.000	0.000	0.928
			0.529												0.911			

National Data & Surveying Services Intersection Turning Movement Count

Location: Northern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(NB)

Project ID: 23-140076-001
Date: 2/14/2023

Data - Cars

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:30 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	5	103	0	0	113
7:45 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	5	167	0	0	175
8:00 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	14	150	0	0	172
8:15 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	15	240	0	0	262
8:30 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	10	235	0	0	253
8:45 AM	3	0	0	0	1	0	0	0	0	0	0	0	0	12	164	0	0	180
9:00 AM	6	0	0	0	1	0	0	0	0	0	0	0	0	16	190	0	0	213
9:15 AM	9	0	0	0	3	0	0	0	0	0	0	0	0	9	184	0	0	205
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	0	0	0	5	0	0	0	0	0	0	0	0	86	1433	0	0	1573
APPROACH %'s :	90.74%	0.00%	0.00%	0.00%	9.26%									5.66%	94.34%	0.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																	TOTAL
PEAK HR VOL :	24	0	0	0	2	0	0	0	0	0	0	0	0	53	829	0	0	908
PEAK HR FACTOR :	0.750	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.828	0.864	0.000	0.000	0.866
			0.813												0.865			

NOON	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	10	158	0	0	172
12:15 PM	7	0	0	0	1	0	0	0	0	0	0	0	0	5	200	0	0	213
12:30 PM	4	0	0	0	2	0	0	0	0	0	0	0	0	6	170	0	0	182
12:45 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	8	182	0	0	196
1:00 PM	10	0	0	0	0	0	0	0	0	0	0	0	0	3	200	0	0	213
1:15 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	11	157	0	0	174
1:30 PM	8	0	0	0	1	0	0	0	0	0	0	0	0	7	177	0	0	193
1:45 PM	6	0	0	0	2	0	0	0	0	0	0	0	0	7	191	0	0	206
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	0	0	0	8	0	0	0	0	0	0	0	0	57	1435	0	0	1549
APPROACH %'s :	85.96%	0.00%	0.00%	0.00%	14.04%									3.82%	96.18%	0.00%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																	TOTAL
PEAK HR VOL :	27	0	0	0	3	0	0	0	0	0	0	0	0	22	752	0	0	804
PEAK HR FACTOR :	0.675	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.688	0.940	0.000	0.000	0.944
			0.750												0.944			

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	3	0	0	0	2	0	0	0	0	0	0	0	0	6	191	0	0	202
3:15 PM	6	0	0	0	1	0	0	0	0	0	0	0	0	11	320	0	0	338
3:30 PM	3	0	0	0	1	0	0	0	0	0	0	0	0	6	324	0	0	334
3:45 PM	3	0	0	0	1	0	0	0	0	0	0	0	0	8	275	0	0	287
4:00 PM	13	0	0	0	2	0	0	0	0	0	0	0	0	12	325	0	0	352
4:15 PM	4	0	0	0	1	0	0	0	0	0	0	0	0	9	300	0	0	314
4:30 PM	9	0	0	0	2	0	0	0	0	0	0	0	0	12	312	0	0	335
4:45 PM	9	0	0	0	1	0	0	0	0	0	0	0	0	11	340	0	0	361
5:00 PM	12	0	0	0	1	0	0	0	0	0	0	0	0	7	372	0	0	392
5:15 PM	12	0	0	0	3	0	0	0	0	0	0	0	0	10	306	0	0	331
5:30 PM	32	0	0	0	2	0	0	0	0	0	0	0	0	8	322	0	0	364
5:45 PM	14	0	0	0	0	0	0	0	0	0	0	0	0	12	295	0	0	321
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	120	0	0	0	17	0	0	0	0	0	0	0	0	112	3682	0	0	3931
APPROACH %'s :	87.59%	0.00%	0.00%	0.00%	12.41%									2.95%	97.05%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	65	0	0	0	7	0	0	0	0	0	0	0	0	36	1340	0	0	1448
PEAK HR FACTOR :	0.508	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.818	0.901	0.000	0.000	0.923
			0.529												0.908			

National Data & Surveying Services Intersection Turning Movement Count

Location: Northern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(NB)

Project ID: 23-140076-001
Date: 2/14/2023

Data - HT

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0	28
APPROACH %'s :														0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.667
															0.667			

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
NOON	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0	0	9
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8
1:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	7
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	0	0	0	0	2	70	0	0	73
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0.00%									2.78%	97.22%	0.00%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																	TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	31
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.775
			0.250												0.750			

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10
3:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	15	0	0	17
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	11	0	0	13
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	9
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	10
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9
4:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	10
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	8	0	0	9
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	6
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	0	0	3	0	0	0	0	0	0	0	0	3	108	0	0	118
APPROACH %'s :	57.14%	0.00%	0.00%	0.00%	42.86%									2.70%	97.30%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	1	0	0	0	1	0	0	0	0	0	0	0	0	0	34	0	0	36
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.944	0.000	0.000	0.900
			0.500												0.944			

National Data & Surveying Services Intersection Turning Movement Count

Location: Northern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands
Control: 1-Way Yield(NB)

Project ID: 23-140076-001
Date: 2/14/2023

Data - Bikes

NS/EW Streets:	Northern Chevron Dwy					Northern Chevron Dwy				Broad Causeway				Broad Causeway				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15
APPROACH %'s :														0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.563
															0.563			

NOON	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15
APPROACH %'s :														0.00%	100.00%	0.00%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.000	0.417
															0.417			

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
3:15 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
	NL	NT	NR	NU	NL2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	0	3	0	0	0	30	0	0	34
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.600
															0.600			

National Data & Surveying Services Intersection Turning Movement Count

Location: Northern Chevron Dwy & Broad Causeway
City: Bay Harbor Islands

Project ID: 23-140076-001
Date: 2/14/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Northern Chevron Dwy		Northern Chevron Dwy		Broad Causeway		Broad Causeway				
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		SOUTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
7:30 AM	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	1	0	1
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	0	1
APPROACH %'s :									100.00%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM										TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :											

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		SOUTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	1	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	1
APPROACH %'s :							100.00%	0.00%			
PEAK HR :	12:15 PM - 01:15 PM										TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :											

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		SOUTH LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
3:00 PM	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :											
PEAK HR :	04:45 PM - 05:45 PM										TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :											

Prepared by National Data & Surveying Services

Northern Chevron Dwy & Broad Causeway

Peak Hour Turning Movement Count

ID: 23-140076-001
City: Bay Harbor Islands

Day: Tuesday
Date: 2/14/2023

PEAK HOURS

AM	08:15 AM - 09:15 AM
NOON	12:15 PM - 01:15 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	7:30 AM - 09:30 AM
NOON	12:00 PM - 02:00 PM
PM	3:00 PM - 06:00 PM

SOUTHBOUND (Northern Chevron Dwy)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Broad Causeway)

AM	NOON	PM	
869	810	1440	⇦
0	0	0	↩ 0
0	0	0	↱ 0
0	0	0	→ 0
0	0	0	↴ 0
AM	NOON	PM	

WESTBOUND (Broad Causeway)

PM	NOON	AM	
0	0	0	↰ 0
1374	782	845	← 0
36	22	53	↩ 0
0	0	0	↰ 0
0	0	0	⇨
PM	NOON	AM	

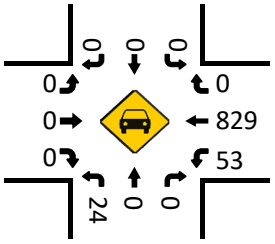
CONTROL: 1-Way Yield(NB)

TEV	922 AM	832 NOON	1476 PM
PHF	0.88	0.95	0.93

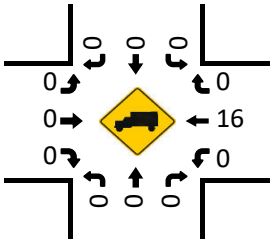
NORTHBOUND (Northern Chevron Dwy)

PM	36	0	66	0	0	PM
NOON	22	0	28	0	0	NOON
AM	53	0	24	0	0	AM

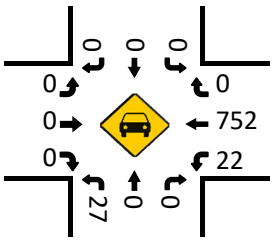
Cars (AM)



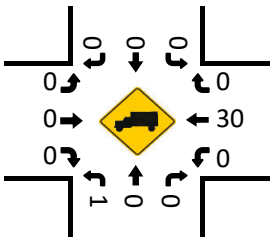
HT (AM)



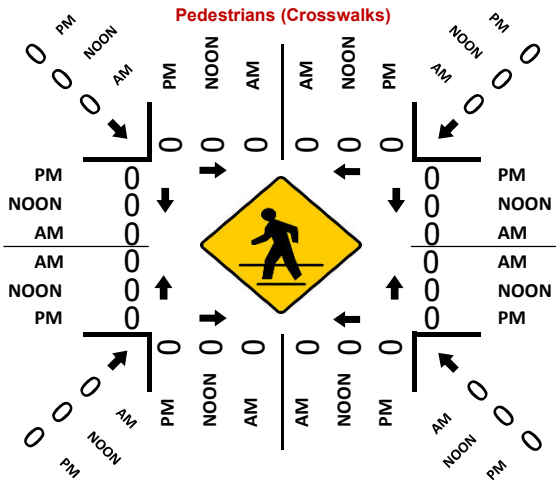
Cars (NOON)



HT (NOON)



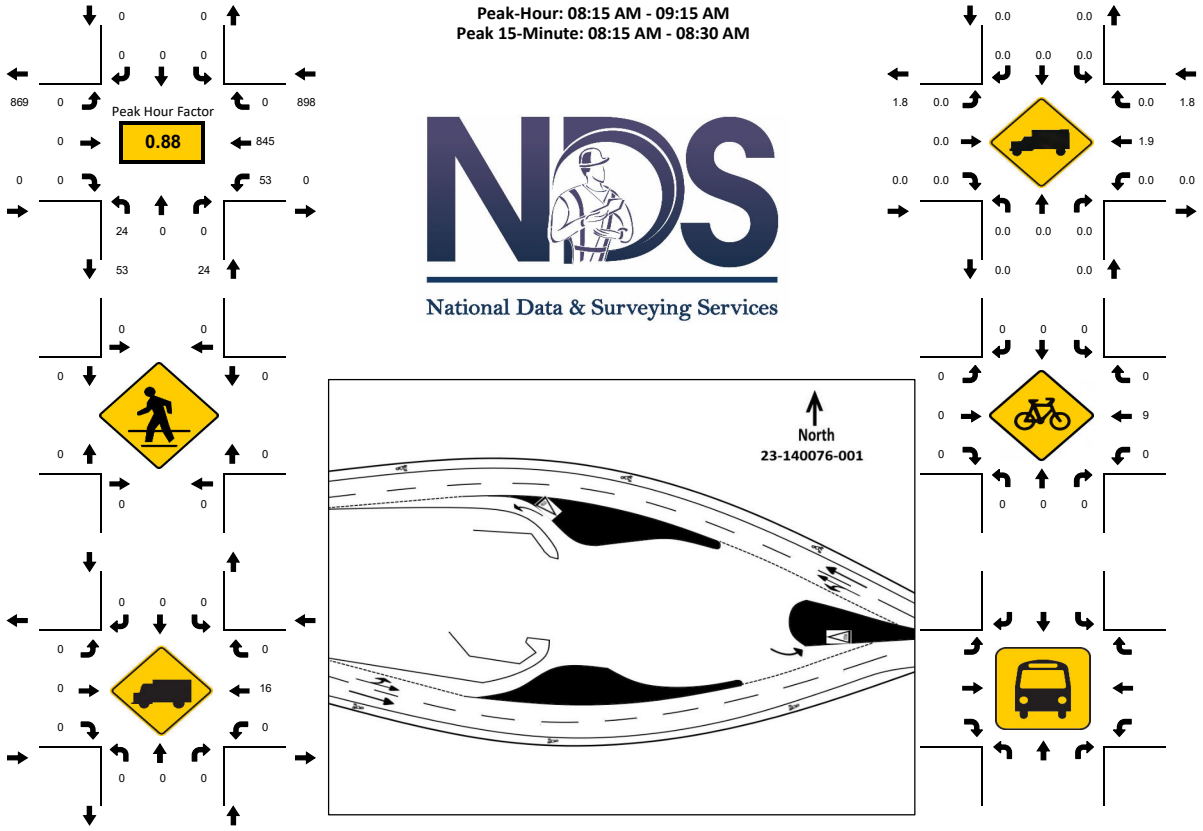
Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
0
0
0

LOCATION: Northern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-001
DATE: Tue, Feb 14, 2023

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



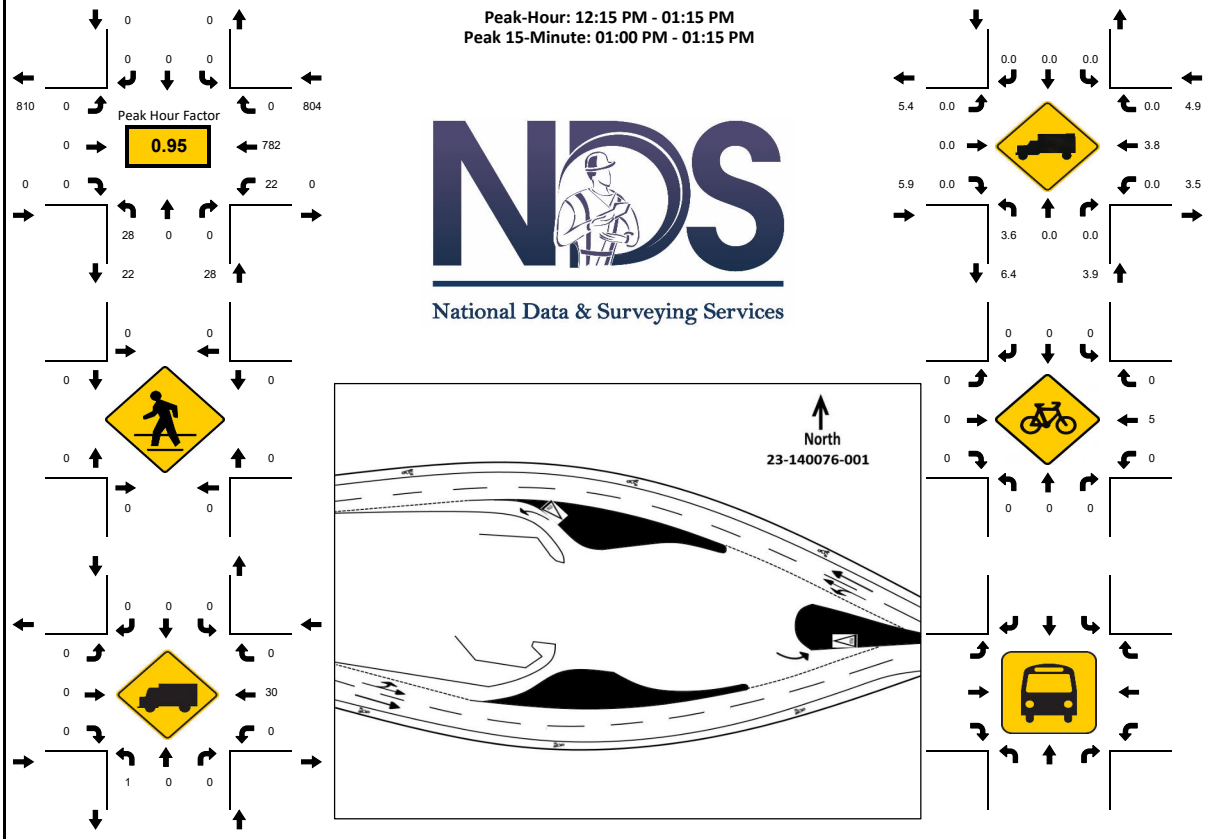
National Data & Surveying Services

15-Min Count Period Beginning At	Northern Chevron Dwy Northbound					Northern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:30 AM	5	0	0	0		0	0	0	0		0	0	0	0		5	106	0	0		116	730
07:45 AM	3	0	0	0		0	0	0	0		0	0	0	0		5	170	0	0		178	870
08:00 AM	8	0	0	0		0	0	0	0		0	0	0	0		14	150	0	0		172	877
08:15 AM	7	0	0	0		0	0	0	0		0	0	0	0		15	242	0	0		264	922
08:30 AM	8	0	0	0		0	0	0	0		0	0	0	0		10	238	0	0		256	866
08:45 AM	3	0	0	0		0	0	0	0		0	0	0	0		12	170	0	0		185	610
09:00 AM	6	0	0	0		0	0	0	0		0	0	0	0		16	195	0	0		217	425
09:15 AM	9	0	0	0		0	0	0	0		0	0	0	0		9	190	0	0		208	208
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	32	0	0	0		0	0	0	0		0	0	0	0		64	968	0	0		**1064**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	24	0	0		**24**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	16	0	0		**16**	
Buses																						
Stopped Buses																						

LOCATION: Northern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-001
DATE: Tue, Feb 14, 2023

Peak-Hour: 12:15 PM - 01:15 PM
Peak 15-Minute: 01:00 PM - 01:15 PM



National Data & Surveying Services

15-Min Count Period Beginning At	Northern Chevron Dwy Northbound					Northern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
12:00 PM	2	0	0	0		0	0	0	0		0	0	0	0		11	166	0	0		179	791
12:15 PM	7	0	0	0		0	0	0	0		0	0	0	0		5	206	0	0		218	832
12:30 PM	4	0	0	0		0	0	0	0		0	0	0	0		6	180	0	0		190	797
12:45 PM	6	0	0	0		0	0	0	0		0	0	0	0		8	190	0	0		204	809
01:00 PM	11	0	0	0		0	0	0	0		0	0	0	0		3	206	0	0		220	823
01:15 PM	6	0	0	0		0	0	0	0		0	0	0	0		11	166	0	0		183	603
01:30 PM	8	0	0	0		0	0	0	0		0	0	0	0		8	186	0	0		202	420
01:45 PM	6	0	0	0		0	0	0	0		0	0	0	0		7	205	0	0		218	218
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	44	0	0	0		0	0	0	0		0	0	0	0		32	824	0	0		**900**	
Heavy Trucks	4	0	0	0		0	0	0	0		0	0	0	0		0	40	0	0		**44**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	12	0	0		**12**	
Buses																						
Stopped Buses																						

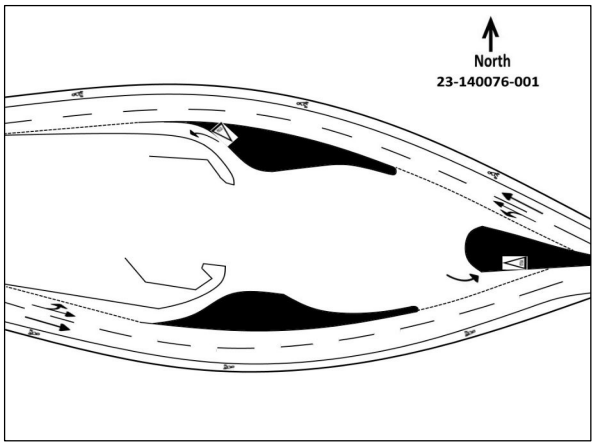
LOCATION: Northern Chevron Dwy & Broad Causeway
CITY/STATE: Bay Harbor Islands, FL

PROJECT ID: 23-140076-001
DATE: Tue, Feb 14, 2023

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:00 PM - 05:15 PM

Peak Hour Factor: **0.93**

National Data & Surveying Services



15-Min Count Period Beginning At	Northern Chevron Dwy Northbound					Northern Chevron Dwy Southbound					Broad Causeway Eastbound					Broad Causeway Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
03:00 PM	3	0	0	0		0	0	0	0		0	0	0	0		7	200	0	0		210	1202
03:15 PM	7	0	0	0		0	0	0	0		0	0	0	0		11	335	0	0		353	1351
03:30 PM	3	0	0	0		0	0	0	0		0	0	0	0		6	332	0	0		341	1321
03:45 PM	3	0	0	0		0	0	0	0		0	0	0	0		9	286	0	0		298	1322
04:00 PM	14	0	0	0		0	0	0	0		0	0	0	0		12	333	0	0		359	1394
04:15 PM	4	0	0	0		0	0	0	0		0	0	0	0		10	309	0	0		323	1434
04:30 PM	9	0	0	0		0	0	0	0		0	0	0	0		12	321	0	0		342	1448
04:45 PM	10	0	0	0		0	0	0	0		0	0	0	0		11	349	0	0		370	1476
05:00 PM	12	0	0	0		0	0	0	0		0	0	0	0		7	380	0	0		399	1433
05:15 PM	12	0	0	0		0	0	0	0		0	0	0	0		10	315	0	0		337	1034
05:30 PM	32	0	0	0		0	0	0	0		0	0	0	0		8	330	0	0		370	697
05:45 PM	15	0	0	0		0	0	0	0		0	0	0	0		12	300	0	0		327	327
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	128	0	0	0		0	0	0	0		0	0	0	0		44	1520	0	0		**1692**	
Heavy Trucks	4	0	0	0		0	0	0	0		0	0	0	0		0	36	0	0		**40**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	20	0	0		**20**	
Buses																						
Stopped Buses																						

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-001
City: Bay Harbor Islands
Intersection: Broad Causeway & Northern Chevron Dwy

Day: Tuesday
Int ID: 1
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 0.0%

Base Year: 2023
Design Year: 2024

Background Adjustment Factor: 1.00

AM Peak: 8:15 AM to 9:15 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	8:15 AM	0	0	0	0	0	15	242	0	0	7	0	0	0	0	0	0	264
	8:30 AM	0	0	0	0	0	10	238	0	0	8	0	0	0	0	0	0	256
	8:45 AM	0	0	0	0	0	12	170	0	1	3	0	0	0	0	0	0	186
	9:00 AM	0	0	0	0	0	16	195	0	1	6	0	0	0	0	0	0	218
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	53	845	0	2	24	0	0	0	0	0	0	924
	Trucks	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**53**	**845**	**0**	**2**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**924**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.83**	**0.87**		**0.50**	**0.75**							**0.88**
	Approach						**0.87**				**0.81**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**0%**	**0%**							**2%**
	Approach						**2%**				**0%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 12:15 PM to 1:15 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	12:15 PM	0	0	0	0	0	5	206	0	1	7	0	0	0	0	0	0	219
	12:30 PM	0	0	0	0	0	6	180	0	2	4	0	0	0	0	0	0	192
	12:45 PM	0	0	0	0	0	8	190	0	0	6	0	0	0	0	0	0	204
	1:00 PM	0	0	0	0	0	3	206	0	0	11	0	0	0	0	0	0	220
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	22	782	0	3	28	0	0	0	0	0	0	835
	Trucks	0	0	0	0	0	0	30	0	0	1	0	0	0	0	0	0	31
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**22**	**782**	**0**	**3**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**835**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.69**	**0.95**		**0.38**	**0.64**							**0.95**
	Approach						**0.95**				**0.70**							
% Heavy Vehicles	**Movement**						**0%**	**4%**		**0%**	**4%**							**4%**
	Approach						**4%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	0	0	0	0	0	11	349	0	1	10	0	0	0	0	0	0	371
	5:00 PM	0	0	0	0	0	7	380	0	1	12	0	0	0	0	0	0	400
	5:15 PM	0	0	0	0	0	10	315	0	3	12	0	0	0	0	0	0	340
	5:30 PM	0	0	0	0	0	8	330	0	3	32	0	0	0	0	0	0	373
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	36	1,374	0	8	66	0	0	0	0	0	0	1,484
	Trucks	0	0	0	0	0	0	34	0	1	1	0	0	0	0	0	0	36
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**36**	**1,374**	**0**	**8**	**66**	**0**	**0**	**0**	**0**	**0**	**0**	**1,484**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.82**	**0.90**		**0.67**	**0.52**							**0.93**
	Approach						**0.91**				**0.53**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**13%**	**2%**							**2%**
	Approach						**2%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-002
City: Bay Harbor Islands
Intersection: Broad Causeway & Southern Chevron Dwy

Day: Tuesday
Int ID: 2
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 0.0%

Base Year: 2023
Design Year: 2024

Background Adjustment Factor: 1.00

AM Peak: 7:45 AM to 8:45 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	7:45 AM	0	9	248	0	0	0	0	0	0	0	0	0	0	5	0	0	262
	8:00 AM	0	8	260	0	0	0	0	0	0	0	0	0	0	10	0	0	278
	8:15 AM	0	5	254	0	0	0	0	0	0	0	0	0	0	13	0	0	272
	8:30 AM	0	4	204	0	0	0	0	0	0	0	0	0	0	7	0	0	215
Unadjusted Hourly	All-Vehicles	0	26	966	0	0	0	0	0	0	0	0	0	0	35	0	0	1,027
	Trucks	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**26**	**966**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**35**	**0**	**0**	**1,027**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**		**0.72**	**0.93**											**0.67**			**0.92**
	Approach		**0.93**												**0.67**			
% Heavy Vehicles	**Movement**		**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 1:00 PM to 2:00 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	1:00 PM	1	5	200	0	0	0	0	0	0	0	0	0	0	6	0	0	212
	1:15 PM	1	5	229	0	0	0	0	0	0	0	0	0	0	7	0	0	242
	1:30 PM	0	9	216	0	0	0	0	0	0	0	0	0	0	3	0	0	228
	1:45 PM	1	9	213	0	0	0	0	0	0	0	0	0	0	5	0	0	228
Unadjusted Hourly	All-Vehicles	3	28	858	0	0	0	0	0	0	0	0	0	0	21	0	0	910
	Trucks	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**3**	**28**	**858**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**910**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.75**	**0.78**	**0.94**											**0.75**			**0.94**
	Approach		**0.95**												**0.75**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	1	10	228	0	0	0	0	0	0	0	0	0	0	12	0	0	251
	5:00 PM	1	8	184	0	0	0	0	0	0	0	0	0	0	7	0	0	200
	5:15 PM	1	2	260	0	0	0	0	0	0	0	0	0	0	4	0	0	267
	5:30 PM	4	29	192	0	0	0	0	0	0	0	0	0	0	8	0	0	233
Unadjusted Hourly	All-Vehicles	7	49	864	0	0	0	0	0	0	0	0	0	0	31	0	0	951
	Trucks	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	5
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**7**	**49**	**864**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**	**0**	**951**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.44**	**0.42**	**0.83**											**0.65**			**0.89**
	Approach		**0.87**												**0.65**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**1%**											**3%**			**1%**
	Approach		**1%**												**3%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-001
City: Bay Harbor Islands
Intersection: Broad Causeway & Northern Chevron Dwy

Day: Tuesday
Int ID: 1
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 1.0%

Base Year: 2023
Design Year: 2030

Background Adjustment Factor: 1.07

AM Peak: 8:15 AM to 9:15 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	8:15 AM	0	0	0	0	0	15	242	0	0	7	0	0	0	0	0	0	264
	8:30 AM	0	0	0	0	0	10	238	0	0	8	0	0	0	0	0	0	256
	8:45 AM	0	0	0	0	0	12	170	0	1	3	0	0	0	0	0	0	186
	9:00 AM	0	0	0	0	0	16	195	0	1	6	0	0	0	0	0	0	218
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	53	845	0	2	24	0	0	0	0	0	0	924
	Trucks	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**57**	**905**	**0**	**2**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**989**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.83**	**0.87**		**0.50**	**0.75**							**0.88**
	Approach						**0.87**				**0.81**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**0%**	**0%**							**2%**
	Approach						**2%**				**0%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 12:15 PM to 1:15 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	12:15 PM	0	0	0	0	0	5	206	0	1	7	0	0	0	0	0	0	219
	12:30 PM	0	0	0	0	0	6	180	0	2	4	0	0	0	0	0	0	192
	12:45 PM	0	0	0	0	0	8	190	0	0	6	0	0	0	0	0	0	204
	1:00 PM	0	0	0	0	0	3	206	0	0	11	0	0	0	0	0	0	220
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	22	782	0	3	28	0	0	0	0	0	0	835
	Trucks	0	0	0	0	0	0	30	0	0	1	0	0	0	0	0	0	31
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**23**	**836**	**0**	**3**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**891**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.69**	**0.95**		**0.38**	**0.64**							**0.95**
	Approach						**0.95**				**0.70**							
% Heavy Vehicles	**Movement**						**0%**	**4%**		**0%**	**4%**							**4%**
	Approach						**4%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	0	0	0	0	0	11	349	0	1	10	0	0	0	0	0	0	371
	5:00 PM	0	0	0	0	0	7	380	0	1	12	0	0	0	0	0	0	400
	5:15 PM	0	0	0	0	0	10	315	0	3	12	0	0	0	0	0	0	340
	5:30 PM	0	0	0	0	0	8	330	0	3	32	0	0	0	0	0	0	373
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	36	1,374	0	8	66	0	0	0	0	0	0	1,484
	Trucks	0	0	0	0	0	0	34	0	1	1	0	0	0	0	0	0	36
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**39**	**1,470**	**0**	**8**	**71**	**0**	**0**	**0**	**0**	**0**	**0**	**1,588**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.82**	**0.90**		**0.67**	**0.52**							**0.93**
	Approach						**0.91**				**0.53**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**13%**	**2%**							**2%**
	Approach						**2%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-002
City: Bay Harbor Islands
Intersection: Broad Causeway & Southern Chevron Dwy

Day: Tuesday
Int ID: 2
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 1.0%

Base Year: 2023
Design Year: 2030

Background Adjustment Factor: 1.07

AM Peak: 7:45 AM to 8:45 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	7:45 AM	0	9	248	0	0	0	0	0	0	0	0	0	0	5	0	0	262
	8:00 AM	0	8	260	0	0	0	0	0	0	0	0	0	0	10	0	0	278
	8:15 AM	0	5	254	0	0	0	0	0	0	0	0	0	0	13	0	0	272
	8:30 AM	0	4	204	0	0	0	0	0	0	0	0	0	0	7	0	0	215
Unadjusted Hourly	All-Vehicles	0	26	966	0	0	0	0	0	0	0	0	0	0	35	0	0	1,027
	Trucks	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**28**	**1,033**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**37**	**0**	**0**	**1,098**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**		**0.72**	**0.93**											**0.67**			**0.92**
	Approach		**0.93**												**0.67**			
% Heavy Vehicles	**Movement**		**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 1:00 PM to 2:00 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	1:00 PM	1	5	200	0	0	0	0	0	0	0	0	0	0	6	0	0	212
	1:15 PM	1	5	229	0	0	0	0	0	0	0	0	0	0	7	0	0	242
	1:30 PM	0	9	216	0	0	0	0	0	0	0	0	0	0	3	0	0	228
	1:45 PM	1	9	213	0	0	0	0	0	0	0	0	0	0	5	0	0	228
Unadjusted Hourly	All-Vehicles	3	28	858	0	0	0	0	0	0	0	0	0	0	21	0	0	910
	Trucks	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**3**	**30**	**918**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**972**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.75**	**0.78**	**0.94**											**0.75**			**0.94**
	Approach		**0.95**												**0.75**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	1	10	228	0	0	0	0	0	0	0	0	0	0	12	0	0	251
	5:00 PM	1	8	184	0	0	0	0	0	0	0	0	0	0	7	0	0	200
	5:15 PM	1	2	260	0	0	0	0	0	0	0	0	0	0	4	0	0	267
	5:30 PM	4	29	192	0	0	0	0	0	0	0	0	0	0	8	0	0	233
Unadjusted Hourly	All-Vehicles	7	49	864	0	0	0	0	0	0	0	0	0	0	31	0	0	951
	Trucks	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	5
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**7**	**53**	**924**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**0**	**0**	**1,017**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.44**	**0.42**	**0.83**											**0.65**			**0.89**
	Approach		**0.87**												**0.65**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**1%**											**3%**			**1%**
	Approach		**1%**												**3%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-001
City: Bay Harbor Islands
Intersection: Broad Causeway & Northern Chevron Dwy

Day: Tuesday
Int ID: 1
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 1.0%

Base Year: 2023
Design Year: 2050

Background Adjustment Factor: 1.27

AM Peak: 8:15 AM to 9:15 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	8:15 AM	0	0	0	0	0	15	242	0	0	7	0	0	0	0	0	0	264
	8:30 AM	0	0	0	0	0	10	238	0	0	8	0	0	0	0	0	0	256
	8:45 AM	0	0	0	0	0	12	170	0	1	3	0	0	0	0	0	0	186
	9:00 AM	0	0	0	0	0	16	195	0	1	6	0	0	0	0	0	0	218
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	53	845	0	2	24	0	0	0	0	0	0	924
	Trucks	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**67**	**1,073**	**0**	**2**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**1,173**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.83**	**0.87**		**0.50**	**0.75**							**0.88**
	Approach						**0.87**				**0.81**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**0%**	**0%**							**2%**
	Approach						**2%**				**0%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 12:15 PM to 1:15 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	12:15 PM	0	0	0	0	0	5	206	0	1	7	0	0	0	0	0	0	219
	12:30 PM	0	0	0	0	0	6	180	0	2	4	0	0	0	0	0	0	192
	12:45 PM	0	0	0	0	0	8	190	0	0	6	0	0	0	0	0	0	204
	1:00 PM	0	0	0	0	0	3	206	0	0	11	0	0	0	0	0	0	220
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	22	782	0	3	28	0	0	0	0	0	0	835
	Trucks	0	0	0	0	0	0	30	0	0	1	0	0	0	0	0	0	31
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**28**	**994**	**0**	**4**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**1,062**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.69**	**0.95**		**0.38**	**0.64**							**0.95**
	Approach						**0.95**				**0.70**							
% Heavy Vehicles	**Movement**						**0%**	**4%**		**0%**	**4%**							**4%**
	Approach						**4%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Northern Chevron Dwy				Northern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	0	0	0	0	0	11	349	0	1	10	0	0	0	0	0	0	371
	5:00 PM	0	0	0	0	0	7	380	0	1	12	0	0	0	0	0	0	400
	5:15 PM	0	0	0	0	0	10	315	0	3	12	0	0	0	0	0	0	340
	5:30 PM	0	0	0	0	0	8	330	0	3	32	0	0	0	0	0	0	373
Unadjusted Hourly	All-Vehicles	0	0	0	0	0	36	1,374	0	8	66	0	0	0	0	0	0	1,484
	Trucks	0	0	0	0	0	0	34	0	1	1	0	0	0	0	0	0	36
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**0**	**0**	**0**	**0**	**46**	**1,745**	**0**	**10**	**84**	**0**	**0**	**0**	**0**	**0**	**0**	**1,885**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**						**0.82**	**0.90**		**0.67**	**0.52**							**0.93**
	Approach						**0.91**				**0.53**							
% Heavy Vehicles	**Movement**						**0%**	**2%**		**13%**	**2%**							**2%**
	Approach						**2%**				**3%**							
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

ATKINS
Member of the SNC-Lavalin Group

Adjusted Turning Movement Count Summary

Project ID: 23-140076-002
City: Bay Harbor Islands
Intersection: Broad Causeway & Southern Chevron Dwy

Day: Tuesday
Int ID: 2
Date: 2/14/2023

Season Factor: 1.00
Linear Growth Rate: 1.0%

Base Year: 2023
Design Year: 2050

Background Adjustment Factor: 1.27

AM Peak: 7:45 AM to 8:45 AM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	7:45 AM	0	9	248	0	0	0	0	0	0	0	0	0	0	5	0	0	262
	8:00 AM	0	8	260	0	0	0	0	0	0	0	0	0	0	10	0	0	278
	8:15 AM	0	5	254	0	0	0	0	0	0	0	0	0	0	13	0	0	272
	8:30 AM	0	4	204	0	0	0	0	0	0	0	0	0	0	7	0	0	215
Unadjusted Hourly	All-Vehicles	0	26	966	0	0	0	0	0	0	0	0	0	0	35	0	0	1,027
	Trucks	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**0**	**32**	**1,227**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**0**	**0**	**1,304**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**		**0.72**	**0.93**											**0.67**			**0.92**
	Approach		**0.93**												**0.67**			
% Heavy Vehicles	**Movement**		**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

Midday Peak: 1:00 PM to 2:00 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	1:00 PM	1	5	200	0	0	0	0	0	0	0	0	0	0	6	0	0	212
	1:15 PM	1	5	229	0	0	0	0	0	0	0	0	0	0	7	0	0	242
	1:30 PM	0	9	216	0	0	0	0	0	0	0	0	0	0	3	0	0	228
	1:45 PM	1	9	213	0	0	0	0	0	0	0	0	0	0	5	0	0	228
Unadjusted Hourly	All-Vehicles	3	28	858	0	0	0	0	0	0	0	0	0	0	21	0	0	910
	Trucks	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**3**	**34**	**1,090**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	**0**	**0**	**1,154**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.75**	**0.78**	**0.94**											**0.75**			**0.94**
	Approach		**0.95**												**0.75**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**3%**											**0%**			**3%**
	Approach		**3%**												**0%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

PM Peak: 4:45 PM to 5:45 PM

Intersection Approach:		Broad Causeway				Broad Causeway				Southern Chevron Dwy				Southern Chevron Dwy				Intersection
Intersection Movement:		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	Total
Unadjusted 15-Minute All-Vehicles	4:45 PM	1	10	228	0	0	0	0	0	0	0	0	0	0	12	0	0	251
	5:00 PM	1	8	184	0	0	0	0	0	0	0	0	0	0	7	0	0	200
	5:15 PM	1	2	260	0	0	0	0	0	0	0	0	0	0	4	0	0	267
	5:30 PM	4	29	192	0	0	0	0	0	0	0	0	0	0	8	0	0	233
Unadjusted Hourly	All-Vehicles	7	49	864	0	0	0	0	0	0	0	0	0	0	31	0	0	951
	Trucks	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	5
Additional Annual Growth																		--
Volume Balance																		--
Adjusted All-Vehicles		**8**	**63**	**1,098**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**0**	**0**	**1,208**
RTOR (included in count above)					**0**				**0**				**0**				**0**	--
PHF	**Movement**	**0.44**	**0.42**	**0.83**											**0.65**			**0.89**
	Approach		**0.87**												**0.65**			
% Heavy Vehicles	**Movement**	**0%**	**0%**	**1%**											**3%**			**1%**
	Approach		**1%**												**3%**			
Pedestrians	**Calls**		**0**				**0**				**0**				**0**			--
	Conflicting	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--	**0**	--

7.3 Crash Data

CRASH SUMMARY

SECTION:	87066000	STUDY PERIOD:	1/1/2018 to 12/31/2022
STATE ROUTE:	SR 922 96th Street	DATA SOURCE:	CARS + S4
ROADWAY LIMITS:	Broad Causeway Bridge	COUNTY:	Miami-Dade
M.P.	3.764 to 4.736	MPH:	30
		ENGINEER:	Atkins

No.	Crash Numbe	Date	Day	Time	Crash Type	Severity	Fatal	Injuries	Day/ Night	Wet/ Dry	Contributing Cause	Direction of Vehicle 1	Direction of Vehicle 2	Seperation Type
1.	81557686	3/26/18	Mon	22:25	Sideswipe	No Injury	0	0	NIGHT	Dry	No Contributing Action	East	East	Divided - Segment 3
2.	81557688	4/3/18	Tue	8:20	Rear End	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 2
3.	81557695	5/1/18	Tue	11:05	Rear End	Possible Injury	0	1	DAY	Dry	Followed Too Closely	East	East	Divided - Segment 2
4.	81557719	7/31/18	Tue	10:15	Sideswipe	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 2
5.	81557732	9/25/18	Tue	7:30	Head On	Incapacitating Injury	0	1	DAY	Dry	Operated MV in Careless or Negligent Manner	East	West	Divided - Segment 3
6.	81557744	12/2/18	Sun	7:10	Off Road	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	East		Divided - Segment 1
7.	81557765	2/27/19	Wed	15:01	Off Road	No Injury	0	0	DAY	Wet	Ran Off Roadway	East		Divided - Segment 3
8.	81557780	4/19/19	Fri	17:03	Rear End	Non-Incapacitating I	0	1	DAY	Dry	Followed Too Closely	West	West	Divided - Segment 2
9.	89349556	6/26/19	Wed	9:35	Sideswipe	No Injury	0	0	DAY	Dry	Swerved or Avoided	West	West	Divided - Segment 3
10.	89349563	7/3/19	Wed	13:30	Sideswipe	No Injury	0	0	DAY	Dry	Failed to Keep in Proper Lane	West	West	Divided - Segment 2
11.	89349559	9/3/19	Tue	14:10	Off Road	No Injury	0	0	DAY	Dry	No Contributing Action	East		Divided - Segment 2
12.	89349569	11/17/19	Sun	19:30	Head On	Possible Injury	0	1	NIGHT	Dry	Operated MV in Careless or Negligent Manner	West	East	Divided - Segment 2
13.	89349588	1/10/20	Fri	7:40	Head On	Non-Incapacitating I	0	1	DAY	Dry	Failed to Keep in Proper Lane	East	West	Divided - Segment 2
14.	89349589	1/10/20	Fri	8:45	Sideswipe	No Injury	0	0	DAY	Dry	Failed to Yield Right-of-Way	West	West	Divided - Segment 2
15.	89349595	2/8/20	Sat	7:05	Bicycle	Incapacitating Injury	0	1	DAY	Dry	Failed to Yield Right-of-Way	East	East	Divided - Segment 1
16.	89349608	3/12/20	Thu	23:00	Bicycle	Non-Incapacitating I	0	1	NIGHT	Dry	Followed Too Closely	East	East	Divided - Segment 1
17.	89349617	5/26/20	Tue	14:40	Rear End	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	West	West	Divided - Segment 2
18.	89349621	6/4/20	Thu	17:10	Sideswipe	No Injury	0	0	DAY	Wet	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 1
19.	89349625	6/22/20	Mon	17:25	Rear End	No Injury	0	0	DAY	Dry	Followed Too Closely	West	West	Divided - Segment 3
20.	89349629	7/17/20	Fri	10:20	Sideswipe	No Injury	0	0	DAY	Dry	Other Contributing Action	East	East	Divided - Segment 1
21.	89349634	8/19/20	Wed	13:05	Bicycle	Non-Incapacitating I	0	1	DAY	Wet	Drove Too Fast for Conditions	East		Divided - Segment 2
22.	89349639	10/5/20	Mon	15:13	Bicycle	Non-Incapacitating I	0	1	DAY	Dry	Other Contributing Action	East		Divided - Segment 2
23.	89349640	10/14/20	Wed	12:03	Rear End	Possible Injury	0	1	DAY	Dry	Other Contributing Action	East	East	Divided - Segment 2
24.	89349655	1/15/21	Fri	11:00	Sideswipe	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 2
25.	89349668	3/30/21	Tue	21:45	Bicycle	Injury	0	0	NIGHT	Dry	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 2
26.	89349671	4/9/21	Fri	14:55	Sideswipe	No Injury	0	0	DAY	Dry	No Contributing Action	West	West	Divided - Segment 2
27.	89349676	4/23/21	Fri	16:08	Off Road	Possible Injury	0	1	DAY	Dry	No Contributing Action	West		Divided - Segment 1
28.	89349684	6/6/21	Sun	14:35	Sideswipe	No Injury	0	0	DAY	Dry	Other Contributing Action	West	West	Divided - Segment 2
29.	89349695	7/14/21	Wed	12:48	Off Road	Possible Injury	0	1	DAY	Dry	Ran Red Light	West		Divided - Segment 2
30.	89349707	8/27/21	Fri	9:05	Off Road	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	West		Divided - Segment 2
31.	89349711	9/12/21	Sun	14:18	Off Road	No Injury	0	0	DAY	Dry	Failed to Keep in Proper Lane	East		Divided - Segment 2
32.	89349722	10/12/21	Tue	21:27	Bicycle	Non-Incapacitating I	0	1	NIGHT	Dry	Other Contributing Action	West	West	Divided - Segment 1
33.	89349729	11/10/21	Wed	11:30	Rear End	No Injury	0	0	DAY	Dry	Followed Too Closely	West	West	Divided - Segment 2
34.	89349732	11/19/21	Fri	20:22	Off Road	No Injury	0	0	NIGHT	Wet	Operated MV in Careless or Negligent Manner	West		Divided - Segment 3
35.	89349739	12/16/21	Thu	18:45	Sideswipe	No Injury	0	0	DAY	Dry	No Contributing Action	East	East	Divided - Segment 3
36.	89349744	1/10/22	Mon	11:30	Head On	No Injury	0	0	DAY	Dry	No Contributing Action	West	East	Divided - Segment 1
37.	89349745	1/13/22	Thu	17:07	Rear End	No Injury	0	0	DAY	Dry	Followed Too Closely	West	West	Divided - Segment 2
38.	89349752	2/3/22	Thu	16:50	Sideswipe	No Injury	0	0	DAY	Dry	Improper Passing	East	East	Divided - Segment 1
39.	89349750	2/4/22	Fri	14:00	Bicycle	Non-Incapacitating I	0	1	DAY	Dry	Operated MV in Careless or Negligent Manner	East	East	Divided - Segment 3
40.	89349756	2/20/22	Sun	12:00	Rear End	Possible Injury	0	1	DAY	Dry	No Contributing Action	West	West	Divided - Segment 3
41.	24394190	3/11/22	Fri	15:10	Rear End	Possible Injury	0	1	DAY	Dry	No Contributing Action	West	West	Divided - Segment 1
42.	89349769	4/26/22	Tue	23:05	Bicycle	Non-Incapacitating I	0	1	NIGHT	Wet	Other Contributing Action	West		Divided - Segment 2
43.	89349775	5/10/22	Tue	17:39	Rear End	Non-Incapacitating I	0	2	DAY	Dry	Other Contributing Action	West	West	Divided - Segment 2
44.	89349774	5/11/22	Wed	19:18	Bicycle	Non-Incapacitating I	0	1	NIGHT	Dry	No Contributing Action	West		Divided - Segment 1

CRASH SUMMARY

SECTION:	87066000					STUDY PERIOD:	1/1/2018	to	12/31/2022						
STATE ROUTE:	SR 922 96th Street					DATA SOURCE:	CARS + S4								
ROADWAY LIMITS:	Broad Causeway Bridge					COUNTY:	Miami-Dade								
M.P.	3.764	to	4.736			MPH:	30					ENGINEER:	Atkins		
45.	89349783	6/6/22	Mon	21:24	Sideswipe	No Injury	0	0	NIGHT	Dry	Failed to Keep in Proper Lane	West	West	Divided - Segment 2	
46.	89349800	9/15/22	Thu	13:50	Rear End	No Injury	0	0	DAY	Dry	Followed Too Closely	East	East	Divided - Segment 2	
47.	89349805	10/24/22	Mon	11:35	Head On	No Injury	0	0	DAY	Dry	Operated MV in Careless or Negligent Manner	West	East	Divided - Segment 1	

7.4 Traffic Forecasting

7.4.1 Demand Model

7.4.2 Historical Counts

7.4.3 Traffic Growth Trends

7.4.4 Population Projections

14,878
14,357
14,357
14,878
29,235
29,235
SERPM 2015 Total Daily Volumes

15,901
16,010
16,010
15,901
31,911
31,911
SERPM 2045 Total Daily Volumes

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8608 - BROAD CSWY, 200 FT E OF GAS STATION ACCESS

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	22000 S	E 10500	W 11500	9.00	56.50	2.60
2021	21000 F	E 10000	W 11000	9.00	55.00	3.20
2020	22000 C	E 10500	W 11500	9.00	56.00	2.40
2019	21000 T	E 10500	W 10500	9.00	56.00	3.40
2018	21000 S	E 10500	W 10500	9.00	54.30	4.30
2017	24000 F	E 12000	W 12000	9.00	55.70	3.50
2016	24000 C	E 12000	W 12000	9.00	56.10	4.00
2015	19300 T	E 9700	W 9600	9.00	57.40	4.80
2014	19500 S	E 9800	W 9700	9.00	59.30	5.20
2013	19700 F	E 9900	W 9800	9.00	58.90	16.20
2012	19900 C	E 10000	W 9900	9.00	59.70	16.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 1023 - SR 922/NE/NW 125 ST, 200' W N BAY SHORE DR

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	24500 C	E 12000	W 12500	9.00	54.70	7.80
2021	23000 C	E 11000	W 12000	9.00	54.30	6.00
2020	21500 C	E 10500	W 11000	9.00	54.20	2.20
2019	23500 C	E 11500	W 12000	9.00	54.60	5.50
2018	22000 C	E 11000	W 11000	9.00	54.30	10.00
2017	22500 C	E 11500	W 11000	9.00	55.00	9.20
2016	24000 C	E 12000	W 12000	9.00	54.50	12.60
2015	25000 C	E 14000	W 11000	9.00	54.70	8.80
2014	23000 C	E 11000	W 12000	9.00	54.50	7.60
2013	24000 C	E 11000	W 13000	9.00	52.40	5.00
2012	24000 C	E 12000	W 12000	9.00	55.70	4.20
2011	20100 C	E 10500	W 9600	9.00	55.10	5.10
2010	18000 C	E 9000	W 9000	8.98	54.08	3.80
2009	19800 C	E 10000	W 9800	8.99	53.24	4.60
2008	19900 C	E 10500	W 9400	9.09	55.75	1.50
2007	21000 C	E 10500	W 10500	8.01	54.34	1.00

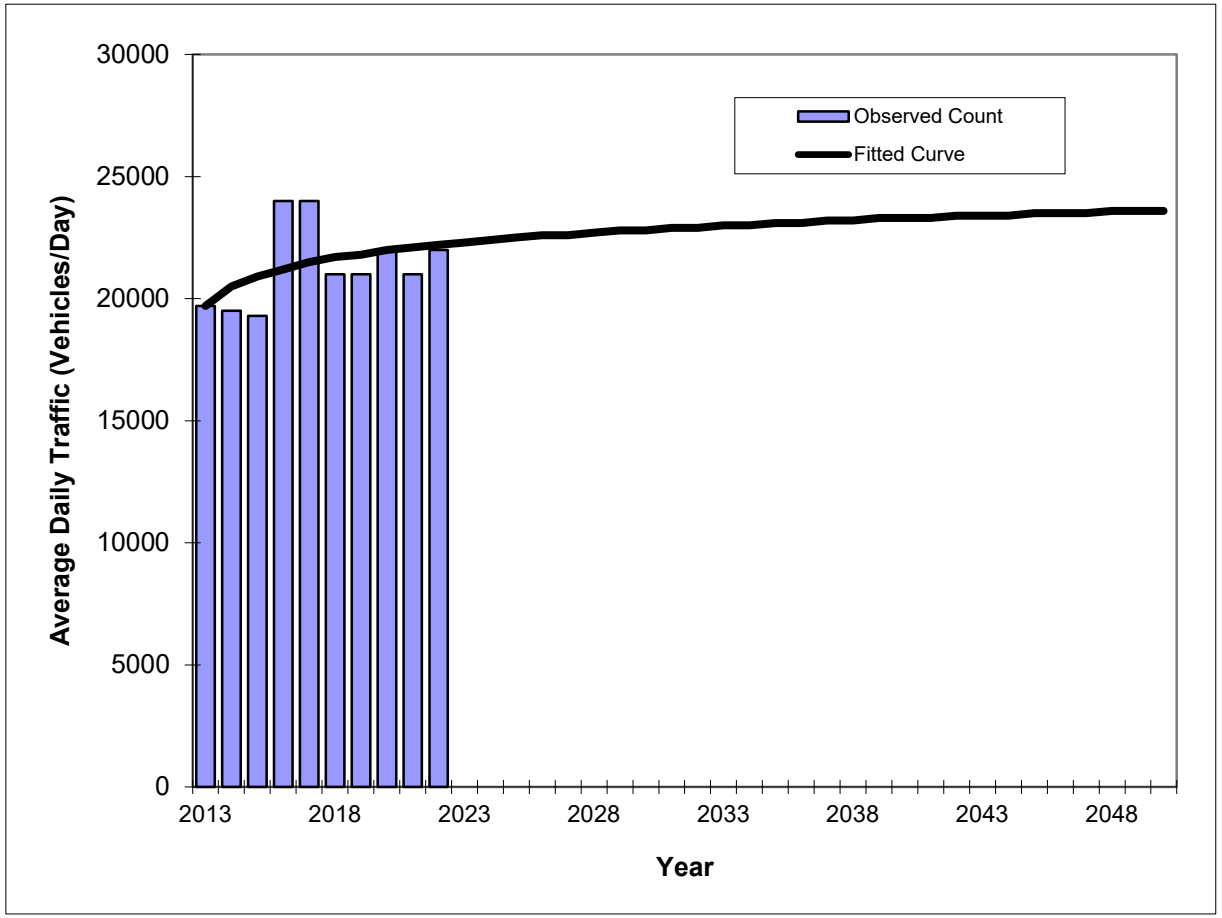
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V03.a

NE 123rd St -- East of Gas Station Access

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	8608
Highway:	NE 123rd St



Year	Traffic (ADT/AADT) Count*	Trend**
2013	19700	19700
2014	19500	20500
2015	19300	20900
2016	24000	21200
2017	24000	21500
2018	21000	21700
2019	21000	21800
2020	22000	22000
2021	21000	22100
2022	22000	22200
2030 Opening Year Trend		
2030	N/A	22800
2040 Mid-Year Trend		
2040	N/A	23300
2050 Design Year Trend		
2050	N/A	23600
TRANPLAN Forecasts/Trends		

Trend R-squared:	21.63%
Compounded Annual Historic Growth Rate:	1.34%
Compounded Growth Rate (2022 to Design Year):	0.22%
Printed:	23-May-23

Decaying Exponential Growth Option

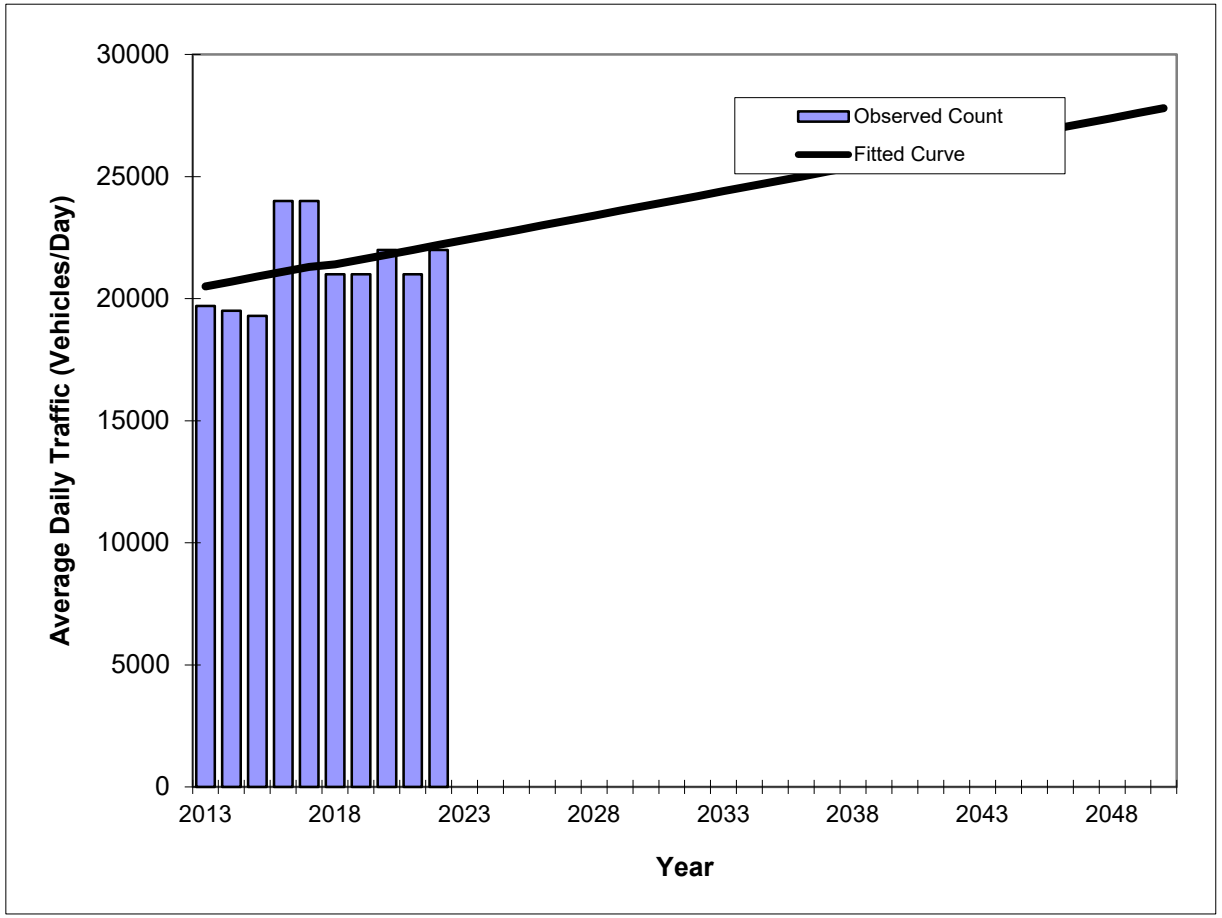
***Axle-Adjusted**

Traffic Trends - V03.a

NE 123rd St -- East of Gas Station Access

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	8608
Highway:	NE 123rd St



Year	Traffic (ADT/AADT) Count*	Trend**
2013	19700	20500
2014	19500	20700
2015	19300	20900
2016	24000	21100
2017	24000	21300
2018	21000	21400
2019	21000	21600
2020	22000	21800
2021	21000	22000
2022	22000	22200
2030 Opening Year Trend		
2030	N/A	23800
2040 Mid-Year Trend		
2040	N/A	25800
2050 Design Year Trend		
2050	N/A	27800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	198
Trend R-squared:	12.65%
Trend Annual Historic Growth Rate:	0.92%
Trend Growth Rate (2022 to Design Year):	0.90%
Printed:	23-May-23

Straight Line Growth Option

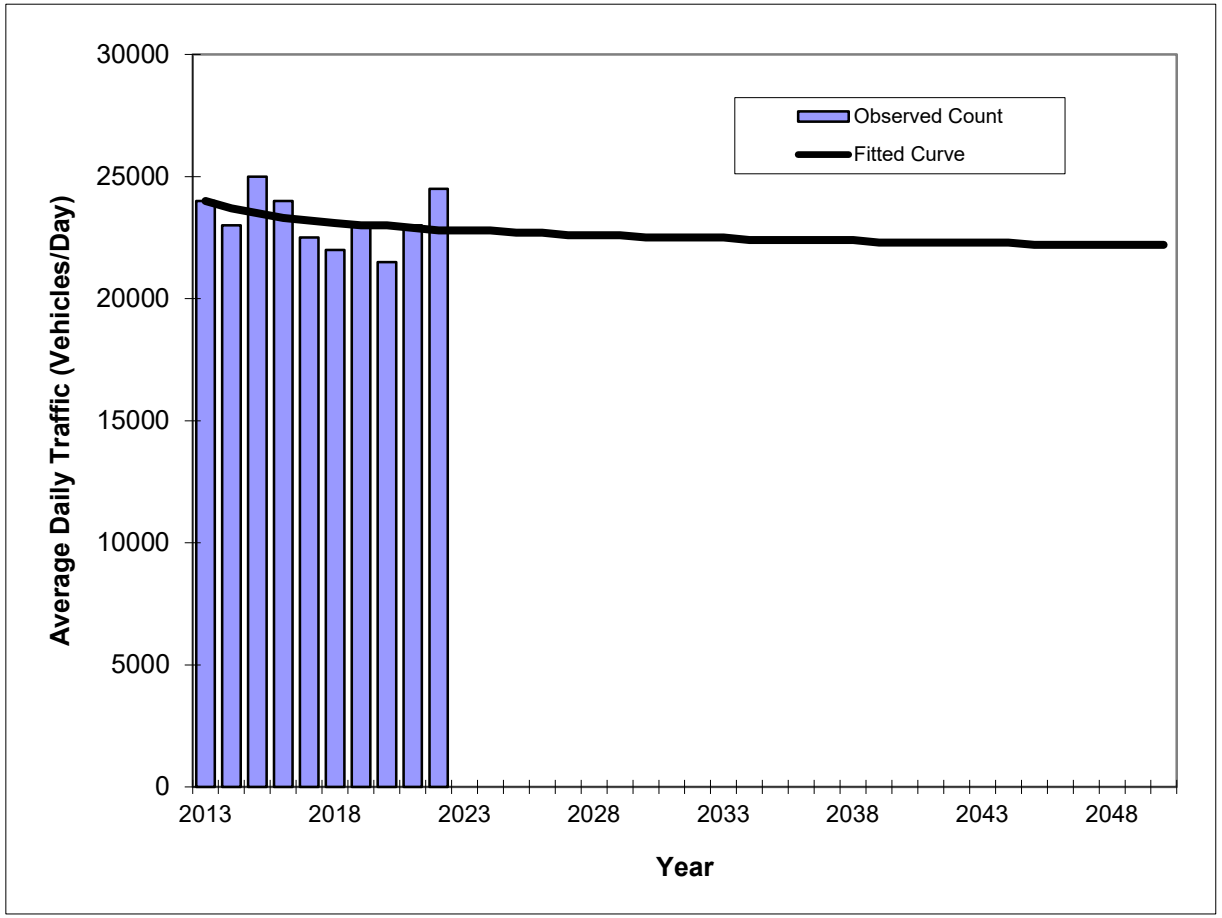
***Axle-Adjusted**

Traffic Trends - V03.a

NE 123rd St -- West of Bayshore Dr

FIN#	1234
Location	2

County:	Miami-Dade (87)
Station #:	1023
Highway:	NE 123rd St



Year	Traffic (ADT/AADT) Count*	Trend**
2013	24000	24000
2014	23000	23700
2015	25000	23500
2016	24000	23300
2017	22500	23200
2018	22000	23100
2019	23000	23000
2020	21500	23000
2021	23000	22900
2022	24500	22800
2030 Opening Year Trend		
2030	N/A	22500
2040 Mid-Year Trend		
2040	N/A	22300
2050 Design Year Trend		
2050	N/A	22200
TRANPLAN Forecasts/Trends		

Trend R-squared:	11.20%
Compounded Annual Historic Growth Rate:	-0.57%
Compounded Growth Rate (2022 to Design Year):	-0.10%
Printed:	23-May-23

Decaying Exponential Growth Option

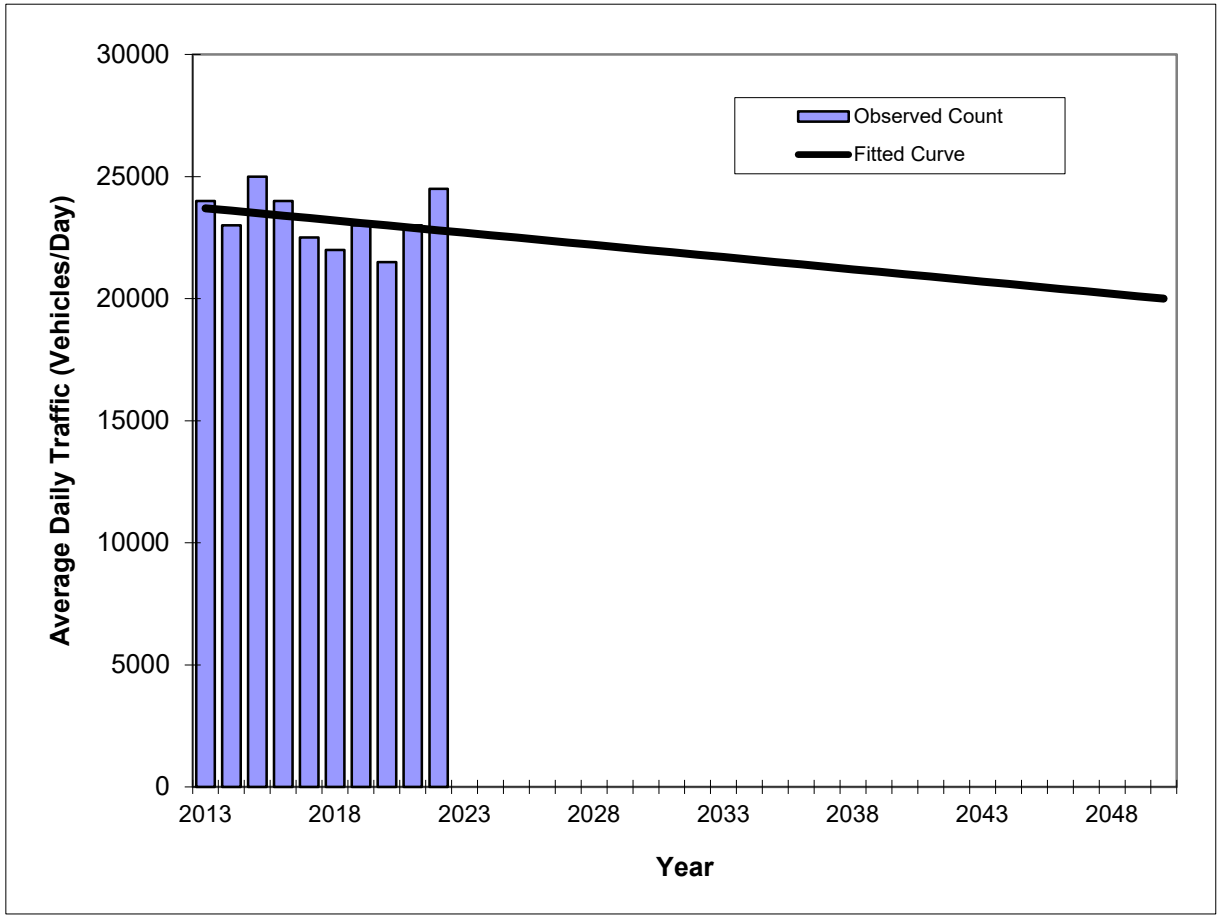
***Axle-Adjusted**

Traffic Trends - V03.a

NE 123rd St -- West of Bayshore Dr

FIN#	1234
Location	2

County:	Miami-Dade (87)
Station #:	1023
Highway:	NE 123rd St



Year	Traffic (ADT/AADT) Count*	Trend**
2013	24000	23700
2014	23000	23600
2015	25000	23500
2016	24000	23400
2017	22500	23300
2018	22000	23200
2019	23000	23100
2020	21500	23000
2021	23000	22900
2022	24500	22800
2030 Opening Year Trend		
2030	N/A	22000
2040 Mid-Year Trend		
2040	N/A	21000
2050 Design Year Trend		
2050	N/A	20000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-100
Trend R-squared:	7.42%
Trend Annual Historic Growth Rate:	-0.42%
Trend Growth Rate (2022 to Design Year):	-0.44%
Printed:	23-May-23

Straight Line Growth Option

***Axle-Adjusted**

College of Liberal Arts and Sciences
Bureau of Economic and Business Research

Florida Population Studies

BEBR
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Projections of Florida Population by County, 2025–2050, with Estimates for 2022

Stefan Rayer, Population Program Director

The Bureau of Economic and Business Research (BEBR) has been making population projections for Florida and its counties since the 1970s. This report presents our most recent set of projections and describes the methodology used to construct those projections. To account for uncertainty regarding future population growth, we publish three series of projections. We believe the medium series is the most likely to provide accurate forecasts in most circumstances, but the low and high series provide an indication of the uncertainty surrounding the medium series. It should be noted that these projections refer solely to permanent residents of Florida; they do not include tourists or seasonal residents.

State Projections

The starting point for the state-level projections was the decennial census count for April 1, 2020. Because the detailed census counts by age and sex are not yet available, we used the BEBR age and sex estimates for April 1, 2020, which were controlled to the Census 2020 count of total population. Projections were made in one-year intervals using a cohort-component methodology in which births, deaths, and migration are projected separately for each age-sex cohort in Florida.

Survival rates were applied by single year of age and sex to project future deaths in the population. These rates were based on Florida Life Tables for 2012–2018, using mortality data published by the Office of Vital Statistics in the Florida Department of Health. We adjusted the survival rates for 2020–2027 to make them consistent with recent mortality trends, and to align the projected deaths with those from the State of Florida's Demographic Estimating Conference (DEC) held February 10, 2023. After 2027, we made small adjustments to the survival rates based on projected changes in survival rates released by the U.S. Census Bureau.

Domestic migration rates by age and sex were based on Public Use Microdata Sample (PUMS) files from the 2011–2019 American Community Survey (ACS) 1-year estimates and 2015–2019 ACS 5-year estimates. We calculated an average of those two sets of migration estimates; projections based on input data from more than one time period tend to be more accurate than those based on a single time period. By combining 1-year ACS estimates, which are more current, with 5-year ACS estimates, which are more stable, we make use of the different strengths of each type of ACS data.

We applied smoothing techniques to the age/sex-specific migration rates to adjust for data irregularities caused by small sample size. The smoothed in- and out-migration rates were weighted to account for recent changes in Florida's population growth rates. Projections of domestic in-migration were made by applying weighted in-migration rates to the projected population of the United States (minus Florida), using the most recent set of national projections produced by the U.S. Census Bureau. Projections of out-migration were made by applying weighted out-migration rates to the Florida population. In both instances, rates were calculated separately for males and females for each age up to 90 and over.

The distribution of foreign immigrants by age and sex was also based on averages of the patterns observed over the same time periods using the same ACS data sets as for domestic migration. Again, we smoothed the estimates to account for irregularities in the age/sex distribution of immigrants.

Projections were made in one-year intervals, with each projection serving as the base for the following projection. Projected in-migration for each one-year interval was added to the survived Florida population at the end of the interval and projected out-migration was subtracted, giving a projection of the population age one and older.

Births were projected by applying age-specific birth rates (adjusted for child mortality) to the projected female population. These birth rates were based on Florida birth data for 2012–2018 published by the Office of Vital Statistics in the Florida Department of Health. They imply a total fertility rate (TFR) of 1.75 births per woman. These rates were reduced in the short-term projections to make them consistent with recent fertility trends, and to align the projected births with those from the February 10, 2023 DEC. The long-term projections imply about 1.80 births per woman.

The medium projections of total population for 2023–2027 were adjusted to be consistent with the state population forecasts for those years produced by the February 10, 2023 DEC. None of the projections after 2027 had any further controls.

In the addition to the medium projections, we also created low and high projections for Florida. The low and high projections for the state should not be considered as low and high growth scenarios; rather, they represent an indication of the uncertainty surrounding the medium projections. The range was based on average projection errors of previous BEBR state-level projections.

In this publication, we provide projections for 2025, 2030, 2035, 2040, 2045, and 2050. State projections for other years are available by request.

County Projections

The cohort-component method is a good way to make population projections at the state level but is not necessarily the best way to make projections at the county level. Many counties in Florida are so small that the number of persons in each age-sex category is inadequate for making reliable cohort-component projections, given the lack of detailed small-area data. Even more important, county growth patterns are so volatile that a single technique based on data from a single time period may provide misleading results. We believe more useful projections of total population can be made by using several different techniques and historical base periods.

For counties, we started with the population estimate constructed by BEBR for April 1, 2022. We made projections for each county using five different techniques in five-year increments. The five techniques were:

1. Linear – the population will change by the same number of persons in each future year as the average annual change during the base period.

2. Exponential – the population will change at the same percentage rate in each future year as the average annual rate during the base period.

3. Share-of-growth – each county's share of state population growth in the future will be the same as its share during the base period.

4. Shift-share – each county's share of the state population will change by the same annual amount in the future as the average annual change during the base period.

5. Constant-share – each county's share of the state population will remain constant at its 2022 level.

For the linear and share-of-growth techniques we used base periods of two, ten, and twenty years (2020–2022, 2012–2022, and 2002–2022), yielding three sets of projections for each technique. For the exponential and shift-share techniques we used base periods of five and fifteen years (2017–2022 and 2007–2022), yielding two sets of projections for each technique. The constant-

share method was based on data for a single year (2022).

This methodology produced eleven projections for each county for each projection year (2025, 2030, 2035, 2040, 2045, and 2050). From these, we calculated five averages: one using all eleven projections (AVE-11), one that excluded the highest and lowest projections (AVE-9), one that excluded the two highest and two lowest projections (AVE-7), one that excluded the three highest and three lowest projections (AVE-5), and one that excluded the four highest and four lowest projections (AVE-3). Based on the results of previous research, we designated the average that excluded the three highest and three lowest projections (AVE-5) as the default technique for each county. We evaluated the resulting projections by comparing them with historical population trends and with the level of population growth projected for the state as a whole. For counties in which AVE-5 did not provide reasonable projections, we selected the technique producing projections that fit most closely with our evaluation criteria.

For 61 counties we selected AVE-5, the average in which the three highest and three lowest projections were excluded. In the remaining six counties, we selected projections made from an individual technique or calculated a custom average (e.g., an average of two individual techniques). These include Baker, Calhoun, Gadsden, Hardee, Jackson, and Monroe counties.

We also made adjustments in several counties to account for changes in institutional populations such as university students and prison inmates. Adjustments were made only in counties in which institutional populations account for a large proportion of total population or where changes in the institutional population have been substantially different than changes in the rest of the population. In the present set of projections, adjustments were made for Alachua, Baker, Bradford, Calhoun, Columbia, DeSoto, Dixie, Franklin, Gadsden, Gilchrist, Glades, Gulf, Hamilton, Hardee, Hendry, Holmes, Jackson, Jefferson, Lafayette, Leon, Liberty, Madison, Okeechobee, Santa Rosa, Sumter, Suwannee, Taylor, Union, Wakulla, Walton, and Washington counties.

Range of County Projections

The techniques described in the previous section were used to construct the medium series of county projections. This is the series we believe will generally provide the most accurate forecasts of future population change. We also constructed low and high projections to provide an indication of the uncertainty surrounding the medium county projections. The low and high projections were based on analyses of past population forecast errors for counties in Florida, broken down by population size and growth rate. They indicate the range into which approximately three-quarters of future county populations will fall, if the future distribution of forecast errors is similar to the past distribution.

The range between the low and high projections varies according to a county's population size in 2022 (less than 30,000; 30,000–199,999; and 200,000 or more), rate of population growth between 2012 and 2022 (less than 7.5%; 7.5–15%; 15–30%; and 30% or more), and the length of the projection horizon. Our studies have found that the distribution of absolute percent errors tends to remain fairly stable over time, leading us to believe that the low and high projections provide a reasonable range of errors for most counties. It must be emphasized, however, that the actual future population of any given county could be below the low projection or above the high projection.

For the medium series of projections, the sum of the county projections equals the state projection for each year (except for slight differences due to rounding). For the low and high series, however, the sum of the county projections does not equal the state projection. The sum of the low projections for counties is lower than the state's low projection and the sum of the high projections for counties is higher than the state's high projection. This occurs because potential variation around the medium projection is greater for counties than for the state as a whole.

Acknowledgement

Funding for these projections was provided by the Florida Legislature.

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Projections of Florida Population by County, 2025–2050, with Estimates for 2022

County and State	Estimates April 1, 2022	Projections, April 1					
		2025	2030	2035	2040	2045	2050
ALACHUA	287,872						
Low		282,800	285,000	284,300	281,500	277,900	274,400
Medium		297,600	311,500	322,100	330,200	336,900	343,000
High		312,500	338,000	360,000	378,900	395,800	411,600
BAKER	27,881						
Low		27,100	27,300	27,000	26,500	25,800	25,000
Medium		29,200	30,900	32,100	33,000	33,700	34,300
High		31,200	34,400	37,100	39,500	41,600	43,500
BAY	184,002						
Low		177,300	175,800	173,400	170,300	166,900	163,700
Medium		188,600	195,400	201,100	205,800	210,000	213,900
High		199,900	214,900	228,700	241,300	253,000	264,200
BRADFORD	27,013						
Low		25,700	25,100	24,500	23,800	23,100	22,400
Medium		27,400	27,900	28,400	28,700	29,100	29,300
High		29,000	30,700	32,300	33,700	35,000	36,200
BREVARD	627,544						
Low		619,000	627,000	626,900	622,200	615,600	609,100
Medium		651,600	685,200	710,300	729,800	746,200	761,300
High		684,200	743,400	793,800	837,500	876,800	913,600
BROWARD	1,969,099						
Low		1,917,300	1,911,600	1,890,100	1,862,600	1,833,400	1,806,000
Medium		2,018,200	2,089,200	2,141,700	2,184,900	2,222,300	2,257,500
High		2,119,100	2,266,800	2,393,400	2,507,100	2,611,200	2,709,100
CALHOUN	13,740						
Low		13,100	12,700	12,300	11,900	11,500	11,200
Medium		14,000	14,100	14,300	14,400	14,500	14,600
High		14,800	15,600	16,300	16,900	17,500	18,000
CHARLOTTE	196,742						
Low		192,100	195,500	195,600	193,400	190,200	186,900
Medium		206,600	220,900	232,100	241,000	248,700	256,000
High		221,100	246,300	268,700	288,600	307,100	325,100
CITRUS	158,009						
Low		153,500	153,600	152,100	149,600	146,600	143,700
Medium		163,300	170,700	176,300	180,800	184,400	187,800
High		173,100	187,800	200,600	212,000	222,200	231,900
CLAY	225,553						
Low		221,200	224,800	225,500	223,700	220,800	217,800
Medium		235,400	249,800	261,400	270,300	277,700	284,700
High		249,500	274,800	297,400	316,900	334,700	351,600
COLLIER	390,912						
Low		385,200	393,200	396,300	394,400	390,300	385,800
Medium		409,800	436,900	459,500	476,600	491,000	504,400
High		434,400	480,500	522,600	558,800	591,600	622,900
COLUMBIA	71,525						
Low		69,600	69,000	68,000	66,800	65,600	64,500
Medium		73,300	75,400	77,000	78,400	79,500	80,600
High		76,900	81,800	86,100	89,900	93,400	96,700
DESOTO	34,748						
Low		33,400	32,600	31,700	30,900	30,100	29,300
Medium		35,100	35,600	35,900	36,200	36,500	36,700
High		36,900	38,600	40,200	41,600	42,900	44,000
DIXIE	16,988						
Low		16,300	16,000	15,600	15,200	14,900	14,500
Medium		17,300	17,800	18,100	18,400	18,700	18,900
High		18,400	19,500	20,600	21,600	22,500	23,400

Projections of Florida Population by County, 2025–2050, with Estimates for 2022

County and State	Estimates April 1, 2022	Projections, April 1					
		2025	2030	2035	2040	2045	2050
DUVAL	1,033,533						
Low		1,013,900	1,028,000	1,026,600	1,014,700	999,100	983,000
Medium		1,078,600	1,142,200	1,190,300	1,226,200	1,256,800	1,285,000
High		1,143,300	1,256,400	1,353,900	1,437,800	1,514,400	1,587,000
ESCAMBIA	329,583						
Low		321,000	319,300	315,300	310,400	305,300	300,500
Medium		337,800	348,900	357,300	364,200	370,000	375,600
High		354,700	378,600	399,300	417,900	434,800	450,700
FLAGLER	124,202						
Low		124,300	130,900	134,400	135,300	135,000	134,100
Medium		133,600	148,000	159,500	168,600	176,500	183,700
High		143,000	165,000	184,600	201,900	218,000	233,300
FRANKLIN	12,729						
Low		12,100	12,000	11,700	11,400	11,000	10,600
Medium		13,200	13,800	14,300	14,700	15,000	15,300
High		14,200	15,600	16,800	17,900	18,900	19,900
GADSDEN	43,967						
Low		42,200	40,800	39,500	38,200	37,100	36,000
Medium		44,400	44,500	44,700	44,800	44,900	45,000
High		46,600	48,300	50,000	51,400	52,800	54,000
GILCHRIST	18,841						
Low		18,200	18,200	18,000	17,700	17,300	16,900
Medium		19,600	20,600	21,400	22,000	22,600	23,100
High		21,000	23,000	24,800	26,400	27,900	29,300
GLADES	12,273						
Low		11,600	11,200	10,800	10,400	10,000	9,700
Medium		12,300	12,400	12,500	12,600	12,600	12,700
High		13,100	13,700	14,200	14,700	15,200	15,700
GULF	15,938						
Low		15,300	15,100	14,900	14,500	14,100	13,700
Medium		16,400	17,100	17,600	18,100	18,500	18,800
High		17,600	19,100	20,400	21,700	22,800	23,900
HAMILTON	13,395						
Low		12,700	12,400	12,000	11,600	11,300	11,000
Medium		13,600	13,700	13,900	14,100	14,200	14,300
High		14,400	15,100	15,800	16,500	17,100	17,700
HARDEE	25,544						
Low		24,100	23,100	22,200	21,300	20,500	19,700
Medium		25,600	25,600	25,700	25,700	25,800	25,800
High		27,100	28,200	29,200	30,200	31,000	31,800
HENDRY	40,633						
Low		39,100	38,700	38,000	37,100	36,100	35,200
Medium		41,600	43,000	44,000	44,800	45,400	46,100
High		44,100	47,300	50,100	52,500	54,800	56,900
HERNANDO	199,207						
Low		194,400	195,800	195,300	193,200	190,200	187,000
Medium		206,800	217,500	226,400	233,500	239,300	244,500
High		219,200	239,300	257,500	273,800	288,300	301,900
HIGHLANDS	103,102						
Low		99,700	98,500	96,900	94,900	92,900	91,100
Medium		104,900	107,600	109,800	111,300	112,600	113,800
High		110,200	116,800	122,600	127,800	132,400	136,600
HILLSBOROUGH	1,520,529						
Low		1,502,000	1,539,600	1,551,900	1,546,300	1,532,200	1,516,200
Medium		1,597,900	1,710,600	1,799,300	1,868,700	1,927,300	1,981,900
High		1,693,800	1,881,700	2,046,700	2,191,000	2,322,400	2,447,700

Projections of Florida Population by County, 2025–2050, with Estimates for 2022

County and State	Estimates April 1, 2022	Projections, April 1 2025	2030	2035	2040	2045	2050
HOLMES	19,784						
Low		18,800	18,100	17,500	16,900	16,300	15,800
Medium		20,000	20,100	20,300	20,400	20,500	20,700
High		21,200	22,200	23,100	24,000	24,800	25,500
INDIAN RIVER	165,559						
Low		160,900	162,700	162,200	159,900	156,700	153,300
Medium		173,000	183,900	192,500	199,300	204,900	210,100
High		185,200	205,000	222,900	238,600	253,000	266,800
JACKSON	48,395						
Low		46,200	44,700	43,300	42,000	40,800	39,700
Medium		48,600	48,800	49,100	49,200	49,400	49,600
High		51,100	53,000	54,800	56,500	58,100	59,500
JEFFERSON	14,923						
Low		14,300	13,900	13,500	13,100	12,700	12,300
Medium		15,200	15,400	15,700	15,800	16,000	16,100
High		16,100	17,000	17,800	18,600	19,300	19,900
LAFAYETTE	7,808						
Low		7,500	7,300	7,100	6,900	6,700	6,600
Medium		8,000	8,100	8,300	8,400	8,500	8,600
High		8,400	9,000	9,400	9,800	10,200	10,600
LAKE	403,857						
Low		402,100	420,300	429,500	431,800	430,300	427,400
Medium		432,300	474,900	509,800	538,100	562,500	585,500
High		462,600	529,500	590,100	644,400	694,700	743,600
LEE	802,178						
Low		801,300	835,000	853,100	858,400	857,300	854,400
Medium		852,500	927,700	989,100	1,037,300	1,078,300	1,116,800
High		903,600	1,020,500	1,125,100	1,216,200	1,299,400	1,379,300
LEON	299,130						
Low		291,400	290,200	287,300	283,200	278,800	274,400
Medium		306,800	317,200	325,600	332,200	337,900	343,000
High		322,100	344,200	363,800	381,200	397,000	411,700
LEVY	44,288						
Low		42,800	42,700	42,200	41,400	40,600	39,700
Medium		45,600	47,400	48,900	50,100	51,100	52,000
High		48,300	52,200	55,600	58,700	61,500	64,200
LIBERTY	7,831						
Low		7,600	7,300	7,000	6,800	6,600	6,400
Medium		8,000	8,100	8,200	8,200	8,300	8,400
High		8,500	8,900	9,300	9,700	10,000	10,300
MADISON	18,438						
Low		17,500	16,900	16,200	15,700	15,100	14,600
Medium		18,700	18,700	18,800	18,900	19,000	19,100
High		19,800	20,600	21,400	22,200	22,900	23,600
MANATEE	421,768						
Low		420,900	437,700	446,200	448,100	447,000	445,100
Medium		447,800	486,300	517,300	541,600	562,300	581,800
High		474,600	534,900	588,500	635,000	677,600	718,500
MARION	391,983						
Low		385,500	392,900	394,700	392,100	387,600	382,700
Medium		410,100	436,600	457,600	473,900	487,600	500,300
High		434,700	480,200	520,600	555,600	587,500	617,900
MARTIN	161,655						
Low		156,000	154,900	152,800	149,900	146,800	143,700
Medium		165,900	172,100	177,200	181,200	184,600	187,800
High		175,900	189,300	201,500	212,400	222,400	232,000

Projections of Florida Population by County, 2025–2050, with Estimates for 2022

County and State	Estimates April 1, 2022	Projections, April 1 2025	2030	2035	2040	2045	2050
MIAMI-DADE	2,757,592						
Low		2,685,500	2,679,300	2,657,200	2,623,100	2,585,200	2,549,500
Medium		2,826,900	2,928,200	3,010,900	3,076,900	3,133,600	3,186,900
High		2,968,200	3,177,100	3,364,700	3,530,800	3,681,900	3,824,300
MONROE	83,961						
Low		80,300	78,400	75,900	73,200	70,400	67,800
Medium		85,400	87,100	88,000	88,400	88,600	88,700
High		90,500	95,800	100,100	103,600	106,800	109,500
NASSAU	95,809						
Low		95,100	98,900	100,800	101,300	100,800	99,900
Medium		102,200	111,800	119,600	126,200	131,700	136,900
High		109,400	124,700	138,500	151,100	162,700	173,900
OKALOOSA	215,751						
Low		209,800	210,300	208,500	205,000	200,800	196,600
Medium		223,200	233,600	241,700	247,700	252,500	257,000
High		236,600	257,000	275,000	290,400	304,300	317,400
OKEECHOBEE	39,385						
Low		37,700	36,600	35,600	34,500	33,600	32,700
Medium		39,700	40,000	40,300	40,500	40,700	40,900
High		41,700	43,400	45,000	46,500	47,800	49,000
ORANGE	1,481,321						
Low		1,471,600	1,519,700	1,539,600	1,540,400	1,531,600	1,520,400
Medium		1,565,600	1,688,500	1,785,000	1,861,500	1,926,600	1,987,400
High		1,659,500	1,857,400	2,030,500	2,182,600	2,321,500	2,454,400
OSCEOLA	424,946						
Low		435,700	473,500	495,300	506,900	512,300	515,200
Medium		468,500	535,000	587,900	631,600	669,600	705,800
High		501,200	596,500	680,500	756,400	827,000	896,300
PALM BEACH	1,518,152						
Low		1,489,900	1,502,300	1,498,400	1,484,600	1,465,900	1,447,400
Medium		1,568,300	1,641,900	1,698,000	1,741,500	1,776,900	1,809,200
High		1,646,700	1,781,400	1,897,500	1,998,300	2,087,800	2,171,100
PASCO	592,669						
Low		590,800	612,500	624,300	628,100	626,800	624,100
Medium		628,500	680,600	723,900	759,000	788,400	815,800
High		666,200	748,700	823,400	889,900	950,000	1,007,500
PINELLAS	972,852						
Low		947,200	935,000	921,000	905,800	891,200	878,100
Medium		986,700	1,005,400	1,020,500	1,032,300	1,042,300	1,051,600
High		1,026,100	1,075,700	1,120,000	1,158,800	1,193,400	1,225,100
POLK	770,019						
Low		768,800	799,500	816,000	822,400	821,900	819,200
Medium		817,800	888,400	946,100	993,900	1,033,800	1,070,900
High		866,900	977,200	1,076,200	1,165,300	1,245,700	1,322,500
PUTNAM	74,249						
Low		71,000	68,900	67,000	65,100	63,300	61,600
Medium		74,700	75,300	75,900	76,300	76,700	77,000
High		78,400	81,800	84,800	87,600	90,100	92,400
ST. JOHNS	296,919						
Low		303,700	329,000	343,700	351,400	354,900	356,700
Medium		326,600	371,700	408,000	437,800	463,900	488,600
High		349,400	414,500	472,200	524,300	572,900	620,500
ST. LUCIE	350,518						
Low		350,800	366,400	374,700	378,100	378,300	377,500
Medium		373,200	407,100	434,500	457,000	475,800	493,500
High		395,600	447,800	494,200	535,800	573,400	609,400

Projections of Florida Population by County, 2025–2050, with Estimates for 2022

County and State	Estimates April 1, 2022	Projections, April 1					
		2025	2030	2035	2040	2045	2050
SANTA ROSA	196,834						
Low		194,000	200,000	202,400	201,900	199,800	197,200
Medium		208,600	226,000	240,300	251,500	261,200	270,200
High		223,200	252,000	278,100	301,200	322,500	343,100
SARASOTA	452,378						
Low		444,300	451,100	452,300	449,400	444,400	438,800
Medium		472,600	501,200	524,400	543,100	559,000	573,600
High		501,000	551,300	596,500	636,800	673,600	708,400
SEMINOLE	484,054						
Low		475,300	478,900	478,200	474,100	468,500	463,000
Medium		500,300	523,400	541,900	556,100	567,900	578,800
High		525,400	567,800	605,600	638,100	667,300	694,600
SUMTER	141,420						
Low		144,000	154,900	161,200	163,900	164,300	163,800
Medium		156,500	178,000	196,000	210,700	223,600	235,700
High		169,000	201,200	230,800	257,600	282,800	307,600
SUWANNEE	44,688						
Low		43,300	43,000	42,300	41,500	40,700	39,900
Medium		45,600	46,900	48,000	48,700	49,300	49,800
High		47,900	50,900	53,600	55,900	57,900	59,800
TAYLOR	21,375						
Low		20,400	19,800	19,200	18,500	18,000	17,400
Medium		21,700	22,000	22,200	22,400	22,600	22,800
High		23,000	24,200	25,300	26,300	27,200	28,100
UNION	15,550						
Low		15,200	14,900	14,600	14,200	13,800	13,400
Medium		16,300	16,900	17,300	17,700	18,100	18,300
High		17,400	18,800	20,100	21,200	22,300	23,300
VOLUSIA	572,815						
Low		565,000	572,200	571,500	566,200	559,500	553,100
Medium		594,700	625,300	647,600	664,200	678,200	691,400
High		624,500	678,500	723,700	762,100	796,900	829,700
WAKULLA	35,169						
Low		34,300	34,800	34,700	34,300	33,700	33,100
Medium		36,900	39,300	41,200	42,800	44,100	45,300
High		39,400	43,800	47,700	51,200	54,500	57,500
WALTON	79,544						
Low		79,300	83,300	85,200	85,600	85,000	84,100
Medium		86,200	95,700	103,600	110,100	115,700	121,000
High		93,100	108,200	122,000	134,600	146,300	157,900
WASHINGTON	25,461						
Low		24,400	24,000	23,500	22,900	22,200	21,600
Medium		26,000	26,700	27,200	27,600	28,000	28,300
High		27,600	29,400	31,000	32,400	33,700	34,900
FLORIDA	22,276,132						
Low		22,754,400	23,604,900	24,135,000	24,414,800	24,543,000	24,599,200
Medium		23,218,800	24,588,500	25,675,600	26,537,900	27,270,000	27,953,600
High		23,683,200	25,572,000	27,216,100	28,660,900	29,997,000	31,308,000

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Technical Memorandum

Projections of Florida Population by County, 2020-2070

Prepared for

Forecasting and Trends Office

Florida Department of Transportation

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Introduction

Long-term population projections are needed to support the statewide transportation planning studies such as the Florida Transportation Plan (FTP) and the Multi-use Corridors of Regional Economic Significance (M-CORES) program. This Technical Memorandum describes the methodology used to develop Florida's population projections for the next 50 years from 2020 to 2070 in five-year increments for all 67 counties and presents the results based on the methodology.

The Bureau of Economic and Business Research (BEBR) at the University of Florida has been making population projections for Florida and its counties since the 1970s. The latest report was published in January 2020 and it contains the most recent set of projections from 2020 to 2045. To account for uncertainty regarding future population growth, BEBR publishes three series of projections: low, medium, and high. The medium series is typically considered more accurate, while the low and high series indicate the uncertainty surrounding the medium series. It should be noted that these projections include only permanent residents. Tourists or seasonal residents are not included.

The methodology used by BEBR to develop 2020-2045 population projections has been used for many years and has proven to be both practical and reliable. The medium series of BEBR projections were adopted for years up to 2045. For years from 2050 to 2070, population projections were developed using the BEBR methodology. However, to ensure that the BEBR methodology was properly applied, a two-step process was followed. The first step was to replicate the BEBR 2020-2045 population projections with the same methodology and data sources. The second step was to extend the population projections an additional 20 years from 2050 to 2070 with necessary adjustments and reasonableness checks. The following sections describe in more detail the two-step process.

Step 1 – BEBR Methodology and Replicating 2020-2045 Population Projections

State Projections

The starting point for the state-level projections was the April 1, 2010 census population count by age, sex, race, and Hispanic origin, as adjusted by the National Center for Health Statistics (NCHS) in the Vintage 2017 bridged race population estimates. Projections were made in one-year intervals using a cohort-component methodology in which births, deaths, and migration are projected separately for each age-sex cohort in Florida for non-Hispanic whites, non-Hispanic nonwhites, and Hispanics.

Three different sets of assumptions are made to provide low, medium, and high series of projections. Although the low and high series do not provide absolute bounds on future population change, they provide a reasonable range in which Florida's future population is likely to fall. The medium projections of total population for 2020-2024 were adjusted to be consistent with the state population forecasts for those years produced by the State of Florida's Demographic Estimating Conference (DEC) held on December 3, 2019. None of the projections after 2024 had any further adjustments.

BEBR indicates that medium series is the most likely to provide accurate forecasts in most circumstances. Therefore, the medium projections of state total population for 2020-2045 were directly used when replicating projections of county population for 2020-2045.

County Projections

The cohort-component method is appropriate to make population projections at the state level but is not sufficient to make projections at the county level. Many counties in Florida have a population so small that the number of persons in each age-sex category is inadequate for making reliable cohort-component projections, given the lack of detailed small-area data. In addition, county growth patterns are often volatile that a single technique based on data from a single time period may produce misleading results. As a result, BEBR recommends using several different techniques and historical base periods to project total populations at the county level.

BEBR started with the population estimates constructed for April 1, 2019, and made projections for each county using the following five (5) different techniques:

- **Linear –** the population will change by the same number of persons in each future year as the average annual change during the base period.
- **Exponential –** the population will change at the same percentage rate in each future year as the average annual rate during the base period.
- **Share-of-growth –** each county's share of state population growth in the future will be the same as its share during the base period.
- **Shift-share –** each county's share of the state population will change by the same annual amount in the future as the average annual change during the base period.
- **Constant-share –** each county's share of the state population will remain constant at its 2019 level.

For the linear and share-of-growth techniques, BEBR used base periods of two, ten, and twenty years (2017–2019, 2009–2019, and 1999–2019), yielding three sets of projections for each

technique. For the exponential and shift-share techniques, BEBR used base periods of five and fifteen years (2014–2019 and 2004–2019), yielding two sets of projections for each technique. The constant-share method was based on data for a single year (2019). **Table 1** shows a summary of the techniques used, the corresponding base period(s), and the number of population projections created for each county for each projection year.

Table 1 Population Projection Techniques and Base Periods

Technique	Base Period	Number of Projections
Linear	2017–2019 (two-year period) 2009–2019 (ten-year period) 1999–2019 (twenty-year period)	3
Exponential	2014–2019 (five-year period) 2004–2019 (fifteen-year period)	2
Share-of-growth	2017–2019 (two-year period) 2009–2019 (ten-year period) 1999–2019 (twenty-year period)	3
Shift-share	2014–2019 (five-year period) 2004–2019 (fifteen-year period)	2
Constant share	2019 (a single year)	1

BEBR's methodology produced eleven projections for each county for each projection year (2020, 2025, 2030, 2035, 2040 and 2045). From these, five averages were calculated: one using all eleven projections (AVE–11), one that excluded the highest and lowest projections (AVE–9), one that excluded the two highest and two lowest projections (AVE–7), one that excluded the three highest and three lowest projections (AVE–5), and one that excluded the four highest and four lowest projections (AVE–3).

BEBR selected AVE–5 for 66 counties, the average in which the three highest and three lowest projections were excluded. For Monroe County, BEBR selected an average of projections made with the exponential technique with a base period of five years and the linear technique with a base period of two years.

In addition, BEBR made manual adjustments to the projections in six counties in the Florida Panhandle to account for estimated population losses or slowdowns in growth due to the impacts of Hurricane Michael (Bay, Calhoun, Gadsden, Gulf, Jackson, and Liberty counties). Manual adjustments were also made in 31 counties to account for changes in institutional populations such as university students and prison inmates. Moreover, the sum of county projections equals the state projection for each year, which indicates additional adjustments.

Because no detailed information about the BEBR manual adjustments was available, no manual adjustments were made to the initial projections. Then the differences between initial projections and the BEBR projections were examined, which can reflect the manual adjustments made by BEBR. In general, the differences between initial and corresponding BEBR projections for a given county increase as the projection year increases and the maximum percentage differences for all counties fall in the year 2045. For counties that are in the adjustment list in BEBR report, if the maximum percentage difference is over 5%, a regression model was used to estimate manual adjustments made by BEBR (hereafter referred to as Type 1 adjustments). For instance, Bay County's 2019 population estimate is heavily impacted by Hurricane Michael. Therefore, the initial

projection based on the 2019 population estimate is much lower than BEBR's projection with a maximum percentage difference of 20%. Type 1 adjustments were made for 18 counties.

Table 2 presents population projections with Type 1 adjustments for 2020-2045. **Table 3** shows the percent differences between BEBR's projections and the projections in **Table 2.** In most cases, the differences between the two sets are below 3.0%, which indicates that our method can replicate the original BEBR population projections reasonably well and can be extended to develop future projections from 2050 to 2070 that are consistent with the 2020-2045 projections.

Table 2 Projections of Florida Population by County, 2020-2045

Population Projections (After Type 1 Adjustments)

County	2020	2025	2030	2035	2040	2045
Alachua*	269,600	281,800	291,700	300,000	307,200	313,500
Baker*	28,500	29,900	31,000	32,100	32,900	33,600
Bay*	175,400	185,500	193,600	200,400	206,200	210,800
Bradford*	28,800	29,200	29,500	29,800	30,100	30,300
Brevard	602,700	637,200	666,900	694,200	720,000	746,100
Broward	1,942,000	2,039,000	2,122,200	2,198,600	2,273,200	2,347,800
Calhoun*	14,900	15,400	15,800	16,200	16,500	16,800
Charlotte	184,900	197,400	209,000	219,600	230,400	241,000
Citrus	149,400	156,700	163,600	169,600	175,200	180,600
Clay	218,900	236,700	253,400	268,100	282,000	295,500
Collier	384,900	421,500	454,800	485,900	513,300	540,500
Columbia*	70,500	73,500	76,000	78,000	79,700	81,200
DeSoto	36,300	37,300	38,200	38,900	39,700	40,500
Dixie*	16,700	16,900	17,000	17,100	17,100	17,100
Duval	986,100	1,051,700	1,107,500	1,160,400	1,208,600	1,254,100
Escambia	324,300	336,300	346,400	355,000	362,600	371,000
Flagler	113,300	126,500	139,400	151,200	162,800	174,000
Franklin*	12,200	12,500	12,800	13,000	13,300	13,400
Gadsden*	46,400	46,900	47,100	47,300	47,300	47,400
Gilchrist	18,000	18,900	19,800	20,500	21,200	21,900
Glades	13,200	13,500	13,800	14,000	14,200	14,400
Gulf*	14,900	15,200	15,600	15,900	16,300	16,800
Hamilton	14,600	14,700	14,600	14,600	14,600	14,600
Hardee	27,400	27,300	27,200	27,100	27,100	27,000
Hendry	40,500	42,000	43,200	44,100	45,000	45,800
Hernando	191,400	206,100	219,500	231,400	241,900	251,800
Highlands	104,200	107,700	110,800	113,400	115,700	118,200
Hillsborough	1,475,300	1,614,100	1,739,300	1,843,000	1,945,200	2,048,100
Holmes	20,100	20,100	20,100	20,000	19,900	19,900

Population Projections (After Type 1 Adjustments)						
County	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**
Indian River	157,700	169,800	180,800	190,400	199,100	207,300
Jackson*	47,100	47,600	47,800	48,000	48,100	48,300
Jefferson	14,800	15,100	15,300	15,500	15,600	15,800
Lafayette*	8,700	9,100	9,400	9,700	9,900	10,100
Lake	366,600	410,100	452,700	492,200	528,000	563,400
Lee	752,800	837,000	911,800	980,300	1,044,800	1,109,600
Leon	300,000	315,200	329,400	342,400	354,700	367,200
Levy	41,600	42,600	43,600	44,400	45,100	45,700
Liberty	8,800	9,200	9,500	9,700	10,000	10,200
Madison	19,600	19,800	20,000	20,200	20,400	20,600
Manatee	396,100	434,300	469,000	502,100	535,100	568,300
Marion	365,800	392,000	416,400	437,600	457,100	474,700
Martin	160,700	169,600	177,700	184,800	192,000	199,100
Miami-Dade	2,851,700	3,026,900	3,185,800	3,339,800	3,484,200	3,616,800
Monroe	76,300	76,600	77,000	77,400	77,800	78,300
Nassau	87,000	95,900	104,200	111,600	118,400	124,900
Okaloosa	204,000	214,200	223,900	232,700	241,200	249,500
Okeechobee	42,100	43,600	44,800	45,800	47,000	48,000
Orange	1,419,700	1,575,300	1,714,700	1,835,200	1,953,900	2,074,200
Osceola	385,200	453,200	517,300	574,400	631,100	689,500
Palm Beach	1,466,000	1,548,200	1,623,500	1,694,600	1,763,800	1,826,900
Pasco	537,200	586,100	630,000	668,700	704,500	738,500
Pinellas	985,500	1,013,500	1,036,700	1,055,300	1,074,200	1,093,800
Polk	704,300	766,900	823,100	873,000	919,200	963,200
Putnam	73,400	73,400	73,100	73,100	73,000	73,000
St. Johns	264,000	309,900	352,600	390,300	427,600	466,400
St. Lucie	315,100	343,000	369,800	394,300	416,600	437,900
Santa Rosa*	183,000	199,300	213,400	225,200	235,300	244,100
Sarasota	433,500	464,100	490,600	516,200	541,900	567,400
Seminole	478,800	510,200	536,500	561,600	585,500	607,300
Sumter*	132,700	152,000	169,800	186,500	199,800	211,000
Suwannee*	45,900	48,300	50,400	52,100	53,500	54,700
Taylor	22,500	23,100	23,500	23,800	24,100	24,400
Union	15,500	15,700	15,900	15,900	15,900	15,900
Volusia	545,300	572,300	595,400	617,500	638,400	658,500
Wakulla*	33,300	35,400	37,100	38,600	39,600	40,600
Walton*	72,100	81,500	89,600	96,200	102,300	107,700
Washington*	25,200	25,900	26,500	27,000	27,300	27,700

* Type 1 adjustments were made to this county's projections.

Table 3 Percent Errors of Florida Population by County, 2020-2045

Percent Errors (Compared with BEBR Projections)

County	2020	2025	2030	2035	2040	2045
Alachua*	-0.1%	0.1%	0.0%	-0.1%	-0.1%	0.1%
Baker*	0.0%	0.0%	-0.3%	0.3%	0.0%	0.0%
Bay*	0.1%	-0.1%	-0.1%	0.0%	0.1%	0.0%
Bradford*	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
Brevard	0.0%	-0.1%	0.3%	0.9%	1.8%	2.8%
Broward	0.0%	0.0%	0.3%	0.9%	1.8%	2.7%
Calhoun*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Charlotte	0.1%	-0.4%	0.1%	1.0%	2.3%	3.7%
Citrus	0.0%	-0.3%	0.0%	0.4%	1.0%	1.9%
Clay	0.0%	0.0%	0.4%	1.2%	2.3%	3.6%
Collier	0.1%	0.1%	0.7%	1.8%	3.0%	4.5%
Columbia*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DeSoto	0.0%	-0.5%	-0.3%	0.0%	0.5%	1.5%
Dixie*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Duval	0.1%	0.0%	0.3%	1.0%	2.0%	3.1%
Escambia	0.1%	0.0%	0.2%	0.6%	0.9%	1.6%
Flagler	-0.1%	0.0%	0.8%	1.9%	3.5%	5.3%
Franklin*	0.0%	0.0%	0.0%	-0.8%	0.8%	0.0%
Gadsden*	0.2%	-0.2%	0.0%	0.2%	0.0%	0.0%
Gilchrist	0.0%	0.0%	0.5%	0.5%	1.4%	2.3%
Glades	0.0%	0.0%	0.7%	0.7%	0.7%	1.4%
Gulf*	1.4%	-0.7%	-0.6%	-0.6%	-0.6%	1.2%
Hamilton	0.0%	-0.7%	-2.0%	-2.0%	-2.0%	-2.7%
Hardee	-0.7%	-1.1%	-1.8%	-2.5%	-2.5%	-3.2%
Hendry	0.0%	-0.5%	-0.7%	-0.9%	-1.1%	-1.3%
Hernando	-0.1%	0.0%	0.3%	1.1%	2.0%	3.0%
Highlands	0.0%	-0.1%	0.0%	0.2%	0.4%	0.9%
Hillsborough	0.1%	0.2%	1.0%	1.9%	3.0%	4.5%
Holmes	-0.5%	-1.0%	-1.5%	-2.0%	-2.9%	-2.9%
Indian River	0.1%	-0.1%	0.3%	1.2%	2.1%	3.2%
Jackson*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Jefferson	0.0%	0.0%	0.0%	0.6%	0.0%	0.6%
Lafayette*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lake	0.0%	-0.2%	0.5%	2.0%	3.5%	5.3%
Lee	0.0%	0.2%	0.8%	2.0%	3.4%	5.0%
Leon	0.1%	0.1%	0.6%	1.4%	2.5%	3.8%
Levy	0.0%	-0.2%	0.0%	0.2%	0.4%	0.4%
Liberty	0.0%	1.1%	1.1%	1.0%	1.0%	1.0%
Madison	2.1%	1.5%	1.5%	2.0%	2.0%	2.5%
Manatee	0.1%	-0.1%	0.5%	1.7%	3.1%	4.8%

Percent Errors (Compared with BEBR Projections)

County	2020	2025	2030	2035	2040	2045
Marion	0.0%	0.0%	0.4%	1.1%	2.1%	3.0%
Martin	0.1%	0.1%	0.5%	1.0%	2.0%	3.2%
Miami-Dade	0.1%	0.1%	0.6%	1.4%	2.5%	3.6%
Monroe	0.0%	0.1%	0.3%	0.4%	0.5%	0.8%
Nassau	0.1%	0.1%	1.1%	2.3%	3.6%	5.0%
Okaloosa	0.1%	0.0%	0.3%	1.0%	1.9%	3.0%
Okeechobee	0.0%	0.5%	0.9%	1.1%	2.2%	2.8%
Orange	0.1%	0.1%	1.1%	2.1%	3.5%	5.2%
Osceola	0.1%	0.2%	1.4%	2.8%	4.8%	7.3%
Palm Beach	0.0%	0.1%	0.4%	1.1%	2.0%	2.9%
Pasco	0.0%	0.0%	0.5%	1.4%	2.6%	3.9%
Pinellas	0.1%	-0.1%	0.1%	0.4%	0.7%	1.2%
Polk	0.0%	0.1%	0.7%	1.7%	2.9%	4.2%
Putnam	0.1%	-0.3%	-0.8%	-1.1%	-1.5%	-1.7%
St. Johns	0.0%	0.2%	1.4%	2.9%	4.8%	7.2%
St. Lucie	0.0%	0.0%	0.6%	1.8%	3.0%	4.4%
Santa Rosa*	0.1%	-0.2%	0.0%	0.0%	0.1%	0.0%
Sarasota	0.0%	-0.2%	0.2%	1.1%	2.4%	3.8%
Seminole	0.0%	-0.1%	0.2%	0.8%	1.9%	2.9%
Sumter*	0.3%	-0.2%	-0.6%	0.4%	0.4%	-0.2%
Suwannee*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taylor	-0.4%	-0.4%	-0.4%	-0.8%	-0.8%	-1.2%
Union	0.0%	0.6%	1.9%	1.3%	1.3%	1.3%
Volusia	0.0%	-0.3%	-0.1%	0.6%	1.4%	2.1%
Wakulla*	0.0%	0.0%	-0.3%	0.3%	0.0%	0.0%
Walton*	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Washington*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

* Type 1 adjustments were made to this county's projections.

Step 2 – Projections of Florida 2050-2070 Population by County

State Projections

Although the cohort-component method is a better way to make population projections at the state level, the information needed to apply the method such as birth rates, death rates, and migration rates for the distant future years from 2050 to 2070 is limited. A simplified method was used to develop state projections. Three different techniques were explored:

- **Linear –** the population will change by the same number of persons in each future year as the average annual change during the base period.
- **Exponential –** the population will change at the same percentage rate in each future year as the average annual rate during the base period.
- **Logarithmic –** the population will rapidly increase in size until it reaches a certain point, called the carrying capacity. At this point, the resources are not enough to support the population.

For all three techniques, the base periods of forty-seven years (1999-2045) were used to develop the state-level projections. The population data for 1999 – 2019 in one-year increments were obtained from the annual release of Florida Estimates of Population Report by BEBR, while the population data for 2020 – 2045 in five-year increments were obtained from the BEBR Projections of Florida Population by County published in January 2020. As mentioned earlier, the medium projections were used as recommended by BEBR.

This method produced three projections for each projection year (**Table 4).** All three projection methods produced high R-squared values. The linear technique produced the most reasonable state-level projections compared to historical trends, and, therefore, linear projection results were used as the basis for county-level population projections.

Table 4 State Projections by Projection Technique, 2050-2070

Projection Technique	2050	2055	2060	2065	2070	R^2
Linear	29,108,600	30,397,600	31,686,600	32,975,600	34,264,600	0.99
Exponential	26,782,800	28,481,700	30,288,300	32,209,500	34,252,600	0.98
Logarithmic	29,064,500	30,333,300	31,599,000	32,861,700	34,121,300	0.99

County Projections

The county-level population projections for 2050-2070 followed the same methodology as described in the Step 1 section. Five (5) techniques (Linear, Exponential, Share-of-growth, and Constant Share) were used to produce eleven projections. Five (5) averages (AVE-11, AVE-9, AVE-7, AVE-5, and AVE-3) were calculated and different averages were used for different counties. Type 1 adjustments were applied for the same 18 counties as shown in **Table 3.** After applying Type 1 adjustments, the difference between the sum of all county projections and the state projection for each projection year was allocated to counties that did not receive Type 1 adjustments (hereafter referred to as Type 2 adjustments). Type 2 adjustments were allocated in proportion to the difference between the county's unadjusted projection and BEBR projection for projection year 2045. Finally, minor adjustments were made to eight (8) counties (Dixie, Gadsden, Hardee, Hamilton, Holmes, Jackson, Union, and Volusia)

whose projections were not consistent with their historical growth patterns prior to 2019 or BEBR's projected growth trends between 2020 and 2045. Like BEBR projections, the sum of FDOT county projections for each projection year equals the corresponding state projections (except for slight differences due to rounding). The final projected population by county for 2050-2070 is presented in **Table 5** together with the BEBR projected populations for 2020-2045.

Table 5 Projections of Florida Population by County (2020–2070 with Estimates for 2019)

County	Census	Estimates (BEBR)	Projections (BEBR)						Projections (FDOT)				
	2010	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
Alachua	247,336	267,306	269,800	281,500	291,600	300,200	307,400	313,300	322,000	330,000	337,700	345,000	351,900
Baker	27,115	28,249	28,500	29,900	31,100	32,000	32,900	33,600	34,600	35,600	36,500	37,400	38,200
Bay	168,852	167,283	175,300	185,700	193,700	200,300	206,000	210,900	215,000	218,300	220,600	222,000	223,400
Bradford	28,520	28,682	28,800	29,200	29,500	29,800	30,000	30,300	30,700	31,000	31,400	31,700	32,100
Brevard	543,376	594,469	602,400	637,600	665,000	687,900	707,400	726,000	766,500	794,000	821,300	848,700	875,900
Broward	1,748,066	1,919,644	1,941,200	2,039,000	2,115,200	2,179,100	2,233,900	2,285,100	2,402,300	2,480,600	2,559,200	2,638,200	2,717,000
Calhoun	14,625	14,067	14,900	15,400	15,800	16,200	16,500	16,800	17,200	17,500	17,800	18,100	18,400
Charlotte	159,978	181,770	184,700	198,100	208,700	217,400	225,200	232,500	246,700	257,400	268,300	279,500	290,900
Citrus	141,236	147,744	149,400	157,100	163,600	168,900	173,400	177,300	185,600	191,800	197,900	203,800	209,600
Clay	190,865	215,246	219,000	236,800	252,500	265,000	275,600	285,100	304,700	318,900	333,000	347,100	361,300
Collier	321,520	376,706	384,600	421,200	451,700	477,200	498,400	517,400	561,300	591,800	622,300	653,100	683,700
Columbia	67,531	70,492	70,500	73,500	76,000	78,000	79,700	81,200	83,200	85,100	87,000	88,600	90,200
DeSoto	34,862	36,065	36,300	37,500	38,300	38,900	39,500	39,900	41,100	41,900	42,700	43,500	44,300
Dixie	16,422	16,610	16,700	16,900	17,000	17,100	17,100	17,100	17,200	17,200	17,300	17,400	17,500
Duval	864,263	970,672	985,500	1,051,900	1,104,300	1,148,700	1,185,300	1,216,200	1,292,000	1,344,100	1,396,100	1,447,900	1,499,200
Escambia	297,619	321,134	324,000	336,400	345,800	353,000	359,300	365,200	378,200	387,400	396,700	406,000	415,300
Flagler	95,696	110,635	113,400	126,500	138,300	148,400	157,300	165,200	182,300	193,900	205,600	217,300	228,900
Franklin	11,549	12,273	12,200	12,500	12,800	13,100	13,200	13,400	13,600	13,800	14,100	14,400	14,600
Gadsden	46,389	46,277	46,300	47,000	47,100	47,200	47,300	47,400	47,400	47,500	47,600	47,600	47,600
Gilchrist	16,939	17,766	18,000	18,900	19,700	20,400	20,900	21,400	22,500	23,300	24,100	24,900	25,700
Glades	12,884	13,121	13,200	13,500	13,700	13,900	14,100	14,200	14,500	14,800	14,900	15,100	15,400
Gulf	15,863	13,082	14,700	15,300	15,700	16,000	16,400	16,600	17,100	17,600	17,900	18,300	18,600
Hamilton	14,799	14,600	14,600	14,800	14,900	14,900	14,900	15,000	15,000	15,100	15,100	15,200	15,200
Hardee	27,731	27,385	27,600	27,600	27,700	27,800	27,800	27,900	27,900	27,900	28,000	28,100	28,100
Hendry	39,140	40,120	40,500	42,200	43,500	44,500	45,500	46,400	47,200	48,400	49,600	50,700	51,900
Hernando	172,778	188,358	191,500	206,100	218,900	228,900	237,200	244,400	261,200	273,300	285,400	297,500	309,700
Highlands	98,786	103,434	104,200	107,800	110,800	113,200	115,200	117,100	120,600	123,600	126,500	129,400	132,400
Hillsborough	1,229,226	1,444,870	1,474,300	1,611,300	1,721,600	1,809,000	1,887,700	1,959,200	2,127,300	2,240,800	2,355,300	2,470,900	2,586,400
Holmes	19,927	20,049	20,200	20,300	20,400	20,400	20,500	20,500	20,600	20,600	20,600	20,700	20,700
Indian River	138,028	154,939	157,600	170,000	180,200	188,200	195,000	200,900	215,000	224,900	235,000	245,100	255,200
Jackson	49,746	46,969	47,100	47,600	47,800	48,000	48,100	48,300	48,400	48,500	48,600	48,700	48,800
Jefferson	14,761	14,776	14,800	15,100	15,300	15,400	15,600	15,700	15,900	16,100	16,400	16,600	16,800
Lafayette	8,870	8,482	8,700	9,100	9,400	9,700	9,900	10,100	10,400	10,600	10,800	10,900	11,100
Lake	297,052	357,247	366,600	410,900	450,300	482,700	510,300	534,800	592,500	633,000	674,300	716,700	759,500
Lee	618,754	735,148	752,800	835,500	904,700	961,400	1,010,900	1,056,600	1,161,200	1,233,700	1,305,600	1,375,900	1,446,000
Leon	275,487	296,499	299,800	314,900	327,500	337,800	346,200	353,700	374,100	386,700	399,300	412,100	424,700

County	Census	Estimates (BEBR)	Projections (BEBR)						Projections (FDOT)				
	2010	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
Levy	40,801	41,330	41,600	42,700	43,600	44,300	44,900	45,500	46,400	47,200	47,900	48,700	49,600
Liberty	8,365	8,772	8,800	9,100	9,400	9,600	9,900	10,100	10,400	10,700	10,900	11,200	11,500
Madison	19,224	19,570	19,200	19,500	19,700	19,800	20,000	20,100	20,400	20,600	20,700	20,800	20,900
Manatee	322,833	387,414	395,800	434,600	466,500	493,800	519,200	542,200	592,900	626,500	659,800	693,000	726,200
Marion	331,298	360,421	365,900	392,100	414,800	432,800	447,900	460,800	491,100	512,700	534,300	555,900	577,300
Martin	146,318	158,598	160,600	169,500	176,900	182,900	188,200	193,000	204,200	211,700	219,300	226,900	234,600
Miami-Dade	2,496,435	2,812,130	2,849,900	3,022,600	3,167,900	3,294,700	3,399,200	3,489,900	3,714,000	3,858,100	4,001,700	4,144,500	4,284,300
Monroe	73,090	76,212	76,300	76,500	76,800	77,100	77,400	77,700	78,600	79,000	79,500	80,100	80,700
Nassau	73,314	85,070	86,900	95,800	103,100	109,100	114,300	118,900	129,900	137,400	145,000	152,600	160,300
Okaloosa	180,822	201,514	203,800	214,300	223,300	230,400	236,600	242,300	254,900	263,600	272,300	281,000	289,700
Okeechobee	39,996	41,808	42,100	43,400	44,400	45,300	46,000	46,700	48,400	49,400	50,500	51,500	52,600
Orange	1,145,956	1,386,080	1,418,900	1,573,000	1,696,800	1,797,400	1,888,700	1,972,200	2,165,600	2,293,700	2,423,300	2,554,300	2,686,500
Osceola	268,685	370,552	384,800	452,100	510,200	558,900	602,200	642,600	709,400	768,000	827,900	888,800	950,600
Palm Beach	1,320,134	1,447,857	1,465,800	1,547,200	1,616,500	1,676,600	1,729,500	1,775,200	1,876,000	1,945,500	2,014,600	2,083,600	2,151,800
Pasco	464,697	527,122	537,300	586,100	626,800	659,200	686,700	711,000	767,800	808,800	848,700	888,700	928,500
Pinellas	916,542	978,045	984,900	1,014,400	1,035,600	1,051,300	1,066,600	1,080,600	1,109,600	1,131,500	1,153,500	1,175,400	1,197,300
Polk	602,095	690,606	704,100	766,400	817,000	858,000	893,100	924,700	997,100	1,048,100	1,099,400	1,151,000	1,202,400
Putnam	74,364	73,268	73,300	73,600	73,700	73,900	74,100	74,300	74,400	74,700	75,000	75,200	75,500
St. Johns	190,039	254,412	263,900	309,300	347,600	379,400	408,100	434,900	487,900	528,300	569,400	611,400	653,900
St. Lucie	277,789	309,359	315,200	342,900	367,500	387,400	404,400	419,400	454,300	477,600	500,800	524,000	546,800
Santa Rosa	151,372	179,054	182,800	199,600	213,400	225,100	235,100	244,200	256,300	268,200	279,900	291,100	302,100
Sarasota	379,448	426,275	433,300	464,900	489,600	510,500	529,400	546,500	585,700	611,700	637,600	663,600	689,500
Seminole	422,718	471,735	478,800	510,700	535,600	556,900	574,700	590,400	625,900	650,900	675,700	700,500	725,000
Sumter	93,420	128,633	132,300	152,300	170,800	185,700	199,100	211,500	223,200	235,000	245,800	255,500	264,300
Suwannee	41,551	45,423	45,900	48,300	50,400	52,100	53,500	54,700	56,000	57,300	58,200	59,000	59,800
Taylor	22,570	22,458	22,600	23,200	23,600	24,000	24,300	24,700	24,900	25,200	25,500	25,900	26,200
Union	15,535	15,505	15,500	15,600	15,600	15,700	15,700	15,700	15,800	15,900	15,900	16,000	16,000
Volusia	494,593	538,763	545,200	573,800	595,800	613,600	629,700	644,700	670,400	692,400	714,400	736,300	763,900
Wakulla	30,776	32,976	33,300	35,400	37,200	38,500	39,600	40,600	41,800	43,000	43,900	44,900	45,600
Walton	55,043	70,071	72,100	81,500	89,600	96,200	102,200	107,700	114,000	119,800	125,300	130,300	134,900
Washington	24,896	25,387	25,200	25,900	26,500	27,000	27,300	27,700	28,200	28,700	29,200	29,700	30,200
FLORIDA	**18,801,310**	**21,208,589**	**21,556,000**	**23,130,900**	**24,426,200**	**25,498,000**	**26,428,700**	**27,266,900**	**29,108,600**	**30,397,600**	**31,686,600**	**32,975,600**	**34,264,600**

7.5 Traffic Analysis

7.5.1 Simtraffic Arterial LOS Reports and Simulation Summary

7.5.2 Synchro HCM Reports

7.5.3 HCS Merge and Diverge Reports

7.5.4 FDOT Level of Traffic Stress

Summary of All Intervals

Start Time	4:30
End Time	5:45
Total Time (min)	75
Time Recorded (min)	60
# of Intervals	5
# of Recorded Intervals	4
Vehs Entered	2655
Vehs Exited	2643
Starting Vehs	104
Ending Vehs	116
Travel Distance (mi)	2557
Travel Time (hr)	97.6
Total Delay (hr)	10.8
Total Stops	886
Fuel Used (gal)	78.0

Interval #0 Information Seeding

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

No data recorded this interval.

Interval #1 Information

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Vehs Entered	736
Vehs Exited	722
Starting Vehs	104
Ending Vehs	118
Travel Distance (mi)	701
Travel Time (hr)	26.9
Total Delay (hr)	3.1
Total Stops	229
Fuel Used (gal)	21.4

Interval #2 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Vehs Entered	621
Vehs Exited	648
Starting Vehs	118
Ending Vehs	91
Travel Distance (mi)	618
Travel Time (hr)	23.4
Total Delay (hr)	2.6
Total Stops	220
Fuel Used (gal)	18.8

Interval #3 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Vehs Entered	664
Vehs Exited	649
Starting Vehs	91
Ending Vehs	106
Travel Distance (mi)	634
Travel Time (hr)	24.3
Total Delay (hr)	2.7
Total Stops	260
Fuel Used (gal)	19.4

Interval #4 Information Recording

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Vehs Entered	634
Vehs Exited	624
Starting Vehs	106
Ending Vehs	116
Travel Distance (mi)	604
Travel Time (hr)	23.0
Total Delay (hr)	2.3
Total Stops	177
Fuel Used (gal)	18.3

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.6	23.2	0.2	27
	13	0.5	10.8	0.1	28
	12	0.6	11.2	0.1	28
	7	0.5	9.6	0.1	28
Southern Chevron Dwy	16	0.4	6.9	0.1	30
Broad Causeway #1WB	3	1.0	16.8	0.1	28
Broadview Dr	1	2.1	32.1	0.3	28
Total		6.7	110.6	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.9	32.0	0.3	28
Bayshore Dr	11	-	-	0.2	-
Total		1.9	32.0	0.4	48

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.6	23.2	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.6	23.2	0.4	67

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.9	32.0	0.3	28
	18	1.1	16.6	0.1	27
Northern Chevron Dwy	6	0.7	8.9	0.1	28
	8	0.7	9.5	0.1	28
	9	0.7	9.6	0.1	27
Broad Causeway #1EB	10	1.0	12.4	0.1	27
Bayshore Dr	11	7.9	28.4	0.2	22
Total		13.9	117.3	0.9	26

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
	13	0.6	10.9	0.1	28
	12	0.6	11.3	0.1	28
	7	0.6	9.6	0.1	27
Southern Chevron Dwy	16	0.4	7.0	0.1	30
Broad Causeway #1WB	3	1.0	16.9	0.1	28
Broadview Dr	1	2.2	32.3	0.3	28
Total		7.3	111.3	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.2	31.4	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.2	31.4	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.8	23.4	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.2	31.4	0.3	29
	18	0.8	16.1	0.1	28
Northern Chevron Dwy	6	0.4	8.6	0.1	29
	8	0.4	9.2	0.1	28
	9	0.5	9.3	0.1	28
Broad Causeway #1EB	10	0.7	12.0	0.1	28
Bayshore Dr	11	6.2	27.0	0.2	24
Total		10.1	113.6	0.9	27

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.7	23.2	0.2	27
	13	0.5	10.8	0.1	28
	12	0.6	11.2	0.1	28
	7	0.5	9.6	0.1	28
Southern Chevron Dwy	16	0.4	6.9	0.1	30
Broad Causeway #1WB	3	1.0	16.8	0.1	28
Broadview Dr	1	2.0	32.1	0.3	28
Total		6.6	110.7	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.1	31.4	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.1	31.4	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.7	23.2	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.7	23.2	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.1	31.4	0.3	29
	18	0.7	15.9	0.1	29
Northern Chevron Dwy	6	0.4	8.6	0.1	29
	8	0.4	9.2	0.1	28
	9	0.4	9.3	0.1	28
Broad Causeway #1EB	10	0.6	11.9	0.1	28
Bayshore Dr	11	5.9	26.6	0.2	24
Total		9.5	112.8	0.9	28

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.7	23.3	0.2	27
	13	0.5	10.9	0.1	28
	12	0.6	11.2	0.1	28
	7	0.5	9.6	0.1	28
Southern Chevron Dwy	16	0.4	6.9	0.1	30
Broad Causeway #1WB	3	0.9	16.7	0.1	28
Broadview Dr	1	2.0	32.1	0.3	28
Total		6.6	110.7	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.8	32.0	0.3	28
Bayshore Dr	11	-	-	0.2	-
Total		1.8	32.0	0.4	48

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.7	23.3	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.7	23.3	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.8	32.0	0.3	28
	18	1.1	16.6	0.1	27
Northern Chevron Dwy	6	0.6	8.8	0.1	29
	8	0.7	9.5	0.1	28
	9	0.7	9.6	0.1	27
Broad Causeway #1EB	10	0.9	12.3	0.1	27
Bayshore Dr	11	8.2	28.9	0.2	22
Total		14.2	117.6	0.9	26

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.9	23.5	0.2	27
	13	0.6	10.9	0.1	28
	12	0.7	11.3	0.1	28
	7	0.6	9.7	0.1	27
Southern Chevron Dwy	16	0.5	7.0	0.1	29
Broad Causeway #1WB	3	1.1	16.9	0.1	28
Broadview Dr	1	2.3	32.4	0.3	28
Total		7.6	111.8	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.3	31.5	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.3	31.5	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.9	23.5	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.9	23.5	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.3	31.5	0.3	29
	18	0.8	16.1	0.1	28
Northern Chevron Dwy	6	0.4	8.6	0.1	29
	8	0.5	9.3	0.1	28
	9	0.5	9.4	0.1	28
Broad Causeway #1EB	10	0.7	12.0	0.1	28
Bayshore Dr	11	6.1	26.8	0.2	24
Total		10.3	113.6	0.9	27

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
	13	0.5	10.9	0.1	28
	12	0.6	11.2	0.1	28
	7	0.5	9.6	0.1	27
Southern Chevron Dwy	16	0.4	7.0	0.1	30
Broad Causeway #1WB	3	1.0	16.8	0.1	28
Broadview Dr	1	2.1	32.2	0.3	28
Total		7.0	111.2	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.1	31.3	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.1	31.3	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.8	23.4	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.1	31.3	0.3	29
	18	0.7	15.9	0.1	29
Northern Chevron Dwy	6	0.4	8.6	0.1	29
	8	0.4	9.2	0.1	28
	9	0.5	9.3	0.1	28
Broad Causeway #1EB	10	0.6	11.8	0.1	28
Bayshore Dr	11	6.0	26.7	0.2	24
Total		9.8	112.9	0.9	28

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
	13	0.6	10.9	0.1	28
	12	0.6	11.3	0.1	28
	7	0.6	9.6	0.1	28
Southern Chevron Dwy	16	0.4	7.0	0.1	30
Broad Causeway #1WB	3	1.0	16.8	0.1	28
Broadview Dr	1	2.1	32.2	0.3	28
Total		6.9	111.0	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	2.0	32.1	0.3	28
Bayshore Dr	11	-	-	0.2	-
Total		2.0	32.1	0.4	48

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	1.8	23.4	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		1.8	23.4	0.4	66

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	2.0	32.1	0.3	28
	18	1.3	16.7	0.1	27
Northern Chevron Dwy	6	0.7	8.9	0.1	28
	8	0.7	9.5	0.1	28
	9	0.7	9.6	0.1	27
Broad Causeway #1EB	10	1.0	12.4	0.1	27
Bayshore Dr	11	8.5	29.2	0.2	22
Total		14.8	118.3	0.9	26

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.2	23.8	0.2	27
	13	0.8	11.1	0.1	28
	12	0.8	11.4	0.1	28
	7	0.7	9.8	0.1	27
Southern Chevron Dwy	16	0.5	7.1	0.1	29
Broad Causeway #1WB	3	1.3	17.1	0.1	27
Broadview Dr	1	2.6	32.7	0.3	28
Total		8.9	113.0	0.9	27

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.5	31.6	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.5	31.6	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.2	23.8	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		2.2	23.8	0.4	65

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.5	31.6	0.3	29
	18	0.9	16.2	0.1	28
Northern Chevron Dwy	6	0.5	8.7	0.1	29
	8	0.5	9.3	0.1	28
	9	0.6	9.4	0.1	28
Broad Causeway #1EB	10	0.8	12.0	0.1	28
Bayshore Dr	11	6.6	27.3	0.2	23
Total		11.3	114.6	0.9	27

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.0	23.6	0.2	27
	13	0.6	11.0	0.1	28
	12	0.7	11.4	0.1	28
	7	0.6	9.7	0.1	27
Southern Chevron Dwy	16	0.5	7.0	0.1	29
Broad Causeway #1WB	3	1.2	17.0	0.1	27
Broadview Dr	1	2.4	32.5	0.3	28
Total		8.0	112.3	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.3	31.5	0.3	29
Bayshore Dr	11	-	-	0.2	-
Total		1.3	31.5	0.4	49

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.0	23.6	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		2.0	23.6	0.4	65

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	1.3	31.5	0.3	29
	18	0.8	16.0	0.1	28
Northern Chevron Dwy	6	0.5	8.7	0.1	29
	8	0.5	9.3	0.1	28
	9	0.5	9.4	0.1	28
Broad Causeway #1EB	10	0.7	11.9	0.1	28
Bayshore Dr	11	6.2	26.9	0.2	24
Total		10.6	113.7	0.9	27

Arterial Level of Service: EB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.0	23.6	0.2	27
	13	0.6	11.0	0.1	28
	12	0.7	11.3	0.1	28
	7	0.6	9.7	0.1	27
Southern Chevron Dwy	16	0.5	7.0	0.1	29
Broad Causeway #1WB	3	1.1	16.9	0.1	28
Broadview Dr	1	2.3	32.4	0.3	28
Total		7.9	111.9	0.9	28

Arterial Level of Service: WB #1EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	2.4	32.5	0.3	28
Bayshore Dr	11	-	-	0.2	-
Total		2.4	32.5	0.4	47

Arterial Level of Service: EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1EB	10	2.0	23.6	0.2	27
Broadview Dr	1	-	-	0.3	-
Total		2.0	23.6	0.4	65

Arterial Level of Service: WB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Broad Causeway #1WB	3	2.4	32.5	0.3	28
	18	1.5	16.9	0.1	27
Northern Chevron Dwy	6	0.8	9.0	0.1	28
	8	0.8	9.6	0.1	27
	9	0.8	9.7	0.1	27
Broad Causeway #1EB	10	1.1	12.5	0.1	27
Bayshore Dr	11	10.8	31.5	0.2	20
Total		18.2	121.7	0.9	26

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.7	17.7	0.1	26
Southern Chevron Dwy	14	1.9	32.9	0.3	29
	6	3.7	53.4	0.4	28
Broadview Dr	1	0.5	7.0	0.1	26
Total		7.8	111.0	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.2	6.4	0.1	29
	14	2.5	51.7	0.4	29
Northern Chevron Dwy	3	2.0	33.1	0.3	29
Bayshore Dr	11	5.4	20.6	0.1	23
Total		10.1	111.7	0.9	28

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.6	17.6	0.1	27
Southern Chevron Dwy	14	1.7	32.9	0.3	29
	6	3.5	53.3	0.4	28
Broadview Dr	1	0.5	6.9	0.1	27
Total		7.3	110.6	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.2	6.4	0.1	29
	14	2.2	51.0	0.4	29
Northern Chevron Dwy	3	1.9	33.0	0.3	29
Bayshore Dr	11	5.5	20.5	0.1	23
Total		9.7	110.9	0.9	28

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.5	17.5	0.1	27
Southern Chevron Dwy	14	1.6	32.7	0.3	29
	6	3.4	53.2	0.4	28
Broadview Dr	1	0.5	6.9	0.1	27
Total		7.1	110.2	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.3	6.5	0.1	28
	14	3.6	53.2	0.4	28
Northern Chevron Dwy	3	2.8	34.0	0.3	28
Bayshore Dr	11	8.5	23.8	0.1	20
Total		15.2	117.4	0.9	26

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.9	17.9	0.1	26
Southern Chevron Dwy	14	2.3	33.3	0.3	28
	6	4.2	54.1	0.4	28
Broadview Dr	1	0.6	7.1	0.1	26
Total		9.0	112.4	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.3	6.5	0.1	28
	14	2.9	52.2	0.4	29
Northern Chevron Dwy	3	2.2	33.4	0.3	28
Bayshore Dr	11	6.0	21.3	0.1	22
Total		11.4	113.3	0.9	27

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.6	17.7	0.1	26
Southern Chevron Dwy	14	1.9	32.9	0.3	29
	6	3.7	53.4	0.4	28
Broadview Dr	1	0.6	7.0	0.1	26
Total		7.8	111.0	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.2	6.4	0.1	29
	14	2.5	51.4	0.4	29
Northern Chevron Dwy	3	2.0	33.2	0.3	28
Bayshore Dr	11	6.1	21.1	0.1	22
Total		10.8	112.2	0.9	28

Arterial Level of Service: EB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	3	1.7	17.7	0.1	26
Southern Chevron Dwy	14	1.9	33.0	0.3	29
	6	3.8	53.5	0.4	28
Broadview Dr	1	0.6	6.9	0.1	27
Total		7.9	111.1	0.9	28

Arterial Level of Service: WB Broad Causeway #1EB #1WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	6	0.4	6.6	0.1	28
	14	4.3	53.9	0.4	28
Northern Chevron Dwy	3	3.2	34.4	0.3	27
Bayshore Dr	11	10.5	25.8	0.1	18
Total		18.3	120.7	0.9	26

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	845	26	0
Future Vol, veh/h	0	0	0	845	26	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	88	92
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	0	0	0	960	30	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	480	-
Stage 1	-	-	0	-
Stage 2	-	-	480	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	520	0
Stage 1	0	-	-	0
Stage 2	0	-	594	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	520	-
Mov Cap-2 Maneuver	-	-	520	-
Stage 1	-	-	-	-
Stage 2	-	-	594	-

Approach	WB	NW
HCM Control Delay, s	0	12.3
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	520	-
HCM Lane V/C Ratio	0.057	-
HCM Control Delay (s)	12.3	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	966	0	0	35	0
Future Vol, veh/h	0	966	0	0	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	1050	0	0	38	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	525	-
Stage 1	-	-	0	-
Stage 2	-	-	525	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	487	0
Stage 1	0	-	-	0
Stage 2	0	-	564	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	487	-
Mov Cap-2 Maneuver	-	-	487	-
Stage 1	-	-	-	-
Stage 2	-	-	564	-

Approach	EB	SE
HCM Control Delay, s	0	13
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	487
HCM Lane V/C Ratio	-	0.078
HCM Control Delay (s)	-	13
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	782	31	0
Future Vol, veh/h	0	0	0	782	31	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	95	95	92
Heavy Vehicles, %	0	0	0	4	4	0
Mvmt Flow	0	0	0	823	33	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	412	-
Stage 1	-	-	0	-
Stage 2	-	-	412	-
Critical Hdwy	-	-	6.88	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.88	-
Follow-up Hdwy	-	-	3.54	-
Pot Cap-1 Maneuver	0	-	563	0
Stage 1	0	-	-	0
Stage 2	0	-	631	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	563	-
Mov Cap-2 Maneuver	-	-	563	-
Stage 1	-	-	-	-
Stage 2	-	-	631	-

Approach	WB	NW
HCM Control Delay, s	0	11.8
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	563	-
HCM Lane V/C Ratio	0.058	-
HCM Control Delay (s)	11.8	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	858	0	0	21	0
Future Vol, veh/h	0	858	0	0	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	94	92	92	94	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	913	0	0	22	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	457	-
Stage 1	-	-	0	-
Stage 2	-	-	457	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	537	0
Stage 1	0	-	-	0
Stage 2	0	-	610	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	537	-
Mov Cap-2 Maneuver	-	-	537	-
Stage 1	-	-	-	-
Stage 2	-	-	610	-

Approach	EB	SE
HCM Control Delay, s	0	12
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	537
HCM Lane V/C Ratio	-	0.042
HCM Control Delay (s)	-	12
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	1374	74	0
Future Vol, veh/h	0	0	0	1374	74	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	93	93	92
Heavy Vehicles, %	0	0	0	2	3	0
Mvmt Flow	0	0	0	1477	80	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	739	-
Stage 1	-	-	0	-
Stage 2	-	-	739	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	351	0
Stage 1	0	-	-	0
Stage 2	0	-	431	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	351	-
Mov Cap-2 Maneuver	-	-	351	-
Stage 1	-	-	-	-
Stage 2	-	-	431	-

Approach	WB	NW
HCM Control Delay, s	0	18.2
HCM LOS		C

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	351	-
HCM Lane V/C Ratio	0.227	-
HCM Control Delay (s)	18.2	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	0.9	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	864	0	0	31	0
Future Vol, veh/h	0	864	0	0	31	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	89	92	92	89	92
Heavy Vehicles, %	0	1	0	0	3	0
Mvmt Flow	0	971	0	0	35	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	486	-
Stage 1	-	-	0	-
Stage 2	-	-	486	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	508	0
Stage 1	0	-	-	0
Stage 2	0	-	581	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	508	-
Mov Cap-2 Maneuver	-	-	508	-
Stage 1	-	-	-	-
Stage 2	-	-	581	-

Approach	EB	SE
HCM Control Delay, s	0	12.6
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	508
HCM Lane V/C Ratio	-	0.069
HCM Control Delay (s)	-	12.6
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	905	27	0
Future Vol, veh/h	0	0	0	905	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	88	92
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	0	0	0	1028	31	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	514	-
Stage 1	-	-	0	-
Stage 2	-	-	514	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	495	0
Stage 1	0	-	-	0
Stage 2	0	-	571	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	495	-
Mov Cap-2 Maneuver	-	-	495	-
Stage 1	-	-	-	-
Stage 2	-	-	571	-

Approach	WB	NW
HCM Control Delay, s	0	12.8
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	495	-
HCM Lane V/C Ratio	0.062	-
HCM Control Delay (s)	12.8	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	1033	0	0	37	0
Future Vol, veh/h	0	1033	0	0	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	1123	0	0	40	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	562	-
Stage 1	-	-	0	-
Stage 2	-	-	562	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	462	0
Stage 1	0	-	-	0
Stage 2	0	-	540	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	462	-
Mov Cap-2 Maneuver	-	-	462	-
Stage 1	-	-	-	-
Stage 2	-	-	540	-

Approach	EB	SE
HCM Control Delay, s	0	13.5
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	462
HCM Lane V/C Ratio	-	0.087
HCM Control Delay (s)	-	13.5
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	836	32	0
Future Vol, veh/h	0	0	0	836	32	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	95	95	92
Heavy Vehicles, %	0	0	0	4	4	0
Mvmt Flow	0	0	0	880	34	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	440	-
Stage 1	-	-	0	-
Stage 2	-	-	440	-
Critical Hdwy	-	-	6.88	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.88	-
Follow-up Hdwy	-	-	3.54	-
Pot Cap-1 Maneuver	0	-	540	0
Stage 1	0	-	-	0
Stage 2	0	-	611	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	540	-
Mov Cap-2 Maneuver	-	-	540	-
Stage 1	-	-	-	-
Stage 2	-	-	611	-

Approach	WB	NW
HCM Control Delay, s	0	12.1
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	540	-
HCM Lane V/C Ratio	0.062	-
HCM Control Delay (s)	12.1	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	918	0	0	21	0
Future Vol, veh/h	0	918	0	0	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	94	92	92	94	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	977	0	0	22	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	489	-
Stage 1	-	-	0	-
Stage 2	-	-	489	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	513	0
Stage 1	0	-	-	0
Stage 2	0	-	588	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	513	-
Mov Cap-2 Maneuver	-	-	513	-
Stage 1	-	-	-	-
Stage 2	-	-	588	-

Approach	EB	SE
HCM Control Delay, s	0	12.3
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	513
HCM Lane V/C Ratio	-	0.044
HCM Control Delay (s)	-	12.3
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	1470	79	0
Future Vol, veh/h	0	0	0	1470	79	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	93	93	92
Heavy Vehicles, %	0	0	0	2	3	0
Mvmt Flow	0	0	0	1581	85	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	791	-
Stage 1	-	-	0	-
Stage 2	-	-	791	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	325	0
Stage 1	0	-	-	0
Stage 2	0	-	405	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	325	-
Mov Cap-2 Maneuver	-	-	325	-
Stage 1	-	-	-	-
Stage 2	-	-	405	-

Approach	WB	NW
HCM Control Delay, s	0	20
HCM LOS		C

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	325	-
HCM Lane V/C Ratio	0.261	-
HCM Control Delay (s)	20	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	924	0	0	33	0
Future Vol, veh/h	0	924	0	0	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	89	92	92	89	92
Heavy Vehicles, %	0	1	0	0	3	0
Mvmt Flow	0	1038	0	0	37	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	519	-
Stage 1	-	-	0	-
Stage 2	-	-	519	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	484	0
Stage 1	0	-	-	0
Stage 2	0	-	559	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	484	-
Mov Cap-2 Maneuver	-	-	484	-
Stage 1	-	-	-	-
Stage 2	-	-	559	-

Approach	EB	SE
HCM Control Delay, s	0	13.1
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	484
HCM Lane V/C Ratio	-	0.077
HCM Control Delay (s)	-	13.1
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	1073	33	0
Future Vol, veh/h	0	0	0	1073	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	88	88	88	92
Heavy Vehicles, %	0	0	0	2	0	0
Mvmt Flow	0	0	0	1219	38	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	610	-
Stage 1	-	-	0	-
Stage 2	-	-	610	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	431	0
Stage 1	0	-	-	0
Stage 2	0	-	510	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	431	-
Mov Cap-2 Maneuver	-	-	431	-
Stage 1	-	-	-	-
Stage 2	-	-	510	-

Approach	WB	NW
HCM Control Delay, s	0	14.1
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	431	-
HCM Lane V/C Ratio	0.087	-
HCM Control Delay (s)	14.1	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.3	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	1227	0	0	45	0
Future Vol, veh/h	0	1227	0	0	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	1334	0	0	49	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	667	-
Stage 1	-	-	0	-
Stage 2	-	-	667	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	397	0
Stage 1	0	-	-	0
Stage 2	0	-	477	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	397	-
Mov Cap-2 Maneuver	-	-	397	-
Stage 1	-	-	-	-
Stage 2	-	-	477	-

Approach	EB	SE
HCM Control Delay, s	0	15.3
HCM LOS		C

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	397
HCM Lane V/C Ratio	-	0.123
HCM Control Delay (s)	-	15.3
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	994	40	0
Future Vol, veh/h	0	0	0	994	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	95	95	92
Heavy Vehicles, %	0	0	0	4	4	0
Mvmt Flow	0	0	0	1046	42	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	523	-
Stage 1	-	-	0	-
Stage 2	-	-	523	-
Critical Hdwy	-	-	6.88	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.88	-
Follow-up Hdwy	-	-	3.54	-
Pot Cap-1 Maneuver	0	-	479	0
Stage 1	0	-	-	0
Stage 2	0	-	554	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	479	-
Mov Cap-2 Maneuver	-	-	479	-
Stage 1	-	-	-	-
Stage 2	-	-	554	-

Approach	WB	NW
HCM Control Delay, s	0	13.2
HCM LOS		B

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	479	-
HCM Lane V/C Ratio	0.088	-
HCM Control Delay (s)	13.2	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.3	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	1090	0	0	27	0
Future Vol, veh/h	0	1090	0	0	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	94	92	92	94	92
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	1160	0	0	29	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	580	-
Stage 1	-	-	0	-
Stage 2	-	-	580	-
Critical Hdwy	-	-	6.8	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.8	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	450	0
Stage 1	0	-	-	0
Stage 2	0	-	529	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	450	-
Mov Cap-2 Maneuver	-	-	450	-
Stage 1	-	-	-	-
Stage 2	-	-	529	-

Approach	EB	SE
HCM Control Delay, s	0	13.5
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	450
HCM Lane V/C Ratio	-	0.064
HCM Control Delay (s)	-	13.5
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑↑	↰	
Traffic Vol, veh/h	0	0	0	1745	94	0
Future Vol, veh/h	0	0	0	1745	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	95	93	93	92
Heavy Vehicles, %	0	0	0	2	3	0
Mvmt Flow	0	0	0	1876	101	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	938	-
Stage 1	-	-	0	-
Stage 2	-	-	938	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	261	0
Stage 1	0	-	-	0
Stage 2	0	-	339	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	261	-
Mov Cap-2 Maneuver	-	-	261	-
Stage 1	-	-	-	-
Stage 2	-	-	339	-

Approach	WB	NW
HCM Control Delay, s	0	27.3
HCM LOS		D

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	261	-
HCM Lane V/C Ratio	0.387	-
HCM Control Delay (s)	27.3	-
HCM Lane LOS	D	-
HCM 95th %tile Q(veh)	1.7	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑			↰	
Traffic Vol, veh/h	0	1098	0	0	39	0
Future Vol, veh/h	0	1098	0	0	39	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	89	92	92	89	92
Heavy Vehicles, %	0	1	0	0	3	0
Mvmt Flow	0	1234	0	0	44	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	617	-
Stage 1	-	-	0	-
Stage 2	-	-	617	-
Critical Hdwy	-	-	6.86	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.86	-
Follow-up Hdwy	-	-	3.53	-
Pot Cap-1 Maneuver	0	-	419	0
Stage 1	0	-	-	0
Stage 2	0	-	498	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	419	-
Mov Cap-2 Maneuver	-	-	419	-
Stage 1	-	-	-	-
Stage 2	-	-	498	-

Approach	EB	SE
HCM Control Delay, s	0	14.6
HCM LOS		B

Minor Lane/Major Mvmt	EBT	SELn1
Capacity (veh/h)	-	419
HCM Lane V/C Ratio	-	0.105
HCM Control Delay (s)	-	14.6
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	28	0	0	94	0
Future Vol, veh/h	0	28	0	0	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	0	30	0	0	102	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	30	-
Stage 1	-	-	0	-
Stage 2	-	-	30	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	989	0
Stage 1	0	-	-	0
Stage 2	0	-	998	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	989	-
Mov Cap-2 Maneuver	-	-	989	-
Stage 1	-	-	-	-
Stage 2	-	-	998	-

Approach	EB	SB
HCM Control Delay, s	0	9.1
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	989
HCM Lane V/C Ratio	-	0.103
HCM Control Delay (s)	-	9.1
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	64	57	0
Future Vol, veh/h	0	0	0	64	57	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	70	62	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	70	-
Stage 1	-	-	0	-
Stage 2	-	-	70	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	934	0
Stage 1	0	-	-	0
Stage 2	0	-	953	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	934	-
Mov Cap-2 Maneuver	-	-	934	-
Stage 1	-	-	-	-
Stage 2	-	-	953	-

Approach	WB	NW
HCM Control Delay, s	0	9.1
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	934	-
HCM Lane V/C Ratio	0.066	-
HCM Control Delay (s)	9.1	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	33	0	0	44	0
Future Vol, veh/h	0	33	0	0	44	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	94	92	92	94	92
Heavy Vehicles, %	2	0	2	2	0	2
Mvmt Flow	0	35	0	0	47	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	35	-
Stage 1	-	-	0	-
Stage 2	-	-	35	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	983	0
Stage 1	0	-	-	0
Stage 2	0	-	993	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	983	-
Mov Cap-2 Maneuver	-	-	983	-
Stage 1	-	-	-	-
Stage 2	-	-	993	-

Approach	EB	SB
HCM Control Delay, s	0	8.8
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	983
HCM Lane V/C Ratio	-	0.048
HCM Control Delay (s)	-	8.8
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	53	23	0
Future Vol, veh/h	0	0	0	53	23	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	58	25	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	58	-
Stage 1	-	-	0	-
Stage 2	-	-	58	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	949	0
Stage 1	0	-	-	0
Stage 2	0	-	965	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	949	-
Mov Cap-2 Maneuver	-	-	949	-
Stage 1	-	-	-	-
Stage 2	-	-	965	-

Approach	WB	NW
HCM Control Delay, s	0	8.9
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	949	-
HCM Lane V/C Ratio	0.026	-
HCM Control Delay (s)	8.9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.1	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	60	0	0	72	0
Future Vol, veh/h	0	60	0	0	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	89	92	92	89	92
Heavy Vehicles, %	2	0	2	2	3	2
Mvmt Flow	0	67	0	0	81	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	67	-
Stage 1	-	-	0	-
Stage 2	-	-	67	-
Critical Hdwy	-	-	6.43	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.43	-
Follow-up Hdwy	-	-	3.527	-
Pot Cap-1 Maneuver	0	-	936	0
Stage 1	0	-	-	0
Stage 2	0	-	953	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	936	-
Mov Cap-2 Maneuver	-	-	936	-
Stage 1	-	-	-	-
Stage 2	-	-	953	-

Approach	EB	SB
HCM Control Delay, s	0	9.2
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	936
HCM Lane V/C Ratio	-	0.086
HCM Control Delay (s)	-	9.2
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	112	39	0
Future Vol, veh/h	0	0	0	112	39	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	122	42	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	122	-
Stage 1	-	-	0	-
Stage 2	-	-	122	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	873	0
Stage 1	0	-	-	0
Stage 2	0	-	903	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	873	-
Mov Cap-2 Maneuver	-	-	873	-
Stage 1	-	-	-	-
Stage 2	-	-	903	-

Approach	WB	NW
HCM Control Delay, s	0	9.3
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	873	-
HCM Lane V/C Ratio	0.049	-
HCM Control Delay (s)	9.3	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	32	0	0	112	0
Future Vol, veh/h	0	32	0	0	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	0	35	0	0	122	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	35	-
Stage 1	-	-	0	-
Stage 2	-	-	35	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	983	0
Stage 1	0	-	-	0
Stage 2	0	-	993	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	983	-
Mov Cap-2 Maneuver	-	-	983	-
Stage 1	-	-	-	-
Stage 2	-	-	993	-

Approach	EB	SB
HCM Control Delay, s	0	9.2
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	983
HCM Lane V/C Ratio	-	0.124
HCM Control Delay (s)	-	9.2
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.4

Intersection	
Int Delay, s/veh	4.3

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	78	67	0
Future Vol, veh/h	0	0	0	78	67	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	85	73	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	85	-
Stage 1	-	-	0	-
Stage 2	-	-	85	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	916	0
Stage 1	0	-	-	0
Stage 2	0	-	938	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	916	-
Mov Cap-2 Maneuver	-	-	916	-
Stage 1	-	-	-	-
Stage 2	-	-	938	-

Approach	WB	NW
HCM Control Delay, s	0	9.3
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	916	-
HCM Lane V/C Ratio	0.08	-
HCM Control Delay (s)	9.3	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.3	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	37	0	0	55	0
Future Vol, veh/h	0	37	0	0	55	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	94	92	92	94	92
Heavy Vehicles, %	2	0	2	2	0	2
Mvmt Flow	0	39	0	0	59	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	39	-
Stage 1	-	-	0	-
Stage 2	-	-	39	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	0	-	978	0
Stage 1	0	-	-	0
Stage 2	0	-	989	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	978	-
Mov Cap-2 Maneuver	-	-	978	-
Stage 1	-	-	-	-
Stage 2	-	-	989	-

Approach	EB	SB
HCM Control Delay, s	0	8.9
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	978
HCM Lane V/C Ratio	-	0.06
HCM Control Delay (s)	-	8.9
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.2

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	67	28	0
Future Vol, veh/h	0	0	0	67	28	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	73	30	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	73	-
Stage 1	-	-	0	-
Stage 2	-	-	73	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	931	0
Stage 1	0	-	-	0
Stage 2	0	-	950	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	931	-
Mov Cap-2 Maneuver	-	-	931	-
Stage 1	-	-	-	-
Stage 2	-	-	950	-

Approach	WB	NW
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	931	-
HCM Lane V/C Ratio	0.033	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.1	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑			↰	
Traffic Vol, veh/h	0	71	0	0	85	0
Future Vol, veh/h	0	71	0	0	85	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	89	92	92	89	92
Heavy Vehicles, %	2	0	2	2	3	2
Mvmt Flow	0	80	0	0	96	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	80	-
Stage 1	-	-	0	-
Stage 2	-	-	80	-
Critical Hdwy	-	-	6.43	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.43	-
Follow-up Hdwy	-	-	3.527	-
Pot Cap-1 Maneuver	0	-	920	0
Stage 1	0	-	-	0
Stage 2	0	-	941	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	920	-
Mov Cap-2 Maneuver	-	-	920	-
Stage 1	-	-	-	-
Stage 2	-	-	941	-

Approach	EB	SB
HCM Control Delay, s	0	9.4
HCM LOS		A

Minor Lane/Major Mvmt	EBT	SBLn1
Capacity (veh/h)	-	920
HCM Lane V/C Ratio	-	0.104
HCM Control Delay (s)	-	9.4
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations				↑	↰	
Traffic Vol, veh/h	0	0	0	133	46	0
Future Vol, veh/h	0	0	0	133	46	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	145	50	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	145	-
Stage 1	-	-	0	-
Stage 2	-	-	145	-
Critical Hdwy	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.42	-
Follow-up Hdwy	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	847	0
Stage 1	0	-	-	0
Stage 2	0	-	882	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	847	-
Mov Cap-2 Maneuver	-	-	847	-
Stage 1	-	-	-	-
Stage 2	-	-	882	-

Approach	WB	NW
HCM Control Delay, s	0	9.5
HCM LOS		A

Minor Lane/Major Mvmt	NWLn1	WBT
Capacity (veh/h)	847	-
HCM Lane V/C Ratio	0.059	-
HCM Control Delay (s)	9.5	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build EB AM Peak
Project Description	Broad Causeway EB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1259	32
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	1409	35
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.37	0.02

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	1409	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	17.6
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	14.6

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Diverge Design EB 2050 AM Peak.xuf

HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build EB Mid Peak
Project Description	Broad Causeway EB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1127	37
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	1262	40
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.33	0.02

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	1262	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	15.7
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	13.3

Service Volume Table

Target LOS	A	B	C	D	E
Freeway					
Max Service Flow Rate (MSF), pc/h/ln	925	1027	1484	1893	1840
Service Flow Rate (SF), veh/h	1797	1995	2883	3677	3573
Service Volume, veh/h	1653	1835	2652	3383	3287
One Direction DSV, 1000 veh/day	16.5	18.4	26.5	33.8	32.9
Bi-Directional DSV, 1000 veh/day	30.1	33.4	48.2	61.5	59.8
Ramp					
Max Service Flow Rate (MSF), pc/h/ln	59	66	95	121	117
Service Flow Rate (SF), veh/h	59	66	95	121	117
Service Volume, veh/h	54	60	87	111	108
One Direction DSV, 1000 veh/day	0.5	0.6	0.9	1.1	1.1

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HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build EB PM Peak
Project Description	Broad Causeway EB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1169	71
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	1309	77
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.34	0.04

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	1309	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	16.3
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	13.7

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Diverge Design EB 2050 PM Peak.xuf

HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build WB AM Peak
Project Description	Broad Causeway WB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1140	67
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	1276	73
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.34	0.04

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	1276	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	15.9
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	13.4

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Diverge Design WB 2050 AM Peak.xuf

HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build WB Mid Peak
Project Description	Broad Causeway WB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1022	28
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	1144	30
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.30	0.02

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	1144	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	14.3
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	12.3

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Diverge Design WB 2050 Mid Peak.xuf

HCS Freeway Diverge Report

Project Information			
Analyst	Atkins	Date	11/22/2023
Agency		Analysis Year	2050
Jurisdiction	Town of Bay Harbor Islands	Time Analyzed	Build WB PM Peak
Project Description	Broad Causeway WB Diverge to Frontage Road	Units	U.S. Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	41.8	25.0
Segment Length (L) / Deceleration Length (LD), ft	1000	200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Highway/CD Roadway	Right-Sided One-Lane

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Proportion of CAVs in Traffic Stream	0	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Demand Adjustment Factor (DAF)	1.000	1.000
Capacity Adjustment Factor for CAVs, CAF_{CAV}	1.000	-
Final Capacity Adjustment Factor (CAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i), veh/h	1791	46
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	0.00
Heavy Vehicle Adjustment Factor (f_{HV})	0.971	1.000
Flow Rate (v_i), pc/h	2005	50
Capacity (c_{md}), pc/h	3800	1900
Initial Adjusted Capacity (c_{mda}), pc/h	3800	-
Final Adjusted Capacity (c_{mda}), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.53	0.03

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	40.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	2005	Outer Lanes Freeway Speed (S_O), mi/h	41.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Ramp Junction Speed (S), mi/h	40.1
Number of Outer Lanes on Freeway (N_O), ln	0	Average Density (D), pc/mi/ln	25.0
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	19.7

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Diverge Design WB 2050 PM Peak.xuf

HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB AM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1033	37
Peak Hour Factor (PHF)	0.93	0.67
Total Trucks, %	3.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	1.000
Flow Rate (vi),pc/h	1144	55
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.32	0.03

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.316
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1144	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1199	Average Density (D), pc/mi/ln	14.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	12.7

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB MID Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	918	21
Peak Hour Factor (PHF)	0.94	0.75
Total Trucks, %	3.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	1.000
Flow Rate (vi),pc/h	1006	28
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.27	0.01

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.314
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1006	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1034	Average Density (D), pc/mi/ln	12.6
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	11.4

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB PM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	924	33
Peak Hour Factor (PHF)	0.83	0.65
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	1124	52
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.31	0.03

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.316
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1124	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1176	Average Density (D), pc/mi/ln	14.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	12.5

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB AM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	905	27
Peak Hour Factor (PHF)	0.87	0.75
Total Trucks, %	2.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	1.000
Flow Rate (vi),pc/h	1061	36
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.29	0.02

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.333
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1061	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1097	Average Density (D), pc/mi/ln	13.4
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	14.1

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB MID Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	836	32
Peak Hour Factor (PHF)	0.95	0.64
Total Trucks, %	4.00	4.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.962
Flow Rate (vi),pc/h	915	52
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.25	0.03

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.331
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	915	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	967	Average Density (D), pc/mi/ln	11.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	13.1

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2030
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB PM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1470	79
Peak Hour Factor (PHF)	0.90	0.52
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	1667	155
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.48	0.08

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.345
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1667	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1822	Average Density (D), pc/mi/ln	22.2
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.7

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB AM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1227	45
Peak Hour Factor (PHF)	0.93	0.67
Total Trucks, %	3.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	1.000
Flow Rate (vi),pc/h	1359	67
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.38	0.04

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.320
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1359	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1426	Average Density (D), pc/mi/ln	17.4
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	14.4

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB MID Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1090	27
Peak Hour Factor (PHF)	0.94	0.75
Total Trucks, %	3.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	1.000
Flow Rate (vi),pc/h	1194	36
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.32	0.02

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.317
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1194	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1230	Average Density (D), pc/mi/ln	15.0
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	12.9

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build EB PM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	350
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1098	33
Peak Hour Factor (PHF)	0.83	0.65
Total Trucks, %	1.00	3.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.971
Flow Rate (vi),pc/h	1336	52
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.37	0.03

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.319
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1336	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1388	Average Density (D), pc/mi/ln	16.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	14.2

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB AM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1073	33
Peak Hour Factor (PHF)	0.87	0.75
Total Trucks, %	2.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	1.000
Flow Rate (vi),pc/h	1259	44
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.34	0.02

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.335
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1259	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1303	Average Density (D), pc/mi/ln	15.9
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	15.7

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB MID Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	994	40
Peak Hour Factor (PHF)	0.95	0.64
Total Trucks, %	4.00	4.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.962
Flow Rate (vi),pc/h	1088	65
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.30	0.03

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.333
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1088	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	1153	Average Density (D), pc/mi/ln	14.1
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	14.5

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HCS7 Freeway Merge Report

Project Information			
Analyst	Atkins	Date	5/31/2023
Agency	Florida Department of Transportation	Analysis Year	2050
Jurisdiction	FDOT D6	Time Period Analyzed	Build WB PM Peak
Project Description	Bridge Replacement PTAR		

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	2	1
Free-Flow Speed (FFS), mi/h	45.0	25.0
Segment Length (L) / Acceleration Length (LA),ft	1386	0
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Highway/CD Roadway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	0.900	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1745	94
Peak Hour Factor (PHF)	0.90	0.52
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	1978	184
Capacity (c), pc/h	3800	1900
Volume-to-Capacity Ratio (v/c)	0.57	0.10

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.355
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/mi/ln	-
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influenece Area Speed (SR), mi/h	41.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	1.000	Outer Lanes Freeway Speed (SO), mi/h	-
Flow in Lanes 1 and 2 (v12), pc/h	1978	Ramp Junction Speed (S), mi/h	41.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	2162	Average Density (D), pc/mi/ln	26.4
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.3

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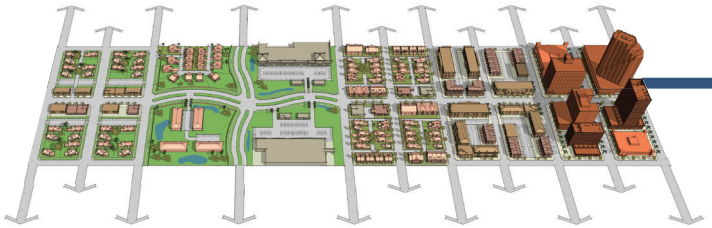


Pedestrian Level of Traffic Stress Flow Chart

C2T, C3C, C3R, C4, C5, & C6

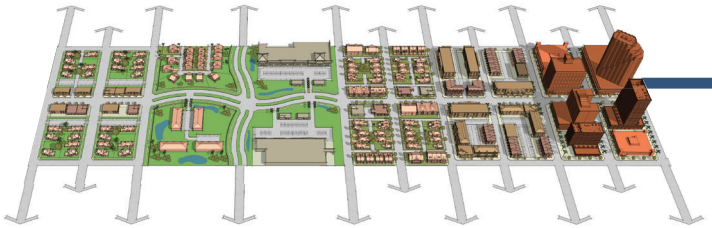
Is there a continuous sidewalk present?

- No → **LTS 4**
- Yes → **What is the posted speed?**
  - 25 mph → **Is there a separation?**
    - Yes → **LTS 1**
    - No → **LTS 2**
  - 30 to 35 mph → **Is there a separation?**
    - Yes → **Does the separation include vertical separation?**
      - Yes → **LTS 1**
      - No → **LTS 2**
    - No → **LTS 3**
  - 40 mph or greater → **Is there a separation?**
    - Yes → **Does the separation include vertical separation?**
      - Yes → **LTS 2**
      - No → **LTS 3**
    - No → **LTS 4**

Notes:
1) This chart does not constitute a standard and should be used only for general planning applications. The chart should not be used for corridor or intersection design, where more refined techniques exist.
2) This analysis is conducted for each side of the road and the worst side PLTS is applied for each segment.
3) If the sidewalk width is less than or equal to 5 feet, the PLTS deteriorates by 1.
4) Separation is defined by space between the outside vehicular travel lane and sidewalk and can include bicycle lanes, unmarked shoulders, street furniture, vertical separation, landscaping, or utility strips. Vertical separation in the separation includes tubular markers, islands, on-street parking, rigid barriers, and landscaping.
5) Sidewalk space over 6 feet can be evaluated as part of the separation.

Low Stress Tolerance → High Stress Tolerance

LTS 1 | LTS 2 | LTS 3 | LTS 4



Bicycle Level of Traffic Stress Flow Chart to use When Bicycle Facility is Present

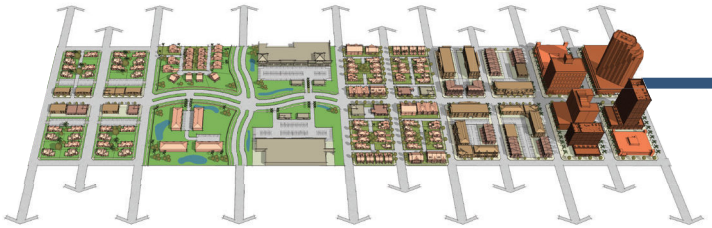
C2T, C3C, C3R, C4, C5, & C6

What kind of bicycle facility is present?

- Separated Bicycle Lane, Shared Use Path, or Urban Side Path → **LTS 1**
- Bicycle Lane, Marked Shoulder, or Paved Shoulder → **Is the posted speed 40 mph or more?**
  - Yes → **LTS 4**
  - No → **Is the AADT less than or equal to 7,000?**
    - Yes → **LTS 1**
    - No → **Is the posted speed 35 mph?**
      - Yes → **Is there a buffered bicycle lane?**
        - Yes → **LTS 2**
        - No → **LTS 3**
      - No → **Is the bicycle facility next to on-street parking?**
        - Yes → **Width of the bicycle lane and separation**
          - Greater than or equal to 7’ → **LTS 1**
          - 5’ or 6’ → **LTS 2**
          - 4’ → **LTS 3**
        - No → **Width of the bicycle lane**
          - Greater than or equal to 6’ → **LTS 1**
          - 5’ → **LTS 2**
          - 4’ → **LTS 3**
- Sharrow or None → **Use bicycle level of traffic stress assessment for when bicycle facility is not present**

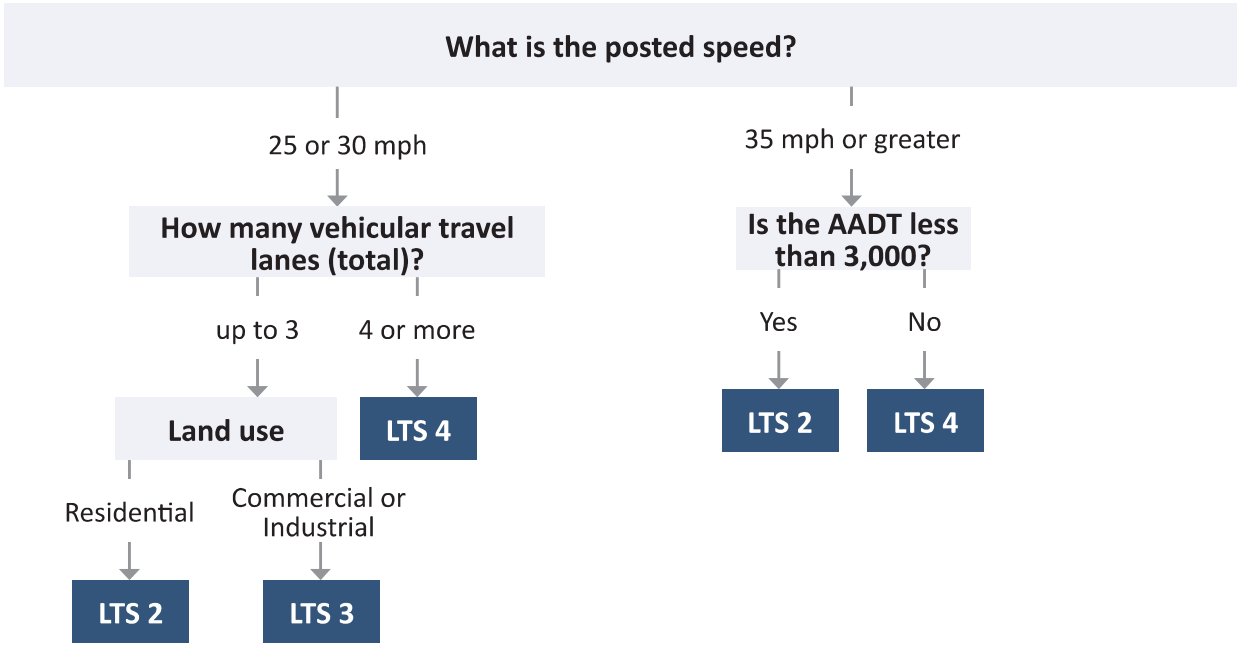
Notes:
1) This chart does not constitute a standard and should be used only for general planning applications. The chart should not be used for corridor or intersection design, where more refined techniques exist.
2) If there is both a separated bicycle lane, shared use path or urban side path and a bicycle lane, marked shoulder, or paved shoulder, evaluate the facility as having a shared use path

Low Stress Tolerance → High Stress Tolerance



Bicycle Level of Traffic Stress Flow Chart to use When No Bicycle Facility is Present or When There are Sharrows Present

C2T, C3C, C3R, C4, C5, & C6



Notes:
1) This chart does not constitute a standard and should be used only for general planning applications. The chart should not be used for corridor or intersection design, where more refined techniques exist.

7.6 Crash Analysis

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	C Russo	Roadway	Broad Causeway
Agency or Company	Atkins	Roadway Section	East of Gas station ot eastern edge of bridge
Date Performed	10/22/23	Jurisdiction	Town of Bay Harbor Islands
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4D
Length of segment, L (mi)		--	0.35
AADT (veh/day)	$AADT_{MAX}$ = 66,000 (veh/day)	--	31,900
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	10
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed 30 mph or Lower
Roadside fixed object density (fixed objects / mi)		0	2
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	8
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.00	1.01	0.91	1.00	0.92

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-12.34	1.36	1.32	2.042	1.000	2.042	0.92	1.00	1.885
Fatal and Injury (FI)	-12.76	1.28	1.31	0.585	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.271	0.554	0.92	1.00	0.512
Property Damage Only (PDO)	-12.81	1.38	1.34	1.570	$(5)_{TOTAL}-(5)_{FI}$ = 0.729	1.488	0.92	1.00	1.373

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.512	1.000	1.373	1.885
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Rear-end collision	0.832	0.426	0.662	0.909	1.335
Head-on collision	0.020	0.010	0.007	0.010	0.020
Angle collision	0.040	0.020	0.036	0.049	0.070
Sideswipe, same direction	0.050	0.026	0.223	0.306	0.332
Sideswipe, opposite direction	0.010	0.005	0.001	0.001	0.006
Other multiple-vehicle collision	0.048	0.025	0.071	0.097	0.122

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-5.05	0.47	0.86	0.294	1.000	0.294	0.92	1.00	0.271
Fatal and Injury (FI)	-8.71	0.66	0.28	0.054	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.184	0.054	0.92	1.00	0.050
Property Damage Only (PDO)	-5.04	0.45	1.06	0.241	$(5)_{TOTAL}-(5)_{FI}$ = 0.816	0.240	0.92	1.00	0.221

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.050	1.000	0.221	0.271
		(2)*$(3)_{FI}$		(4)*$(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.063	0.014	0.014
Collision with fixed object	0.500	0.025	0.813	0.180	0.205
Collision with other object	0.028	0.001	0.016	0.004	0.005
Other single-vehicle collision	0.471	0.023	0.108	0.024	0.047

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.033	1.106	0.000	
Minor commercial	0	0.011	1.106	0.000	
Major industrial/institutional	0	0.036	1.106	0.000	
Minor industrial/institutional	0	0.005	1.106	0.000	--
Major residential	0	0.018	1.106	0.000	
Minor residential	0	0.003	1.106	0.000	
Other	0	0.005	1.106	0.000	
Total	--	--	--	0.000	1.39

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.000	1.000	0.000	0.92	1.00	0.000
Fatal and injury (FI)	--	0.284	0.000	0.92	1.00	0.000
Property damage only (PDO)	--	0.716	0.000	0.92	1.00	0.000

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	1.885	0.271	0.000	2.156	0.067	0.144
Fatal and injury (FI)	--	--	--	--	--	0.144

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	1.885	0.271	0.000	2.156	0.013	0.028
Fatal and injury (FI)	--	--	--	--	--	0.028

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.426	0.909	1.335
Head-on collisions (from Worksheet 1D)	0.010	0.010	0.020
Angle collisions (from Worksheet 1D)	0.020	0.049	0.070
Sideswipe, same direction (from Worksheet 1D)	0.026	0.306	0.332
Sideswipe, opposite direction (from Worksheet 1D)	0.005	0.001	0.006
Driveway-related collisions (from Worksheet 1H)	0.000	0.000	0.000
Other multiple-vehicle collision (from Worksheet 1D)	0.025	0.097	0.122
Subtotal	0.512	1.373	1.885
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.014	0.014
Collision with fixed object (from Worksheet 1F)	0.025	0.180	0.205
Collision with other object (from Worksheet 1F)	0.001	0.004	0.005
Other single-vehicle collision (from Worksheet 1F)	0.023	0.024	0.047
Collision with pedestrian (from Worksheet 1I)	0.144	0.000	0.144
Collision with bicycle (from Worksheet 1J)	0.028	0.000	0.028
Subtotal	0.222	0.221	0.443
Total	0.734	1.594	2.328

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	2.3	0.35	6.7
Fatal and injury (FI)	0.7	0.35	2.1
Property damage only (PDO)	1.6	0.35	4.6

Worksheet 1A -- General Information and Input Data for Urban and Suburban Roadway Segments

General Information		Location Information	
Analyst	C Russo	Roadway	Broad Causeway
Agency or Company	Atkins	Roadway Section	East of Gas station ot eastern edge of bridge
Date Performed	11/22/23	Jurisdiction	Town of Bay Harbor Islands
		Analysis Year	2050

Input Data		Base Conditions	Site Conditions
Roadway type (2U, 3T, 4U, 4D, ST)		--	4U
Length of segment, L (mi)		--	0.35
AADT (veh/day)	$AADT_{MAX}$ = 40,100 (veh/day)	--	31,900
Type of on-street parking (none/parallel/angle)		None	None
Proportion of curb length with on-street parking		--	0
Median width (ft) - for divided only		15	Not Present
Lighting (present / not present)		Not Present	Present
Auto speed enforcement (present / not present)		Not Present	Not Present
Major commercial driveways (number)		--	0
Minor commercial driveways (number)		--	0
Major industrial / institutional driveways (number)		--	0
Minor industrial / institutional driveways (number)		--	0
Major residential driveways (number)		--	0
Minor residential driveways (number)		--	0
Other driveways (number)		--	0
Speed Category		--	Posted Speed 30 mph or Lower
Roadside fixed object density (fixed objects / mi)		0	2
Offset to roadside fixed objects (ft) [If greater than 30 or Not Present, input 30]		30	2
Calibration Factor, Cr		1.00	1.00

Worksheet 1B -- Crash Modification Factors for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
CMF for On-Street Parking	CMF for Roadside Fixed Objects	CMF for Median Width	CMF for Lighting	CMF for Automated Speed Enforcement	Combined CMF
CMF 1r	*CMF 2r*	*CMF 3r*	*CMF 4r*	*CMF 5r*	*CMF comb*
from Equation 12-32	from Equation 12-33	from Table 12-22	from Equation 12-34	from Section 12.7.1	(1)*(2)*(3)*(4)*(5)
1.00	1.00	1.00	0.92	1.00	0.92

Worksheet 1C -- Multiple-Vehicle Nondriveway Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brmv}**	**Proportion of Total Crashes**	**Adjusted N_{brmv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brmv}**
	from Table 12-3		from Table 12-3	from Equation 12-10		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-11.63	1.33	1.01	3.043	1.000	3.043	0.92	1.00	2.791
Fatal and Injury (FI)	-12.08	1.25	0.99	0.846	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.289	0.881	0.92	1.00	0.808
Property Damage Only (PDO)	-12.53	1.38	1.08	2.078	$(5)_{TOTAL}-(5)_{FI}$ = 0.711	2.162	0.92	1.00	1.983

Worksheet 1D -- Multiple-Vehicle Nondriveway Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brmv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brmv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brmv\ (TOTAL)}$ (crashes/year)**
	from Table 12-4	$(9)_{FI}$ from Worksheet 1C	from Table 12-4	$(9)_{PDO}$ from Worksheet 1C	$(9)_{TOTAL}$ from Worksheet 1C
Total	1.000	0.808	1.000	1.983	2.791
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Rear-end collision	0.511	0.413	0.506	1.003	1.416
Head-on collision	0.077	0.062	0.004	0.008	0.070
Angle collision	0.181	0.146	0.130	0.258	0.404
Sideswipe, same direction	0.093	0.075	0.249	0.494	0.569
Sideswipe, opposite direction	0.082	0.066	0.031	0.061	0.128
Other multiple-vehicle collision	0.056	0.045	0.080	0.159	0.204

Worksheet 1E -- Single-Vehicle Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Crash Severity Level	**SPF Coefficients**		**Overdispersion Parameter, k**	**Initial N_{brsv}**	**Proportion of Total Crashes**	**Adjusted N_{brsv}**	**Combined CMFs**	**Calibration Factor, Cr**	**Predicted N_{brsv}**
	from Table 12-5		from Table 12-5	from Equation 12-13		$(4)_{TOTAL}$*(5)	(6) from Worksheet 1B		(6)*(7)*(8)
	a	b							
Total	-7.99	0.81	0.91	0.527	1.000	0.527	0.92	1.00	0.484
Fatal and Injury (FI)	-7.37	0.61	0.54	0.123	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ = 0.222	0.117	0.92	1.00	0.107
Property Damage Only (PDO)	-8.50	0.84	0.97	0.432	$(5)_{TOTAL}-(5)_{FI}$ = 0.778	0.410	0.92	1.00	0.376

Worksheet 1F -- Single-Vehicle Collisions by Collision Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Collision Type	**Proportion of Collision Type$_{(FI)}$**	**Predicted N $_{brsv\ (FI)}$ (crashes/year)**	**Proportion of Collision Type $_{(PDO)}$**	**Predicted N $_{brsv\ (PDO)}$ (crashes/year)**	**Predicted N $_{brsv\ (TOTAL)}$ (crashes/year)**
	from Table 12-6	$(9)_{FI}$ from Worksheet 1E	from Table 12-6	$(9)_{PDO}$ from Worksheet 1E	$(9)_{TOTAL}$ from Worksheet 1E
Total	1.000	0.107	1.000	0.376	0.484
		$(2)*(3)_{FI}$		$(4)*(5)_{PDO}$	(3)+(5)
Collision with animal	0.001	0.000	0.001	0.000	0.000
Collision with fixed object	0.612	0.066	0.809	0.305	0.370
Collision with other object	0.020	0.002	0.029	0.011	0.013
Other single-vehicle collision	0.367	0.039	0.161	0.061	0.100

Worksheet 1G -- Multiple-Vehicle Driveway-Related Collisions by Driveway Type for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)
Driveway Type	**Number of driveways, n_j**	**Crashes per driveway per year, N_j**	**Coefficient for traffic adjustment, t**	**Initial N_{brdwy}**	**Overdispersion parameter, k**
		from Table 12-7	from Table 12-7	Equation 12-16 $n_j * N_j * (AADT/15,000)^t$	from Table 12-7
Major commercial	0	0.182	1.172	0.000	
Minor commercial	0	0.058	1.172	0.000	
Major industrial/institutional	0	0.198	1.172	0.000	
Minor industrial/institutional	0	0.026	1.172	0.000	--
Major residential	0	0.096	1.172	0.000	
Minor residential	0	0.018	1.172	0.000	
Other	0	0.029	1.172	0.000	
Total	--	--	--	0.000	0.81

Worksheet 1H -- Multiple-Vehicle Driveway-Related Collisions by Severity Level for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	**Initial N_{brdwy}**	**Proportion of total crashes (f_{dwy})**	**Adjusted N_{brdwy}**	**Combined CMFs**	**Calibration factor, C_r**	**Predicted N_{brdwy}**
	$(5)_{TOTAL}$ from Worksheet 1G	from Table 12-7	$(2)_{TOTAL} * (3)$	(6) from Worksheet 1B		(4)*(5)*(6)
Total	0.000	1.000	0.000	0.92	1.00	0.000
Fatal and injury (FI)	--	0.342	0.000	0.92	1.00	0.000
Property damage only (PDO)	--	0.658	0.000	0.92	1.00	0.000

Worksheet 1I -- Vehicle-Pedestrian Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{pedr}**	**Predicted N_{pedr}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-8	(5)*(6)
Total	2.791	0.484	0.000	3.274	0.022	0.072
Fatal and injury (FI)	--	--	--	--	--	0.072

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-19

Worksheet 1J -- Vehicle-Bicycle Collisions for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)	(5)	(6)	(8)*
Crash Severity Level	**Predicted N_{brmv}**	**Predicted N_{brsv}**	**Predicted N_{brdwy}**	**Predicted N_{br}**	**f_{biker}**	**Predicted N_{biker}**
	(9) from Worksheet 1C	(9) from Worksheet 1E	(7) from Worksheet 1H	(2)+(3)+(4)	from Table 12-9	(5)*(6)
Total	2.791	0.484	0.000	3.274	0.011	0.036
Fatal and injury (FI)	--	--	--	--	--	0.036

* Column 7 has been removed due to redundant application of calibration factors and inconsistency with HSM Equation 12-20

Worksheet 1K -- Crash Severity Distribution for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Collision type	**Fatal and injury (FI)**	**Property damage only (PDO)**	**Total**
	(3) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J	(5) from Worksheet 1D and 1F; and (7) from Worksheet 1H	(6) from Worksheet 1D and 1F; (7) from Worksheet 1H; and (8) from Worksheet 1I and 1J
MULTIPLE-VEHICLE			
Rear-end collisions (from Worksheet 1D)	0.413	1.003	1.416
Head-on collisions (from Worksheet 1D)	0.062	0.008	0.070
Angle collisions (from Worksheet 1D)	0.146	0.258	0.404
Sideswipe, same direction (from Worksheet 1D)	0.075	0.494	0.569
Sideswipe, opposite direction (from Worksheet 1D)	0.066	0.061	0.128
Driveway-related collisions (from Worksheet 1H)	0.000	0.000	0.000
Other multiple-vehicle collision (from Worksheet 1D)	0.045	0.159	0.204
Subtotal	0.808	1.983	2.791
SINGLE-VEHICLE			
Collision with animal (from Worksheet 1F)	0.000	0.000	0.000
Collision with fixed object (from Worksheet 1F)	0.066	0.305	0.370
Collision with other object (from Worksheet 1F)	0.002	0.011	0.013
Other single-vehicle collision (from Worksheet 1F)	0.039	0.061	0.100
Collision with pedestrian (from Worksheet 1I)	0.072	0.000	0.072
Collision with bicycle (from Worksheet 1J)	0.036	0.000	0.036
Subtotal	0.215	0.376	0.592
Total	1.023	2.359	3.383

Worksheet 1L -- Summary Results for Urban and Suburban Roadway Segments

(1)	(2)	(3)	(4)
Crash Severity Level	**Predicted average crash frequency, $N_{predicted\ rs}$ (crashes/year)**	**Roadway segment length, L (mi)**	**Crash rate (crashes/mi/year)**
	(Total) from Worksheet 1K		(2) / (3)
Total	3.4	0.35	9.7
Fatal and injury (FI)	1.0	0.35	2.9
Property damage only (PDO)	2.4	0.35	6.7

CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 974

CMF Name: Install median barrier

Description:

Prior Condition: No Prior Condition(s)

Category: Roadside

Study ID: *Development of Crash Reduction Factors*, Hovey and Chowdhury 2005

Star Quality Rating	
Star Quality Rating:	4 Stars

Crash Modification Factor (CMF)	
Value:	0.14
Adjusted Standard Error:	
Unadjusted Standard Error:	0.029

Crash Reduction Factor	
Value:	86
Adjusted Standard Error:	
Unadjusted Standard Error:	2.9

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	All
Minimum Number of Lanes:	
Maximum Number of Lanes:	
Number of Lanes Direction:	
Number of Lanes Comment:	
Road Division Type:	
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
Area Type:	All
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	
If countermeasure is intersection-based.	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Average Major Road Volume:	
Average Minor Road Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	OH
Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size (sites):	4 sites after

Other Details

Included in HSM:	No
Date Added to Clearinghouse:	Dec 01, 2009
Comments:	The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 to give 10 points as a beneift of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the disaggragate dataset used for CMF development.

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