

2023
US 1 ARTERIAL TRAVEL TIME
AND DELAY STUDY
MONROE COUNTY, FLORIDA

Prepared for:

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1. EXECUTIVE SUMMARY

This report contains the results and findings of the 2023 Arterial Travel Time and Delay Study (ATTDS). The primary objective of this study is to determine the US 1 Level of Service (LOS) for concurrency management purposes pursuant to Chapter 163, Florida Statutes, Monroe County Land Development Regulations and the Monroe County Comprehensive Plan. The study methodology was developed by the US 1 Level of Service Task Force in 1993. The methodology established a procedure for using travel speed as a means of assessing the LOS and reserve capacity for US 1. The study methodology was modified by the US 1 LOS Task Force in 1997 and 2021 (see Monroe County Resolution 64-2021 in Appendix A) to account for the latest changes in the Highway Capacity Manual (HCM).

Both Monroe County and the Florida Department of Transportation (FDOT) have adopted a LOS C Standard for US 1. Further, 45 miles per hour (mph) has been adopted as the LOS C Standard for the entire length of US 1 regardless of the posted speed limits. Under the adopted growth management process, if the overall LOS for US 1 falls below the LOS C Standard, then no additional land development will be allowed in the Florida Keys, unless mitigation measures are proposed to address the LOS deficiencies.

The 2023 study results are presented in Table 1 on the next page.

**TABLE 1
AVERAGE TRAVEL SPEEDS AND LEVELS OF SERVICE**

Segment	Name of Segment	Beginning Control Point	Ending Control Point	Beginning Mile Marker	Ending Mile Marker	LOS 2019	LOS 2021	LOS 2023	Median Speed 2019	Median Speed 2021	Median Speed 2023
1	Stock Island	Cow Key Bridge (N)	Key Haven Boulevard	4.0	5.0	B	A	B	33.0	40.0	34.9
2	Boca Chica	Key Haven Boulevard	Rockland Drive	5.0	9.0	B	A	A	55.8	59.9	58.1
3	Big Coppitt	Rockland Drive	Boca Chica Road	9.0	10.5	B	B	B	46.1	47.5	46.6
4	Saddlebunch	Boca Chica Road	Harris Channel Bridge (N)	10.5	16.5	C	B	B	52.0	53.5	52.7
5	Sugarloaf	Harris Channel Bridge (N)	Bow Channel Bridge (N)	16.5	20.5	A	A	A	48.1	48.8	47.7
6	Cudjoe	Bow Channel Bridge (N)	Spanish Main Drive	20.5	23.0	A	A	A	47.2	47.9	46.5
7	Summerland	Spanish Main Drive	East Shore Drive	23.0	25.0	B	B	B	45.2	46.1	44.8
8	Ramrod	East Shore Drive	Torch-Ramrod Bridge (S)	25.0	27.5	A	A	A	46.7	46.5	47.0
9	Torch	Torch-Ramrod Bridge (S)	N. Pine Channel Bridge (N)	27.5	29.5	A	A	A	48.1	48.8	48.0
10	Big Pine	N. Pine Channel Bridge (N)	Long Beach Drive	29.5	33.0	B	A	B	42.4	42.7	40.4
11	Bahia Honda	Long Beach Drive	7-Mile Bridge (S)	33.0	40.0	A	A	A	54.2	54.8	52.5
12 ⁽²⁾	7-Mile Bridge	7-Mile Bridge (S)	7-Mile Bridge (N)	40.0	47.0	B	B	B	53.4	53.2	54.5
13	Marathon	7-Mile Bridge (N)	Coco Plum Drive	47.0	54.0	A	A	A	37.9	39.6	35.2
14	Grassy	Coco Plum Drive	Toms Harbor Ch Bridge (S)	54.0	60.5	C	C	C	50.7	51.4	51.3
15	Duck	Toms Harbor Ch Bridge (S)	Long Key Bridge (S)	60.5	63.0	C	C	B	53.3	53.2	53.6
16	Long	Long Key Bridge (S)	Channel #2 Bridge (N)	63.0	73.0	B	C	C	52.0	49.9	50.9
17 ⁽²⁾	Lower Matecumbe	Channel #2 Bridge (N)	Lignumvitae Bridge (S)	73.0	77.5	C	C	B	49.6	48.2	45.3
18 ⁽¹⁾	Tea Table	Lignumvitae Bridge (S)	Tea Table Relief Bridge (N)	77.5	79.5	D	A	B	46.9	46.6	44.8
19 ⁽¹⁾	Upper Matecumbe	Tea Table Relief Bridge (N)	Whale Harbor Bridge (S)	79.5	84.0	E	E	E	36.4	35.3	36.9
20 ⁽¹⁾	Windley	Whale Harbor Bridge (S)	Snake Creek Bridge (N)	84.0	86.0	E	D	E	37.0	39.3	34.4
21 ^{(1) (2)}	Plantation	Snake Creek Bridge (N)	Ocean Boulevard	86.0	91.5	D	C	D	35.3	34.7	33.3
22	Tavernier	Ocean Boulevard	Atlantic Boulevard	91.5	99.5	A	A	A	46.9	49.4	45.6
23	Key Largo	Atlantic Boulevard	C-905	99.5	106.0	A	A	A	44.2	45.0	44.1
24	Cross	C-905	County Line Sign	106.0	112.6	B	C	C	50.2	49.1	48.4
Overall				4.0	112.6	D	C	D	44.6	45.5	44.2

Segments with NO Reserve Capacity

- (1) - Village of Islamorada
- (2) – Segments with Speed Limit Changes

- As compared to the 2021 study, the median speeds in 5 of the 24 segments increased, ranging from 0.4 mph to 1.6 mph.
- As compared to the 2021 study, the median speeds in 19 of the 24 segments decreased, ranging from 0.1 mph to 5.1 mph.
- As compared to the 2021 study, the largest decrease in speed (-5.1 mph) was recorded in Segment #1 (Stock Island – MM 4.0 to MM 5.0); the LOS changed from ‘A’ to ‘B’.
- As compared to the 2021 study, the largest increase in speed (1.6 mph) was recorded in Segment #19 (Upper Matecumbe – MM 79.5 to MM 84.0); the LOS ‘E’ remained unchanged.
- As compared to the 2021 study, the significant changes in LOS were recorded in Segments #20 and #21 (Windley – MM 84.0 to MM 86.0, Plantation – MM 86.0 to 91.5); the LOS changed from ‘D’ to ‘E’ and from ‘C’ to ‘D’, respectively.

Segments with reserve speeds of less than or equal to 3 mph should be given particular attention when approving development applications. The segments within the ‘area of concern’ are segment #16 (Long – MM 63 to MM 73), segment #24 (Cross – MM 106 to MM 112.5), and the 12-mile segment in the upper keys covering segments #19 (Upper Matecumbe – MM 79.5 to MM 84.0), #20 (Windley – MM 84.0 to MM 86.0) and #21 (Plantation – MM 86.0 to 91.5); the last three segments (#19, #20, #21) have no reserve capacity.

The following is a list of considerations for review:

- 1) Under the adopted growth management process, if the overall LOS for US 1 falls below the LOS C Standard, then no additional land development will be allowed unless mitigation measures are implemented. Roadway widening is a typical mitigation measure (or capacity improvement) used by most agencies. However, in Monroe County, road widening (specifically along US 1) is restricted by the adopted comprehensive plan policies to preserve and protect the fragile ecological conditions. There are other remedies that could be explored and evaluated to improve the traffic flow and capacity along US 1. Some examples include:
 - Upgrade the traffic signal infrastructure and/or signal timing at signalized intersections along US 1 to enhance traffic flow.
 - Provide or improve transit service or other multi-modal transportation alternatives.
 - Implement active traffic management and Transportation System Management & Operation type improvements, which include real-time monitoring of traffic flow and implementing measures to address traffic congestion.
 - Add turn lanes at strategic locations to improve roadway capacity.
 - Implement access management improvements (consolidate driveways/access points, modify median openings, etc.) to reduce interruptions to US 1 traffic.
 - Provide and/or improve frontage roads to reduce the impacts to US 1 traffic flow. Improve local roads to minimize US 1 being used as a local street for short trips.
 - Do not install new traffic signals along US 1, if a safe and/or less restrictive alternative (such as indirect left-turns, a roundabout, etc.) can be provided to accommodate traffic movements.
 - Conduct speed studies on selected segments of US 1 to confirm if the current posted speed limits are appropriate and modify, if necessary.

The US 1 Master Plan has identified several locations for improvements. It is recommended that follow-up studies be conducted at those locations to evaluate the feasibility of implementing improvements (such as the ones listed above or from the Master Plan) to enhance traffic flow.

- 2) This is the first Travel Time and Delay Study conducted after all COVID-19 related restrictions have been lifted and more people appear to be traveling. The traffic data collected as part of this study, indicates higher volumes as compared to 2021 traffic volumes. The increased volumes may have impacted travel speeds.

2. INTRODUCTION

Monroe County conducted travel time and delay studies along US 1 on an annual basis from 1991 to 2013; and on a biennial basis since 2013. The data collection for years 1991 through 1996 was conducted by the Monroe County Planning Department, with assistance from the Monroe County Engineering Department, and the Florida Department of Transportation (FDOT). URS and later AECOM have collected the data for years 1997 through 2023, on behalf of the Monroe County Planning Department with assistance from the agencies identified above. This report contains the travel time/delay data and findings for the year 2023.

The US 1 ATTDs's primary objective is to monitor the level of service on US 1 for concurrency management purposes pursuant to Chapter 163, Florida Statutes, Section 114 of the Monroe County Land Development Regulations and the Monroe County Comprehensive Plan. Although US 1 is predominantly an uninterrupted two-lane roadway, the US 1 Level of Service Task Force felt that due to US 1's uniqueness, it warrants an alternative LOS evaluation process to that found in the Highway Capacity Manual (HCM).

The US 1 Level of Service Task Force was formulated in 1992 to develop a methodology for US 1 that utilizes an empirical relationship between the volume-based capacities and the speed-based LOS. The US 1 Level of Service Task Force was a multi-agency group with members from Monroe County, the Florida Department of Transportation, and the Department of Economic Opportunity (formerly known as Florida Department of Community Affairs - DCA). The methodology established by the task force is a procedure for using travel speed as a means of assessing the level of service and reserve capacity for US 1. Each member organization of the Task Force has endorsed the methodology.

The US 1 Level of Service Task Force met in 1997 to re-evaluate the LOS procedure. After several meetings, the Task Force concluded that the speed-based LOS methodology should be used to assess the LOS along US 1 in Monroe County, with a minor change. The signal delay for LOS C was increased to 25 seconds from 15 seconds to account for changes in the HCM. The study methodology was modified again by the US 1 LOS Task Force in 2021 and the signal delay for LOS C was increased to 35 seconds from 25 seconds to account for the latest changes in the HCM. A copy of the current methodology titled "[A Methodology to Assess Level of Service on US 1 in the Florida Keys](#)"- January 2021, is included in Appendix A. Another change made by the 2021 US 1 Level of Service Task Force includes how the drawbridge delay is considered in the LOS calculations. Please refer to Appendix A for additional details.

Pursuant to Section 114-2(a)(1)(a) of the Land Development Code (LDC), US 1 shall have sufficient available capacity to operate at LOS C for the overall length and the 24 roadway segments of US 1, as measured by the US 1 Level of Service Task Force Methodology. In addition, all segments of US 1, as identified in the US 1 Level of Service Task Force Methodology, which would be impacted by a proposed development's access to US 1, shall have sufficient available capacity to operate at LOS C. Section 114-2(a)(1)(b) of the LDC states, development may be approved, provided that the development in combination with all other permitted developments will not decrease travel speed by more than five percent (5%) below LOS C, as measured by the US 1 Level of Service Task Force Methodology. While development may be approved within 5% of LOS C, the proposed development shall be considered to have an impact that needs mitigation. Development mitigation may be in the form of specific improvements or proportioned shared contribution towards improvements and strategies identified by the County, and/or FDOT to address any level of service degradation beyond LOS C and/or other potential deficiencies.

Although there has never been a countywide development restriction, Big Pine Key experienced a localized development restriction between 1994 and 2002.

Following the 2012 LOS evaluation, the Monroe County Board of County Commissioners (BOCC) directed the Planning Department to re-write the LDC to remove the segment-based development restriction, but after further consideration between the BOCC and County staff, it was not implemented. In 2016, Monroe County adopted the 2030 Comprehensive Plan and implementing land development code which maintained the overall and segment-based LOS for transportation concurrency.

3. MONROE COUNTY LEVEL OF SERVICE (LOS) AND RESERVE CAPACITY ASSESSMENT OVERVIEW

US 1 (Overseas Highway) is the only principal arterial serving residents and visitors in the Keys. The unique geography, land use patterns and trip making characteristics of the Florida Keys present a challenge in developing and applying a reasonable and acceptable method to assess LOS.

Although US 1 in the Florida Keys is predominantly an uninterrupted, two-lane roadway, its uniqueness warrants an alternative LOS evaluation process to the methodology provided in the Highway Capacity Manual.

A uniform method was developed in 1992 by the US 1 Level of Service Task Force to assess the level of service on US 1, then amended in 1997 and 2021 to be consistent with current HCM. The adopted method considers both the overall level of service from Key West to the mainland, and the level of service for 24 segments (see Table 2). The original methodology was developed from basic criteria and principles contained in Chapter 7 (Rural Multilane Highways), Chapter 8 (Rural Two-Lane Highways) and Chapter 11 (Urban and Suburban Arterials) of the Highway Capacity Manual. The methodology establishes a procedure for using travel speed as a means of assessing the level of service and reserve capacity for US 1 in the Florida Keys.

**TABLE 2
US 1 ROADWAY SEGMENTS**

SEG NO.	APPROXIMATE MILE - MARKER		CONTROL POINTS		KEY(S)
	Beginning	Ending	Beginning	Ending	
1	4.0	5.0	Cow Key Bridge (N)	Key Haven Boulevard	Stock Island, Key Haven
2	5.0	9.0	Key Haven Boulevard	Rockland Drive	Boca Chica, Rockland
3	9.0	10.5	Rockland Drive	Boca Chica Road	Big Coppitt
4	10.5	16.5	Boca Chica Road	Harris Channel Bridge (N)	Shark, Saddlebunch
5	16.5	20.5	Harris Channel Bridge (N)	Bow Channel Bridge (N)	Lower Sugarloaf, Upper Sugarloaf
6	20.5	23.0	Bow Channel Bridge (N)	Spanish Main Drive	Cudjoe
7	23.0	25.0	Spanish Main Drive	East Shore Drive	Summerland
8	25.0	27.5	East Shore Drive	Torch-Ramrod Bridge (S)	Ramrod
9	27.5	29.5	Torch-Ramrod Bridge (S)	N. Pine Channel Bridge (N)	Torch
10	29.5	33.0	N. Pine Channel Bridge (N)	Long Beach Drive	Big Pine
11	33.0	40.0	Long Beach Drive	7- Mile Bridge (S)	W. Summerland, Bahia Honda, Ohio
12	40.0	47.0	7- Mile Bridge (S)	7- Mile Bridge (N)	7-Mile Bridge
13	47.0	54.0	7- Mile Bridge (N)	Cocoa Plum Drive	Marathon, Key Colony Beach
14	54.0	60.5	Cocoa Plum Drive	Toms Harbor Ch Bridge (S)	Fat Deer Crawl, Grassy
15	60.5	63.0	Toms Harbor Ch Bridge (S)	Long Key Bridge (S)	Duck, Conch
16	63.0	73.0	Long Key Bridge (S)	Channel # 2 Bridge (N)	Long, Fiesta, Craig
17	73.0	77.5	Channel #2 Bridge (N)	Lignum Vitae Bridge (S)	Lower Matecumbe
18	77.5	79.5	Lignum Vitae Bridge (S)	Tea Table Relief Bridge (N)	Fill
19	79.5	84.0	Tea Table Relief Bridge (N)	Whale Harbor Bridge (S)	Upper Matecumbe
20	84.0	86.0	Whale Harbor Bridge (S)	Snake Creek Bridge (N)	Windley
21	86.0	91.5	Snake Creek Bridge (N)	Ocean Boulevard	Plantation
22	91.5	99.5	Ocean Boulevard	Atlantic Boulevard	Key Largo
23	99.5	106.0	Atlantic Boulevard	C-905	Key Largo
24	106.0	112.5	C-905	County Line Sign	Key Largo, Cross Key

NOTE: (N) and (S) refer to the north and south ends of the bridges, respectively

The travel speeds for the entire 108-mile stretch of US 1 and the 24 individual segments are measured by conducting travel time runs during the peak season. The peak season, for the purpose of this study, has been established by the Task Force as the six-week window beginning the second week of February and ending the fourth week of March.

Overall speeds reflect the traffic conditions experienced by motorists making long distance trips or traffic traveling the entire length of the Keys. Given that US 1 is the only principal arterial in unincorporated Monroe County, the movement of long-distance traffic is an important consideration.

Both Monroe County and the FDOT have adopted a LOS C standard for US 1. Regardless of the posted speed limit, 45 mph has been adopted as the LOS C Standard for the entire length of US 1. Under the adopted growth management process, if the overall LOS for US 1 falls below the LOS C Standard, then no additional land development will be allowed in the Florida Keys unless mitigation measures are implemented.

Segment speeds are the speeds recorded within the individual segments of US 1. The segments were defined by the Task Force to reflect roadway cross-sections, speed limits, and geographical boundaries. Segment speeds reflect the conditions experienced during local trips. Given that US 1 serves as the principal arterial in the Keys, the movement of local traffic is also an important consideration.

LOS is determined for individual segments by comparing the weighted average posted speed limits with the median travel speeds. The difference between the segment travel speed and the LOS C Standard is referred to as reserve speed. The reserve speed is converted to an estimated reserve capacity of additional traffic volume. If the travel speed falls below the LOS C Standard, additional trips equivalent to 5% of LOS C capacity can be allowed, to accommodate a limited amount of development to continue until traffic speeds are measured again the following year or until remedial actions are implemented. While development may be approved within 5% of LOS C, the proposed development shall be considered to have an impact that needs mitigation.

4. DATA COLLECTION

The field data collection took place between March 5, 2023 and March 18, 2023. The data was recorded by date, day of the week, time of the day, and direction of travel. Fourteen (14) round trips were made to complete the required 28 travel time runs. These runs represent a sample of two runs for each day. The data collection methodology and the data collected are presented in Appendices A and B, respectively. The seven-day, 24-hour traffic data was collected in Islamorada, Marathon, and Big Pine Key from March 13, 2023 to March 19, 2023. The volume data is provided in Appendix C.

The field studies employed a staggered schedule of departure times previously approved by the Task Force to capture peak hour conditions in as many different locations as possible during the approximately 2.5-hour one-way trip between Key West and the mainland. The staggered schedule of departure also helps to capture the varied trip purposes and time frames within the Keys.

In addition, supplemental travel time runs were conducted (as required by the 2021 US 1 LOS Methodology Update) between March 15, 2023 and March 17, 2023 in the four southernmost segments to better reflect AM and PM peak conditions associated with traffic entering and exiting the City of Key West. It should be noted that the results of the supplemental runs are included in the 2023 ATTDS Report for informational purposes only and are not used in the LOS calculations. This information is to be reviewed to decide if supplemental runs should be incorporated into future ATTDS and LOS calculations, as directed by the Monroe County BOCC.

5. FIELD OBSERVATIONS

Traffic Signals

There are 17 traffic signals, two flashing signals, seven emergency signals, one drawbridge signal, one Pedestrian Hybrid Beacon (PHB) and two pedestrian signals along the study corridor:

<u>LOCATION</u>	<u>APPROX. MILE MARKER</u>	<u>SEGMENT</u>
College Road	4.4	1
Cross Street	4.6	1
McDonald Avenue	4.8	1
3 rd Street (Flashing Signal)	4.9	1
Emerald Drive (Emergency Signal)	10.5	3
Sugarloaf Boulevard (Flashing Signal)	10.5	5
Crane Boulevard	19.5	5
Key Deer Boulevard	30.3	10
33 rd Street	48.5	13
Sombrero Beach Road	50.0	13
89 th Street (Emergency Signal)	51.7	13
107 th Street	52.4	13
109 th Street	52.5	13
Pedestrian Crossing – 121 st Street	53.0	13
Sadowski Causeway	53.5	13
Coco Plum Drive	54.0	13/14
Layton Drive (Emergency Signal)	68.4	16
Snake Creek Bridge (Drawbridge Signal)	85.7	20
Woods Avenue	90.0	21
Bessie Road	90.5	21
Ocean Boulevard	91.5	21/22
Jo-Jean Way (Emergency Signal)	92.0	22
Burton Drive	92.6	22
Fisherman's Trail (Emergency Signal)	99.1	22
East Drive (Emergency Signal)	99.2	22
Ocean Bay Drive/Atlantic Boulevard	99.5	22/23
Pedestrian Crossing (PHB) – Bay Drive	99.8	23
Tarpon Basin Drive	101.0	23
Pedestrian Crossing – Bowen Drive	105.0	23
CR-905 (Emergency Signal)	106.5	23/24

As it was done in the past, only a partial impact of the signal was considered for the pedestrian signals mentioned above. The delays associated with traffic signals located at the beginning or end of segments, such as Coco Plum Drive, Ocean Boulevard and Atlantic Boulevard intersections, are divided between the two adjacent segments.

The three closely-spaced traffic signals in Stock Island (Segment 1) were observed to experience slightly less delay events (11 in 2023 vs. 13 in 2021) but increased total delay (13 minutes and 20 seconds in 2023 vs. 7 minutes and 3 seconds in 2021) as compared to the year 2021.

The six traffic signals in Marathon (Segment 13) were observed to experience more events and significantly more total delay as compared to the year 2021. The number of delay events increased to 45 in 2023 vs. 37 in 2021. The total delay time caused by these signals was 39 minutes and 18 seconds in 2023 as compared to 15 minutes and 21 seconds in 2021.

The last signal retiming study that included 16 traffic signals along US 1, was performed by FDOT in 2019. It is possible that a new Countywide signal retiming study (along US 1) may help reduce the overall signal delay.

Traffic Counts

Mechanical traffic counters and hoses were installed on March 13, 2023 along US 1 at the following locations:

- Big Pine Key, on the south side of the North Pine Channel Bridge (MM 29);
- Marathon, in front of McDonalds (MM 50);
- Upper Matecumbe, on the south side of the Whale Harbor Bridge (MM 84).

As compared to the volumes collected in 2021, the traffic volumes collected in 2023 were found to be higher in Big Pine, Marathon and Upper Matecumbe Keys (see Table 3). Additional traffic data was collected to identify localized differences in traffic volumes in Big Pine Key. Please see Appendix C for a summary of this data.

6. RESULTS AND DISCUSSIONS

Traffic Volumes

US 1 is predominately a four-lane facility in Marathon and a two-lane facility in Upper Matecumbe and Big Pine Key. Seven-day continuous traffic counts recorded between March 13 and March 19, 2023 at the three locations listed below were used to calculate the average daily traffic (ADT) and annual average daily traffic (AADT). The 7-day average volumes were used along with seasonal and axle factors to estimate the 2023 AADTs. Traffic data summaries are included in Appendix C.

<u>Location</u>	<u>5-Day ADT</u>	<u>7-Day ADT</u>	<u>AADT</u>
Big Pine Key (MM 29)	23,427	22,428	19,580
Marathon (MM 50)	38,262	36,739	32,430
Upper Matecumbe (MM 84)	26,152	26,908	23,751

The 2023 ADT increased in Big Pine (2 - 3%), Marathon Key (2 - 3%) and Upper Matecumbe (6 - 9%) Keys as compared to 2021. A detailed historical comparison of the US 1 traffic counts for the period from 1993 to 2023 is presented in Appendix D. A comparison of the most recent data (2010 to 2023) is presented in Table 3 and represented graphically in Figure 1.

US 1 historical traffic growth is depicted in a regression analysis graph in Figure 2. A linear regression analysis of the AADT at each of the three locations over the last 26 years indicates that there is a slight increase in overall traffic growth at the Marathon and Upper Matecumbe count locations, and an overall slightly decreasing trend in traffic volumes for the Big Pine count location (but the last 4-year data shows an increasing trend).

Overall Speeds

The Level of Service (LOS) criteria for overall speeds on US 1 in Monroe County, as adopted by the Task Force, is as follows:

LOS A	51.0 mph or above
LOS B	50.9 mph to 48 mph
LOS C	47.9 mph to 45 mph
LOS D	44.9 mph to 42 mph
LOS E	41.9 mph to 36 mph
LOS F	below 36 mph

Both Monroe County and the FDOT have adopted a LOS C standard for US 1.

**TABLE 3
US 1 TRAFFIC COUNTS – HISTORICAL COMPARISON**

	2010		2011		2012		2013		2015		2017		2019		2021		2023	
	Count	% Change	Count	Count	Count	% Change												
Big Pine																		
5 – Day Average	20,651	-2.78%	20,468	-0.88%	21,056	2.87%	20,986	-0.33%	22,833	22,799	22,799	-4.02%	22,408	2.25%	22,799	1.74%	23,427	2.75%
7 – Day Average	20,115	-2.62%	20,070	-0.22%	20,579	2.53%	20,066	-2.49%	22,106	22,009	22,009	-2.31%	21,722	0.59%	22,009	1.32%	22,428	1.90%
AADT	17,842	6.97%	17,684	-0.88%	18,011	1.85%	17,943	-0.38%	20,139	19,427	19,427	-5.42%	18,753	-1.54%	19,427	3.59%	19,580	0.79%
Marathon																		
5 – Day Average	31,883	-6.76%	32,156	0.85%	34,145	6.19%	34,097	-0.14%	38,824	38,262	38,262	1.44%	43,041	9.29%	38,262	-11.10%	39,386	2.94%
7 – Day Average	30,548	-5.42%	31,097	1.79%	32,985	6.07%	32,783	-0.61%	38,144	36,739	36,739	2.87%	42,530	8.39%	36,739	-13.62%	37,675	2.55%
AADT	27,547	5.62%	27,782	0.85%	29,208	5.13%	29,153	-0.19%	34,243	32,430	32,430	1.07%	36,716	6.09%	32,430	-11.67%	32,890	1.42%
Upper Matecumbe																		
5 – Day Average	22,588	-2.09%	24,326	7.69%	24,561	0.97%	23,656	-3.68%	26,079	26,152	26,152	-1.84%	25,856	1.01%	26,152	1.14%	28,615	9.42%
7 – Day Average	22,634	-1.66%	24,508	8.27%	24,936	1.75%	23,164	-7.11%	25,817	26,908	26,908	1.20%	25,837	-1.11%	26,908	4.15%	28,419	5.62%
AADT	19,516	5.01%	21,017	7.69%	21,009	-0.04%	20,226	-3.73%	23,002	23,751	23,751	0.18%	22,305	-3.20%	23,751	6.48%	24,810	4.46%

Figure 1: U.S. 1 AADT - HISTORICAL COMPARISON

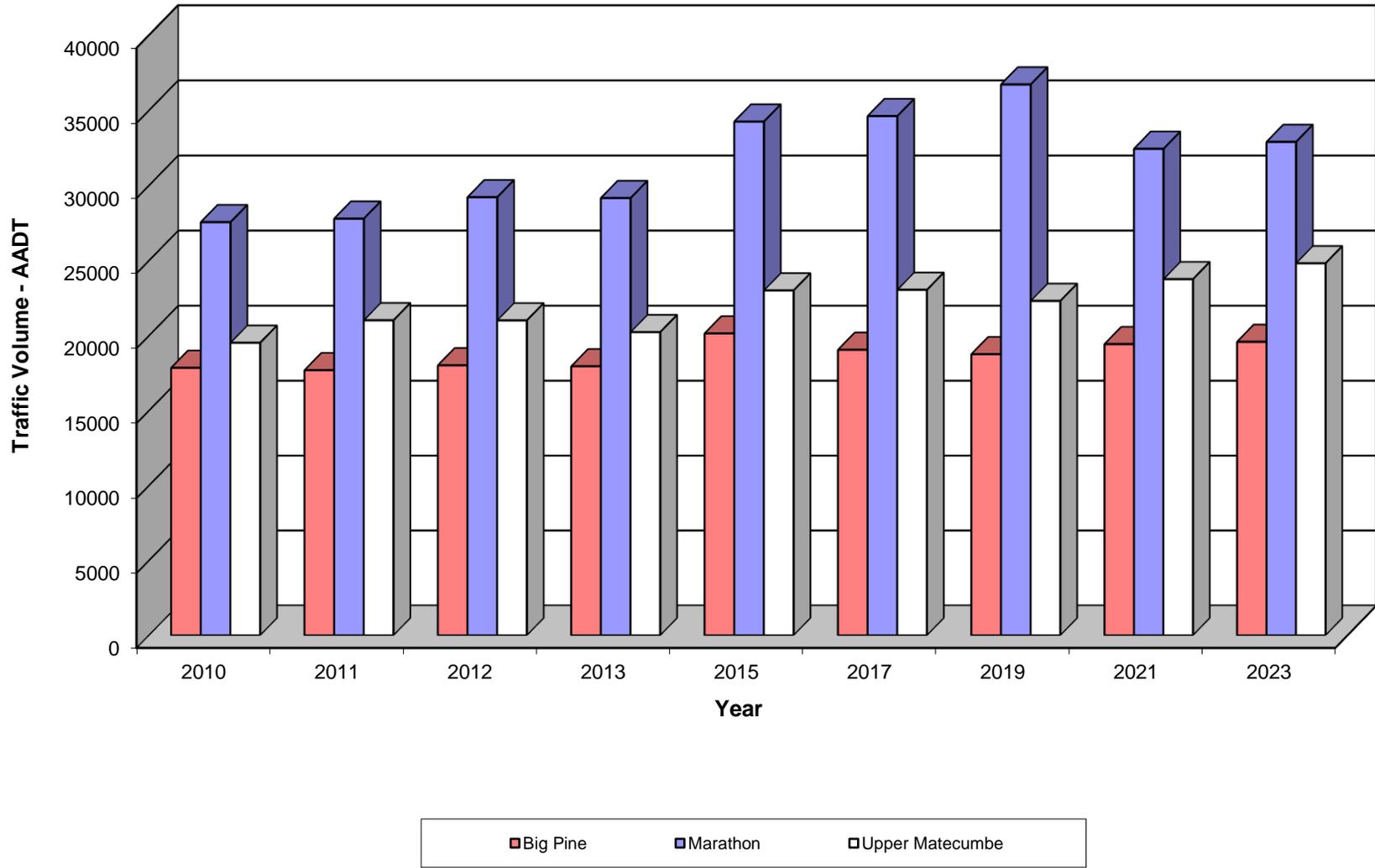
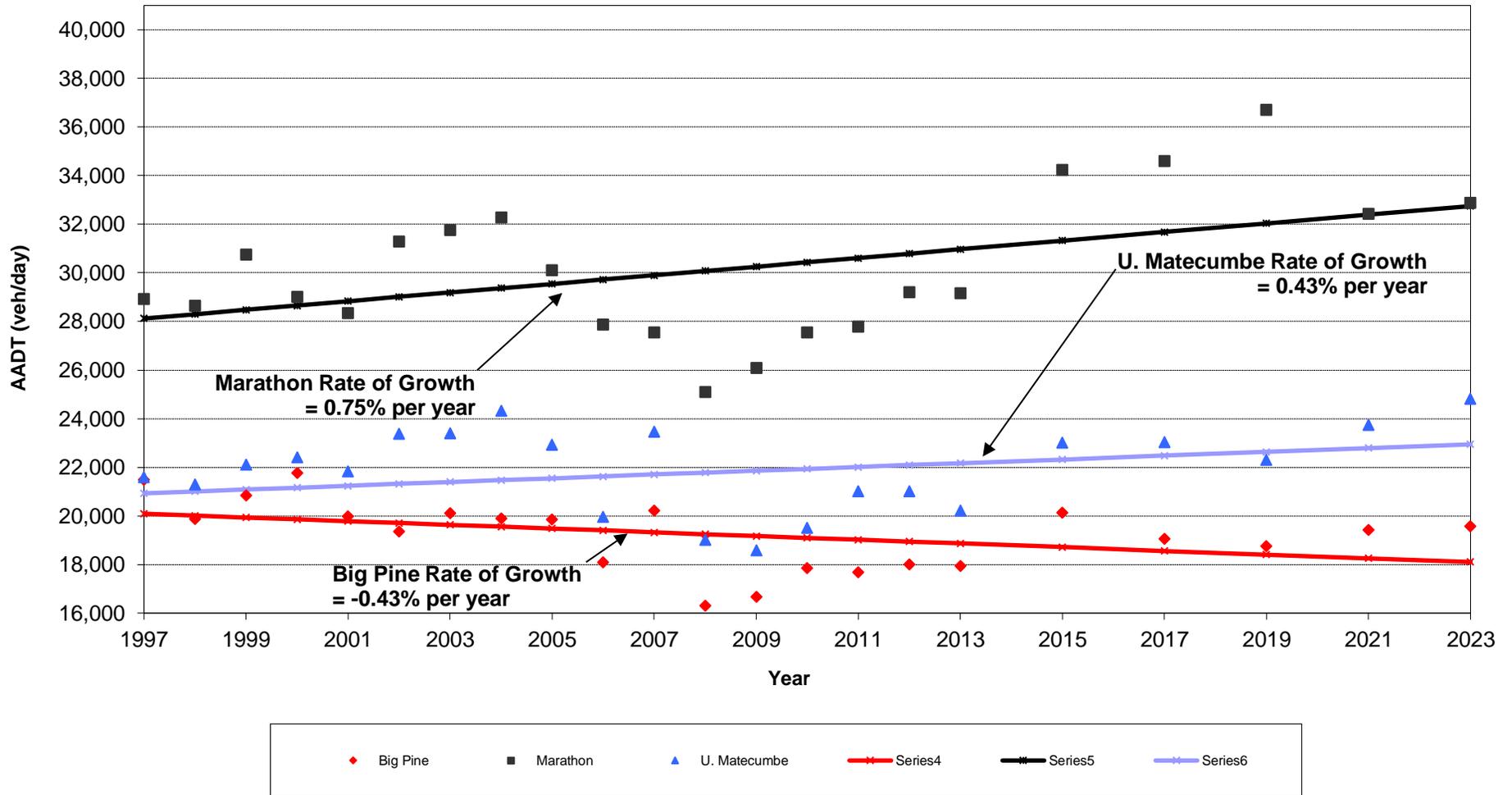


Figure 2: U.S. 1 Historical Traffic Growth AADT



The overall median speed during the 2023 ATTDS was 44.2 mph, which is 1.3 mph lower than the 2021 median speed of 45.5 mph. The median speed corresponds to LOS D. The highest overall speed recorded during the 14-day ATTDS was 47.6 mph (2.0 mph lower than the 2021 highest overall speed of 49.6 mph), which occurred on Saturday, March 11, 2023 in the northbound direction. The lowest overall speed recorded was 36.6 mph (1.1 mph higher than the 2021 lowest overall speed of 35.5 mph), which occurred on Thursday, March 16, 2023 in the southbound direction. The 2023 travel speed data is summarized in Appendix E. See Appendix F for comparisons of speed data from the 2023 study to previous years data.

Segment Speeds

Segment speeds are the speeds recorded within individual segments of US 1. Segment speeds reflect the conditions experienced during local trips. Given that US 1 serves as the main arterial in the Keys, the movement of local traffic along US 1 is also an important consideration.

The level of service criteria for segment speeds on US 1 in Monroe County depends on the flow characteristics and the posted speed limits within the given segment. The criteria, listed by type of flow characteristic, are explained in the LOS Methodology provided in Appendix A, and summarized below.

Interrupted Flow

LOS A \geq 35 mph
LOS B \geq 28 mph
LOS C \geq 22 mph
LOS D \geq 17 mph
LOS E \geq 13 mph
LOS F $<$ 13 mph

Uninterrupted Flow

LOS A \geq 1.5 mph above the posted speed limit
LOS B \geq 3.0 mph below LOS A
LOS C \geq 6.0 mph below LOS A
LOS D \geq 9.0 mph below LOS A
LOS E \geq 15.0 mph below LOS A
LOS F $<$ 15.0 mph below LOS A

For all “uninterrupted” segments containing isolated traffic signals, the travel times were reduced by 35 seconds per signalized intersection and 3 seconds per pedestrian signal to account for delay due to signals. The Marathon and the Stock Island segments are considered “interrupted” flow facilities, which are evaluated using the interrupted flow LOS criteria shown above. Therefore, no adjustments (to account for delay at signals) were made to travel times in these segments.

The segment limits, median travel speeds, and Level of Service (for 2021 and 2023) for each segment are presented in Figure 3. The median segment speed ranged from 58.1 mph in the Boca Chica segment to 33.3 mph in the Plantation segment. A summary of LOS changes, as compared to the 2021 ATTDS, are shown in the following pages.

Segment	Beginning Control Point	Ending Control Point	Beginning Mile Marker	Ending Mile Marker	LOS 21	LOS 23	Median Speed 21	Median Speed 23
1	Cow Key Bridge (N)	Key Haven Boulevard	4.0	5.0	A	B	40.0	34.9
2	Key Haven Boulevard	Rockland Drive	5.0	9.0	A	A	59.9	58.1
3	Rockland Drive	Boca Chica Road	9.0	10.5	B	B	47.5	46.6
4	Boca Chica Road	Harris Channel Bridge (N)	10.5	16.5	B	B	53.5	52.7
5	Harris Channel Bridge (N)	Bow Channel Bridge (N)	16.5	20.5	A	A	48.8	47.7
6	Bow Channel Bridge (N)	Spanish Main Drive	20.5	23.0	A	A	47.9	46.5
7	Spanish Main Drive	East Shore Drive	23.0	25.0	B	B	46.1	44.8
8	East Shore Drive	Torch-Ramrod Bridge (S)	25.0	27.5	A	A	46.5	47.0
9	Torch-Ramrod Bridge (S)	N.Pine Channel Bridge (N)	27.5	29.5	A	A	48.8	48.0
10	N.Pine Channel Bridge (N)	Long Beach Drive	29.5	33.0	A	B	42.7	40.4
11	Long Beach Drive	7-Mile Bridge (S)	33.0	40.0	A	A	54.8	52.5
12	7-Mile Bridge (S)	7-Mile Bridge (N)	40.0	47.0	B	B	53.2	54.5
13	7-Mile Bridge (N)	Coco Plum Drive	47.0	54.0	A	A	39.6	35.2
14	Coco Plum Drive	Toms Harbor Ch Bridge (S)	54.0	60.5	C	C	51.4	51.3
15	Toms Harbor Ch Bridge (S)	Long Key Bridge (S)	60.5	63.0	C	B	53.2	53.6
16	Long Key Bridge (S)	Channel #2 Bridge (N)	63.0	73.0	C	C	49.9	50.9
17	Channel #2 Bridge (N)	Lignum vitae Bridge (S)	73.0	77.5	C	B	48.2	45.3
18	Lignum vitae Bridge (S)	Tea Table Relief Bridge (N)	77.5	79.5	A	B	46.6	44.8
19	Tea Table Relief Bridge (N)	Whale Harbor Bridge (S)	79.5	84.0	E	E	35.3	36.9
20	Whale Harbor Bridge (S)	Snake Creek Bridge (N)	84.0	86.0	D	E	39.3	34.4
21	Snake Creek Bridge (N)	Ocean Boulevard	86.0	91.5	C	D	34.7	33.3
22	Ocean Boulevard	Atlantic Boulevard	91.5	99.5	A	A	49.4	45.6
23	Atlantic Boulevard	C-905	99.5	106.0	A	A	45.0	44.1
24	C-905	County Line Sign	106.0	112.6	C	C	49.1	48.4
Overall			4.0	112.6	C	D	45.5	44.2



Average Travel Speeds And Levels Of Service

2023 Travel Time Delay Study

Figure 3

SOURCE(S): Florida Department of Transportation Transportation Statistics Office; URS Consultants, Inc.



10 E Broward Boulevard, Ste 700
Fort Lauderdale, FL 33301

\$FILES

\$TIME

\$DATES



There are LOS changes in 7 segments in 2023 study compared to the 2021 study – the LOS for five segments have degraded, and the LOS for two segments have improved.

- Stock Island segment (1) changed from LOS ‘A’ to LOS ‘B’
- Big Pine segment (10) changed from LOS ‘A’ to LOS ‘B’
- Duck segment (15) changed from LOS ‘C’ to LOS ‘B’
- Lower Matecumbe segment (17) changed from LOS ‘C’ to LOS ‘B’
- Tea Table segment (18) changed from LOS ‘A’ to LOS ‘B’- Village of Islamorada
- Windley segment (20) changed from LOS ‘D’ to LOS ‘E’ - Village of Islamorada
- Plantation segment (21) changed from LOS ‘C’ to LOS ‘D’- Village of Islamorada

<u>LOS A</u>	<u>LOS B</u>	<u>LOS C</u>	<u>LOS D</u>	<u>LOS E</u>
	(-) Stock Island (1)		(-) Plantation (21)	(-) Windley (20)
	(-) Big Pine (10)			
	(+) Duck (15)			
	(+) L. Matecumbe (17)			
	(-) Tea Table (18)			

As compared to the 2021 study, the median segment speeds decreased in 19 of the 24 segments, ranging between 0.1 mph and 5.1 mph, and increased in 5 segments, ranging from 0.4 mph to 1.6 mph.

The largest increase in speed (+1.6 mph) was recorded in Segment #19 (Upper Matecumbe – MM 79.5 to MM 84.0); The largest reduction in speed (-5.1 mph) was recorded in Segment #1 (Stock Island – MM 4.0 to MM 5.0).

As compared to the 2021 study, the LOS degraded in five of the 24 segments, and improved in two segments. The LOS did not change in the rest of the segments. The significant LOS changes recorded in Segments #20 (Windley – MM 84.0 to MM 86.0; LOS changed from ‘D’ to LOS ‘E’), #21 (Plantation – MM 86.0 to MM 91.5; LOS changed from ‘C’ to LOS ‘D’).

Summary tables of the measured travel speeds by day, segment, and fourteen-day average are included in Appendix E.

Supplemental Travel Time Runs

Supplemental travel time runs were conducted (as required by the 2021 US 1 LOS Methodology Update) between March 15, 2023 and March 17, 2023 in the four southernmost segments to better reflect AM and PM peak conditions associated with traffic entering and exiting the City of Key West. The supplemental runs indicate that the travel speeds in Segment 1 and 3 are relatively lower during peak hours, as compared to the travel speeds measured during travel time runs conducted using the staggered schedule. However, the peak hour LOS for all four segments remained unchanged (LOS B for segment 1, LOS A for segment 2, LOS D for segment 3 and LOS B for segment 4). A summary table of measured travel speeds by day, segment and three-day average from the supplemental travel runs is also included in Appendix E. It should also be noted that the results of the supplemental runs are included in the 2023 ATTDS Report for informational purposes only and are not used in the LOS calculations. This information is to be reviewed to decide if supplemental runs should be incorporated into future ATTDS and LOS calculations, as directed by the Monroe County BOCC.

Delay

A delay event starts whenever the speed of the test vehicle falls below 5 mph. The delay event continues until the test vehicle's speed increases to 15 mph. During the study, the observers encountered a total of 332 separate delay events. Thirty-seven (37) of these delay events, resulting in 5 hours 42 minutes and 27 seconds, were excluded from the overall and the segment travel time calculations. The excluded delays were caused by non-recurring events, such as accidents and road construction.

A detailed listing of the specific sources of delay is included in Appendix H of this report. It should be noted that segment # 25 (MM 112.6 – MM 126.5), which belongs to Miami-Dade County was not included in the total delay calculations. However, the delays in that segment were listed in Appendix H. A summary of the delay data (as compared to 2021 data), is provided in Table 4. The mean delay per trip is the total delay recorded for a given delay event divided by the study's 28 one-way trips. The mean delay per trip is found to be 28 minutes and 53 seconds.

**TABLE 4
DELAY DATA SUMMARY AND COMPARISON**

Delay Source	Number of Events		Total Delay		Excluded Time		Mean Delay Per Event		Mean Delay Per Trip	
	2023	(2021)	2023	(2021)	2023	(2021)	2023	(2021)	2023	(2021)
Traffic Signals	164	124	02:18:12	01:00:08	00:00:00	00:00:00	00:00:51	00:00:29	00:04:56	00:02:09
Drawbridges	6	2	00:35:32	00:12:00	00:35:32	00:12:00	00:05:55	00:06:00	00:01:16	00:00:26
Congestion	109	87	05:20:07	02:16:39	00:00:00	00:00:00	00:02:56	00:01:34	00:11:26	00:04:53
Left Turns	22	5	00:07:47	00:01:20	00:00:00	00:00:00	00:00:21	00:00:16	00:00:17	00:00:03
Right Turns	0	1	00:00:00	00:00:13	00:00:00	00:00:00	00:00:00	00:00:13	00:00:00	00:00:00
School Bus	3	9	00:01:00	00:03:14	00:01:00	00:03:14	00:00:20	00:00:22	00:00:02	00:00:07
Construction	18	10	04:29:55	02:14:56	04:29:55	02:14:56	00:15:00	00:13:30	00:09:38	00:04:49
Accidents	2	15	00:09:02	00:33:29	00:09:02	00:33:29	00:04:31	00:02:14	00:00:19	00:01:12
School Zones	0	1	00:00:00	00:00:42	00:00:00	00:00:42	00:00:00	00:00:42	00:00:00	00:00:01
Special Event	8	1	00:26:58	00:00:17	00:26:58	00:00:17	00:03:22	00:00:17	00:00:58	00:00:01
Total	332	255	13:28:33	06:22:59	05:42:27	03:04:38	00:02:26	00:01:30	00:28:53	00:13:41

Signal Delays

The third largest recurring delay was caused by traffic signals. During the 2023 study, 164 observable signal delay events were noted in the vicinity of the signalized intersections as compared to 124 delay events in 2021. Traffic signals resulted in a total delay of 2 hours, 18 minutes and 12 seconds in 2023, as compared to 1 hour and 8 seconds in 2021. Some notable observations based on signal delay are provided below:

- The mean delay per event for signals in Segments # 1, 10, 13 and 22 was higher than the LOS C threshold value of 35 seconds (deducted as per the methodology).
- The average signal delay per trip for Segment # 1 was lower (29 seconds) than the 35 second threshold; the average signal delay per trip for Segment # 23 was higher (41 seconds) than the 35 second threshold.
- The signal at Sombrero Beach Road (Segment # 13) caused the most delay, 24 minutes and 12 seconds, which accounted for 18% of the total signal delay. In

addition, the signal at Sombrero Beach Road had the highest mean delay per event with 14 signal delay events, at 1 minute and 44 seconds.

- The signal at Atlantic Boulevard (Segment # 22/23) caused the second highest delay, 22 minutes and 55 seconds, (from a total of 29 delay events), which accounted for 17% of the total signal delay.
- The signal at Key Deer Boulevard in the Big Pine segment (Segment # 10) caused the third highest delay (from a total of 13 delay events), which accounted for 14% of the total signal delay.
- The Marathon segment (Segment # 13) experienced the highest number of signal delay events (45), as well as signal delay with 39 minutes and 18 seconds delay (28% of the total signal delays).

The last signal retiming study that included 16 traffic signals along US 1, was performed by FDOT in 2019. It is possible that a new signal retiming study at the above segments/locations may help reduce the signal delay, which may improve the overall US 1 Level of Service.

Accident Delay

The accident-related delays, although non-recurring, were observed to be the sixth highest delay event category during the 2023 study. Two accident delay events were recorded during the 2023 study, accounting for 9 minutes and 2 seconds of delay. The accident delays were excluded from the overall and segment travel times.

Turning Vehicles Delay

There were 22 left-turn delay events during the 2023 study. Left-turn delays accounted for 7 minutes and 47 seconds, with a mean delay of 21 seconds.

Drawbridge Delay

The bridge across the Snake Creek was the only drawbridge observed along the entire length of the study segment. There were six drawbridge events during the 2023 study, compared to two events in the 2021 travel time study. Drawbridge delays accounted for 35 minutes and 32 seconds, with an average delay of 5 minutes and 55 seconds per event. The drawbridge delays were excluded from the overall and segment travel times.

Congestion Delay

Congestion related delay represents the largest recurring delay observed during the 2023 study. There were 109 congestion related delay events, resulting in 5 hours 20 minutes and 7 seconds of delay. It is possible that some of this delay was caused by inadequate roadway capacity, stop and go conditions in the vicinity of signalized intersections, drawbridge openings, accidents, vehicles turning from through lane, etc. Specific sources of congestion were not always visible to the observers in the test vehicle, especially if the test vehicle was in a long queue; or the delay event has ended (such as red signal indication may have changed to green or the open drawbridge may have been lowered, or accident scene has been cleared) by the time the test vehicle approached the event location.

Construction Delay

Construction delays accounted for 4 hours 29 minutes and 55 seconds during the 2023 study, as compared to 2 hours 14 minutes and 56 seconds construction delay during the 2021 study. Construction related delay represents the second largest single delay observed during the 2023 study. There was significant increase in construction delay during the 2023 study as compared to 2021 study. For example, emergency water main

repairs at MM 84 affected travel time runs on March 8 and March 9; only SB direction of travel was allowed at a time on US 1, while the NB traffic was diverted to Old Hwy (parallel to US 1) and afterwards merged back to US 1; flagger operations were used for traffic management. In addition, significant construction delays were caused due to regular road work on the right shoulder that affected several travel time runs; cones were placed on the right shoulder over a long distance at the Village of Islamorada, especially in the SB direction. Construction vehicles may have caused actual interference with traffic, but observers could not visually confirm during the travel time runs.

Reserve Capacities

The difference between the median speed and the LOS C Standard speed gives the reserve speed, which in turn can be converted to an estimated reserve capacity. The overall median speed of 44.2 mph compared to the LOS C standard of 45 mph results in a negative overall reserve speed of -0.8 mph. This reserve speed is converted into an estimated number of reserve trips using the formula below:

$$\text{Reserve Volume} = \frac{\text{Reserve Speed} \times K \times \text{Overall Length}}{\text{Trip Length}}$$

$$\text{Reserve Volume} = \frac{\text{Reserve speed} \times 1656 \text{ daily trips/mph} \times 112 \text{ miles}}{10 \text{ miles}}$$

Applying the formula for reserve volume to each of the 24 segments of US 1 individually gives maximum reserve volumes for all segments totaling 90,496 trips. These individual reserve volumes may be unobtainable, due to the constraint imposed by the overall reserve volume.

County regulations and FDOT policy allow segments that fail to meet the LOS C standards to receive an allocation not to exceed five percent below the LOS C standard. The so-called five percent allocations were calculated for such segments as follows:

$$5\% \text{ Allocation} = \frac{(\text{median speed} - 95\% \text{ of LOS C}) \times 1656 \times \text{Length}}{\text{Trip Length}}$$

The following three segments were identified to be functioning below the LOS C threshold: Segment #19 (Upper Matecumbe), Segment #20 (Windley) and Segment #21 (Plantation). These three segments have depleted their reserve capacities. All three segments are in the Village of Islamorada.

A summary table displaying level of service and reserve capacity values for each segment as well as overall US 1 are contained in Appendix G.

7. SUMMARY

The following is a summary of the 2023 Travel Time and Delay Study results as compared to the 2021 Travel Time and Delay Study:

- a) The average daily traffic volumes (ADTs) have increased in Big Pine (2 - 3%), Marathon (2 - 3%) and Upper Matecumbe (6 - 9%) Keys as compared to 2021 volumes.
- b) The overall travel speed on US 1 based on the 2023 study is 44.2 mph, which is 1.3 mph lower than the 2021 overall travel speed.
- c) As compared to the 2021 data, the median travel speeds in 19 of the 24 segments have decreased. They are:

- Boca Chica (-1.8 mph)	- Grassy (-0.1 mph)
- Sugarloaf (-1.1 mph)	- Big Pine (-2.3 mph)
- Cudjoe (-1.4 mph)	- Torch (-0.8 mph)
- Big Coppitt (-0.9 mph)	- Bahia Honda (-2.3 mph)
- Tavernier (-3.8 mph)	- Windley (-4.9 mph)
- Key Largo (-0.9 mph)	- L Matecumbe (-2.9 mph)
- Stock Island (-5.1 mph)	- Tea Table (-1.8 mph)
- Marathon (-4.4 mph)	- Plantation (-1.4 mph)
- Summerland (-1.3 mph)	- Cross (-0.7 mph)
- Saddlebunch (-0.8 mph)	

Median travel speeds in five segments have increased. They are:

- Duck (+0.4 mph)	- Ramrod (+0.5 mph)
- Long (+1.0 mph)	- U Matecumbe (+1.6 mph)
- 7-Mile Bridge (+1.3 mph)	

- d) As compared to the 2021 study, there are LOS changes in seven of the 24 segments – the LOS for five segments have degraded, and the LOS for two segments have improved. Segment # 20 (Windley – MM 84.0 – MM 86.0) LOS changed from LOS 'D' to 'E'. Segment # 21 (Plantation – MM 86.0 – MM 91.5) LOS changed from LOS 'C' to 'D'. The LOS for Segment #19 (Upper Matecumbe – MM 79.5 – MM 84.0) remained at LOS 'E'. These three segments have no reserve capacity and should be given special attention.
- e) There were six drawbridge delay events during the 2023 study, as compared to two drawbridge delay events in the 2021 study. Drawbridge delays accounted for 35 minutes and 32 seconds, with an average delay of 5 minutes and 55 seconds.
- f) There were 18 construction delay events in 2023 (accounted for 4 hours 29 minutes and 55 seconds), as compared to 10 construction delay events (accounted for 2 hours 14 minutes and 56 seconds) in 2021.
- g) There were 164 signal related delay events in 2023, resulting in 2 hours 18 minutes and 12 seconds of delay, as compared to 1 hour and 8 seconds (in 124 signal related events) in 2021. The signal delay events contributed to 4 minutes and 56 seconds of delay per trip on an average, which is higher when compared to the 2021 average signal delay per trip of 2 minutes and 9 seconds.
- h) Segments with reserve speeds of less than or equal to 3 mph should be given particular attention when approving development applications. Based on the 2023 study, there are five segments in this category (compared to seven segments in the 2021 study).

- Long (MM 63.0 – MM 73.0)	- U. Matecumbe (MM 79.5 – MM 84.0)
- Cross (MM 106.0 – MM 112.5)	- Windley (84.0 – 86.0)
- Plantation (86.0 – 91.5)	

The following is a list of considerations for review:

- 1) Under the adopted growth management process, if the overall LOS for US 1 falls below the LOS C Standard, then no additional land development will be allowed unless mitigation measures are implemented. Roadway widening is a typical mitigation measure (or capacity improvement) used by most agencies. However, in Monroe County, road widening (specifically along US 1) is restricted by the adopted comprehensive plan policies to preserve and protect the fragile ecological conditions. There are other remedies that could be explored and evaluated to improve the traffic flow and capacity along US 1. Some examples include:
 - Upgrade the traffic signal infrastructure and/or signal timing at signalized intersections along US 1 to enhance traffic flow.
 - Provide or improve transit service or other multi-modal transportation alternatives.
 - Implement active traffic management and Transportation System Management & Operation type improvements, which include real-time monitoring of traffic flow and implementing measures to address traffic congestion.
 - Add turn lanes at strategic locations to improve roadway capacity.
 - Implement access management improvements (consolidate driveways/access points, modify median openings, etc.) to reduce interruptions to US 1 traffic.
 - Provide and/or improve frontage roads to reduce the impacts to US 1 traffic flow. Improve local roads to minimize US 1 being used as a local street for short trips.
 - Do not install new traffic signals along US 1, if a safe and/or less restrictive alternative (such as indirect left-turns, a roundabout, etc.) can be provided to accommodate traffic movements.
 - Conduct speed studies on selected segments of US 1 to confirm if the current posted speed limits are appropriate and modify, if necessary.

The US 1 Master Plan has identified several locations for improvements. It is recommended that follow-up studies be conducted at those locations to evaluate the feasibility of implementing improvements (such as the ones listed above or from the Master Plan) to enhance traffic flow.

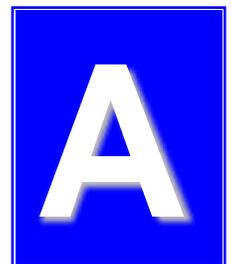
- 2) This is the first Travel Time and Delay Study conducted after all COVID-19 related restrictions have been lifted and more people appear to be traveling. The traffic data collected as part of this study, indicates higher volumes as compared to 2021 traffic volumes. The increased volumes may have impacted travel speeds.

APPENDIX A

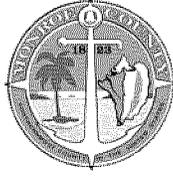
Data Collection Methodology



A P P E N D I X



AECOM



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2
3 **MONROE COUNTY, FLORIDA**
4 **MONROE COUNTY BOARD OF COUNTY COMMISSIONERS**
5 **RESOLUTION NO. 064 -2021**
6

7 **A RESOLUTION BY THE MONROE COUNTY BOARD OF**
8 **COUNTY COMMISSIONERS APPROVING UPDATES TO**
9 **THE U.S. 1 LEVEL OF SERVICE (“L.O.S.”)**
10 **METHODOLOGY BASED ON RECOMMENDATIONS**
11 **MADE BY THE U.S. 1 L.O.S. TASK FORCE WHICH**
12 **EVALUATED CONSIDERATIONS IDENTIFIED IN THE**
13 **DRAFT 2019 ARTERIAL TRAVEL TIME AND DELAY**
14 **STUDY (“ATTDS”).**
15

16 **WHEREAS**, in August, 1991, the BOCC adopted the U.S. 1 Level of Service (“L.O.S.”)
17 C as measured by the U.S. 1 L.O.S. Methodology established by the U.S. 1 L.O.S. Task Force;
18 and

19 **WHEREAS**, on December 10, 1997, the BOCC approved an amendment to the U.S. 1
20 L.O.S. Methodology based on recommendations of the U.S. 1 L.O.S. Task Force; and

21 **WHEREAS**, on July 15, 2020, the BOCC considered the Draft 2019 Arterial Travel Time
22 & Delay Study (“ATTDS”), prepared by the County’s traffic consultant, AECOM Technical
23 Services, Inc. (“AECOM”), which identified several considerations regarding methodology; and

24 **WHEREAS**, at the July 15, 2020, meeting, the BOCC directed staff to re-engage the U.S.
25 1 L.O.S. Task Force to evaluate the L.O.S. methodology and consider updates to it based on the
26 considerations identified in the Draft 2019 ATTDS; and

27 **WHEREAS**, on October 21, 2020, the BOCC adopted Resolution No. 355-2020,
28 reconvening the U.S. 1 L.O.S. Task Force and tasking the U.S. 1 L.O.S. Task Force with evaluating
29 the L.O.S. Methodology and potential updates to it based on the considerations identified in the
30 draft 2019 ATTDS; and

31 **WHEREAS**, U.S. 1 L.O.S. Task Force met on November 10, 2020, January 6, 2021, and
32 January 21, 2021, to evaluate the L.O.S. methodology and to consider updates to it based on the
33 considerations identified in the Draft 2019 ATTDS; and

1 **WHEREAS**, U.S. 1 L.O.S. Task Force agreed to the following recommended items
2 through a roll call for vote for the update to the L.O.S. methodology at the January 21, 2021,
3 meeting:

- 4 1. Signal Delay: Increase to 35 seconds (to be consistent with the current Highway
5 Capacity Manual);
6
- 7 2. Signal Delay: Continue to apply to only uninterrupted segments (not overall U.S.-1
8 L.O.S. calculations);
9
- 10 3. Drawbridge Delay: Deduct delays due to drawbridge openings from the time run
11 calculations for both affected segments and overall U.S.-1, using a delay time of 6
12 minutes (average gate closure time based on FDOT data for drawbridge delays), and
13 applying to only those travel runs which were impacted by bridge openings;
14
- 15 4. Overall L.O.S. calculation methodology for segments versus overall U.S.-1 will stay
16 the same;
17
- 18 5. Travel Time Schedule: Conduct 2021 travel time runs based on current schedule. Also,
19 conduct supplemental runs in the southbound direction within Segments 1 to 4 during
20 AM peak (7-8 AM) on Wednesday, Thursday and Friday of the second week.
21 Additionally, conduct supplemental runs in the northbound direction within Segments
22 1 to 4 during the PM Peak (5-6 PM) on Wednesday, Thursday, and Friday of the second
23 week. The results of the supplemental runs will be included in the 2021 ATTDS Report
24 for informational purposes only and will not be used in overall L.O.S. calculations.
25 This information will be reviewed to decide if supplemental runs should be
26 incorporated into future ATTDS and L.O.S. calculations, as directed by the Monroe
27 County BOCC; and
28
- 29 6. Include by reference the Data Collection Methodology into the U.S. 1 L.O.S.
30 Methodology document.
31

32 **NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY**
33 **COMMISSIONERS OF MONROE COUNTY, FLORIDA, THAT:**

34 **Section 1.** The recitals contained herein are true and correct and are hereby
35 incorporated as if fully set forth herein.

36 **Section 2.** The Board of County Commissioners does hereby adopt the
37 recommendations of the U.S. 1 L.O.S. Task Force and the 2021 Updated
38 methodology document, *A Methodology To Assess Level-Of-Service On*
39 *US-1 In The Florida Keys*, attached as Exhibit A, for County use.

40
41 **PASSED AND ADOPTED** by the Board of County Commissioners of Monroe County,
42 Florida, at a regular meeting of the Board held on the 17th day of February, 2021.

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Mayor Michelle Coldiron Yes
Mayor Pro Tem David Rice Yes
Commissioner Craig Cates Yes
Commissioner Eddie Martinez Yes
Commissioner Mike Forster Yes



BOARD OF COUNTY COMMISSIONERS
OF MONROE COUNTY, FLORIDA

Michelle Coldiron
BY _____
MAYOR MICHELLE COLDIRON

ATTEST: KEVIN MADOK, CLERK

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PETER MORRIS
ASSISTANT COUNTY ATTORNEY
Date: 2/2/21

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MONROE COUNTY, FLORIDA

**A METHODOLOGY TO ASSESS LEVEL-OF-SERVICE
ON US-1 IN THE FLORIDA KEYS**

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DRAFT UPDATE

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**Updated by AECOM Technical Services, Inc.
Based on input from the 2019/2020 US-1 LOS Task Force**

ABSTRACT

This paper presents the methodology developed to assess level-of-service (LOS) on US-1 in the Florida Keys. Although predominantly an uninterrupted flow two-lane roadway in the Keys, US-1's uniqueness warrants an alternative LOS evaluation process to that found in the 1985 Highway Capacity Manual.

U.S.-1 extends from the Key West to the Florida mainland with no major roads intersecting it. Furthermore, no other principal arterial serves the Keys or the Keys' resident and tourist population, over 100,000. Its unique geography, land use patterns, trip making characteristics presented a challenge in developing and applying a reasonable and acceptable method to assess its LOS.

A uniform method was developed to assess LOS on U.S.-1 to cover both its overall arterial length from Key West to the Florida mainland, and 24 roadway segments delineated. The methodology employs average travel speed as the main measure of effectiveness. It was developed from basic criteria and principles contained in Chapters 7 (Rural Multilane Highways), 8 (Rural Two-Lane Highways) and 11 (Urban and Suburban Arterials) of the 1985 Highway Capacity Manual.

The results of the study correlate well with perceived operating conditions on US-1 and over a two-year period the methodology appears to have a good level of reliability. The authors recommend that for uninterrupted flow conditions in developed areas, Chapters 7 and 8 of the Highway Capacity Manual incorporate average travel speed as the main measure of effectiveness to determine LOS.

A METHOD TO ASSESS LEVEL-OF-SERVICE ON US-1 IN THE FLORIDA KEYS

INTRODUCTION

The purpose of this paper is to present the methodology developed by the Monroe County US-1 level-of-service (LOS) Task Force to assess LOS on US-1 (the Overseas Highway) in the Florida Keys (1). The authors are members of the referenced task force.

US-1 which is mostly two-lanes, has unique geographic and trip characteristics. It extends through the Florida Keys covering approximately 180 kilometers (112 miles) from the City of Key West to the Florida mainland (Figure 1). There are 48 bridges crossing water for a total length of 35 km (22 mi), with the longest bridge approximately 11 km (7 mi) long. There is no other road, to provide vehicular access to the Florida Keys from the rest of Florida or anywhere else. Few local roads are 5 km (3 mi) in length. Consequently, US-1 serves not only as a regional principal arterial which serves intra as well as interstate travel, but also serves as the local road for most of the trips within the Keys. US-1 Annual average daily traffic (AADT) volumes range from a low of 4700 to a high of 34200. The road serves a large tourist demand and is one of the most scenic in the United States. The linear geography with the narrow land width of most of the Florida Keys are further characteristics.

Most of the surrounding land use is rural developed and suburban in nature; however, some areas are totally rural and others are urban, such as the Key West and its suburbs. With the exception of the few completely rural segments and the bridges, strip commercial stores, motels and restaurants are very common throughout the Keys along US-1. Numerous driveways and intersecting local roads provide access to the surrounding residential areas.

The US-1 LOS study encompassed approximately 174 km (108 mi) of US-1 from Key West/Stock Island to the Monroe/Dade County Line, broken down as follows:

- 129 km (80 mi) (74%) two-lane uninterrupted flow;
- 32 km (20 mi) (19 %) four-lane uninterrupted flow; and
- 13 km (8 mi) (7%) four-lane urban/suburban interrupted flow.

Part of the growth management process in Florida is to assess roadway LOS to determine if roadway facilities meet standards established by state regulations. The Transportation Research Board Special Report 209 Highway Capacity Manual (HCM) (2) is extensively used throughout Florida as the source document to determine highway capacities and LOS.

HCM Chapter 7 (Rural Multilane Highways), 8 (Rural Two-Lane Highways) and 11 (Urban and Suburban Arterials) were consulted to determine applicability to the unique conditions and vehicular traffic operations and characteristics of the Florida Keys. Only the 13 km (8 mi) of urban/suburban interrupted flow and the small percentage of the two-lane truly rural portions correlate directly to the HCM Chapters 11 and 8.

Thus, the challenge was to develop a methodology to assess arterial LOS along US-1 without deviating from the principles of the HCM. Towards that end a task force was created consisting of representatives from State and local agencies and an engineering consulting firm.

THE NEED TO DEVELOP A LOS MEASUREMENT METHOD

From a state transportation perspective, the overall operating condition of US-1 is important, not the condition of any smaller segment. With Key West as a major tourist destination at the southern end of the Keys and no alternative routes, the logical analysis section of highway extends from Key West to the mainland. From local transportation and development approval perspectives, shorter segments for analysis are desirable.

Chapter 8 of the HCM presents a methodology which applies to typical rural two-lane highways with basically long stretches of roads, and few side intersecting streets and driveways directly connecting to the roads. Chapter 8 methodology relies mainly on "percent time delay" to assess LOS. The HCM further states that "Percent time delay...is defined as the average percent of time that all vehicles are delayed while traveling in platoons due to inability to pass. Percent time delay is difficult to measure directly in the field. The percent of vehicles traveling at headways less than 5 seconds can be used as a surrogate measure in field studies."

Chapter 8 of the HCM also uses average travel speed and capacity utilization as additional measures of effectiveness to assess LOS. However, the HCM states clearly that percent time delay is the primary measure of service quality. Further inspection of the average speeds for level terrain depicted by Table 8-1 of the HCM do not correspond well with the typical operating speeds of US-1 in the Florida Keys. For instance, Table 8-1 shows average speeds ranging from 58 mph (93 kmh) (LOS A) to 45 mph (72 kmh) (LOS D).

The overall weighted posted speed limit for US-1 in the Florida Keys is 79.7 kmh (49.5 mph). The overall median operating speeds along US-1 according to the 1991 and 1992 field studies (3, 4) were 76.8 and 75.5 kmh (47.7 and 46.9 mph), respectively. The field studies showed, for the most part, the survey vehicle(s) was traveling close to the posted speed limit.

It is believed the average motorist in the Florida Keys is mostly concerned with operating at an acceptable average travel speed rather than being concerned about the ability to pass. This is supported by the physical and traffic characteristics of the Keys (e.g., adjacent land development, sight-seeing tourists), local knowledge, and discussions with motorists.

From the above statements, it was clear to the task team that HCM Chapter 8 methodology could not be applied to US-1 for analysis of its two-lane sections.

With regards to the four-lane uninterrupted flow portions of US-1, a similar dilemma occurred. HCM Chapter 7 methodology applies to multi-lane highways with operating characteristics generally unlike those of US-1 through the Florida Keys. For instance, average travel speeds depicted by Table 7-1 of the HCM are also higher than those encountered in the Keys. Further, the methodology inherent in equations (7-1), (7-2) and (7-3) are closely related to those of freeways with their higher service flow rates, which again neither simulate nor resemble those of US-1 in the Keys. The Four-lane portion is found mostly in Key Largo (the northeastern end of the Keys) which has a weighted posted speed limit of 72.5 kmh (45 mph). Key largo is developed with strip commercial and residential development. It has numerous driveway connections and side streets directly accessing US-1.

The remaining 7% of the total US-1 mileage is four-lane interrupted flow. These are the portions encompassing Marathon (in the middle of the Keys) and Stock Island (near Key West). The operating characteristics here are truly urban/suburban and interrupted flow in nature resembling those of HCM Chapter 11. Thus, the methodology of Chapter 11 was employed in assessing LOS on these segments.

From the preceding discussion, it was evident that a distinct method to assess LOS on US-1 had to be developed. The task team's efforts concentrated on keeping consistency with the basic philosophy of the HCM, and yet be sensitive to the Keys uniqueness. Thus, the proposed methodology correlates measured travel speeds along US-1 with LOS speed thresholds developed as part of this study. This is in line with the concept behind the HCM of average travel speed being the main parameter to measure arterial LOS.

METHODOLOGY

Considering the types of trips served by US-1, it was decided to conduct travel time and delay runs to cover both the entire length of US-1 from Key West to the Monroe/Dade County Line (mainland) and for each segment of the highway along the way. Twenty-four segments were selected as depicted by Table 1. Each segment is fairly homogeneous in nature having a uniform roadway cross section and traffic flow.

Travel speeds for the overall length (from Key West to the mainland) provide an indication of the LOS for the regional trips. Travel speeds for each segment also provides an opportunity to assess the impact of local trips. Establishing speed criteria for both the overall length and for each roadway segment satisfies the requirements of the Florida growth management process.

The next step in the process was to determine the number of travel time runs and how, when and to/from where. Runs were started at both ends of US-1. For example, one run started on Stock Island (Key West City limits) and proceeded to the mainland (Dade County). After reaching this point, the vehicle turned back and proceeded to end the run where it started, on Stock Island. On another day the reverse was true (i.e., the run started in Dade County instead of Stock Island). It was decided to perform a total of fourteen two-way runs or twenty-eight in each direction covering the 174 km (108 mi) study portion of US-1. Twenty-eight runs provide enough data for statistical significance. Control points were established at each of the 24 segments to record travel time and speed data specific to each one of those segments. Seven runs were started at Stock Island and seven in Dade County. Each began at staggered hours to cover the varied trip purposes and time frames within the Keys. The surveys were conducted during March, reflecting the area's peak traffic season.

The 2021 travel time runs shall be conducted based on the current schedule. In addition, supplemental runs shall be conducted in the southbound direction within Segments 1 to 4 during AM peak (7-8 am) on Wednesday, Thursday and Friday of the second week. Also, conduct supplemental runs in the northbound direction within Segments 1 to 4 during the PM Peak (5-6pm) on Wednesday, Thursday, and Friday of the second week. The results of the supplemental runs will be included in the 2021 ATTDS Report for informational purposes only and will not be used in overall or segment LOS calculations. This information will be reviewed to decide if supplemental runs should be incorporated into future ATTDS and LOS calculations, as directed by the Monroe County BOCC.

For each run the process provided data (see Exhibit 1, Data Collection Methodology), such as running speed and travel speed, in each direction of US-1. Vehicular traffic counts were also collected at three locations covering seven days.

The travel time runs yielded a total of 28 one-way travel speed values for the overall length of US-1 and for each of the 24 segments. The value selected for analysis was the median speed which would reflect a "typical peak period during the peak season." In other developed parts of Florida the typical peak hour of the peak season approximates the 100th highest hour of the year (5). The median value was also selected, instead of the average, to avoid the influence of extremely high or low speed value at either end of the survey population. The process up to this point provided median travel speeds. The question then became, what LOS do these speeds represent.

The next step was to develop a set of LOS/Speed threshold values for both the overall length of US-1 and the pertinent segments of the highway. Towards this end, the speed ratios between LOS thresholds from Tables 7-1, 8-1 and 11-1 of the HCM were used in the analysis. These ratios were weighted against actual mileage of US-1 in the Florida Keys to represent the prevailing type of flow; two-lane uninterrupted flow, four-lane uninterrupted flow and four-lane interrupted flow. For example, from the level terrain portion of HCM Table 8-1, the ratio between LOS B speed and LOS A speed is $55/58 = 0.948$. The ratio between LOS C/LOS A = $52/58 = 0.897$; the ratio between LOS D/LOS A = $50/58 = 0.862$ and so on. The same process was applied to Tables 7-1 (96.6 kmh) (60 mph) and 11-1. Then each ratio was weighted to take into account the length of the section of US-1 to which that type of traffic flow applied. Once all the ratios were developed, the weight criteria was applied as in the following example:

TYPE OF FLOW	LOS C/LOS A RATIO	WEIGHT
Two-lane uninterrupted	$52/58 = 0.897$	74
Four-lane uninterrupted	$44/50 = 0.880$	19
Four-lane interrupted	$22/35 = 0.629$	07

Therefore, the overall speed ratio between LOS C and LOS A is:

$$[74(0.897)+19(0.880)+7(0.629)]+100=0.875$$

The above process was applied to develop all the required ratios. Further observations with reference to Tables 8-1, 7-1 and 11-1 yielded the following. From Table 8-1 the difference between LOS A and LOS B speeds is 4.8 kmh (3 mph), or 4.8 kmh (3 mph) above an assumed posted speed limit of 88 kmh (55 mph). From Tables 7-1 and 11-1 the differences are 3.2 kmh and 11.3 kmh (2 mph and 7 mph), respectively, with LOS lower than assumed speed limits. Therefore, from these observations plus local knowledge, it was determined that the overall US-1 posted speed limit is 79.7 kmh (49.5 mph) reasonably fell between the LOS A and B thresholds.

This assumption is not far away from the premise that if a vehicle is able to sustain a travel speed equal to the posted speed limit, then it will correspond typically with the upper ranges of LOS (i.e., LOS A or B).

With the above speed differentials and LOS range premise in mind, the US-1 overall speed thresholds for LOS A and B became 82.1 kmh (51 mph) (2.4 kmh (1.5 mph) above 79.7 kmh (49.5) and 77.3 kmh (48 mph), respectively. Applying the developed ratio between LOS C/LOS A to the LOS A speed resulted in 72.5 kmh (45 mph), rounded off (i.e., 0.875×82.1 kmh (51 mph) = 71.8 kmh (44.6 mph)), which then became the threshold for LOS C. After applying all the ratios the overall LOS criteria for US-1 became:

<u>LOS</u>	<u>Speed</u>
A	≥ 82 kmh (51 mph)
B	≥ 77 kmh (48 mph)
C	≥ 72 kmh (45 mph)
D	≥ 68 kmh (42 mph)
E	≥ 58 kmh (36 mph)
F	< 58 kmh (36 mph)

Inspection of the criteria above indicates a close relationship with the speed differentials of both Tables 8-1 and 7-1 of the HCM. Comparing the median speed data for US-1 from the 1991 and 1992 field studies to the above criteria resulted in an overall LOS of C for both years, i.e., 76.8 kmh (47.7 mph) for 1991 and 75.5 kmh (46.9 mph) for 1992. These speeds are 2.9 kmh (1.8 mph) and 4.2 kmh (2.6 mph) below the overall weighted 79.7 kmh (49.5 mph) speed limit, which would correspond to the upper range of LOS C. The authors also believe that LOS C is the appropriate LOS designation for the whole of US-1 from Key West to the mainland.

A final step was still needed to complete the task of developing LOS/Speed threshold values for the segments of US-1. No further work was needed to cover the 7% mileage of the interrupted portions of US-1 found on Marathon and Stock Island, adjacent to Key West. As discussed earlier, these segments correlate with Chapter 11 of the HCM. Therefore, direct application of Table 11-1 LOS/speed criteria for a Class I arterial was made.

The remaining segments fell within the two-lane and four lane uninterrupted flow criteria. It was decided to make LOS A speed criterion 2.4 kmh (1.5 mph) above the weighted posted speed limit in order to keep consistency with the overall criteria. LOS C speed was set 9.7 kmh (6 mph) below LOS A speed consistent with Tables 7-1 and 8-1 of the HCM. LOS B and D speed criteria were set to provide equal increments between LOS A and LOS D (i.e., LOS B 4.8 kmh (3 mph) below LOS A speed and LOS D 4.8 kmh (3 mph) below LOS C speed). LOS E was set 9.7 kmh (6 mph) below the LOS D Speed. This makes the segmental speed differential between LOS thresholds consistent with the differentials in the overall criteria, except for one consideration. On any uninterrupted flow segment, signalized intersection delay would be deducted from the segment's travel time to account for the influence of the traffic signals (i.e., signal delay = 1.0 x 35 seconds average stopped delay). This corresponds to an LOS C delay due to isolated signals. LOS C delay was chosen because LOS C is the state LOS standard for US-1 in the Florida Keys. The rationale behind deducting signal delay from the segment analysis was to recognize the impact of signals in reducing travel time. This provides the required sensitivity in the segment which is not only to assess the impact of regional vehicular trips, but also those that are local in nature. The following illustrates the concept plus one example for the US-1 Segmental LOS/speed relationship.

- The uninterrupted flow segment criteria are:

<u>LOS</u>	<u>SPEED</u>
A	≥ 2.4 kmh (1.5 mph) above the posted speed limit
B	≥ 4.8 kmh (3.0 mph) below LOS A
C	≥ 9.7 kmh (6.0 mph) below LOS A
D	≥ 14.5 kmh (9.0 mph) below LOS A
E	≥ 24 kmh (15.0 mph) below LOS A
F	< 24 kmh (15.0 mph) below LOS A

- A segment having a weighted posted speed limit of 72 kmh (45 mph) would then have this criteria:

<u>LOS</u>	<u>SPEED</u>
A	≥ 74.9 kmh (46.5 mph)
B	≥ 70.0 kmh (43.5 mph)
C	≥ 65.2 kmh (40.5 mph)
D	≥ 60.4 kmh (37.5 mph)
E	≥ 50.7 kmh (31.5 mph)
F	< 50.7 kmh (31.5 mph)

- The LOS/Speed criteria for interrupted flow segments (marathon and Stock Island) are based directly on a Class I arterial from Table 11-1 of the HCM.

<u>LOS</u>	<u>SPEED</u>
A	≥ 56.4 kmh (35 mph)
B	≥ 45.1 kmh (28 mph)
C	≥ 35.4 kmh (22 mph)
D	≥ 27.4 kmh (17 mph)
E	≥ 20.9 kmh (13 mph)
F	< 20.9 kmh (13 mph)

Speed data from both the overall length of US-1 and the individual segments were compared against the applicable LOS/speed thresholds. This provided for an assessment of the facility LOS plus an indication of reserve speed, if any.

Under Florida's and Monroe County's growth management process if the overall LOS for US-1 fell below the LOS C standard, then no additional land development would be allowed to proceed in the Florida Keys. Unless the proposed new development traffic impact were mitigated. If the overall LOS for US-1 was C or better, then additional development could take place in those segments where there was reserve speed available (i.e., segment's speed was higher than the standard threshold).

Besides meeting highway LOS standards there are numerous other considerations in Florida's growth management process pertaining to the Florida Keys that are beyond the scope of this paper. As mentioned in the introduction, the purpose of this study was to present the methodology to assess LOS on US-1.

DATA COLLECTION METHODOLOGY

(Previously Approved by Task Force)

Calibration of the DMI

Prior to beginning the study, the DMI was calibrated over a half-mile course. The calibration procedure set-up by the DMI manufacturer established a calibration factor of 0.682 for the test vehicle, which resulted in measurements within 3 feet of the 5,280-foot distance (0.057%). At this level of accuracy, the DMI would measure the 108 mile distance of US 1 between Stock Island and the Dade County line to within 325 feet, or to within 0.03 mile per hour (mph) of the 45 mph standard for LOS C.

Floating Car Method and Passing Score

The study employed the floating car method, whereby under ideal conditions the test vehicle passes and is passed by an equal number of vehicles (i.e. "goes with the flow"). A passing score was recorded for each segment to document the extent to which this objective was accomplished. Positive scores indicate the number of excess vehicles the test car passed; negative scores indicate the number of excess vehicles that passed the test car; and zero indicates an even balance. The overall passing score consists of the sum of the segment scores.

The passing score provided an objective measure of the traffic flow, allowing the driver to adjust the test car speed accordingly. In the event that the traffic flow was higher than the posted speed limit, as was frequently the case in the Dade County and Boca Chica segments, the test car also traveled above the speed limit. Vehicles turning on or off US 1 were omitted from the passing score.

Employing the floating car method in two-lane segments was fairly straightforward, where the observers frequently encountered platoons of sufficient size to discourage or prohibit passing. When positioned at the rear or in the middle of a platoon, the observers simply traveled with the pack. When positioned as the lead car, the observers avoided delaying the platoon yet kept the platoon within sight.

On two-lane segments the observers occasionally encountered stopped vehicles waiting to turn left, raising the question of whether the test vehicle should leave the lane or paved road surface and pass to the right of the stopped vehicle. When the vehicles ahead of the observers passed to the right of the stopped vehicle, then the observers did also. However, when the test car was the lead car in the platoon, the observers only passed on the right if they could do so without leaving the paved roadway.

Within four-lane segments with light congestion, the observers often encountered traffic traveling in the right lane at or below the posted speed limit, while there was little or no traffic in the left lane. Rather than "floating" below the speed limit in the right lane or traveling at the maximum possible speed in the left lane, the observers traveled at the posted speed limit, which resulted in passing score as high as +10. Thus, in these cases, a passing score of zero is undesirable, since the corresponding speed would fail to reflect the availability of the vacant passing lane.

Within four-lane segments with moderate or heavy congestion, the observers often encountered separate platoons in the right and left lanes, with the left lane typically

moving at a faster speed. Rather than continuously changing lanes to achieve a passing score of zero, the test car "floated" in the faster of the two platoons, which also yielded high passing scores.

Platoon Size

To provide a measure of roadway congestion within each segment, the average number of vehicles traveling in the test car's platoon was recorded, including the test car itself. Within four-lane segments, this number represents the average number of vehicles that traveled in the test car's platoon within the test car's lane.

Treatment of Delay

In accordance with the FDOT Manual on Uniform Traffic Studies, the observers began recording delay when the test car's speed fell to 5 mph and terminated the delay event when the test car's speed rose to 15 mph. Each delay entry was identified, in the DMI memory by a sequential code number. The observers recorded the type and location of the delay on a field data sheet.

When computing both segments and overall travel times, delays due to typical events such as turning movements, traffic signals, and certain types of congestion were included. Unusual or non-recurring delays, such as construction, accidents, school bus, and emergency vehicles were excluded. Delays due to drawbridge openings should be deducted from the segment travel times (all affected segments) and the overall travel times, to account for the influence of the drawbridge openings. A delay of 6 minutes should be deducted from those travel time runs that were impacted by bridge openings. However, regardless of how a particular type of delay was treated in the analysis, all delays of all types were identified and recorded on the field data sheets.

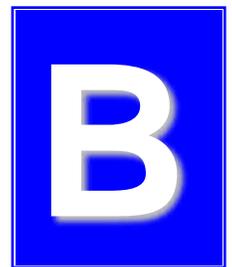
Occasionally an external event slowed traffic speeds, but not enough to meet the 5 mph criteria for a formal delay. Highway construction and maintenance activities were the most common example of this borderline situation. The decision of whether to record these events was made on a case-by-case basis in the field. As long as the observers were traveling at speeds within 5 to 10 mph of the posted speed limit and the event occurred over a distance of about a mile or less, the event was not recorded. However, if the activity caused speeds slower than this or when the observers witnessed active interference, such as bulldozers or flagman blocking the traffic, the event was recorded and later excluded from the analysis.

APPENDIX B

Travel Time Delay Data



**A
P
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D
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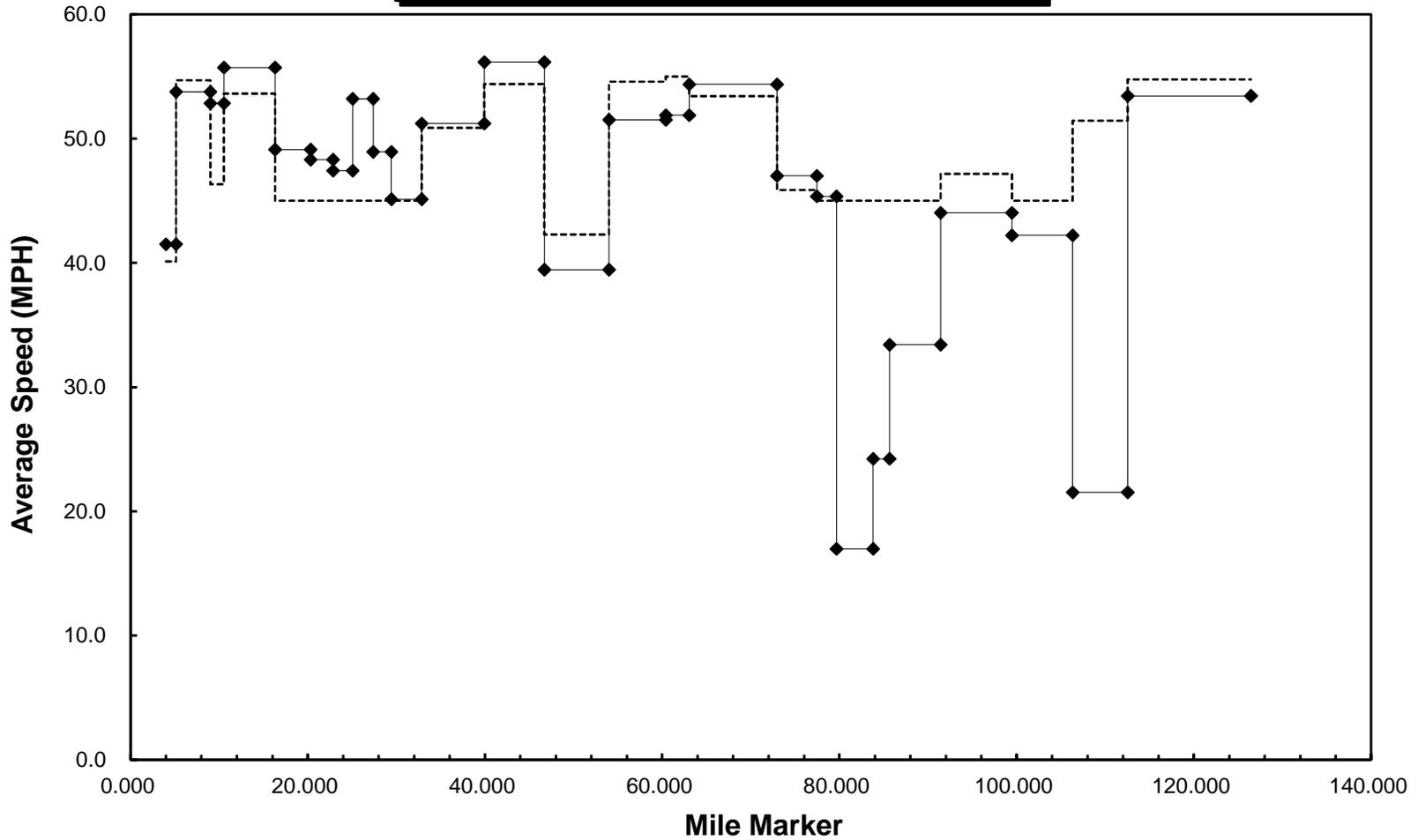
AECOM

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	BH		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Sunday, March 5, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	03:30:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	06:24:22 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	----	----	-	--	-----	-
Key Haven Blvd	1	00:01:37	00:01:37		1.118	1.118		41.5				
Rockland Dr	2	00:05:58	00:04:21		5.017	3.899		53.8				
Boca Chica Rd	3	00:07:41	00:01:43		6.529	1.512		52.8				
Harris Ch Br (N)	4	00:13:55	00:06:14		12.318	5.789		55.7				
Bow Channel Br (N)	5	00:18:47	00:04:52		16.303	3.985		49.1				
Spanish Main Dr	6	00:21:57	00:03:10		18.853	2.550		48.3				
E Shore Dr	7	00:24:45	00:02:48		21.066	2.213		47.4				
Torch-Ramrod Br (S)	8	00:27:22	00:02:37		23.387	2.321		53.2				
N Pine Ch Br (N)	9	00:29:53	00:02:31		25.440	2.053		48.9				
Long Beach Dr	10	00:34:25	00:04:32		28.850	3.410		45.1				
7-Mile Br (S)	11	00:42:41	00:08:16		35.907	7.057		51.2				1
7-Mile Br (N)	12	00:49:57	00:07:16		42.709	6.802		56.2				
Coco Plum Dr	13	01:01:01	00:11:04		49.985	7.276		39.4	10+	TS	00:00:27	
Toms Harbor Ch Br (S)	14	01:08:30	00:07:29		56.410	6.425		51.5				2
Long Key Br (S)	15	01:11:34	00:03:04		59.062	2.652		51.9				
Channel #2 Br (N)	16	01:22:28	00:10:54		68.939	9.877		54.4				
Lignum V Br (S)	17	01:28:12	00:05:44		73.431	4.492		47.0				
Teatable Relf Br (N)	18	01:31:09	00:02:57		75.661	2.230		45.4				
Whale Harbor Br (S)	19	01:45:44	00:14:35		79.787	4.126		17.0	10+	CG	00:11:59	
Snake Creek Br (N)	20	01:50:21	00:04:37		81.651	1.864		24.2	10+	CG (2)	00:03:39	
Ocean Blvd	21	02:00:42	00:10:21		87.413	5.762		33.4	10+	CG (2)	00:01:56	3
Atlantic Blvd	22	02:11:41	00:10:59		95.471	8.058		44.0				2
C-905	23	02:21:24	00:09:43		102.308	6.837		42.2	9	TS	00:00:51	-5
County Line sign	24	02:38:46	00:17:22		108.538	6.230		21.5	10+	CG	00:14:29	
Card Sound Rd	25	02:54:22	00:15:36		122.435	13.897		53.5				
OVERALL		-----	02:38:46	00:00:00	-----	108.538	0.000	41.0			00:33:21	3

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
SUNDAY, 03-05-23, 15:30 TO 18:25**



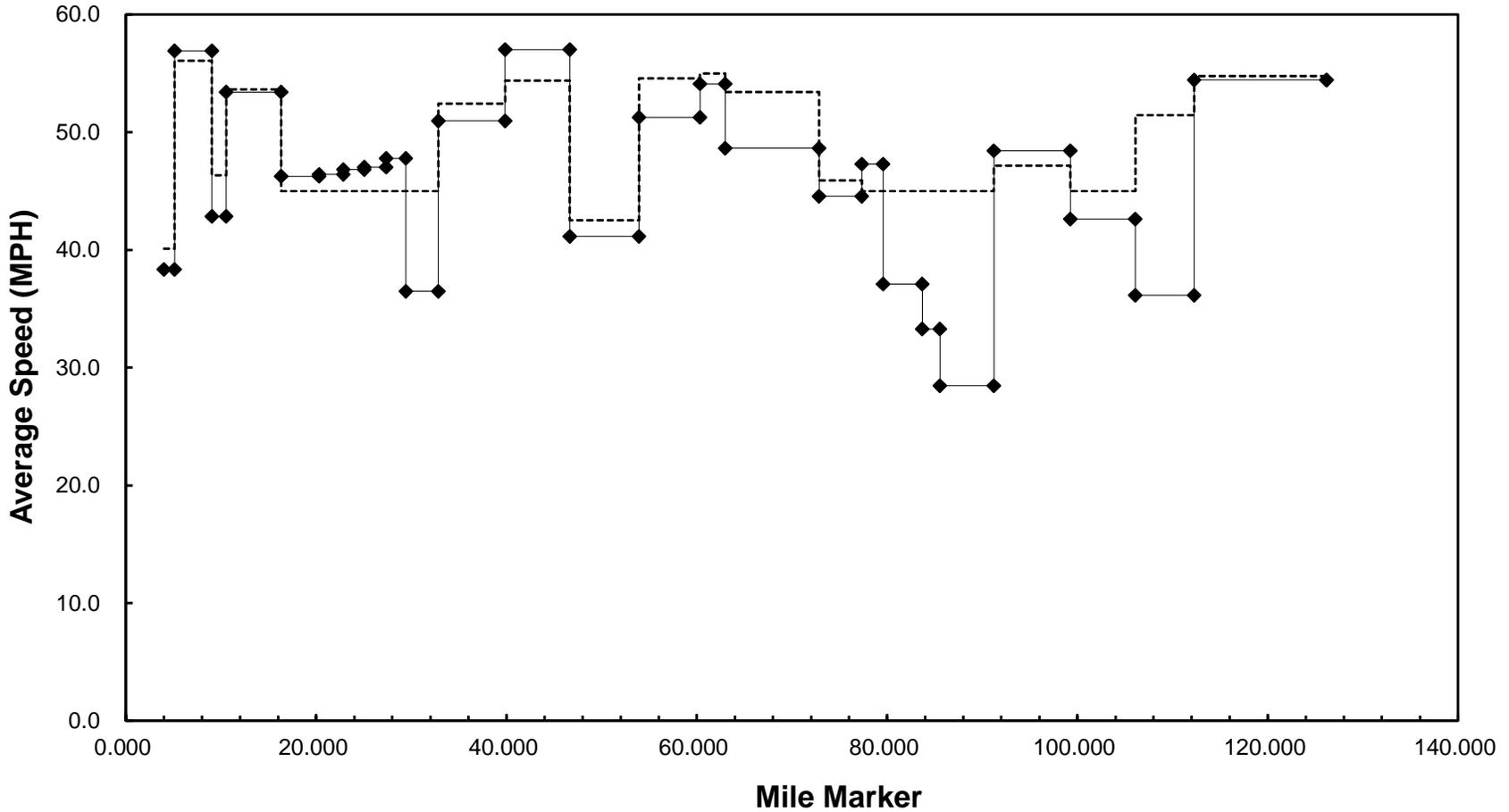
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	BH		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Sunday, March 5, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	11:15:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	02:04:47 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:15:19	00:15:19		13.902	13.902		54.5	10+	CG	00:00:21	2
C-905	24	00:25:38	00:10:19		20.119	6.217		36.2	10+	CG	00:04:23	
Atlantic Blvd	23	00:35:13	00:09:35		26.927	6.808		42.6	10+	TS (2)	00:00:53	-10
Ocean Blvd	22	00:45:10	00:09:57		34.957	8.030		48.4				-3
Snake Creek Br (N)	21	01:00:31	00:15:21	00:06:00	40.663	5.706	1.270	28.5	10+	TS,CG,DB,DB	00:10:40	-2
Whale Harbor Br (S)	20	01:03:51	00:03:20		42.512	1.849		33.3	10+	CG	00:00:18	
Teatable Relf Br (N)	19	01:15:23	00:11:32	00:06:49	46.623	4.111	1.195	37.1	10+	SE	00:06:49	
Lignum V Br (S)	18	01:18:13	00:02:50		48.857	2.234		47.3				
Channel #2 Br (N)	17	01:24:15	00:06:02		53.337	4.480		44.6				
Long Key Br (S)	16	01:36:25	00:12:10		63.199	9.862		48.6				
Toms Harbor Ch Br (S)	15	01:39:21	00:02:56		65.844	2.645		54.1				
Coco Plum Dr	14	01:46:51	00:07:30		72.254	6.410		51.3				
7-Mile Br (N)	13	01:57:27	00:10:36		79.527	7.273		41.2				-7
7-Mile Br (S)	12	02:04:37	00:07:10		86.338	6.811		57.0				-1
Long Beach Dr	11	02:12:53	00:08:16		93.360	7.022		51.0				-3
N Pine Ch Br (N)	10	02:18:30	00:05:37		96.775	3.415		36.5	7	TS	00:00:48	
Torch-Ramrod Br (S)	9	02:21:05	00:02:35		98.833	2.058		47.8				
E Shore Dr	8	02:24:00	00:02:55		101.120	2.287		47.0				
Spanish Main Dr	7	02:26:51	00:02:51		103.345	2.225		46.8				
Bow Channel Br (N)	6	02:30:09	00:03:18		105.898	2.553		46.4				
Harris Ch Br (N)	5	02:35:18	00:05:09		109.869	3.971		46.3				
Boca Chica Rd	4	02:41:48	00:06:30		115.655	5.786		53.4				
Rockland Dr	3	02:43:54	00:02:06		117.155	1.500		42.9				
Key Haven Blvd	2	02:48:01	00:04:07		121.060	3.905		56.9				3
Cow Key Bridge (N)	1	02:49:47	00:01:46		122.189	1.129		38.3				
OVERALL		-----	02:34:28	00:12:49	-----	108.287	2.465	44.8			00:23:51	-23

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
SUNDAY, 03-05-23, 11:15 TO 14:05**



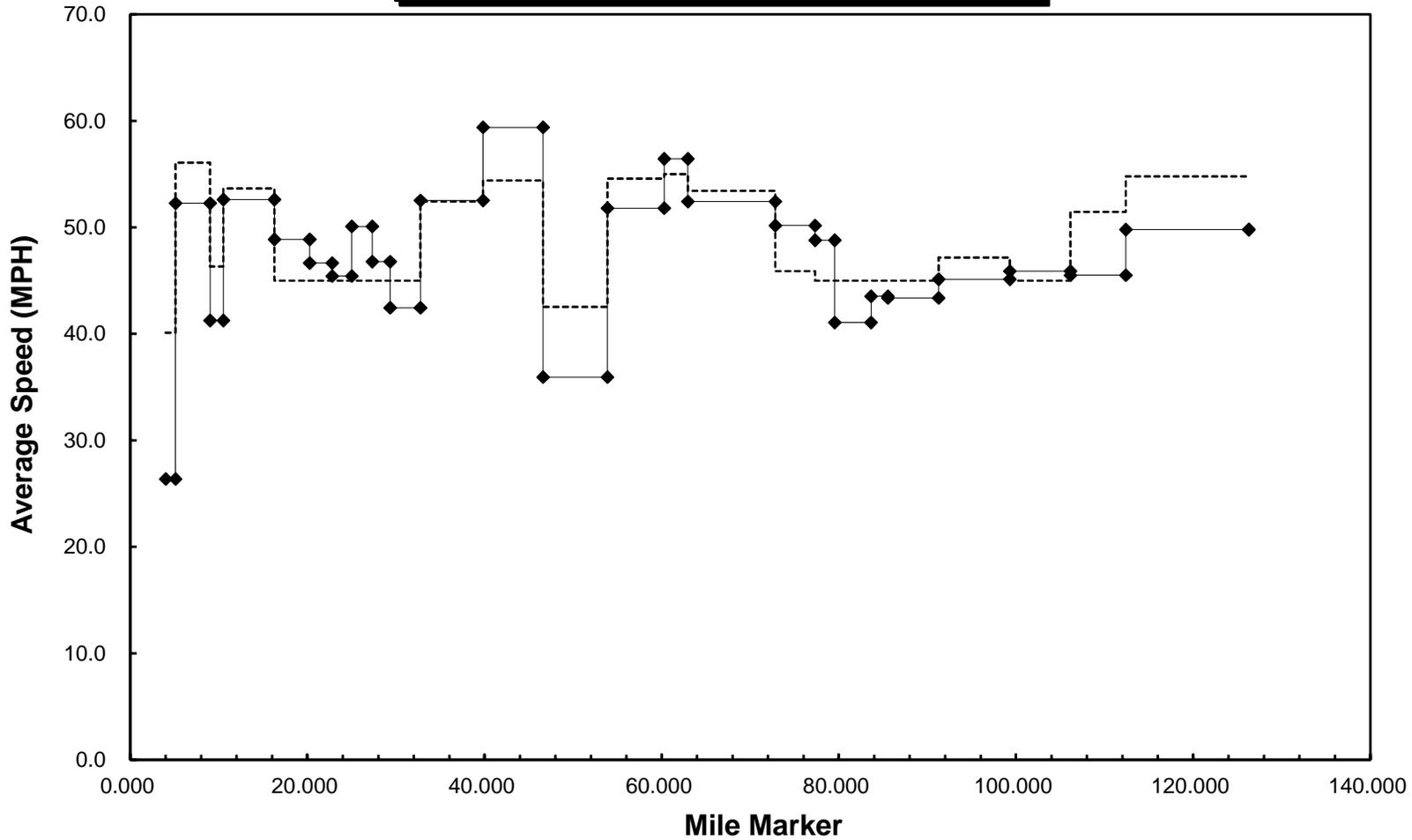
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	BH		LT = Left Turn RT = Right Turn TS = Traffic Signal DB = Drawbridge CG = Congestion
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	CS = Construction SB = School Bus EV = Emergency Vehicle AC = Accident SE = Special Event
DAY/DATE:	Monday, March 6, 2023	Delay ends @ 15 mph	
START TIME @ COW KEY BR:	04:00:00 PM		
FINISH TIME @ C SOUND RD:	06:37:30 PM		

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:02:32	00:02:32		1.113	1.113		26.4	10+	TS	00:00:58	1
Rockland Dr	2	00:09:38	00:07:06	00:03:04	5.003	3.890	0.377	52.3	10+	CS	00:03:04	1
Boca Chica Rd	3	00:11:50	00:02:12		6.516	1.513		41.3				
Harris Ch Br (N)	4	00:18:25	00:06:35		12.290	5.774		52.6				
Bow Channel Br (N)	5	00:23:17	00:04:52		16.255	3.965		48.9				
Spanish Main Dr	6	00:26:32	00:03:15		18.782	2.527		46.7				
E Shore Dr	7	00:29:27	00:02:55		20.991	2.209		45.4				
Torch-Ramrod Br (S)	8	00:32:13	00:02:46		23.301	2.310		50.1				
N Pine Ch Br (N)	9	00:34:50	00:02:37		25.341	2.040		46.8				
Long Beach Dr	10	00:39:40	00:04:50		28.760	3.419		42.4				
7-Mile Br (S)	11	00:47:43	00:08:03		35.809	7.049		52.5				
7-Mile Br (N)	12	00:54:35	00:06:52		42.605	6.796		59.4				
Coco Plum Dr	13	01:06:43	00:12:08		49.873	7.268		35.9	10+	TS	00:01:18	-4
Toms Harbor Ch Br (S)	14	01:14:09	00:07:26		56.292	6.419		51.8				
Long Key Br (S)	15	01:16:58	00:02:49		58.941	2.649		56.4				
Channel #2 Br (N)	16	01:28:16	00:11:18		68.814	9.873		52.4				
Lignum V Br (S)	17	01:33:38	00:05:22		73.303	4.489		50.2				
Teatable Relf Br (N)	18	01:36:23	00:02:45		75.539	2.236		48.8				
Whale Harbor Br (S)	19	01:42:23	00:06:00		79.645	4.106		41.1				
Snake Creek Br (N)	20	01:44:58	00:02:35		81.519	1.874		43.5				
Ocean Blvd	21	01:52:55	00:07:57		87.267	5.748		43.4				-1
Atlantic Blvd	22	02:03:36	00:10:41		95.305	8.038		45.1	10+	TS	00:00:58	-5
C-905	23	02:12:33	00:08:57		102.151	6.846		45.9				6
County Line sign	24	02:20:46	00:08:13		108.385	6.234		45.5				
Card Sound Rd	25	02:37:30	00:16:44		122.274	13.889		49.8				1
OVERALL		-----	02:20:46	00:03:04	-----	108.385	0.377	47.1			00:06:18	-2

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
MONDAY, 03-06-23, 16:00 TO 18:38**



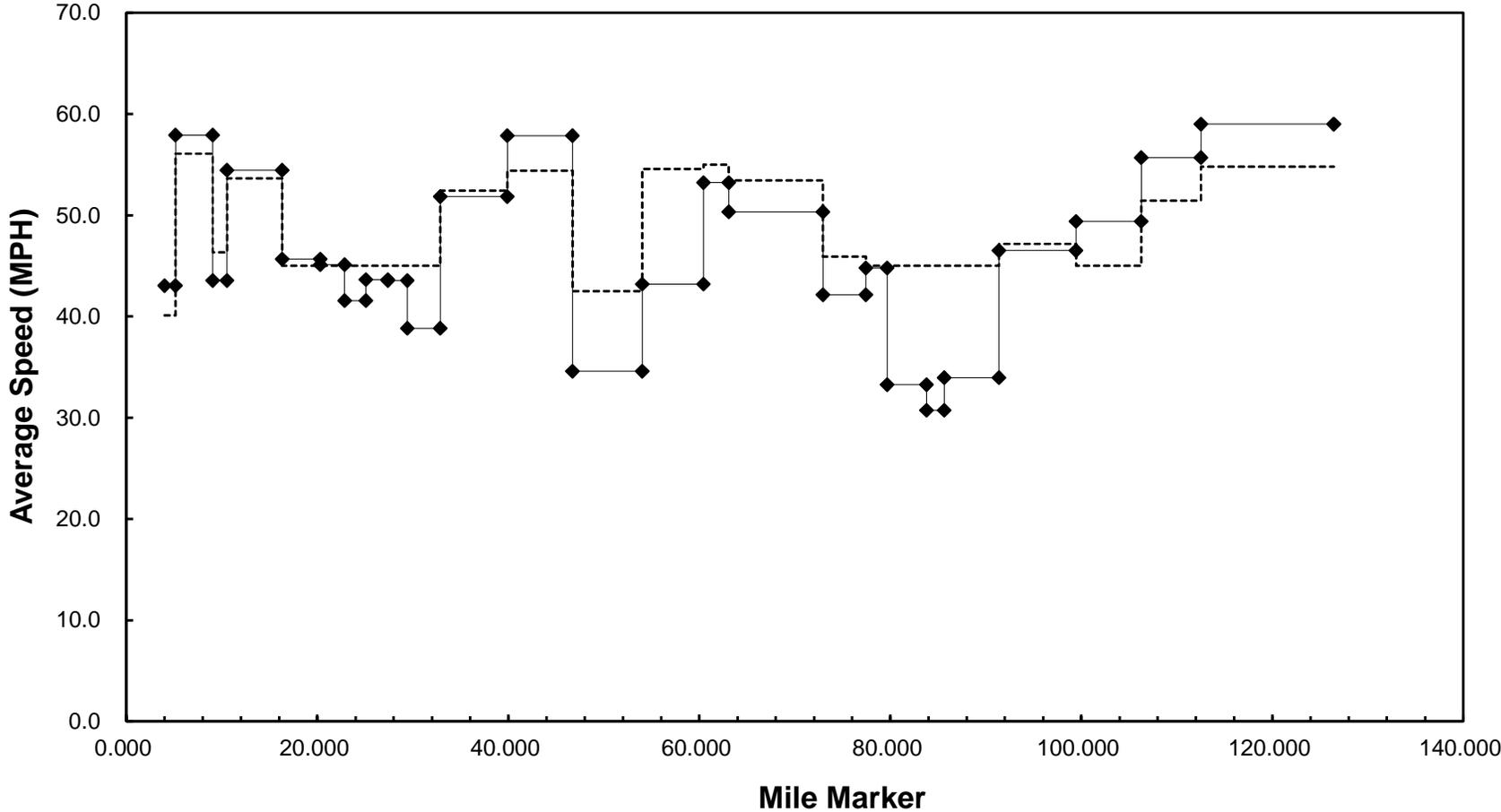
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	BH		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Cloudy/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Monday, March 6, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ C SOUND RD:	11:45:00 AM		DB = Drawbridge	AC = Accident
FINISH TIME @ COW KEY BR:	02:25:10 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:14:08	00:14:08		13.901	13.901		59.0				
C-905	24	00:20:52	00:06:44		20.150	6.249		55.7				
Atlantic Blvd	23	00:29:10	00:08:18		26.984	6.834		49.4				-9
Ocean Blvd	22	00:39:33	00:10:23		35.034	8.050		46.5	10+	TS	00:00:24	-5
Snake Creek Br (N)	21	00:49:42	00:10:09		40.779	5.745		34.0	10+	TS(2), CG(2)	00:01:59	1
Whale Harbor Br (S)	20	00:53:21	00:03:39		42.649	1.870		30.7	10+	CG	00:01:24	
Teatable Relf Br (N)	19	01:02:05	00:08:44	00:02:35	46.770	4.121	0.710	33.3	10+	CS(3)	00:02:35	
Lignum V Br (S)	18	01:05:04	00:02:59		48.998	2.228		44.8				
Channel #2 Br (N)	17	01:11:27	00:06:23		53.483	4.485		42.2				1
Long Key Br (S)	16	01:23:13	00:11:46		63.353	9.870		50.3				1
Toms Harbor Ch Br (S)	15	01:26:12	00:02:59		65.999	2.646		53.2				
Coco Plum Dr	14	01:35:07	00:08:55		72.421	6.422		43.2				
7-Mile Br (N)	13	01:47:46	00:12:39		79.715	7.294		34.6	10+	TS(2)	00:01:33	-2
7-Mile Br (S)	12	01:54:50	00:07:04		86.528	6.813		57.8				
Long Beach Dr	11	02:02:59	00:08:09		93.569	7.041		51.8				
N Pine Ch Br (N)	10	02:08:17	00:05:18		96.998	3.429		38.8				
Torch-Ramrod Br (S)	9	02:11:06	00:02:49		99.043	2.045		43.6				
E Shore Dr	8	02:14:16	00:03:10		101.347	2.304		43.7				
Spanish Main Dr	7	02:17:29	00:03:13		103.575	2.228		41.6				
Bow Channel Br (N)	6	02:20:52	00:03:23		106.120	2.545		45.1				
Harris Ch Br (N)	5	02:26:06	00:05:14		110.104	3.984		45.7				
Boca Chica Rd	4	02:32:28	00:06:22		115.884	5.780		54.5				
Rockland Dr	3	02:34:32	00:02:04		117.384	1.500		43.5				
Key Haven Blvd	2	02:38:35	00:04:03		121.293	3.909		57.9				4
Cow Key Bridge (N)	1	02:40:10	00:01:35		122.429	1.136		43.0				
OVERALL		-----	02:26:02	00:02:35	-----	108.528	0.710	45.1			00:07:55	-9

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
MONDAY, 03-06-23, 11:45 TO 14:26**



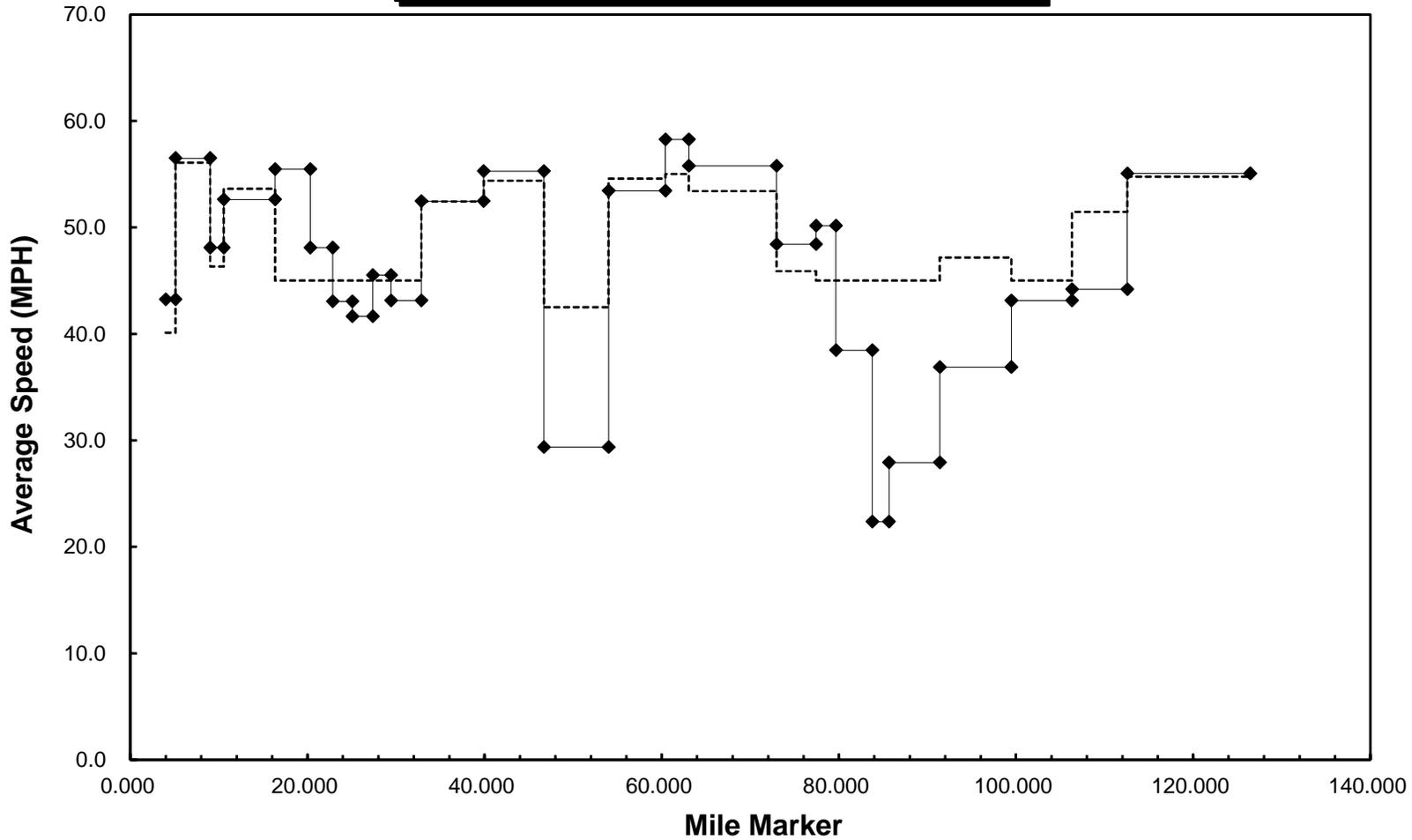
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Tuesday, March 7, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	01:45:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	04:29:43 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:01:33	00:01:33		1.117	1.117		43.2				
Rockland Dr	2	00:05:42	00:04:09		5.026	3.909		56.5				
Boca Chica Rd	3	00:07:35	00:01:53		6.536	1.510		48.1				
Harris Ch Br (N)	4	00:14:11	00:06:36		12.324	5.788		52.6				
Bow Channel Br (N)	5	00:18:29	00:04:18		16.300	3.976		55.5				
Spanish Main Dr	6	00:21:39	00:03:10		18.839	2.539		48.1				
E Shore Dr	7	00:24:45	00:03:06		21.063	2.224		43.0				
Torch-Ramrod Br (S)	8	00:28:05	00:03:20		23.377	2.314		41.7				
N Pine Ch Br (N)	9	00:30:47	00:02:42		25.426	2.049		45.5				
Long Beach Dr	10	00:35:33	00:04:46		28.852	3.426		43.1				
7-Mile Br (S)	11	00:43:36	00:08:03		35.891	7.039		52.5				
7-Mile Br (N)	12	00:51:00	00:07:24		42.709	6.818		55.3				
Coco Plum Dr	13	01:05:52	00:14:52		49.987	7.278		29.4	10+	TS(2), CG	00:04:22	
Toms Harbor Ch Br (S)	14	01:13:04	00:07:12		56.401	6.414		53.5				
Long Key Br (S)	15	01:15:48	00:02:44		59.055	2.654		58.3				
Channel #2 Br (N)	16	01:26:26	00:10:38		68.938	9.883		55.8				
Lignum V Br (S)	17	01:31:59	00:05:33		73.417	4.479		48.4				
Teatable Relf Br (N)	18	01:34:40	00:02:41		75.660	2.243		50.2				
Whale Harbor Br (S)	19	01:41:05	00:06:25		79.775	4.115		38.5				
Snake Creek Br (N)	20	01:46:06	00:05:01		81.645	1.870		22.4	10+	CG(2)	00:03:39	
Ocean Blvd	21	01:58:28	00:12:22		87.398	5.753		27.9	10+	CG(3)	00:04:37	
Atlantic Blvd	22	02:11:35	00:13:07		95.456	8.058		36.9	10+	TS(2)	00:02:58	-3
C-905	23	02:21:06	00:09:31		102.298	6.842		43.1	10+	TS(2)	00:00:45	6
County Line sign	24	02:29:35	00:08:29		108.545	6.247		44.2	10+	CG	00:01:43	-1
Card Sound Rd	25	02:44:43	00:15:08		122.437	13.892		55.1				-3
OVERALL		-----	02:29:35	00:00:00	-----	108.545	0.000	43.5			00:18:04	2

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
TUESDAY, 03-07-23, 13:45 TO 16:30**



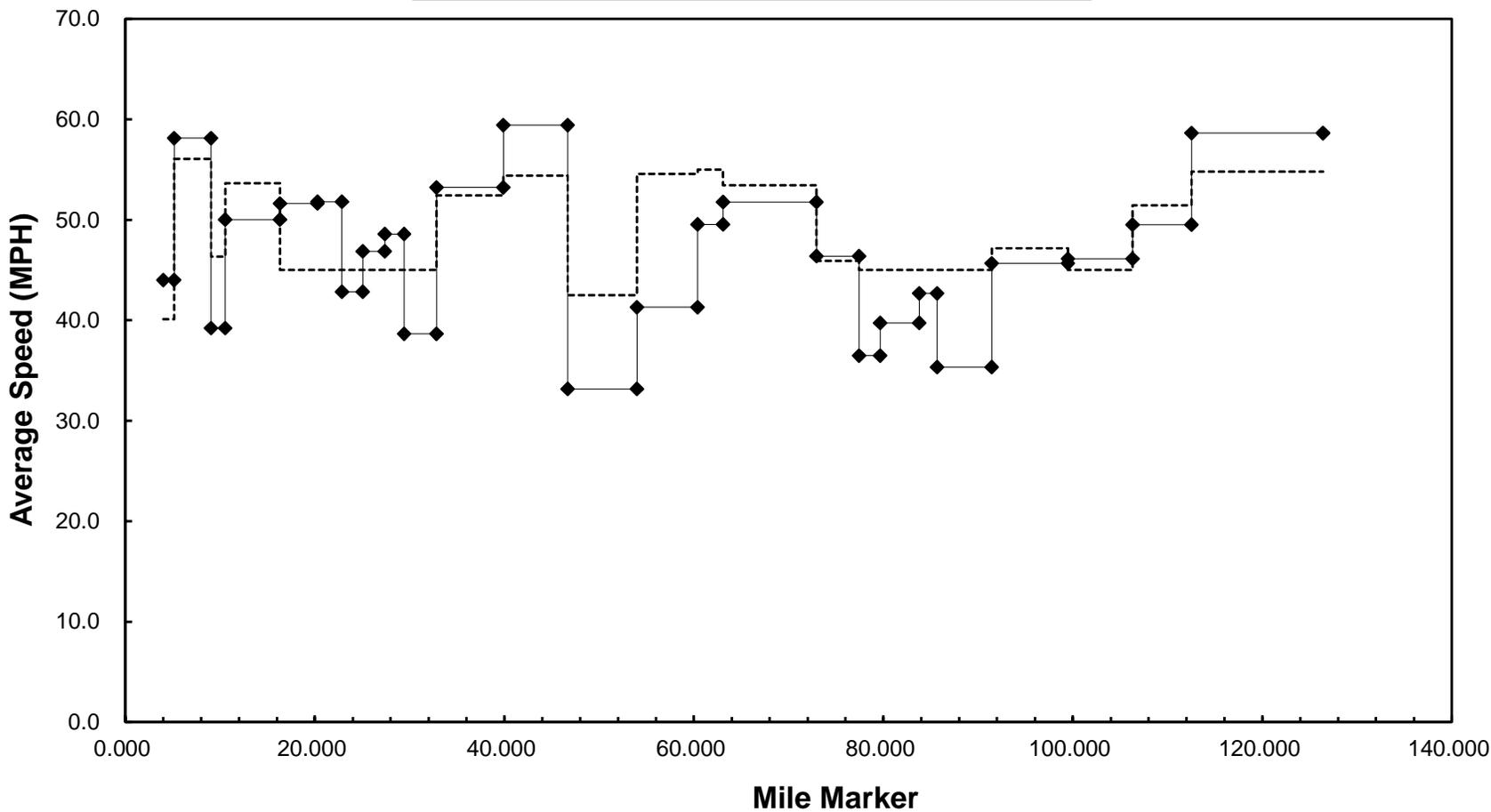
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Tuesday, March 7, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	09:30:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	12:15:51 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:14:13	00:14:13		13.895	13.895		58.6				
C-905	24	00:21:46	00:07:33		20.126	6.231		49.5				
Atlantic Blvd	23	00:30:39	00:08:53		26.953	6.827		46.1				2
Ocean Blvd	22	00:41:13	00:10:34		34.993	8.040		45.7				
Snake Creek Br (N)	21	00:55:26	00:14:13	00:07:17	40.761	5.768	1.685	35.3	10+	CS	00:07:17	-4
Whale Harbor Br (S)	20	00:58:03	00:02:37		42.623	1.862		42.7				
Teatable Relf Br (N)	19	01:04:16	00:06:13		46.740	4.117		39.7				
Lignum V Br (S)	18	01:07:56	00:03:40		48.969	2.229		36.5	10+	CG	00:00:54	
Channel #2 Br (N)	17	01:13:45	00:05:49		53.467	4.498		46.4				
Long Key Br (S)	16	01:25:12	00:11:27		63.350	9.883		51.8				
Toms Harbor Ch Br (S)	15	01:28:25	00:03:13		66.006	2.656		49.5				
Coco Plum Dr	14	01:37:45	00:09:20		72.433	6.427		41.3	9	TS	00:00:33	
7-Mile Br (N)	13	01:50:56	00:13:11		79.721	7.288		33.2	10+	TS(3),LT(2)	00:02:29	1
7-Mile Br (S)	12	01:57:49	00:06:53		86.540	6.819		59.4				
Long Beach Dr	11	02:05:45	00:07:56		93.578	7.038		53.2				
N Pine Ch Br (N)	10	02:14:52	00:09:07	00:05:36	96.992	3.414	1.148	38.7	10+	CS(2)	00:05:36	
Torch-Ramrod Br (S)	9	02:17:24	00:02:32		99.044	2.052		48.6				
E Shore Dr	8	02:20:21	00:02:57		101.349	2.305		46.9				
Spanish Main Dr	7	02:23:28	00:03:07		103.574	2.225		42.8				
Bow Channel Br (N)	6	02:26:26	00:02:58		106.135	2.561		51.8				
Harris Ch Br (N)	5	02:31:02	00:04:36		110.094	3.959		51.6				
Boca Chica Rd	4	02:37:58	00:06:56		115.874	5.780		50.0				
Rockland Dr	3	02:40:16	00:02:18		117.378	1.504		39.2				
Key Haven Blvd	2	02:44:18	00:04:02		121.285	3.907		58.1				
Cow Key Bridge (N)	1	02:45:51	00:01:33		122.422	1.137		44.0				
OVERALL		-----	02:31:38	00:12:53	-----	108.527	2.833	45.7			00:16:49	-1

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
TUESDAY, 03-07-23, 09:30 TO 12:16**



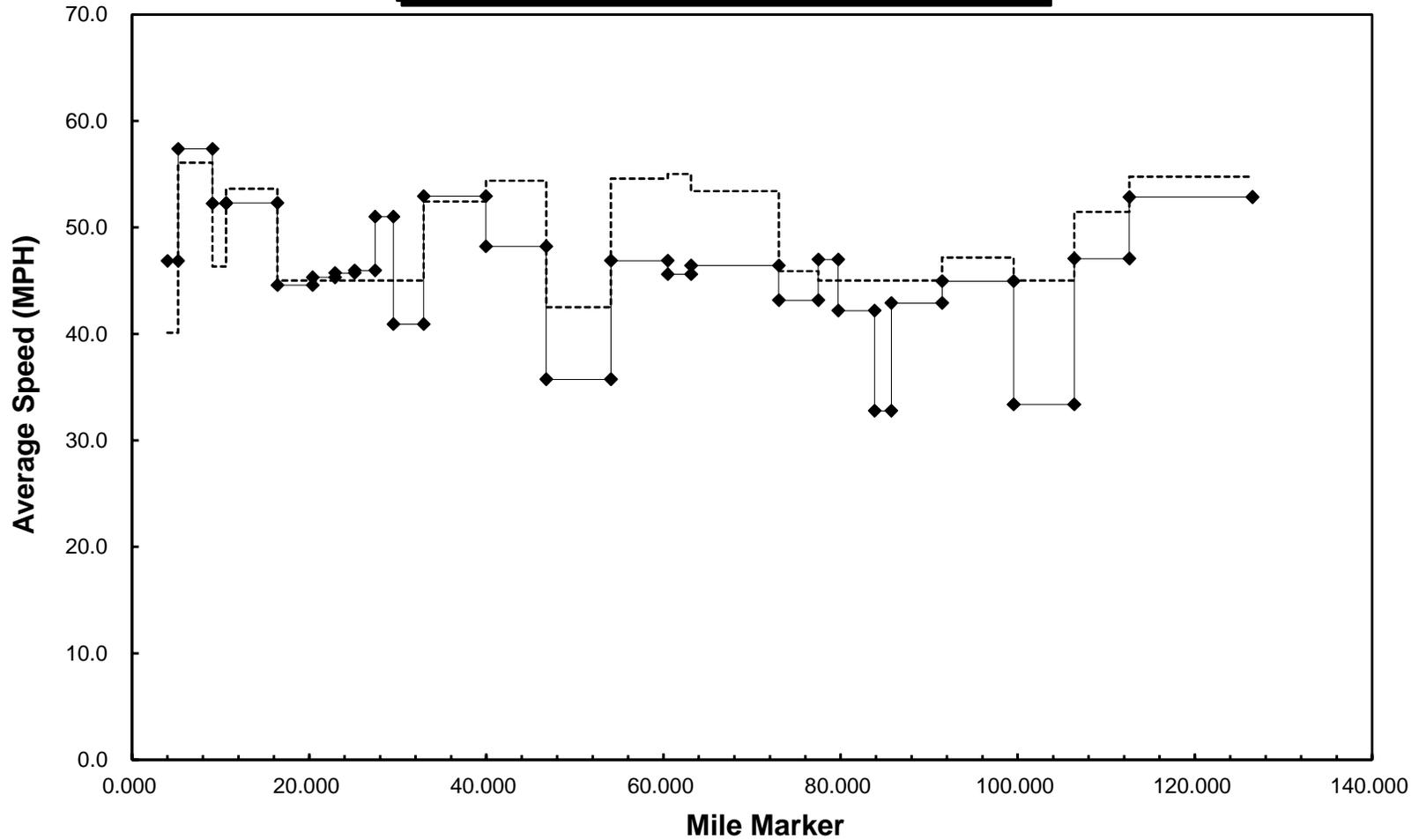
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIREdTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/dONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Wednesday, March 8, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ dOW KEY BR:	01:30:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ d SOUND RD:	04:33:27 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:01:31	00:01:31		1.184	1.184		46.8				
Rockland Dr	2	00:05:36	00:04:05		5.089	3.905		57.4				
Boca Chica Rd	3	00:07:20	00:01:44		6.598	1.509		52.2				
Harris Ch Br (N)	4	00:13:59	00:06:39		12.395	5.797		52.3				
Bow Channel Br (N)	5	00:19:20	00:05:21		16.370	3.975		44.6				
Spanish Main Dr	6	00:22:42	00:03:22		18.912	2.542		45.3				
E Shore Dr	7	00:25:37	00:02:55		21.134	2.222		45.7				
Torch-Ramrod Br (S)	8	00:28:38	00:03:01		23.444	2.310		45.9				
N Pine Ch Br (N)	9	00:31:03	00:02:25		25.498	2.054		51.0				
Long Beach Dr	10	00:36:03	00:05:00		28.908	3.410		40.9				
7-Mile Br (S)	11	00:44:03	00:08:00		35.966	7.058		52.9				
7-Mile Br (N)	12	00:52:31	00:08:28		42.768	6.802		48.2				
Coco Plum Dr	13	01:04:44	00:12:13		50.046	7.278		35.7				-1
Toms Harbor Ch Br (S)	14	01:12:58	00:08:14		56.478	6.432		46.9				
Long Key Br (S)	15	01:16:27	00:03:29		59.125	2.647		45.6				
Channel #2 Br (N)	16	01:29:13	00:12:46		69.000	9.875		46.4				
Lignum V Br (S)	17	01:35:26	00:06:13		73.473	4.473		43.2				
Teatable Relf Br (N)	18	01:38:18	00:02:52		75.718	2.245		47.0				
Whale Harbor Br (S)	19	02:00:41	00:22:23	00:18:21	79.835	4.117	1.282	42.2	10+	CS	00:18:21	
Snake Creek Br (N)	20	02:08:10	00:07:29	00:06:13	81.704	1.869	1.177	32.8	10+	CS	00:06:13	
Ocean Blvd	21	02:16:13	00:08:03		87.460	5.756		42.9	8	TS	00:00:12	-1
Atlantic Blvd	22	02:27:24	00:11:11	00:00:29	95.518	8.058	0.041	45.0	10+	TS(2),SB	00:00:47	1
C-905	23	02:39:43	00:12:19		102.367	6.849		33.4	10+	CG/TS	00:04:03	
County Line sign	24	02:47:40	00:07:57		108.602	6.235		47.1				-9
Card Sound Rd	25	03:03:27	00:15:47		122.506	13.904		52.9				
OVERALL		-----	02:47:40	00:25:03	-----	108.602	2.500	44.6			00:29:36	-10

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-8-23, 13:30 TO 16:34**



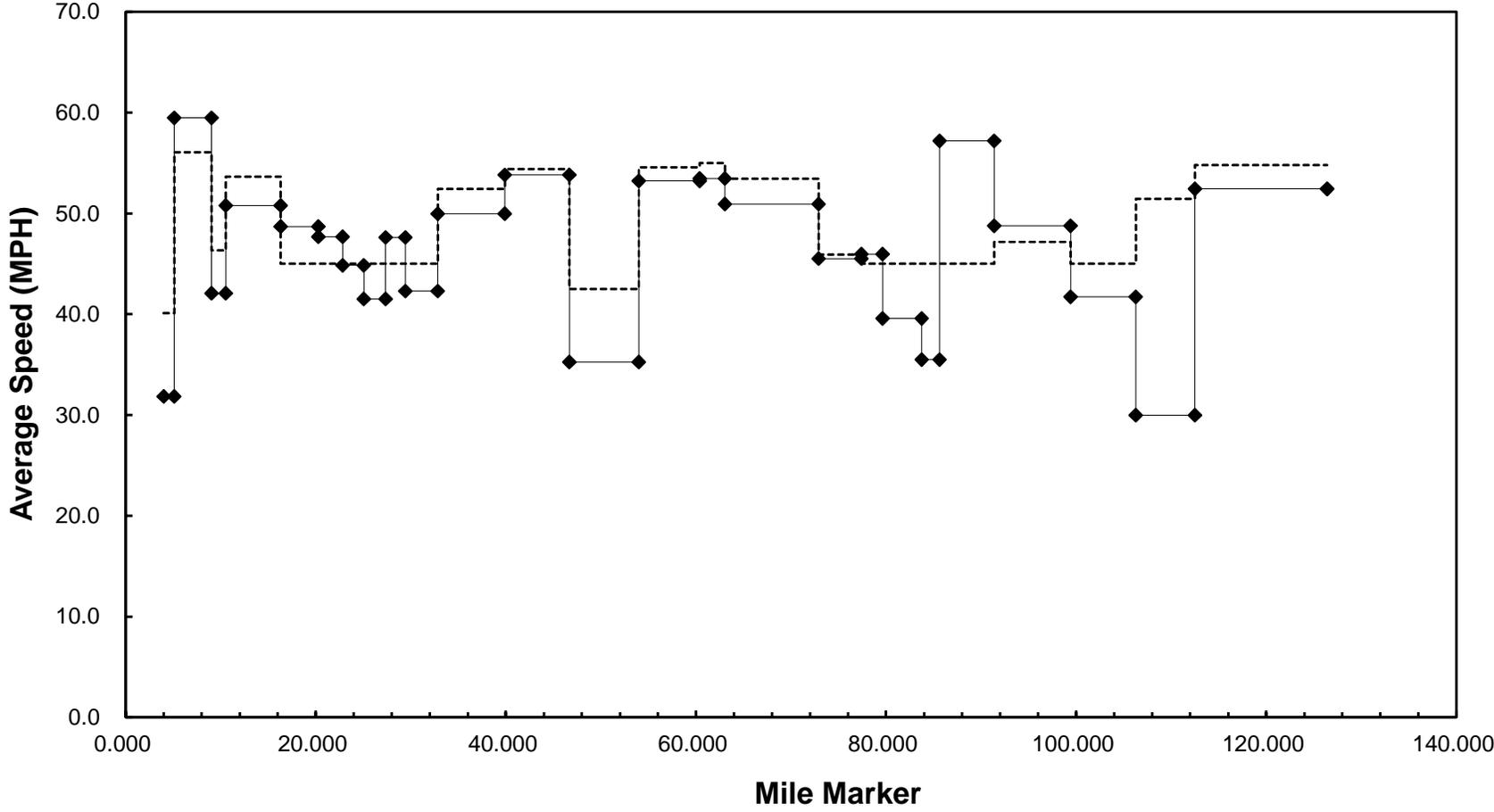
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Wednesday, March 8, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ C SOUND RD:	09:45:00 AM		DB = Drawbridge	AC = Accident
FINISH TIME @ COW KEY BR:	12:59:17 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	----	----	-	--	-----	-
County Line sign	25	00:15:54	00:15:54		13.897	13.897		52.4	10+	CG	00:02:00	
C-905	24	00:28:22	00:12:28		20.128	6.231		30.0	10+	CG(3)	00:04:25	-5
Atlantic Blvd	23	00:38:13	00:09:51		26.976	6.848		41.7	10+	TS(2)	00:00:53	3
Ocean Blvd	22	00:48:07	00:09:54		35.022	8.046		48.8				12
Snake Creek Br (N)	21	01:24:02	00:35:55	00:32:00	40.783	5.761	2.028	57.2	8	TS,CS/DB	00:32:42	-2
Whale Harbor Br (S)	20	01:30:04	00:06:02	00:03:00	42.650	1.867	0.072	35.5	10+	CS	00:03:00	
Teatable Relf Br (N)	19	01:36:18	00:06:14		46.764	4.114		39.6	10+	CG	00:00:16	
Lignum V Br (S)	18	01:39:13	00:02:55		48.998	2.234		46.0				
Channel #2 Br (N)	17	01:45:08	00:05:55		53.487	4.489		45.5				
Long Key Br (S)	16	01:56:46	00:11:38		63.364	9.877		50.9				
Toms Harbor Ch Br (S)	15	01:59:44	00:02:58		66.007	2.643		53.5				
Coco Plum Dr	14	02:06:58	00:07:14		72.424	6.417		53.2				
7-Mile Br (N)	13	02:19:23	00:12:25		79.719	7.295		35.3	10+	TS,LT	00:00:58	1
7-Mile Br (S)	12	02:26:58	00:07:35		86.523	6.804		53.8				
Long Beach Dr	11	02:35:25	00:08:27		93.561	7.038		50.0		LT	00:00:18	
N Pine Ch Br (N)	10	02:40:17	00:04:52		96.992	3.431		42.3	10+	TS	00:00:12	6
Torch-Ramrod Br (S)	9	02:42:52	00:02:35		99.043	2.051		47.6				
E Shore Dr	8	02:46:11	00:03:19		101.337	2.294		41.5				
Spanish Main Dr	7	02:49:10	00:02:59		103.568	2.231		44.9				
Bow Channel Br (N)	6	02:52:23	00:03:13		106.124	2.556		47.7				
Harris Ch Br (N)	5	02:57:17	00:04:54		110.101	3.977		48.7				
Boca Chica Rd	4	03:04:06	00:06:49		115.870	5.769		50.8				
Rockland Dr	3	03:06:15	00:02:09		117.378	1.508		42.1				
Key Haven Blvd	2	03:10:11	00:03:56		121.278	3.900		59.5				
Cow Key Bridge (N)	1	03:14:17	00:04:06	00:02:28	122.407	1.129	0.262	31.8	10+	CS	00:02:28	
OVERALL		-----	02:58:23	00:37:28	-----	108.510	2.362	45.2			00:45:12	15

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-08-23, 09:45 TO 13:00**



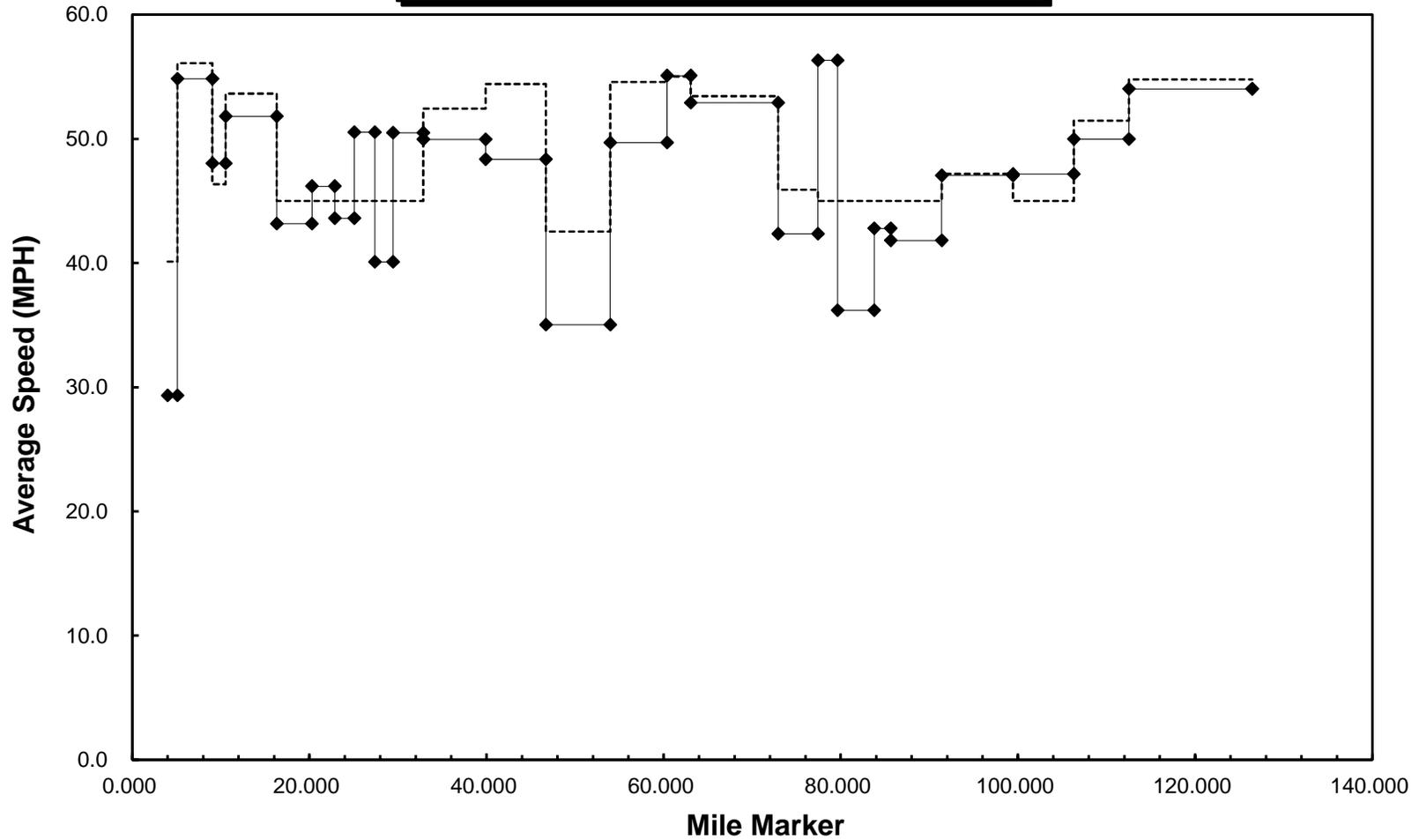
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Thursday, March 9, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	02:00:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	04:49:52 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:02:17	00:02:17		1.116	1.116		29.3	10+	TS	00:00:16	
Rockland Dr	2	00:06:34	00:04:17		5.029	3.913		54.8				-4
Boca Chica Rd	3	00:08:27	00:01:53		6.536	1.507		48.0				
Harris Ch Br (N)	4	00:15:09	00:06:42		12.320	5.784		51.8				
Bow Channel Br (N)	5	00:20:40	00:05:31		16.288	3.968		43.2	10+	TS	00:00:16	
Spanish Main Dr	6	00:23:59	00:03:19		18.841	2.553		46.2				
E Shore Dr	7	00:27:03	00:03:04		21.069	2.228		43.6				
Torch-Ramrod Br (S)	8	00:29:47	00:02:44		23.371	2.302		50.5				2
N Pine Ch Br (N)	9	00:32:51	00:03:04		25.420	2.049		40.1				
Long Beach Dr	10	00:36:55	00:04:04		28.841	3.421		50.5				3
7-Mile Br (S)	11	00:45:23	00:08:28		35.890	7.049		50.0				
7-Mile Br (N)	12	00:53:50	00:08:27		42.697	6.807		48.3				
Coco Plum Dr	13	01:06:18	00:12:28		49.975	7.278		35.0	10+	TS(2),CG	00:01:18	3
Toms Harbor Ch Br (S)	14	01:14:03	00:07:45		56.392	6.417		49.7				
Long Key Br (S)	15	01:16:57	00:02:54		59.054	2.662		55.1				
Channel #2 Br (N)	16	01:28:09	00:11:12		68.926	9.872		52.9				
Lignum V Br (S)	17	01:34:30	00:06:21		73.407	4.481		42.3				
Teatable Relf Br (N)	18	01:36:53	00:02:23		75.644	2.237		56.3				
Whale Harbor Br (S)	19	01:43:43	00:06:50		79.765	4.121		36.2				
Snake Creek Br (N)	20	01:46:20	00:02:37		81.631	1.866		42.8				
Ocean Blvd	21	02:13:19	00:26:59	00:19:13	87.392	5.761	0.350	41.8	10+	CS,TS(2)	00:20:05	
Atlantic Blvd	22	02:33:13	00:19:54	00:10:04	95.445	8.053	0.346	47.0	10+	CS,TS	00:11:03	-3
C-905	23	02:41:56	00:08:43		102.295	6.850		47.2	10+	TS	00:00:07	-5
County Line sign	24	02:49:25	00:07:29		108.528	6.233		50.0				
Card Sound Rd	25	03:04:52	00:15:27		122.437	13.909		54.0				-3
OVERALL		-----	02:49:25	00:29:17	-----	108.528	0.696	46.2			00:33:05	-4

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
THURSDAY, 03-09-23, 14:00 TO 16:50**



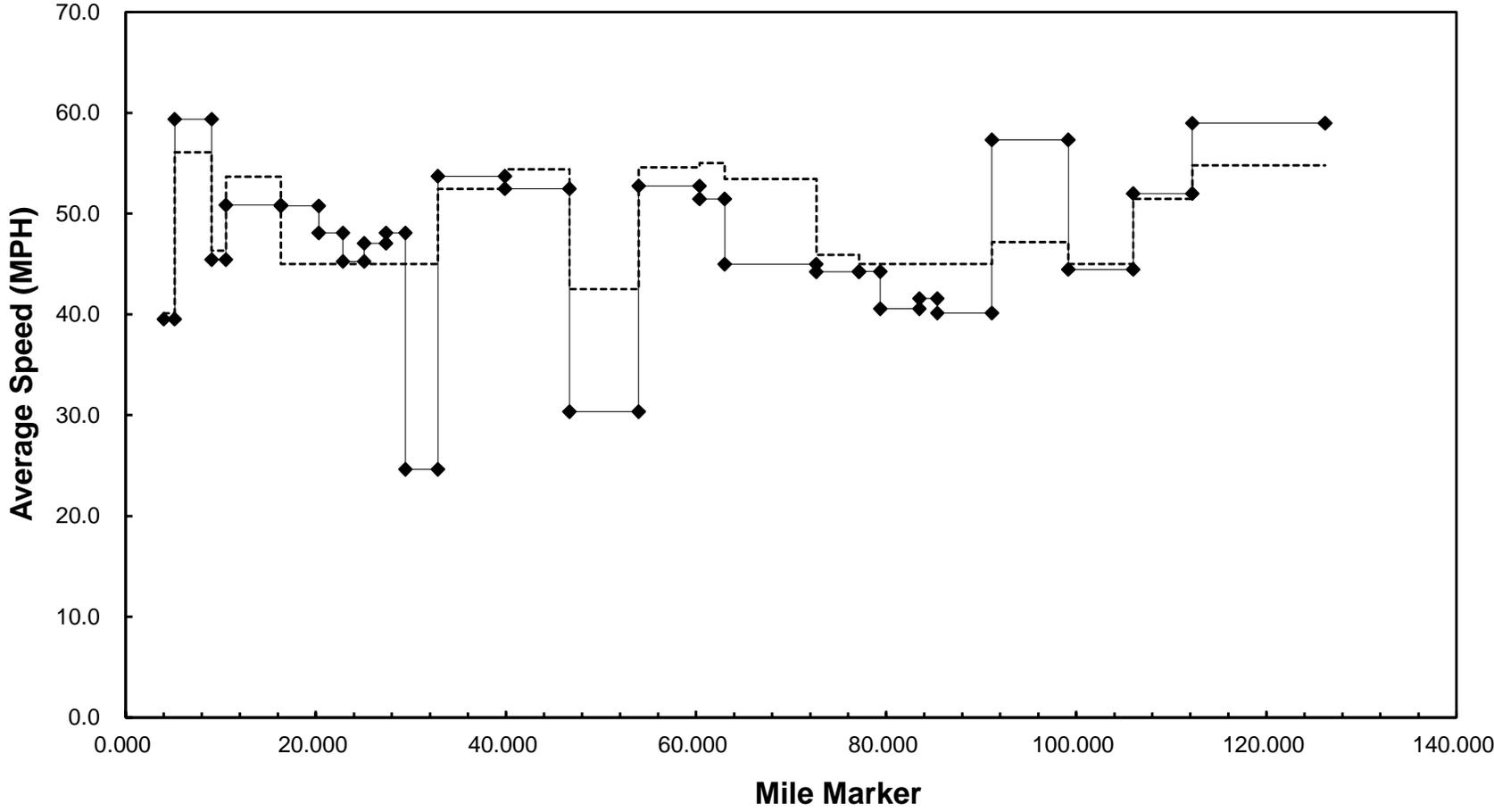
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Cloudy	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Thursday, March 9, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	9:45:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	13:25:05 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:14:13	00:14:13		13.971	13.971		59.0				
C-905	24	00:21:25	00:07:12		20.209	6.238		52.0				-3
Atlantic Blvd	23	00:30:57	00:09:32	00:00:20	27.030	6.821	0.003	44.5	6	SB	00:00:20	2
Ocean Blvd	22	01:41:10	01:10:13	01:05:32	35.061	8.031	3.558	57.3	10+	CS,TS	01:06:02	7
Snake Creek Br (N)	21	01:49:45	00:08:35		40.802	5.741		40.1	8	TS	00:00:03	
Whale Harbor Br (S)	20	01:52:27	00:02:42		42.673	1.871		41.6				
Teatable Relf Br (N)	19	01:58:34	00:06:07		46.806	4.133		40.5				
Lignum V Br (S)	18	02:01:35	00:03:01		49.031	2.225		44.3				
Channel #2 Br (N)	17	02:07:41	00:06:06		53.526	4.495		44.2				
Long Key Br (S)	16	02:20:32	00:12:51		63.159	9.633		45.0				
Toms Harbor Ch Br (S)	15	02:23:37	00:03:05		65.803	2.644		51.5				
Coco Plum Dr	14	02:30:55	00:07:18		72.219	6.416		52.7				
7-Mile Br (N)	13	02:45:18	00:14:23		79.491	7.272		30.3	8	TS(2)	00:02:00	-4
7-Mile Br (S)	12	02:53:05	00:07:47		86.297	6.806		52.5				
Long Beach Dr	11	03:00:57	00:07:52		93.339	7.042		53.7				1
N Pine Ch Br (N)	10	03:09:16	00:08:19		96.753	3.414		24.6	10+	CG,TS	00:02:26	
Torch-Ramrod Br (S)	9	03:11:50	00:02:34		98.810	2.057		48.1				
E Shore Dr	8	03:14:46	00:02:56		101.111	2.301		47.1				
Spanish Main Dr	7	03:17:43	00:02:57		103.335	2.224		45.2				
Bow Channel Br (N)	6	03:20:54	00:03:11		105.886	2.551		48.1				
Harris Ch Br (N)	5	03:25:36	00:04:42		109.863	3.977		50.8				
Boca Chica Rd	4	03:32:25	00:06:49		115.638	5.775		50.8				
Rockland Dr	3	03:34:25	00:02:00		117.152	1.514		45.4				2
Key Haven Blvd	2	03:38:21	00:03:56		121.043	3.891		59.4				1
Cow Key Bridge (N)	1	03:40:05	00:01:44		122.185	1.142		39.5				
OVERALL		-----	03:25:52	01:05:52	-----	108.214	3.561	44.9			01:10:51	6

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
THURSDAY, 03-09-23, 09:45 TO 13:26**



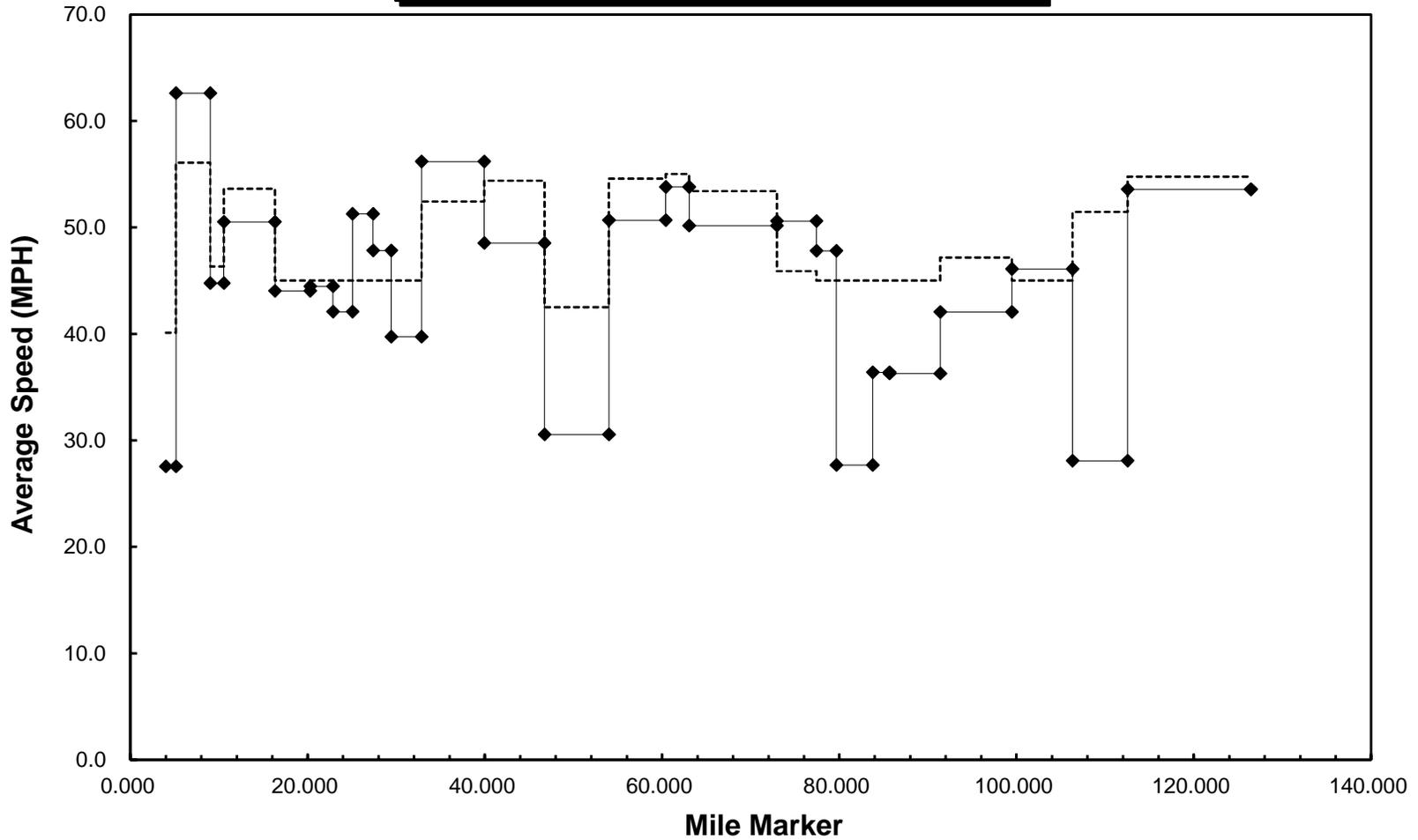
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn RT = Right Turn TS = Traffic Signal DB = Drawbridge CG = Congestion
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	CS = Construction SB = School Bus EV = Emergency Vehicle AC = Accident SE = Special Event
DAY/DATE:	Friday, March 10, 2023	Delay ends @ 15 mph	
START TIME @ COW KEY BR:	02:30:00 PM		
FINISH TIME @ C SOUND RD:	05:22:22 PM		

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:02:27	00:02:27		1.125	1.125		27.6	10+	TS	00:00:36	
Rockland Dr	2	00:06:11	00:03:44		5.020	3.895		62.6				2
Boca Chica Rd	3	00:08:13	00:02:02		6.537	1.517		44.8				
Harris Ch Br (N)	4	00:15:05	00:06:52		12.319	5.782		50.5				
Bow Channel Br (N)	5	00:20:30	00:05:25		16.294	3.975		44.0	10+	TS	00:00:25	
Spanish Main Dr	6	00:23:56	00:03:26		18.838	2.544		44.5				
E Shore Dr	7	00:27:07	00:03:11		21.070	2.232		42.1				
Torch-Ramrod Br (S)	8	00:29:49	00:02:42		23.377	2.307		51.3				
N Pine Ch Br (N)	9	00:32:24	00:02:35		25.436	2.059		47.8				
Long Beach Dr	10	00:37:34	00:05:10		28.857	3.421		39.7				
7-Mile Br (S)	11	00:45:06	00:07:32		35.910	7.053		56.2				
7-Mile Br (N)	12	00:53:31	00:08:25		42.716	6.806		48.5				
Coco Plum Dr	13	01:07:47	00:14:16		49.982	7.266		30.6	10+	TS,TS/LT	00:03:24	-2
Toms Harbor Ch Br (S)	14	01:15:23	00:07:36		56.402	6.420		50.7	7	CG	00:00:13	
Long Key Br (S)	15	01:18:21	00:02:58		59.062	2.660		53.8				
Channel #2 Br (N)	16	01:30:10	00:11:49		68.939	9.877		50.2				
Lignum V Br (S)	17	01:35:29	00:05:19		73.421	4.482		50.6				
Teatable Relf Br (N)	18	01:38:17	00:02:48		75.651	2.230		47.8				
Whale Harbor Br (S)	19	01:47:14	00:08:57		79.780	4.129		27.7		CG/LT	00:03:51	
Snake Creek Br (N)	20	01:50:18	00:03:04		81.640	1.860		36.4				
Ocean Blvd	21	01:59:50	00:09:32		87.403	5.763		36.3	8	TS(2)	00:00:51	3
Atlantic Blvd	22	02:14:35	00:14:45	00:03:50	95.464	8.061	0.409	42.1	10+	TS,SE/TS/LT	00:05:11	-2
C-905	23	02:23:30	00:08:55		102.314	6.850		46.1	10+	TS/LT	00:00:17	2
County Line sign	24	02:36:48	00:13:18		108.542	6.228		28.1	10+	CG(2)	00:08:43	
Card Sound Rd	25	02:52:22	00:15:34		122.444	13.902		53.6	10+	CG	00:01:01	1
OVERALL		-----	02:36:48	00:03:50	-----	108.542	0.409	42.4			00:23:31	3

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
FRIDAY, 03-10-23, 14:30 TO 17:23**



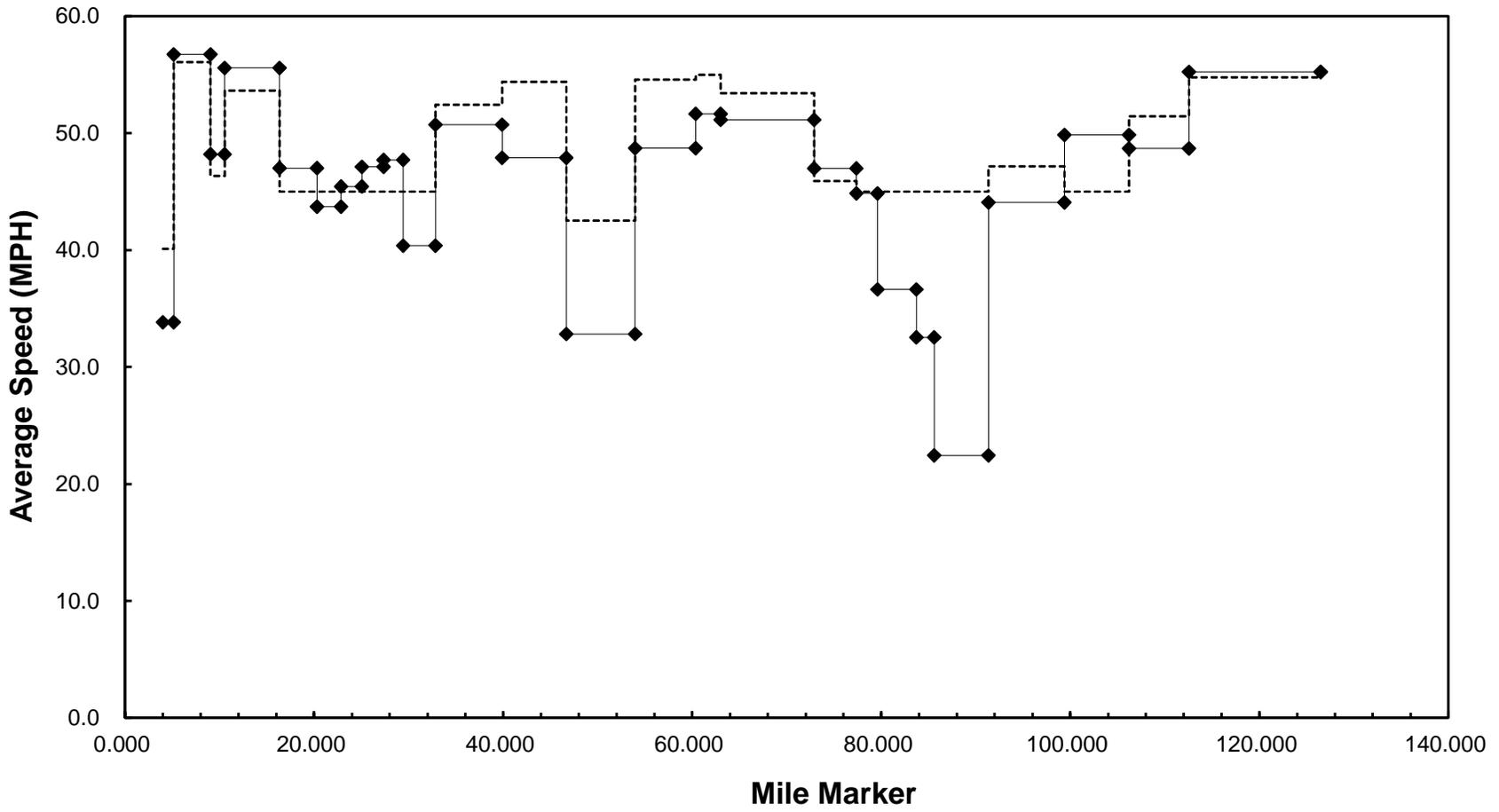
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction PED = Ped Crossing
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 10, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	10:15:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	13:00:26 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:15:08	00:15:08		13.936	13.936		55.3				-3
C-905	24	00:22:57	00:07:49		20.279	6.343		48.7				
Atlantic Blvd	23	00:31:11	00:08:14		27.121	6.842		49.9				-2
Ocean Blvd	22	00:42:07	00:10:56		35.153	8.032		44.1	10+	TS	00:00:06	-1
Snake Creek Br (N)	21	00:57:28	00:15:21		40.894	5.741		22.4	10+	TS,CG	00:11:12	
Whale Harbor Br (S)	20	01:00:56	00:03:28		42.774	1.880		32.5	10+	CG	00:00:52	
Teatable Relf Br (N)	19	01:07:40	00:06:44		46.886	4.112		36.6				
Lignum V Br (S)	18	01:10:39	00:02:59		49.116	2.230		44.8				
Channel #2 Br (N)	17	01:16:22	00:05:43		53.592	4.476		47.0				
Long Key Br (S)	16	01:27:58	00:11:36		63.482	9.890		51.2				
Toms Harbor Ch Br (S)	15	01:31:02	00:03:04		66.123	2.641		51.7				
Coco Plum Dr	14	01:38:56	00:07:54		72.538	6.415		48.7				
7-Mile Br (N)	13	01:52:15	00:13:19		79.820	7.282		32.8	10+	TS(2),LT(2)	00:02:28	-4
7-Mile Br (S)	12	02:00:46	00:08:31		86.619	6.799		47.9				
Long Beach Dr	11	02:09:06	00:08:20		93.666	7.047		50.7				2
N Pine Ch Br (N)	10	02:14:10	00:05:04		97.076	3.410		40.4	10+	TS	00:00:44	
Torch-Ramrod Br (S)	9	02:16:45	00:02:35		99.130	2.054		47.7				
E Shore Dr	8	02:19:41	00:02:56		101.434	2.304		47.1				
Spanish Main Dr	7	02:22:37	00:02:56		103.655	2.221		45.4				
Bow Channel Br (N)	6	02:26:06	00:03:29		106.192	2.537		43.7	10+	PED	00:00:14	
Harris Ch Br (N)	5	02:31:10	00:05:04		110.162	3.970		47.0				
Boca Chica Rd	4	02:37:25	00:06:15		115.951	5.789		55.6				
Rockland Dr	3	02:39:17	00:01:52		117.451	1.500		48.2				-2
Key Haven Blvd	2	02:43:25	00:04:08		121.360	3.909		56.7				
Cow Key Bridge (N)	1	02:45:26	00:02:01		122.497	1.137		33.8	10+	TS	00:00:26	
OVERALL		-----	02:30:18	00:00:00	-----	108.561	0.000	43.3			00:16:02	-7

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
FRIDAY, 03-10-23, 10:15 TO 13:01**



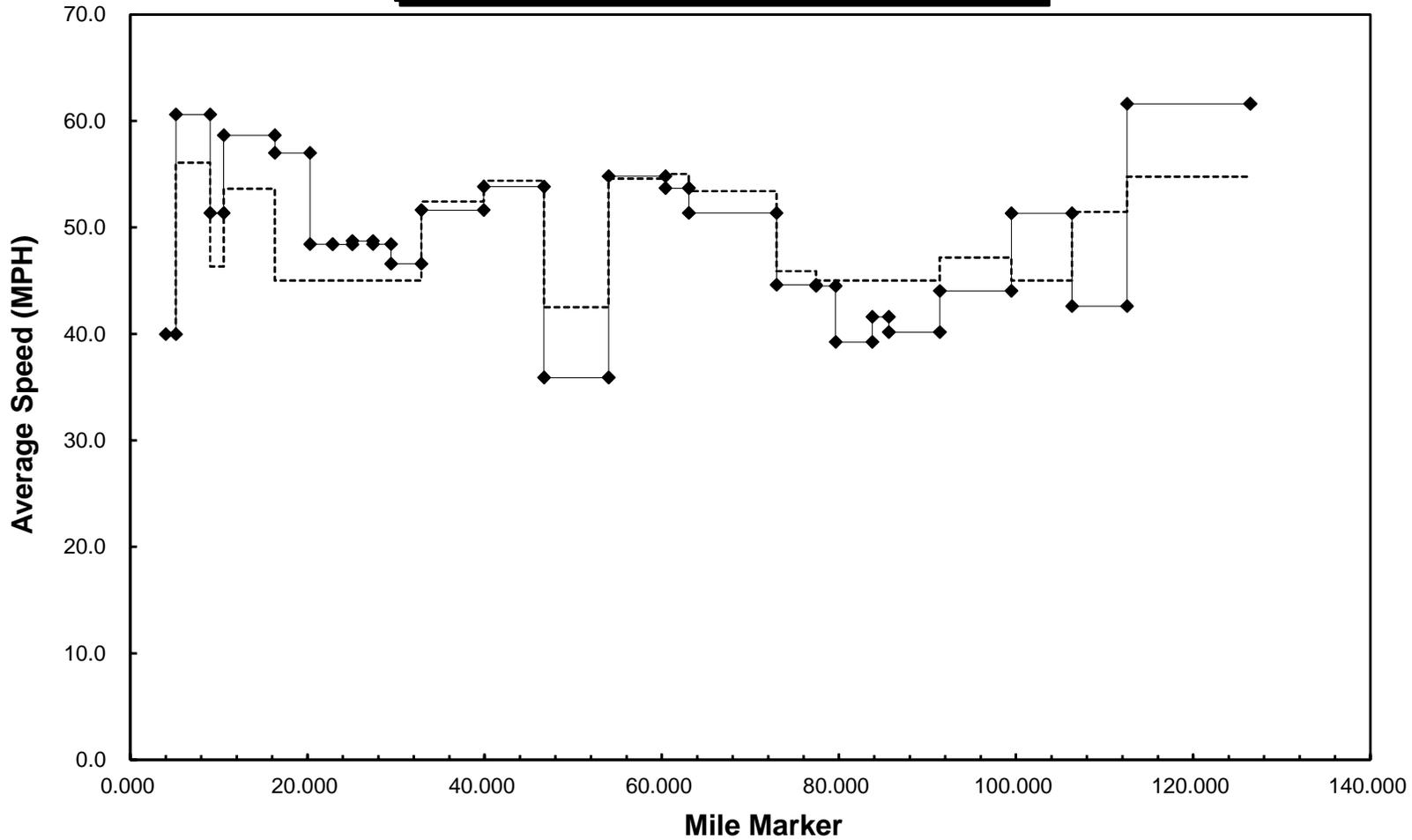
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Saturday, March 11, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	03:00:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	05:31:13 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:41	00:01:41		1.121	1.121		40.0				
Rockland Dr	2	00:05:33	00:03:52		5.026	3.905		60.6				4
Boca Chica Rd	3	00:07:19	00:01:46		6.538	1.512		51.4				
Harris Ch Br (N)	4	00:13:14	00:05:55		12.322	5.784		58.7				
Bow Channel Br (N)	5	00:17:25	00:04:11		16.295	3.973		57.0				
Spanish Main Dr	6	00:20:34	00:03:09		18.837	2.542		48.4				
E Shore Dr	7	00:23:20	00:02:46		21.069	2.232		48.4				
Torch-Ramrod Br (S)	8	00:26:10	00:02:50		23.370	2.301		48.7				
N Pine Ch Br (N)	9	00:28:43	00:02:33		25.428	2.058		48.4				
Long Beach Dr	10	00:33:07	00:04:24		28.843	3.415		46.6				
7-Mile Br (S)	11	00:41:19	00:08:12		35.899	7.056		51.6				3
7-Mile Br (N)	12	00:48:54	00:07:35		42.702	6.803		53.8				
Coco Plum Dr	13	01:01:45	00:12:51	00:01:09	49.987	7.285	0.287	35.9	10+	SE,TS	00:02:49	7
Toms Harbor Ch Br (S)	14	01:08:47	00:07:02		56.411	6.424		54.8				
Long Key Br (S)	15	01:11:44	00:02:57		59.050	2.639		53.7				
Channel #2 Br (N)	16	01:23:17	00:11:33		68.935	9.885		51.4				
Lignum V Br (S)	17	01:29:19	00:06:02		73.419	4.484		44.6				
Teatable Relf Br (N)	18	01:32:19	00:03:00		75.644	2.225		44.5				
Whale Harbor Br (S)	19	01:38:38	00:06:19		79.774	4.130		39.2				
Snake Creek Br (N)	20	01:41:19	00:02:41		81.634	1.860		41.6				
Ocean Blvd	21	01:49:55	00:08:36		87.391	5.757		40.2	10+	TS	00:00:27	-3
Atlantic Blvd	22	02:00:54	00:10:59		95.453	8.062		44.0	10+	TS(2)	00:01:32	-4
C-905	23	02:08:54	00:08:00		102.298	6.845		51.3	10+	TS	00:00:04	-2
County Line sign	24	02:17:41	00:08:47		108.532	6.234		42.6	10+	CG	00:00:37	
Card Sound Rd	25	02:31:13	00:13:32		122.426	13.894		61.6				
OVERALL		-----	02:17:41	00:01:09	-----	108.532	0.287	47.6			00:05:29	5

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
SATURDAY, 03-11-23, 15:00 TO 17:32**



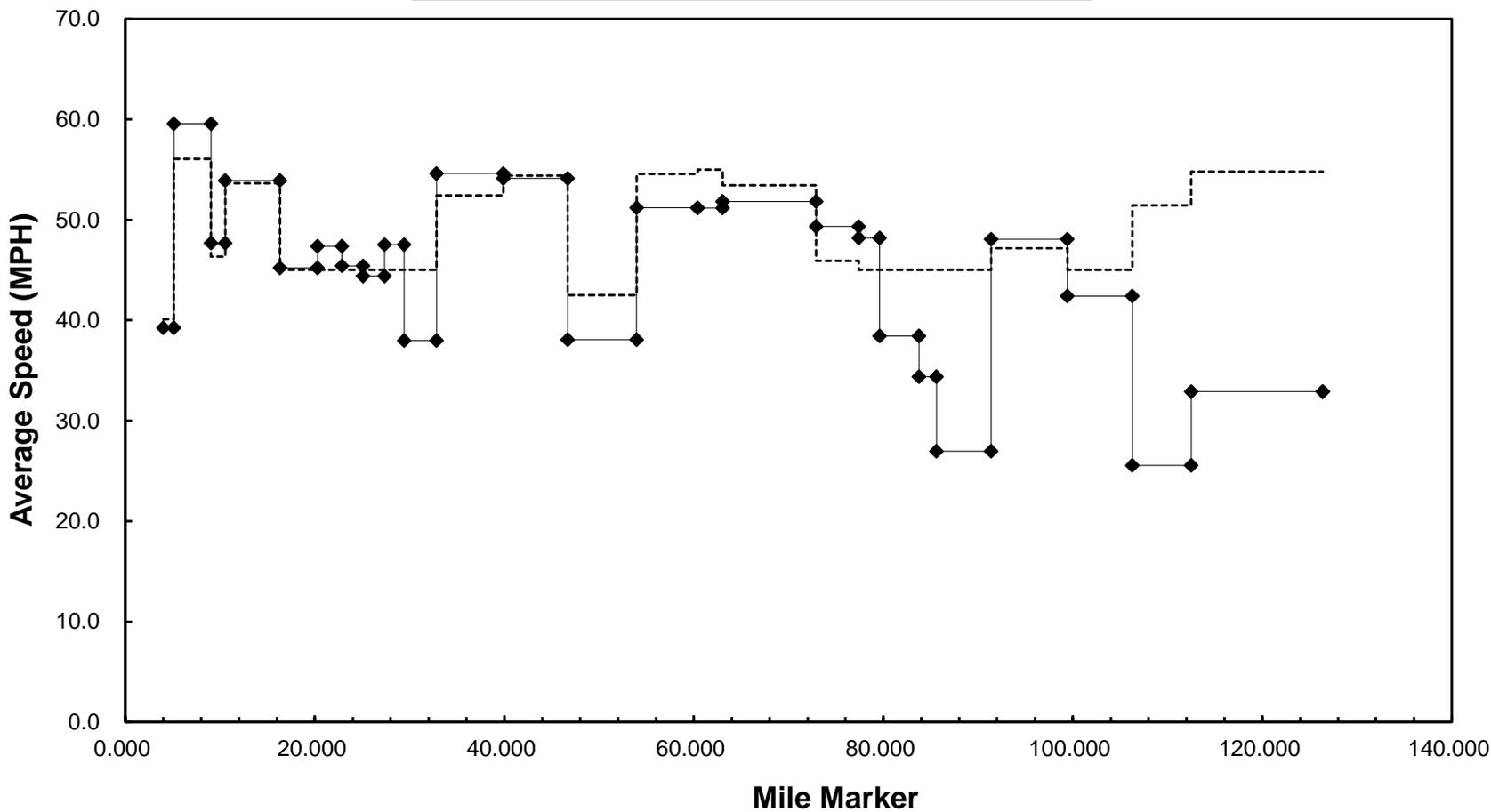
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Saturday, March 11, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	10:45:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	01:54:57 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:25:20	00:25:20		13.890	13.890		32.9	10+	CG(2)	00:14:07	
C-905	24	00:39:57	00:14:37		20.117	6.227		25.6	10+	CG(3)	00:11:06	-2
Atlantic Blvd	23	00:58:55	00:18:58	00:10:13	26.952	6.835	0.651	42.4	10+	SE,TS	00:10:53	6
Ocean Blvd	22	01:08:58	00:10:03		35.003	8.051		48.1	10+	TS(2)	00:00:30	
Snake Creek Br (N)	21	01:25:33	00:16:35	00:06:00	40.770	5.767	1.007	27.0	10+	TS(2),CG,CG/DB	00:11:12	
Whale Harbor Br (S)	20	01:28:48	00:03:15		42.632	1.862		34.4	10+	CG(2)	00:01:17	
Teatable Relf Br (N)	19	01:35:15	00:06:27		46.764	4.132		38.4				
Lignum V Br (S)	18	01:38:01	00:02:46		48.986	2.222		48.2				
Channel #2 Br (N)	17	01:43:28	00:05:27		53.468	4.482		49.3				
Long Key Br (S)	16	01:54:54	00:11:26		63.349	9.881		51.9				
Toms Harbor Ch Br (S)	15	01:58:00	00:03:06		65.993	2.644		51.2				
Coco Plum Dr	14	02:05:31	00:07:31		72.410	6.417		51.2				
7-Mile Br (N)	13	02:18:08	00:12:37	00:01:52	79.687	7.277	0.452	38.1	10+	TS,SE/TS,LT	00:03:27	1
7-Mile Br (S)	12	02:25:41	00:07:33		86.498	6.811		54.1				
Long Beach Dr	11	02:33:26	00:07:45		93.551	7.053		54.6				
N Pine Ch Br (N)	10	02:38:50	00:05:24		96.970	3.419		38.0	10+	TS	00:00:44	
Torch-Ramrod Br (S)	9	02:41:25	00:02:35		99.017	2.047		47.5				
E Shore Dr	8	02:44:31	00:03:06		101.311	2.294		44.4				
Spanish Main Dr	7	02:47:28	00:02:57		103.544	2.233		45.4				
Bow Channel Br (N)	6	02:50:42	00:03:14		106.097	2.553		47.4				
Harris Ch Br (N)	5	02:55:58	00:05:16		110.065	3.968		45.2				
Boca Chica Rd	4	03:02:24	00:06:26		115.846	5.781		53.9				
Rockland Dr	3	03:04:18	00:01:54		117.356	1.510		47.7				
Key Haven Blvd	2	03:08:14	00:03:56		121.262	3.906		59.6				
Cow Key Bridge (N)	1	03:09:57	00:01:43		122.385	1.123		39.3				-3
OVERALL		-----	02:44:37	00:18:05	-----	108.495	2.110	43.6			00:39:09	2

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
SATURDAY, 03-11-23, 10:45 TO 13:55**



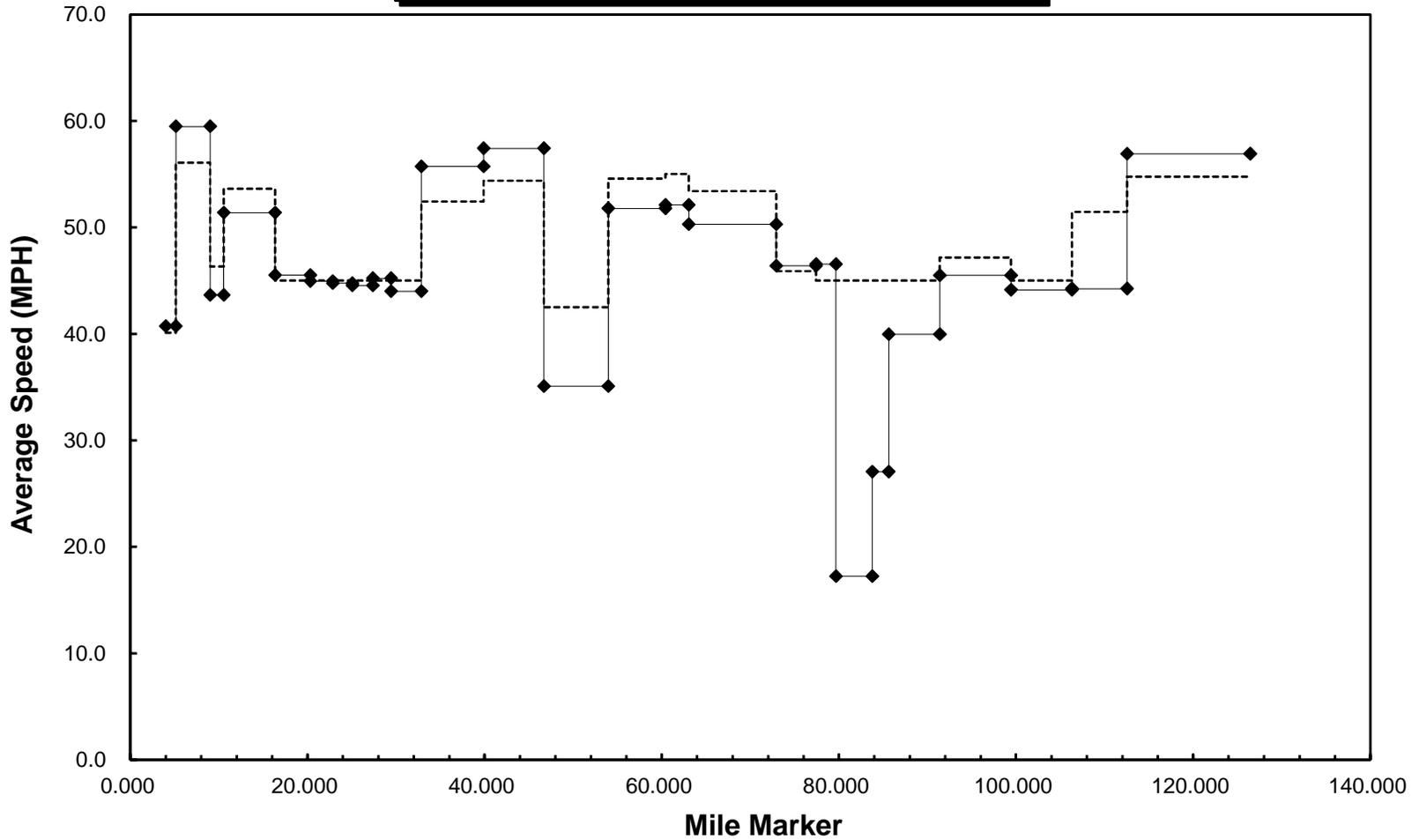
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Sunny/Clear	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Sunday, March 12, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	11:30:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	02:16:25 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:01:39	00:01:39		1.120	1.120		40.7				
Rockland Dr	2	00:05:35	00:03:56		5.019	3.899		59.5				
Boca Chica Rd	3	00:07:40	00:02:05		6.535	1.516		43.7				
Harris Ch Br (N)	4	00:14:26	00:06:46		12.328	5.793		51.4				
Bow Channel Br (N)	5	00:19:40	00:05:14		16.298	3.970		45.5				
Spanish Main Dr	6	00:23:04	00:03:24		18.845	2.547		44.9				
E Shore Dr	7	00:26:03	00:02:59		21.071	2.226		44.8				
Torch-Ramrod Br (S)	8	00:29:09	00:03:06		23.373	2.302		44.6				
N Pine Ch Br (N)	9	00:31:52	00:02:43		25.421	2.048		45.2				
Long Beach Dr	10	00:36:32	00:04:40		28.844	3.423		44.0				
7-Mile Br (S)	11	00:44:08	00:07:36		35.900	7.056		55.7				
7-Mile Br (N)	12	00:51:14	00:07:06		42.694	6.794		57.4				
Coco Plum Dr	13	01:05:17	00:14:03	00:02:25	49.969	7.275	0.475	35.1	10+	SE,TS	00:04:17	
Toms Harbor Ch Br (S)	14	01:12:44	00:07:27		56.400	6.431		51.8				
Long Key Br (S)	15	01:15:47	00:03:03		59.049	2.649		52.1				
Channel #2 Br (N)	16	01:27:34	00:11:47		68.926	9.877		50.3				
Lignum V Br (S)	17	01:33:22	00:05:48		73.411	4.485		46.4	10+	LT	00:00:21	
Teatable Relf Br (N)	18	01:36:15	00:02:53		75.648	2.237		46.6				
Whale Harbor Br (S)	19	01:50:37	00:14:22		79.774	4.126		17.2	10+	LT,CG	00:09:55	
Snake Creek Br (N)	20	01:54:44	00:04:07		81.631	1.857		27.1	10+	CG	00:02:02	
Ocean Blvd	21	02:03:23	00:08:39		87.394	5.763		40.0				
Atlantic Blvd	22	02:14:00	00:10:37		95.443	8.049		45.5	7	TS	00:00:34	-3
C-905	23	02:23:19	00:09:19		102.296	6.853		44.1	10+	TS	00:01:14	
County Line sign	24	02:31:46	00:08:27		108.527	6.231		44.2	10+	CG	00:00:40	
Card Sound Rd	25	02:46:25	00:14:39		122.425	13.898		56.9				
OVERALL		-----	02:31:46	00:02:25	-----	108.527	0.475	43.4			00:19:03	-3

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
SUNDAY, 03-12-23, 11:30 TO 14:17**



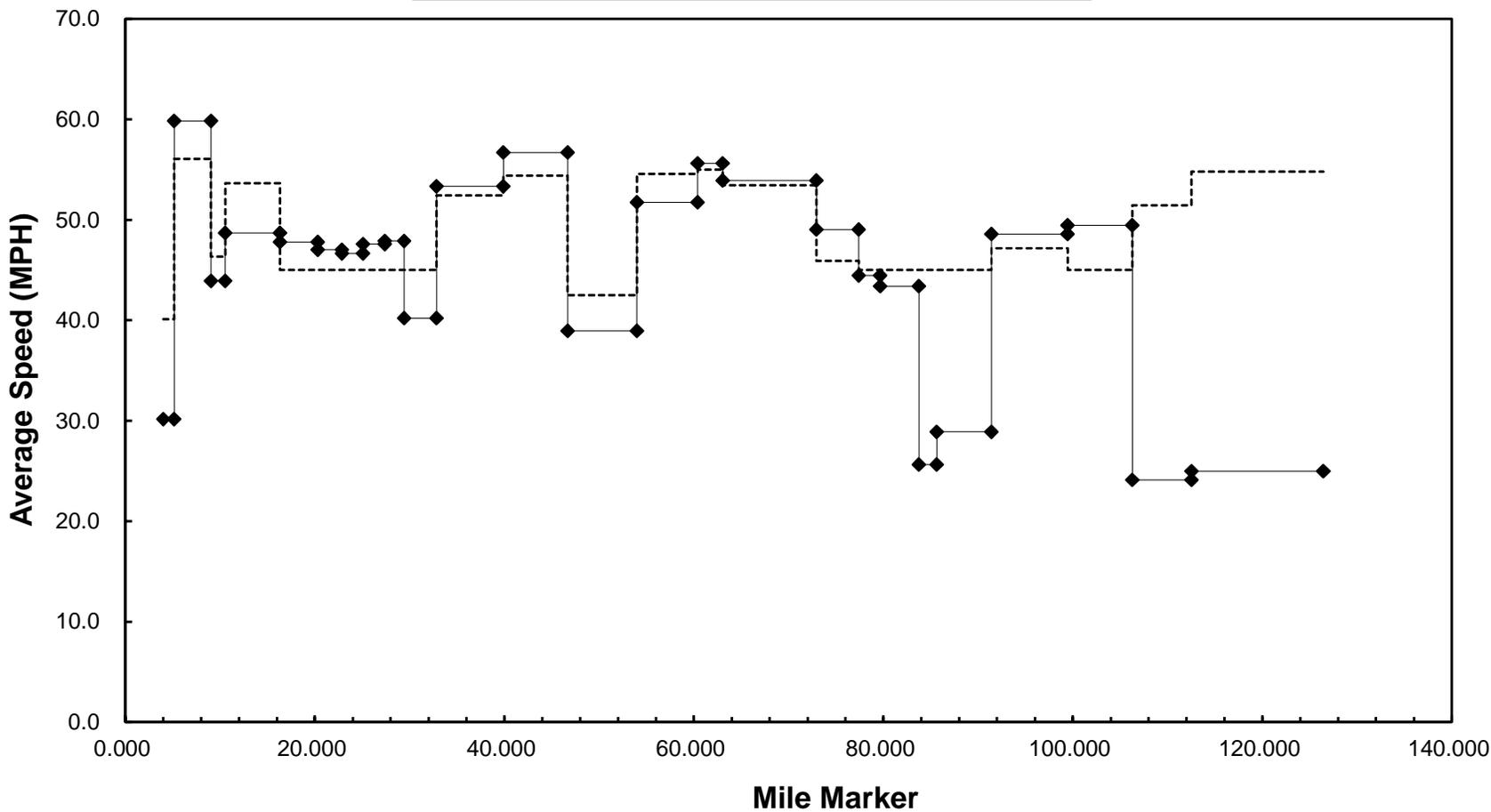
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Sunny/Clear	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Sunday, March 12, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	03:15:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	06:17:21 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:33:23	00:33:23		13.897	13.897		25.0	10+	CG(2)	00:23:15	
C-905	24	00:48:55	00:15:32		20.139	6.242		24.1	10+	CG	00:11:33	2
Atlantic Blvd	23	00:57:13	00:08:18		26.982	6.843		49.5				
Ocean Blvd	22	01:07:09	00:09:56		35.025	8.043		48.6				
Snake Creek Br (N)	21	01:19:06	00:11:57		40.783	5.758		28.9	10+	CG(2)	00:01:00	
Whale Harbor Br (S)	20	01:23:29	00:04:23		42.656	1.873		25.6	10+	CG	00:04:02	
Teatable Relf Br (N)	19	01:29:10	00:05:41		46.769	4.113		43.4				
Lignum V Br (S)	18	01:32:11	00:03:01		49.005	2.236		44.5				
Channel #2 Br (N)	17	01:37:41	00:05:30		53.499	4.494		49.0				
Long Key Br (S)	16	01:48:41	00:11:00		63.384	9.885		53.9				
Toms Harbor Ch Br (S)	15	01:51:32	00:02:51		66.026	2.642		55.6				
Coco Plum Dr	14	01:58:58	00:07:26		72.437	6.411		51.7				
7-Mile Br (N)	13	02:10:12	00:11:14		79.731	7.294		39.0	10+	TS(2),CG	00:01:27	
7-Mile Br (S)	12	02:17:24	00:07:12		86.538	6.807		56.7				
Long Beach Dr	11	02:25:19	00:07:55		93.576	7.038		53.3				
N Pine Ch Br (N)	10	02:30:25	00:05:06		96.994	3.418		40.2	10+	TS	00:00:29	
Torch-Ramrod Br (S)	9	02:32:59	00:02:34		99.043	2.049		47.9				
E Shore Dr	8	02:35:53	00:02:54		101.343	2.300		47.6				
Spanish Main Dr	7	02:38:45	00:02:52		103.573	2.230		46.7				
Bow Channel Br (N)	6	02:42:01	00:03:16		106.133	2.560		47.0				
Harris Ch Br (N)	5	02:47:00	00:04:59		110.104	3.971		47.8				
Boca Chica Rd	4	02:54:07	00:07:07		115.883	5.779		48.7				
Rockland Dr	3	02:56:11	00:02:04		117.396	1.513		43.9				
Key Haven Blvd	2	03:00:05	00:03:54		121.286	3.890		59.8				
Cow Key Bridge (N)	1	03:02:21	00:02:16		122.426	1.140		30.2	10+	TS	00:00:15	
OVERALL		-----	02:28:58	00:00:00	-----	108.529	0.000	43.7			00:18:46	2

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
SUNDAY, 03-12-23, 15:15 TO 18:18**



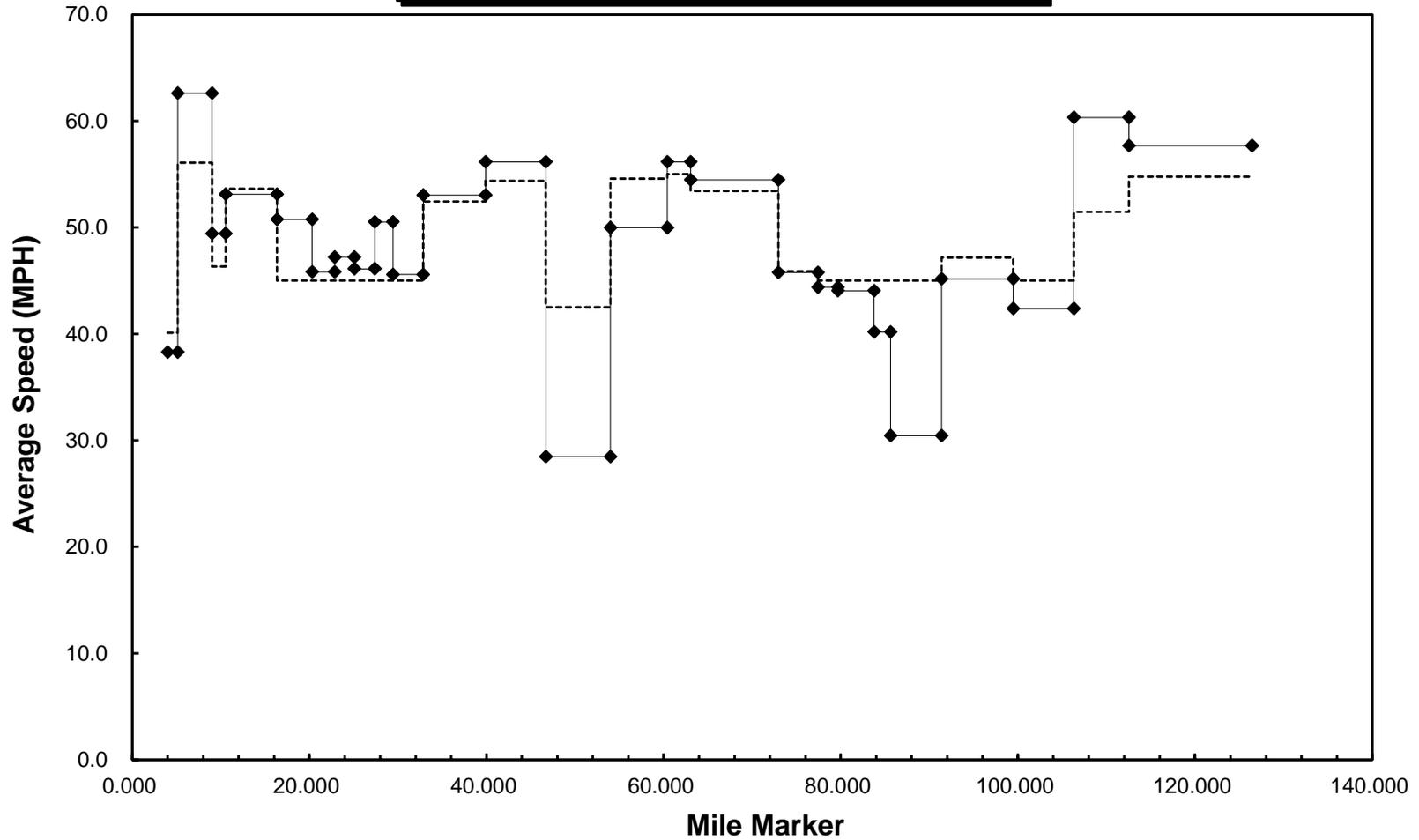
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Monday, March 13, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ COW KEY BR:	12:00:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ C SOUND RD:	2:36:24 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:46	00:01:46		1.127	1.127		38.3				1
Rockland Dr	2	00:05:30	00:03:44		5.022	3.895		62.6				2
Boca Chica Rd	3	00:07:21	00:01:51		6.546	1.524		49.4				
Harris Ch Br (N)	4	00:13:53	00:06:32		12.329	5.783		53.1				
Bow Channel Br (N)	5	00:18:35	00:04:42		16.305	3.976		50.8				
Spanish Main Dr	6	00:21:55	00:03:20		18.850	2.545		45.8				
E Shore Dr	7	00:24:45	00:02:50		21.079	2.229		47.2				
Torch-Ramrod Br (S)	8	00:27:45	00:03:00		23.385	2.306		46.1	6	LT	00:00:17	
N Pine Ch Br (N)	9	00:30:11	00:02:26		25.434	2.049		50.5				3
Long Beach Dr	10	00:34:41	00:04:30		28.853	3.419		45.6				
7-Mile Br (S)	11	00:42:39	00:07:58		35.894	7.041		53.0				
7-Mile Br (N)	12	00:49:56	00:07:17		42.709	6.815		56.1				
Coco Plum Dr	13	01:05:16	00:15:20		49.983	7.274		28.5	10+	LT,TS(3)	00:04:45	6
Toms Harbor Ch Br (S)	14	01:12:59	00:07:43		56.409	6.426		50.0				
Long Key Br (S)	15	01:15:49	00:02:50		59.061	2.652		56.2				
Channel #2 Br (N)	16	01:26:42	00:10:53		68.943	9.882		54.5				
Lignum V Br (S)	17	01:32:34	00:05:52		73.417	4.474		45.8				
Teatable Relf Br (N)	18	01:35:35	00:03:01		75.649	2.232		44.4				
Whale Harbor Br (S)	19	01:41:12	00:05:37		79.773	4.124		44.1				
Snake Creek Br (N)	20	01:43:59	00:02:47		81.637	1.864		40.2				
Ocean Blvd	21	01:55:20	00:11:21		87.394	5.757		30.4	10+	CG(2),TS	00:04:10	5
Atlantic Blvd	22	02:06:02	00:10:42		95.450	8.056		45.2	10+	TS(2)	00:01:04	2
C-905	23	02:15:44	00:09:42		102.302	6.852		42.4		TS	00:01:01	
County Line sign	24	02:21:56	00:06:12		108.537	6.235		60.3				
Card Sound Rd	25	02:36:24	00:14:28		122.441	13.904		57.7	10+	CG	00:00:30	
OVERALL		-----	02:21:56	00:00:00	-----	108.537	0.000	45.9			00:11:17	19

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
MONDAY, 03-13-23, 12:00 TO 14:37**



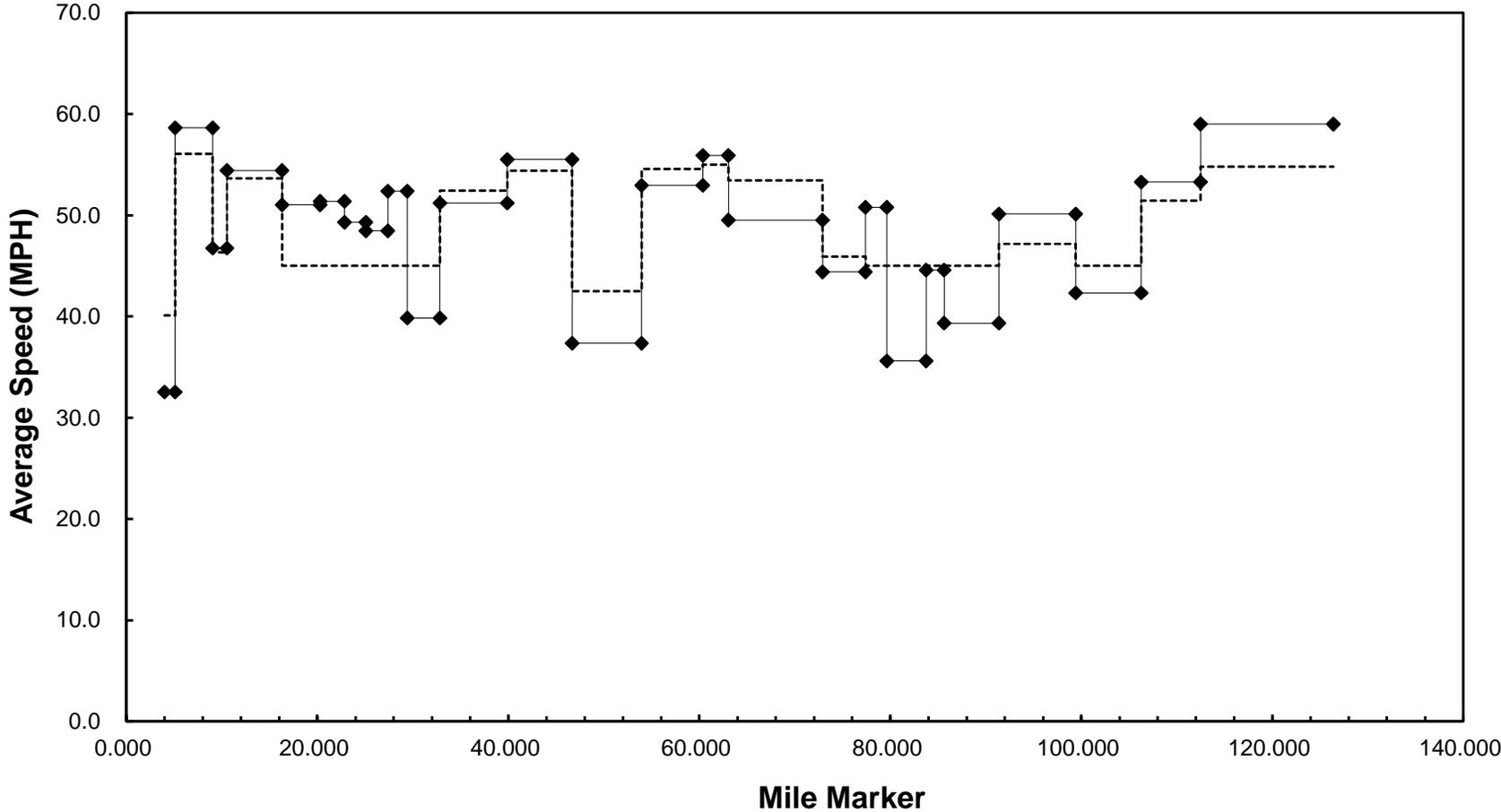
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Monday, March 13, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ C SOUND RD:	03:45:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ COW KEY BR:	06:24:28 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:14:08	00:14:08		13.902	13.902		59.0				2
C-905	24	00:21:09	00:07:01		20.134	6.232		53.3				
Atlantic Blvd	23	00:30:50	00:09:41		26.967	6.833		42.3	10+	TS	00:00:40	
Ocean Blvd	22	00:40:28	00:09:38		35.015	8.048		50.1	10+	TS	00:09:33	
Snake Creek Br (N)	21	00:56:52	00:16:24	00:08:58	40.770	5.755	0.879	39.4	10+	TS,AC	00:10:13	
Whale Harbor Br (S)	20	00:59:22	00:02:30	00:00:04	42.646	1.876	0.068	44.6		AC	00:00:04	
Teatable Relf Br (N)	19	01:06:18	00:06:56		46.762	4.116		35.6	10+	LT	00:01:02	
Lignum V Br (S)	18	01:08:56	00:02:38		48.991	2.229		50.8				
Channel #2 Br (N)	17	01:15:00	00:06:04		53.481	4.490		44.4				
Long Key Br (S)	16	01:26:58	00:11:58		63.357	9.876		49.5				
Toms Harbor Ch Br (S)	15	01:29:49	00:02:51		66.012	2.655		55.9				
Coco Plum Dr	14	01:37:05	00:07:16		72.427	6.415		53.0				
7-Mile Br (N)	13	01:48:46	00:11:41		79.704	7.277		37.4	10+	TS(2)	00:00:47	
7-Mile Br (S)	12	01:56:08	00:07:22		86.521	6.817		55.5				
Long Beach Dr	11	02:04:22	00:08:14		93.548	7.027		51.2				
N Pine Ch Br (N)	10	02:09:31	00:05:09		96.969	3.421		39.9				
Torch-Ramrod Br (S)	9	02:11:52	00:02:21		99.021	2.052		52.4				
E Shore Dr	8	02:14:43	00:02:51		101.323	2.302		48.5				
Spanish Main Dr	7	02:17:25	00:02:42		103.542	2.219		49.3				
Bow Channel Br (N)	6	02:20:24	00:02:59		106.097	2.555		51.4				
Harris Ch Br (N)	5	02:25:05	00:04:41		110.079	3.982		51.0				
Boca Chica Rd	4	02:31:27	00:06:22		115.853	5.774		54.4				
Rockland Dr	3	02:33:23	00:01:56		117.359	1.506		46.7				
Key Haven Blvd	2	02:37:23	00:04:00		121.269	3.910		58.7				
Cow Key Bridge (N)	1	02:39:28	00:02:05		122.399	1.130		32.5	10+	CG	00:00:48	
OVERALL		-----	02:25:20	00:09:02	-----	108.497	0.947	47.3			00:23:07	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
MONDAY, 03-13-23, 15:45 TO 18:25**



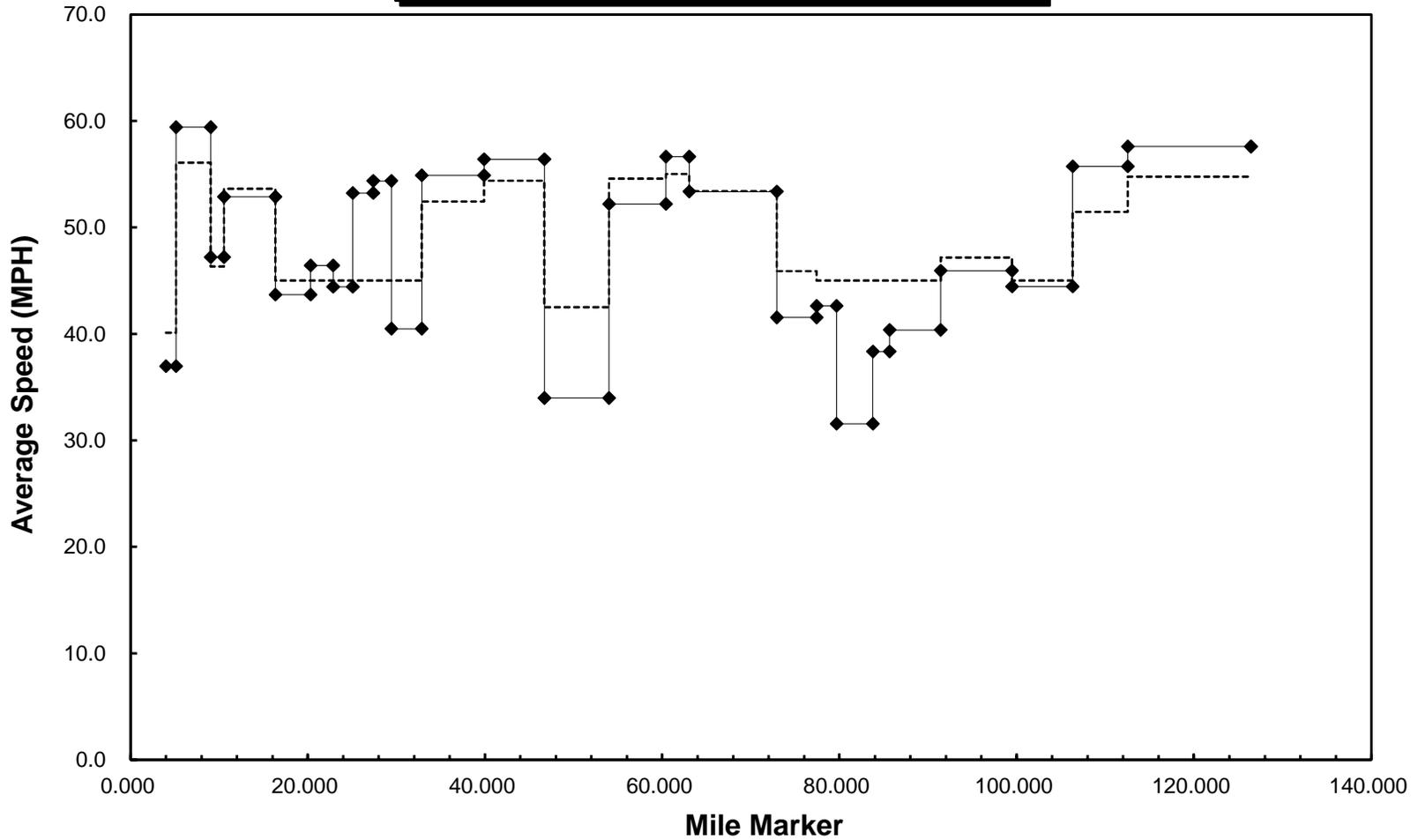
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Tuesday, March 14, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ COW KEY BR:	10:45:00 AM		DB = Drawbridge	AC = Accident
FINISH TIME @ C SOUND RD:	01:25:08 PM		CC = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:49	00:01:49		1.119	1.119		37.0				-1
Rockland Dr	2	00:05:46	00:03:57		5.030	3.911		59.4				1
Boca Chica Rd	3	00:07:41	00:01:55		6.538	1.508		47.2				
Harris Ch Br (N)	4	00:14:15	00:06:34		12.325	5.787		52.9				
Bow Channel Br (N)	5	00:19:43	00:05:28		16.305	3.980		43.7	6	TS	00:00:42	
Spanish Main Dr	6	00:23:00	00:03:17		18.845	2.540		46.4				
E Shore Dr	7	00:26:00	00:03:00		21.065	2.220		44.4				
Torch-Ramrod Br (S)	8	00:28:36	00:02:36		23.371	2.306		53.2				
N Pine Ch Br (N)	9	00:30:52	00:02:16		25.425	2.054		54.4				
Long Beach Dr	10	00:35:56	00:05:04		28.843	3.418		40.5	10+	TS	00:00:23	
7-Mile Br (S)	11	00:43:39	00:07:43		35.902	7.059		54.9				
7-Mile Br (N)	12	00:50:53	00:07:14		42.702	6.800		56.4				
Coco Plum Dr	13	01:03:44	00:12:51		49.980	7.278		34.0	10+	CG,TS(2)	00:01:43	5
Toms Harbor Ch Br (S)	14	01:11:07	00:07:23		56.402	6.422		52.2				
Long Key Br (S)	15	01:13:56	00:02:49		59.061	2.659		56.6				
Channel #2 Br (N)	16	01:25:02	00:11:06		68.934	9.873		53.4				
Lignum V Br (S)	17	01:31:30	00:06:28		73.410	4.476		41.5		CG	00:00:24	
Teatable Relf Br (N)	18	01:34:39	00:03:09		75.648	2.238		42.6				
Whale Harbor Br (S)	19	01:42:30	00:07:51		79.778	4.130		31.6		CG(2)	00:03:27	
Snake Creek Br (N)	20	01:45:25	00:02:55		81.641	1.863		38.3				
Ocean Blvd	21	01:53:59	00:08:34		87.404	5.763		40.4	10+	TS	00:00:15	
Atlantic Blvd	22	02:04:30	00:10:31		95.453	8.049		45.9	10+	TS(2)	00:00:42	-2
C-905	23	02:13:45	00:09:15		102.302	6.849		44.4	10+	TS(2)	00:00:42	6
County Line sign	24	02:20:27	00:06:42		108.524	6.222		55.7				
Card Sound Rd	25	02:40:08	00:19:41	00:06:27	122.420	13.896	1.194	57.6	10+	AC	00:06:27	-3
OVERALL		-----	02:20:27	00:00:00	-----	108.524	0.000	46.4			00:08:18	9

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
TUESDAY, 03-14-23, 10:45 TO 13:26**



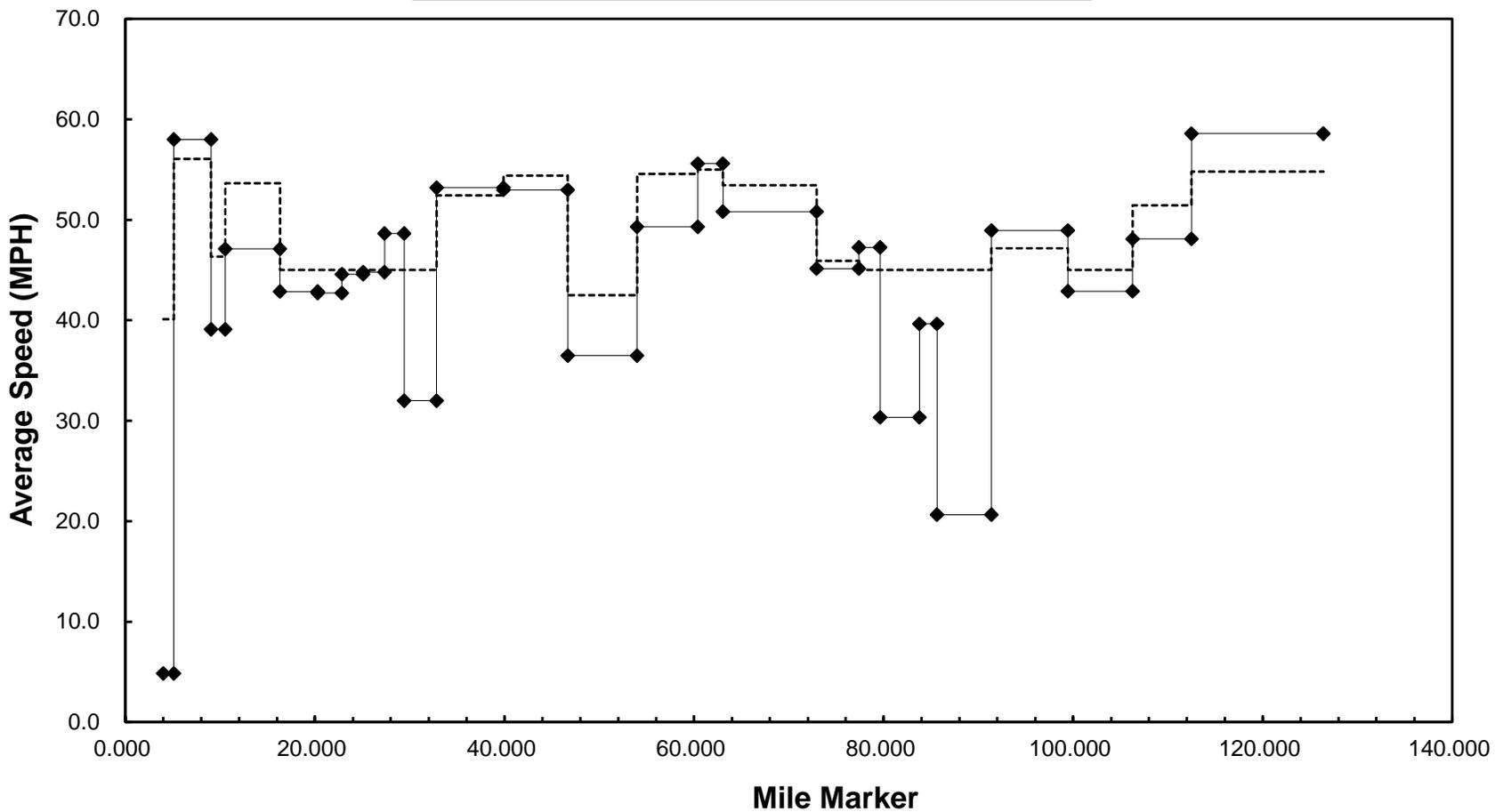
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Cloudy	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Tuesday, March 14, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ C SOUND RD:	02:30:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ COW KEY BR:	05:34:02 PM		CC = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:14:15	00:14:15		13.915	13.915		58.6				
C-905	24	00:22:01	00:07:46		20.143	6.228		48.1				6
Atlantic Blvd	23	00:31:35	00:09:34		26.983	6.840		42.9	10+	TS	00:01:22	5
Ocean Blvd	22	00:41:27	00:09:52		35.030	8.047		48.9		TS	00:00:04	3
Snake Creek Br (N)	21	01:02:16	00:20:49	00:06:00	40.788	5.758	0.661	20.6	10+	CG/DB	00:15:27	
Whale Harbor Br (S)	20	01:05:05	00:02:49		42.649	1.861		39.6				
Teatable Relf Br (N)	19	01:13:15	00:08:10		46.779	4.130		30.3	10+	CG(2)	00:02:59	
Lignum V Br (S)	18	01:16:05	00:02:50		49.011	2.232		47.3				
Channel #2 Br (N)	17	01:22:02	00:05:57		53.489	4.478		45.2				
Long Key Br (S)	16	01:33:42	00:11:40		63.367	9.878		50.8				
Toms Harbor Ch Br (S)	15	01:36:34	00:02:52		66.024	2.657		55.6				
Coco Plum Dr	14	01:44:31	00:07:57	00:00:11	72.434	6.410	0.028	49.3		SB	00:00:11	
7-Mile Br (N)	13	01:56:30	00:11:59		79.722	7.288		36.5	10+	TS(2)	00:01:06	5
7-Mile Br (S)	12	02:04:12	00:07:42		86.521	6.799		53.0				
Long Beach Dr	11	02:12:09	00:07:57		93.569	7.048		53.2				
N Pine Ch Br (N)	10	02:18:35	00:06:26		96.999	3.430		32.0	10+	TS	00:01:40	
Torch-Ramrod Br (S)	9	02:21:07	00:02:32		99.053	2.054		48.6				
E Shore Dr	8	02:24:11	00:03:04		101.343	2.290		44.8				
Spanish Main Dr	7	02:27:11	00:03:00		103.572	2.229		44.6				
Bow Channel Br (N)	6	02:30:46	00:03:35		106.124	2.552		42.7				
Harris Ch Br (N)	5	02:36:25	00:05:39	00:00:15	110.101	3.977	0.119	42.9	8	SE	00:00:15	
Boca Chica Rd	4	02:43:47	00:07:22		115.887	5.786		47.1				
Rockland Dr	3	02:46:05	00:02:18		117.386	1.499		39.1				
Key Haven Blvd	2	02:50:08	00:04:03		121.302	3.916		58.0				
Cow Key Bridge (N)	1	03:04:02	00:13:54		122.421	1.119		4.8	10+	CG	00:13:16	
OVERALL		-----	02:49:47	00:06:26	-----	108.506	0.808	39.6			00:36:20	19

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
TUESDAY, 03-14-23, 14:30 TO 17:35**



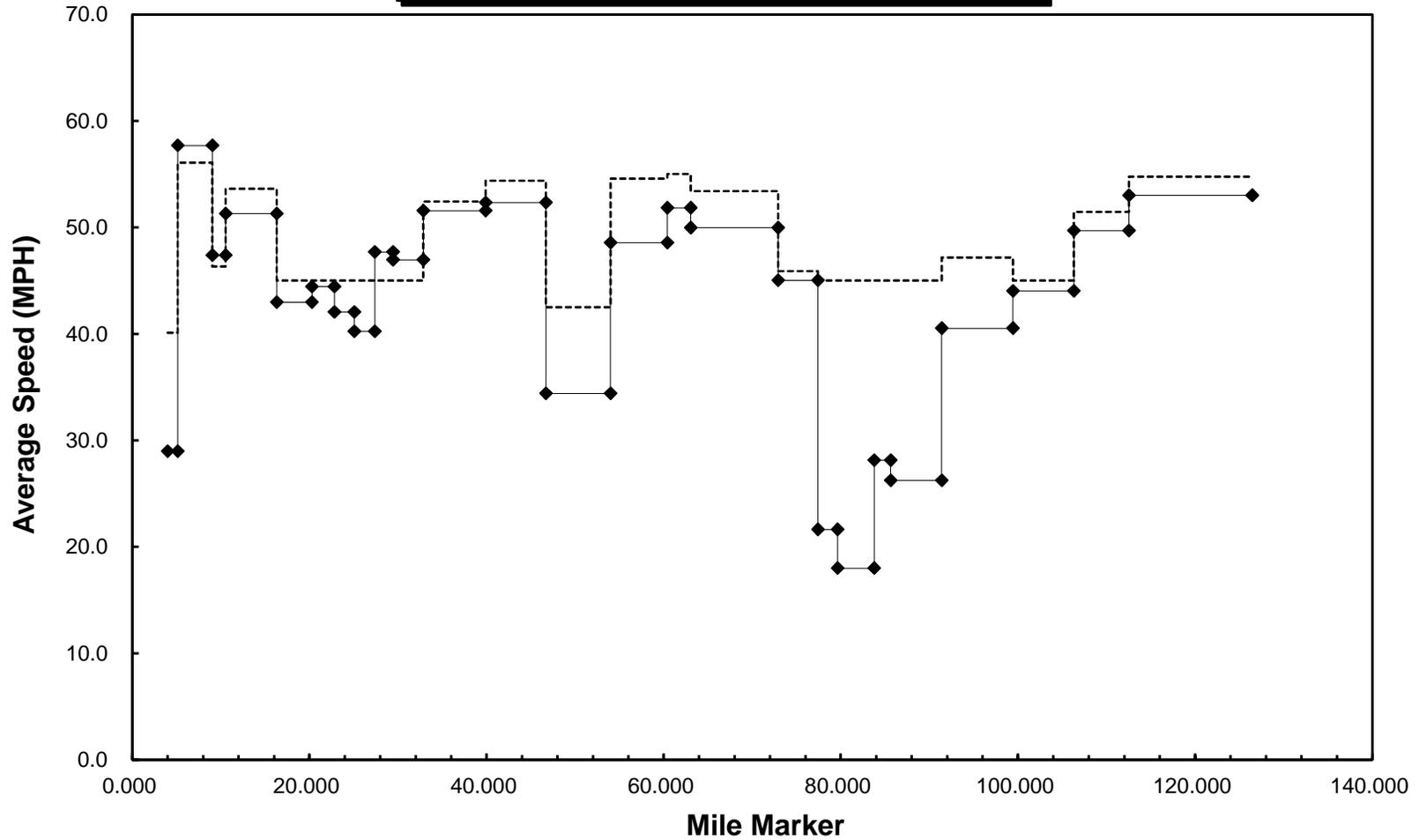
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Cloudy	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Wednesday, March 15, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	10:15:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	13:11:35 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:02:19	00:02:19		1.119	1.119		29.0	10+	TS	00:00:38	
Rockland Dr	2	00:06:23	00:04:04		5.029	3.910		57.7				
Boca Chica Rd	3	00:08:17	00:01:54		6.530	1.501		47.4				
Harris Ch Br (N)	4	00:15:03	00:06:46		12.315	5.785		51.3				
Bow Channel Br (N)	5	00:20:36	00:05:33		16.289	3.974		43.0				
Spanish Main Dr	6	00:24:02	00:03:26		18.832	2.543		44.4				
E Shore Dr	7	00:27:13	00:03:11		21.063	2.231		42.1				
Torch-Ramrod Br (S)	8	00:30:40	00:03:27		23.376	2.313		40.2	7	LT	00:00:26	
N Pine Ch Br (N)	9	00:33:15	00:02:35		25.429	2.053		47.7				
Long Beach Dr	10	00:37:37	00:04:22		28.847	3.418		47.0				
7-Mile Br (S)	11	00:45:49	00:08:12		35.895	7.048		51.6				
7-Mile Br (N)	12	00:53:37	00:07:48		42.697	6.802		52.3				
Coco Plum Dr	13	01:06:19	00:12:42		49.978	7.281		34.4	7	LT,TS	00:00:40	
Toms Harbor Ch Br (S)	14	01:14:15	00:07:56		56.398	6.420		48.6				
Long Key Br (S)	15	01:17:19	00:03:04		59.048	2.650		51.8				
Channel #2 Br (N)	16	01:29:11	00:11:52		68.928	9.880		50.0				
Lignum V Br (S)	17	01:35:09	00:05:58		73.406	4.478		45.0				
Teatable Relf Br (N)	18	01:41:20	00:06:11		75.635	2.229		21.6	10+	CG	00:03:34	
Whale Harbor Br (S)	19	01:54:54	00:13:34	00:06:00	79.757	4.122	1.853	18.0	10+	CG/DB,DB	00:12:40	
Snake Creek Br (N)	20	01:58:53	00:03:59		81.625	1.868		28.1	10+	CG	00:03:59	
Ocean Blvd	21	02:12:03	00:13:10		87.381	5.756		26.2	10+	CG,TS	00:11:55	
Atlantic Blvd	22	02:23:59	00:11:56		95.441	8.060		40.5	10+	TS(2)	00:02:16	
C-905	23	02:33:19	00:09:20		102.290	6.849		44.0	10+	TS(2),CG	00:01:37	
County Line sign	24	02:40:51	00:07:32		108.530	6.240		49.7				
Card Sound Rd	25	02:56:35	00:15:44		122.426	13.896		53.0				
OVERALL		-----	02:40:51	00:06:00	-----	108.530	1.853	41.3			00:37:45	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-15-23, 10:15 TO 13:12**



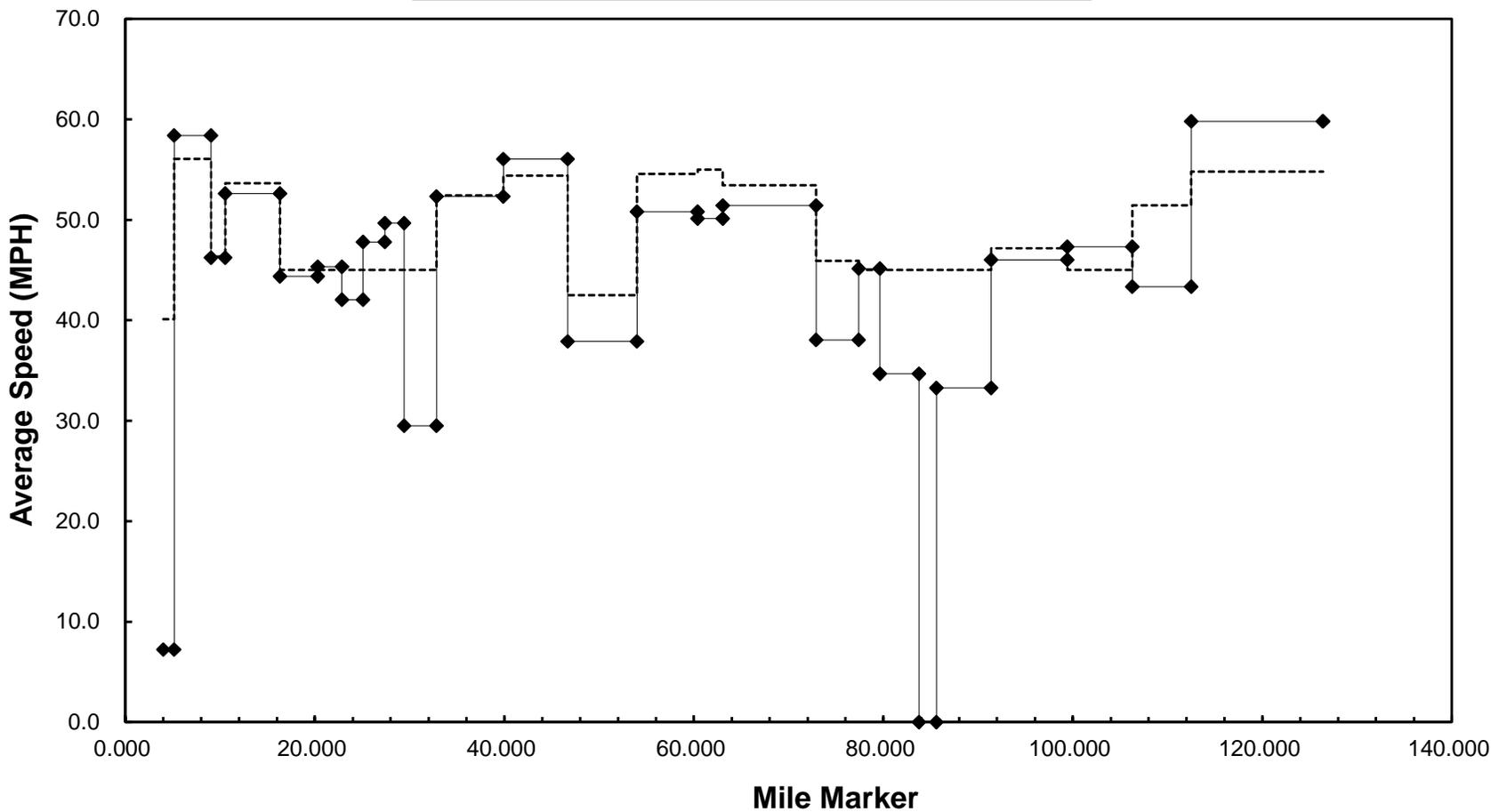
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Cloudy	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Wednesday, March 15, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ C SOUND RD:	01:45:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ COW KEY BR:	05:30:20 PM		CG = Congestion	SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:13:57	00:13:57		13.906	13.906		59.8	10+	CG	00:00:54	
C-905	24	00:22:34	00:08:37		20.130	6.224		43.3	10+	CG(3)	00:01:45	
Atlantic Blvd	23	00:31:15	00:08:41		26.979	6.849		47.3	10+	TS	00:02:45	
Ocean Blvd	22	00:41:56	00:10:41	00:00:25	35.024	8.045	0.168	46.0	10+	SE, TS	00:00:53	
Snake Creek Br (N)	21	01:44:04	01:02:08	00:57:23	40.788	5.764	3.131	33.3	10+	TS,CS	01:00:47	
Whale Harbor Br (S)	20	01:49:51	00:05:47	00:05:47	42.657	1.869	1.869	-	10+	CS	00:05:47	
Teatable Relf Br (N)	19	01:59:54	00:10:03	00:05:20	46.780	4.123	1.398	34.7	10+	CS	00:05:20	
Lignum V Br (S)	18	02:02:52	00:02:58		49.013	2.233		45.2				
Channel #2 Br (N)	17	02:09:56	00:07:04		53.494	4.481		38.0	10+	CG	00:01:22	
Long Key Br (S)	16	02:21:27	00:11:31		63.363	9.869		51.4				
Toms Harbor Ch Br (S)	15	02:24:37	00:03:10		66.009	2.646		50.1				
Coco Plum Dr	14	02:32:11	00:07:34		72.419	6.410		50.8				
7-Mile Br (N)	13	02:43:44	00:11:33		79.713	7.294		37.9	10+	TS(3)	00:01:17	
7-Mile Br (S)	12	02:51:01	00:07:17		86.518	6.805		56.1				
Long Beach Dr	11	02:59:05	00:08:04		93.554	7.036		52.3				
N Pine Ch Br (N)	10	03:06:02	00:06:57		96.971	3.417		29.5	10+	TS	00:02:26	
Torch-Ramrod Br (S)	9	03:08:31	00:02:29		99.027	2.056		49.7				
E Shore Dr	8	03:11:24	00:02:53		101.324	2.297		47.8				
Spanish Main Dr	7	03:14:35	00:03:11		103.556	2.232		42.1				
Bow Channel Br (N)	6	03:17:58	00:03:23		106.112	2.556		45.3				
Harris Ch Br (N)	5	03:23:20	00:05:22		110.082	3.970		44.4				
Boca Chica Rd	4	03:29:56	00:06:36		115.871	5.789		52.6				
Rockland Dr	3	03:31:52	00:01:56		117.361	1.490		46.2				
Key Haven Blvd	2	03:35:53	00:04:01		121.271	3.910		58.4				
Cow Key Bridge (N)	1	03:45:20	00:09:27		122.407	1.136		7.2	10+	TS	00:08:47	
OVERALL		-----	03:31:23	01:08:55	-----	108.501	6.566	42.9			01:31:09	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-15-23, 13:45 TO 17:31**



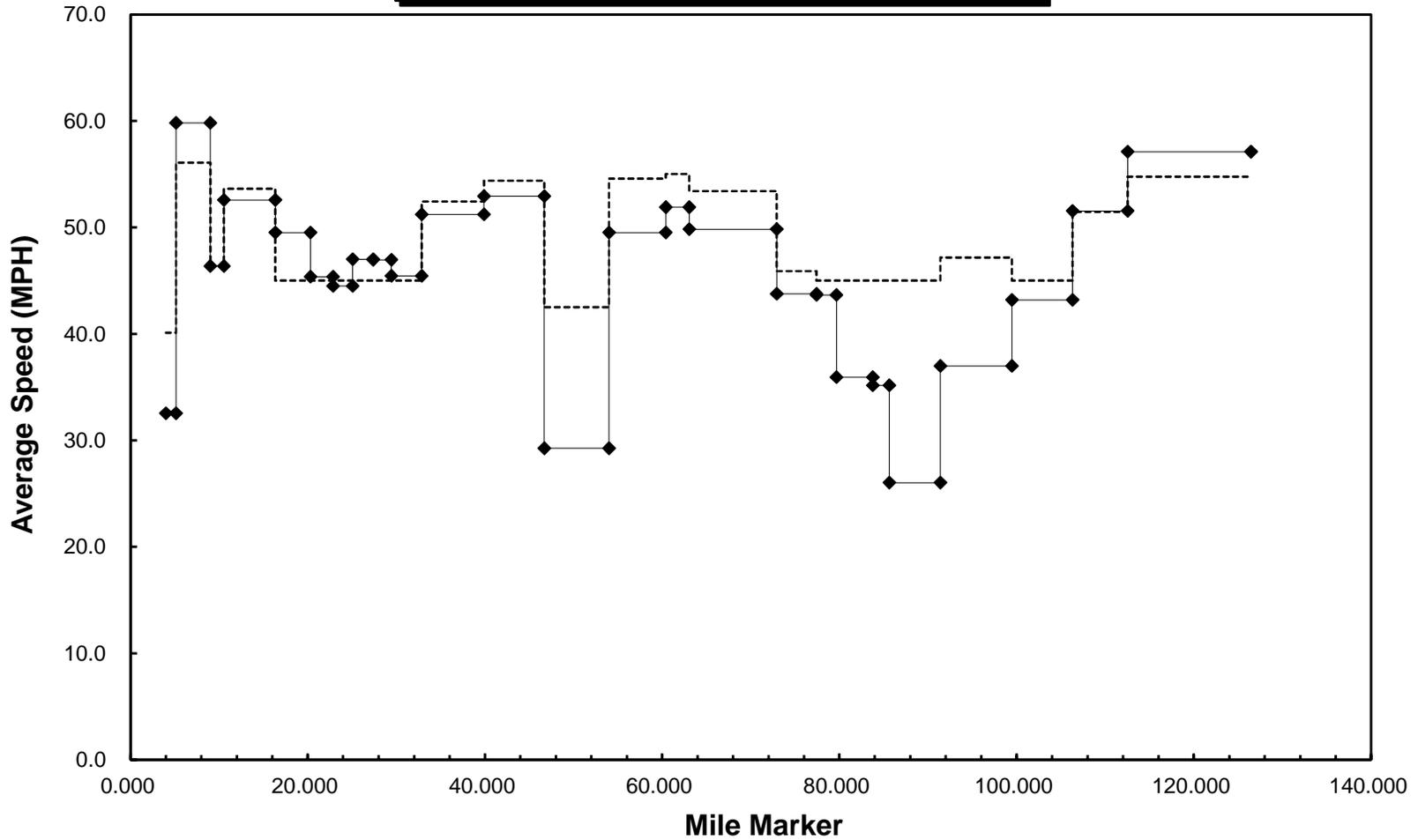
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn RT = Right Turn TS = Traffic Signal DB = Drawbridge CG = Congestion
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	CS = Construction SB = School Bus EV = Emergency Vehicle AC = Accident SE = Special Event
DAY/DATE:	Thursday, March 16, 2023	Delay ends @ 15 mph	
START TIME @ COW KEY BR:	10:00:00 AM		
FINISH TIME @ C SOUND RD:	12:48:34 PM		

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:02:04	00:02:04		1.121	1.121		32.5				
Rockland Dr	2	00:05:59	00:03:55		5.025	3.904		59.8				2
Boca Chica Rd	3	00:07:56	00:01:57		6.532	1.507		46.4				
Harris Ch Br (N)	4	00:14:33	00:06:37		12.328	5.796		52.6				
Bow Channel Br (N)	5	00:19:22	00:04:49		16.303	3.975		49.5				
Spanish Main Dr	6	00:22:44	00:03:22		18.848	2.545		45.4				
E Shore Dr	7	00:25:44	00:03:00		21.072	2.224		44.5				
Torch-Ramrod Br (S)	8	00:28:40	00:02:56		23.371	2.299		47.0				
N Pine Ch Br (N)	9	00:31:18	00:02:38		25.432	2.061		47.0				
Long Beach Dr	10	00:35:49	00:04:31		28.852	3.420		45.4				
7-Mile Br (S)	11	00:44:04	00:08:15		35.894	7.042		51.2				
7-Mile Br (N)	12	00:51:47	00:07:43		42.702	6.808		52.9				
Coco Plum Dr	13	01:08:48	00:17:01	00:02:45	49.984	7.282	0.325	29.3	10+	LT,CG(2),TS(2),CS	00:07:49	
Toms Harbor Ch Br (S)	14	01:16:35	00:07:47		56.405	6.421		49.5				
Long Key Br (S)	15	01:19:39	00:03:04		59.058	2.653		51.9				
Channel #2 Br (N)	16	01:31:32	00:11:53		68.930	9.872		49.8				
Lignum V Br (S)	17	01:37:41	00:06:09		73.414	4.484		43.7				
Teatable Relf Br (N)	18	01:40:45	00:03:04		75.645	2.231		43.6				
Whale Harbor Br (S)	19	01:47:38	00:06:53		79.767	4.122		35.9	10+	CG	00:01:57	
Snake Creek Br (N)	20	01:50:49	00:03:11		81.633	1.866		35.2				
Ocean Blvd	21	02:04:06	00:13:17		87.392	5.759		26.0	10+	CG(2),CG/TS	00:08:09	
Atlantic Blvd	22	02:17:11	00:13:05		95.454	8.062		37.0	10+	TS	00:02:51	
C-905	23	02:26:42	00:09:31		102.306	6.852		43.2	10+	TS(2)	00:00:47	
County Line sign	24	02:33:57	00:07:15		108.534	6.228		51.5				-2
Card Sound Rd	25	02:48:34	00:14:37		122.442	13.908		57.1				
OVERALL		-----	02:33:57	00:02:45	-----	108.534	0.325	42.9			00:21:33	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
THURSDAY, 03-16-23, 10:00 TO 12:49**



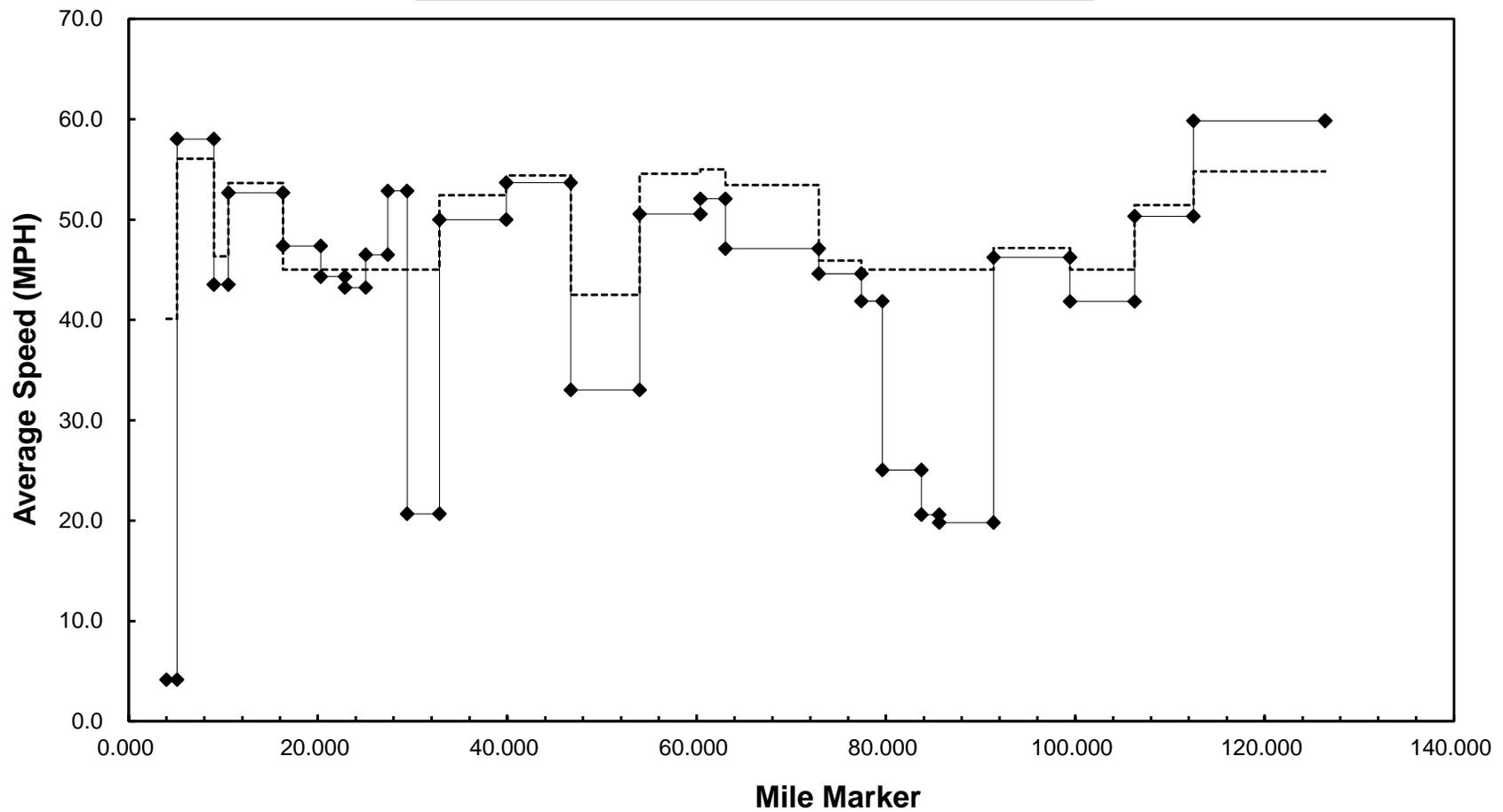
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Thursday, March 16, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	01:45:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	04:56:55 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:13:56	00:13:56		13.897	13.897		59.8				
C-905	24	00:21:22	00:07:26		20.132	6.235		50.3				
Atlantic Blvd	23	00:31:10	00:09:48		26.967	6.835		41.8	7	TS(2)	00:01:14	
Ocean Blvd	22	00:41:37	00:10:27		35.023	8.056		46.3				2
Snake Creek Br (N)	21	00:59:03	00:17:26		40.777	5.754		19.8	10+	CG(4)	00:11:35	
Whale Harbor Br (S)	20	01:04:29	00:05:26		42.641	1.864		20.6	10+	CG(2)	00:04:32	
Teatable Relf Br (N)	19	01:14:22	00:09:53		46.765	4.124		25.0	10+	CG	00:06:30	
Lignum V Br (S)	18	01:17:34	00:03:12		48.999	2.234		41.9				
Channel #2 Br (N)	17	01:23:36	00:06:02		53.485	4.486		44.6				
Long Key Br (S)	16	01:36:11	00:12:35		63.364	9.879		47.1	10+	CG	00:01:04	
Toms Harbor Ch Br (S)	15	01:39:14	00:03:03		66.011	2.647		52.1				
Coco Plum Dr	14	01:46:51	00:07:37		72.428	6.417		50.5				
7-Mile Br (N)	13	02:00:04	00:13:13		79.704	7.276		33.0	10+	TS(2),CG(2)	00:04:01	
7-Mile Br (S)	12	02:07:41	00:07:37		86.518	6.814		53.7				
Long Beach Dr	11	02:16:08	00:08:27		93.561	7.043		50.0				
N Pine Ch Br (N)	10	02:26:03	00:09:55		96.979	3.418		20.7	10+	TS	00:06:24	
Torch-Ramrod Br (S)	9	02:28:23	00:02:20		99.035	2.056		52.9				
E Shore Dr	8	02:31:21	00:02:58		101.335	2.300		46.5				
Spanish Main Dr	7	02:34:26	00:03:05		103.556	2.221		43.2				
Bow Channel Br (N)	6	02:37:54	00:03:28		106.117	2.561		44.3				
Harris Ch Br (N)	5	02:42:56	00:05:02		110.091	3.974		47.4				
Boca Chica Rd	4	02:49:31	00:06:35		115.873	5.782		52.7				
Rockland Dr	3	02:51:36	00:02:05		117.384	1.511		43.5				
Key Haven Blvd	2	02:55:38	00:04:02		121.285	3.901		58.0				
Cow Key Bridge (N)	1	03:11:55	00:16:17		122.408	1.123		4.1	10+	CG	00:16:12	
OVERALL		-----	02:57:59	00:00:00	-----	108.511	0.000	36.6			00:51:32	2

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
THURSDAY, 03-16-23, 13:45 TO 16:57**



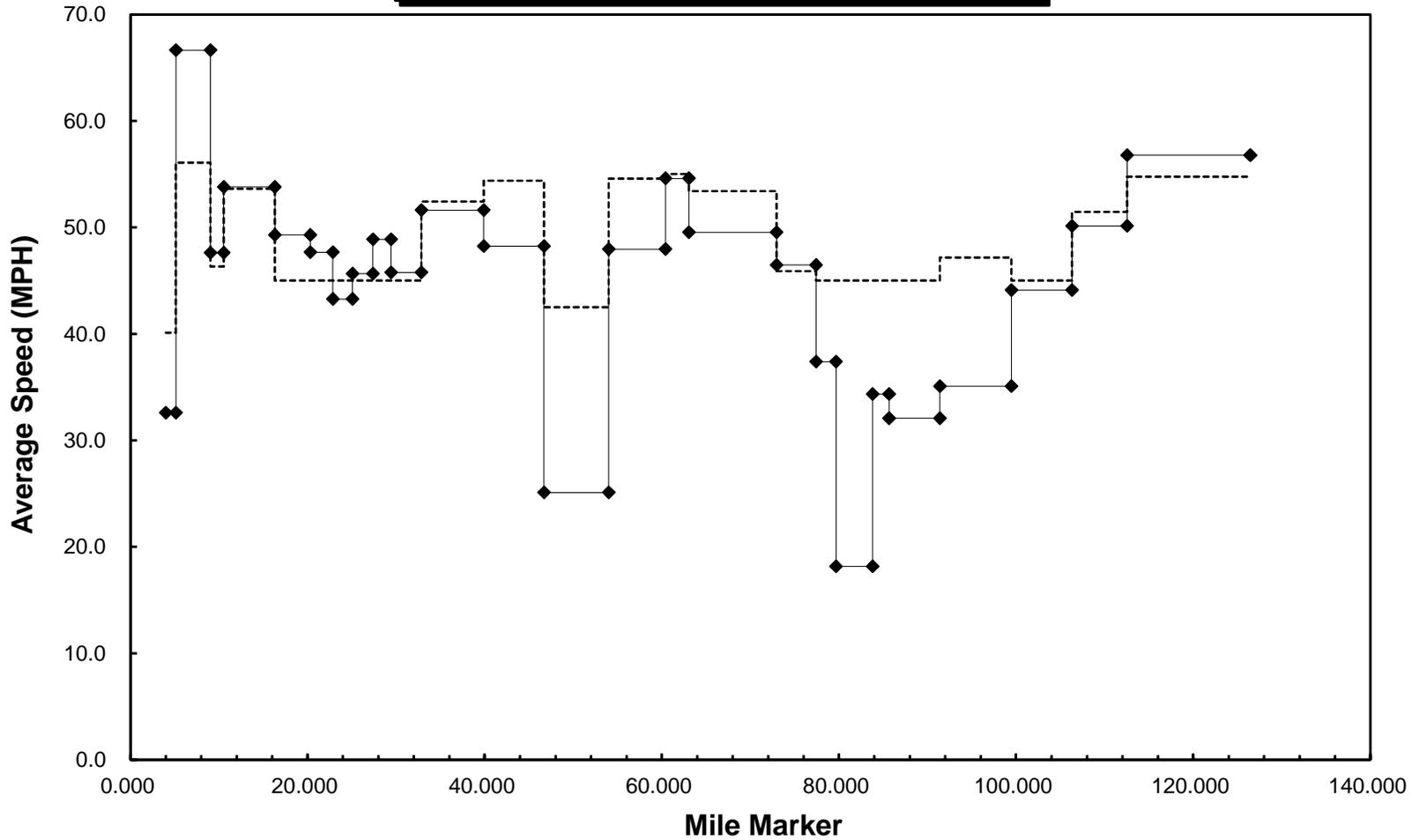
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 17, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	10:30:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	01:24:20 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
Key Haven Blvd	1	00:02:04	00:02:04		1.122	1.122		32.6				
Rockland Dr	2	00:05:35	00:03:31		5.028	3.906		66.6				
Boca Chica Rd	3	00:07:29	00:01:54		6.536	1.508		47.6				
Harris Ch Br (N)	4	00:13:56	00:06:27		12.319	5.783		53.8				
Bow Channel Br (N)	5	00:18:47	00:04:51		16.303	3.984		49.3				
Spanish Main Dr	6	00:21:59	00:03:12		18.845	2.542		47.7				
E Shore Dr	7	00:25:04	00:03:05		21.068	2.223		43.3	10+	CG	00:00:24	
Torch-Ramrod Br (S)	8	00:28:06	00:03:02		23.376	2.308		45.7				
N Pine Ch Br (N)	9	00:30:37	00:02:31		25.426	2.050		48.9				
Long Beach Dr	10	00:35:06	00:04:29		28.845	3.419		45.8				
7-Mile Br (S)	11	00:43:18	00:08:12		35.900	7.055		51.6				
7-Mile Br (N)	12	00:51:46	00:08:28		42.708	6.808		48.2				
Coco Plum Dr	13	01:09:09	00:17:23		49.983	7.275		25.1	10+	CG,TS	00:06:49	
Toms Harbor Ch Br (S)	14	01:17:11	00:08:02		56.405	6.422		48.0				
Long Key Br (S)	15	01:20:06	00:02:55		59.060	2.655		54.6				
Channel #2 Br (N)	16	01:32:04	00:11:58		68.942	9.882		49.5				
Lignum V Br (S)	17	01:37:51	00:05:47		73.420	4.478		46.5				
Teatable Relf Br (N)	18	01:41:26	00:03:35		75.652	2.232		37.4	10+	CG	00:00:27	
Whale Harbor Br (S)	19	01:55:05	00:13:39		79.782	4.130		18.2	10+	CG	00:10:38	
Snake Creek Br (N)	20	01:58:20	00:03:15		81.643	1.861		34.4				
Ocean Blvd	21	02:09:06	00:10:46		87.400	5.757		32.1	10+	CG(3),TS	00:03:54	
Atlantic Blvd	22	02:22:52	00:13:46		95.451	8.051		35.1	10+	TS	00:04:18	3
C-905	23	02:32:11	00:09:19		102.301	6.850		44.1	10+	TS(2)	00:00:39	4
County Line sign	24	02:39:38	00:07:27		108.524	6.223		50.1				-1
Card Sound Rd	25	02:54:20	00:14:42		122.431	13.907		56.8				-1
OVERALL		-----	02:39:38	00:00:00	-----	108.524	0.000	40.8			00:27:09	6

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
FRIDAY, 03-17-23, 10:30 TO 13:25**



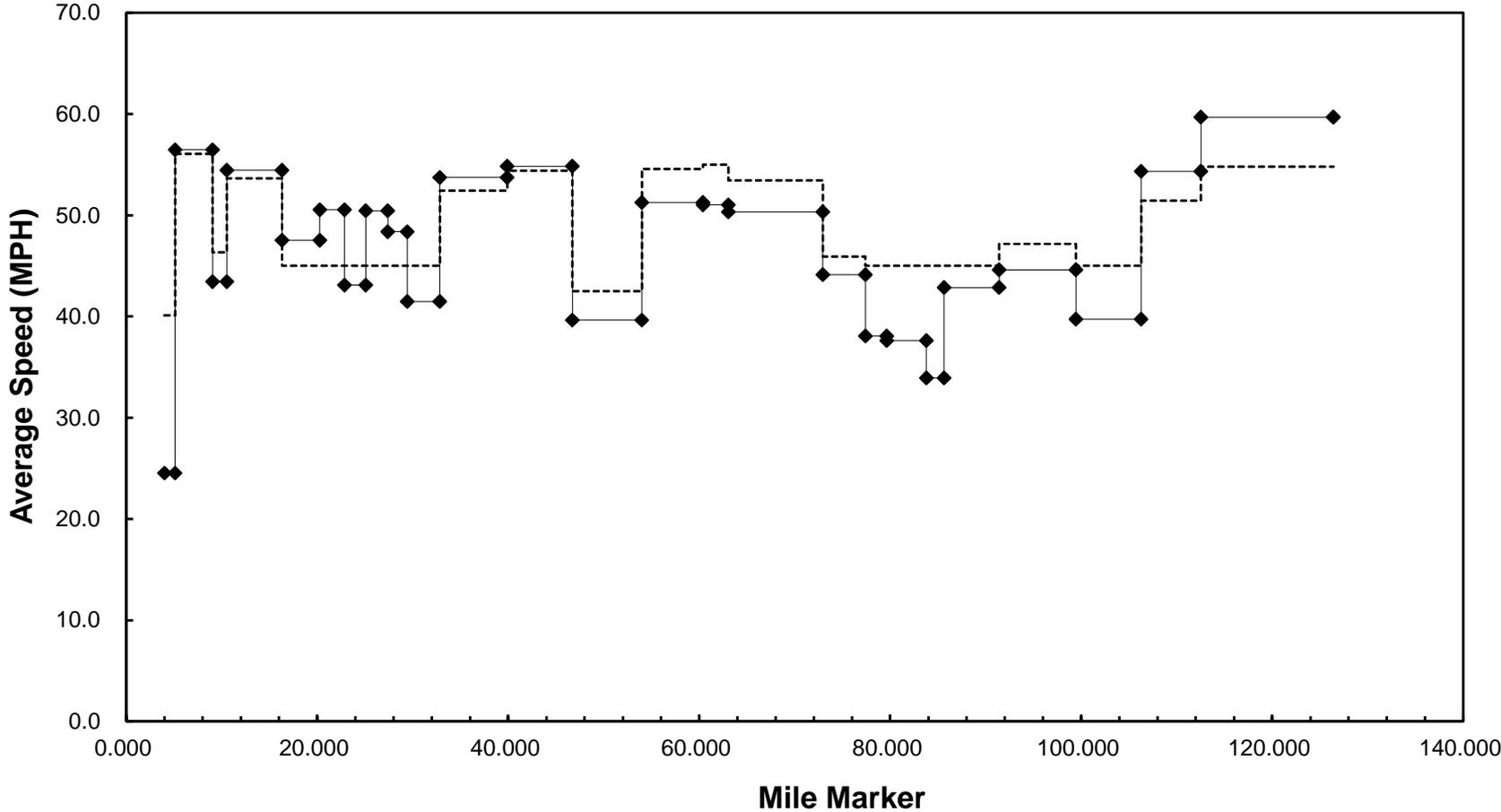
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 17, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	02:15:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	04:55:03 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25	00:13:58	00:13:58		13.896	13.896		59.7				-5
C-905	24	00:20:51	00:06:53		20.129	6.233		54.3				3
Atlantic Blvd	23	00:31:11	00:10:20		26.971	6.842		39.7	10+	TS(3)	00:01:48	5
Ocean Blvd	22	00:42:00	00:10:49		35.014	8.043		44.6	10+	TS(2)	00:00:51	7
Snake Creek Br (N)	21	00:55:05	00:13:05	00:05:32	40.775	5.761	0.648	40.6	10+	TS(2),DB(2)	00:05:53	
Whale Harbor Br (S)	20	00:58:23	00:03:18		42.641	1.866		33.9	10+	CG	00:01:52	
Teatable Relf Br (N)	19	01:04:58	00:06:35		46.770	4.129		37.6	10+	CG	00:00:34	
Lignum V Br (S)	18	01:08:29	00:03:31		49.002	2.232		38.1	10+	CG	00:00:17	
Channel #2 Br (N)	17	01:14:35	00:06:06		53.489	4.487		44.1				
Long Key Br (S)	16	01:26:22	00:11:47		63.373	9.884		50.3				
Toms Harbor Ch Br (S)	15	01:29:28	00:03:06		66.010	2.637		51.0				
Coco Plum Dr	14	01:36:59	00:07:31		72.434	6.424		51.3				
7-Mile Br (N)	13	01:48:00	00:11:01		79.716	7.282		39.7	10+	TS	00:00:16	
7-Mile Br (S)	12	01:55:27	00:07:27		86.525	6.809		54.8				
Long Beach Dr	11	02:03:19	00:07:52		93.571	7.046		53.7				
N Pine Ch Br (N)	10	02:08:16	00:04:57		96.994	3.423		41.5	10+	TS	00:03:06	
Torch-Ramrod Br (S)	9	02:10:48	00:02:32		99.037	2.043		48.4				
E Shore Dr	8	02:13:32	00:02:44		101.336	2.299		50.5				
Spanish Main Dr	7	02:16:38	00:03:06		103.563	2.227		43.1				
Bow Channel Br (N)	6	02:19:41	00:03:03		106.133	2.570		50.6				
Harris Ch Br (N)	5	02:24:42	00:05:01		110.107	3.974		47.5				
Boca Chica Rd	4	02:31:04	00:06:22		115.885	5.778		54.5				
Rockland Dr	3	02:33:08	00:02:04		117.381	1.496		43.4				
Key Haven Blvd	2	02:37:17	00:04:09		121.288	3.907		56.5				
Cow Key Bridge (N)	1	02:40:03	00:02:46		122.419	1.131		24.5	10+	TS(2)	00:01:11	-3
OVERALL		-----	02:26:05	00:05:32	-----	108.523	0.648	46.1			00:15:48	12

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
FRIDAY, 03-17-23, 14:15 TO 16:56**



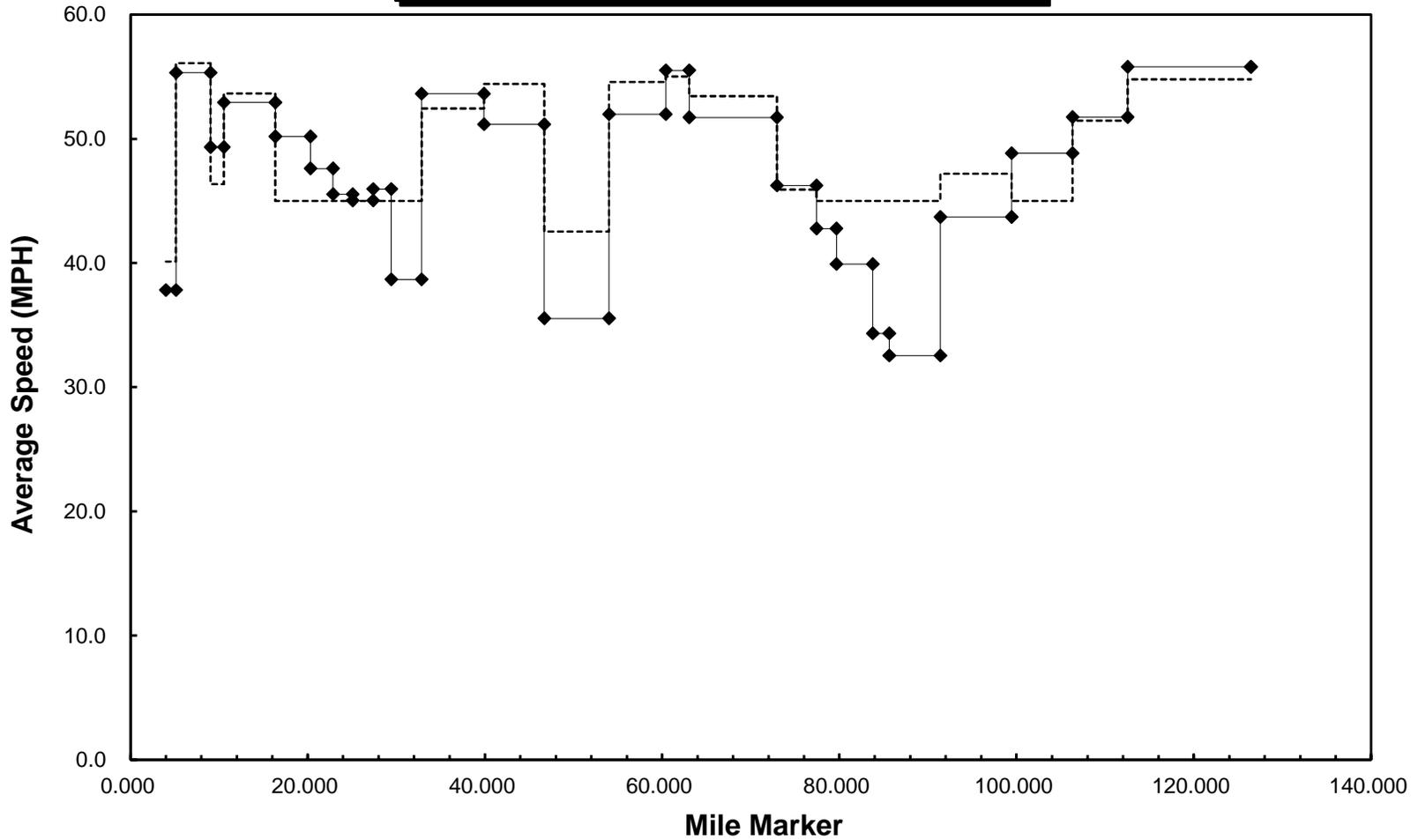
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Saturday, March 18, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	11:00:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	01:59:50 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:47	00:01:47		1.124	1.124		37.8	2	TS	00:00:08	1
Rockland Dr	2	00:06:01	00:04:14		5.027	3.903		55.3				
Boca Chica Rd	3	00:07:51	00:01:50		6.534	1.507		49.3				
Harris Ch Br (N)	4	00:14:25	00:06:34		12.326	5.792		52.9				
Bow Channel Br (N)	5	00:19:10	00:04:45		16.299	3.973		50.2				
Spanish Main Dr	6	00:22:23	00:03:13		18.850	2.551		47.6				
E Shore Dr	7	00:25:18	00:02:55		21.063	2.213		45.5				
Torch-Ramrod Br (S)	8	00:28:23	00:03:05		23.376	2.313		45.0				
N Pine Ch Br (N)	9	00:31:04	00:02:41		25.431	2.055		46.0				
Long Beach Dr	10	00:36:22	00:05:18		28.847	3.416		38.7	10+	TS,CG	00:00:31	
7-Mile Br (S)	11	00:44:15	00:07:53		35.892	7.045		53.6				
7-Mile Br (N)	12	00:52:15	00:08:00		42.711	6.819		51.1				
Coco Plum Dr	13	01:04:32	00:12:17		49.985	7.274		35.5	10+	TS(2),LT	00:01:15	4
Toms Harbor Ch Br (S)	14	01:11:57	00:07:25		56.407	6.422		52.0				
Long Key Br (S)	15	01:14:49	00:02:52		59.059	2.652		55.5				
Channel #2 Br (N)	16	01:26:17	00:11:28		68.939	9.880		51.7				
Lignum V Br (S)	17	01:32:06	00:05:49		73.420	4.481		46.2				
Teatable Relf Br (N)	18	01:36:49	00:04:43	00:02:00	75.653	2.233	0.297	42.8	10+	CS	00:02:00	
Whale Harbor Br (S)	19	02:04:18	00:27:29	00:27:17	79.768	4.115	3.982	39.9	10+	CS	00:27:17	
Snake Creek Br (N)	20	02:07:33	00:03:15		81.627	1.859		34.3	10+	CG	00:01:01	
Ocean Blvd	21	02:18:10	00:10:37		87.383	5.756		32.5	10+	LT,CG,TS(2)	00:01:59	
Atlantic Blvd	22	02:29:14	00:11:04		95.443	8.060		43.7	10+	TS(2),LT	00:01:06	-2
C-905	23	02:37:39	00:08:25		102.292	6.849		48.8	10+	TS(2)	00:00:16	3
County Line sign	24	02:44:52	00:07:13		108.515	6.223		51.7				-1
Card Sound Rd	25	02:59:50	00:14:58		122.430	13.915		55.8				-1
OVERALL		-----	02:44:52	00:29:17	-----	108.515	4.279	46.1			00:35:33	5

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
SATURDAY, 03-18-23, 11:00 TO 14:00**



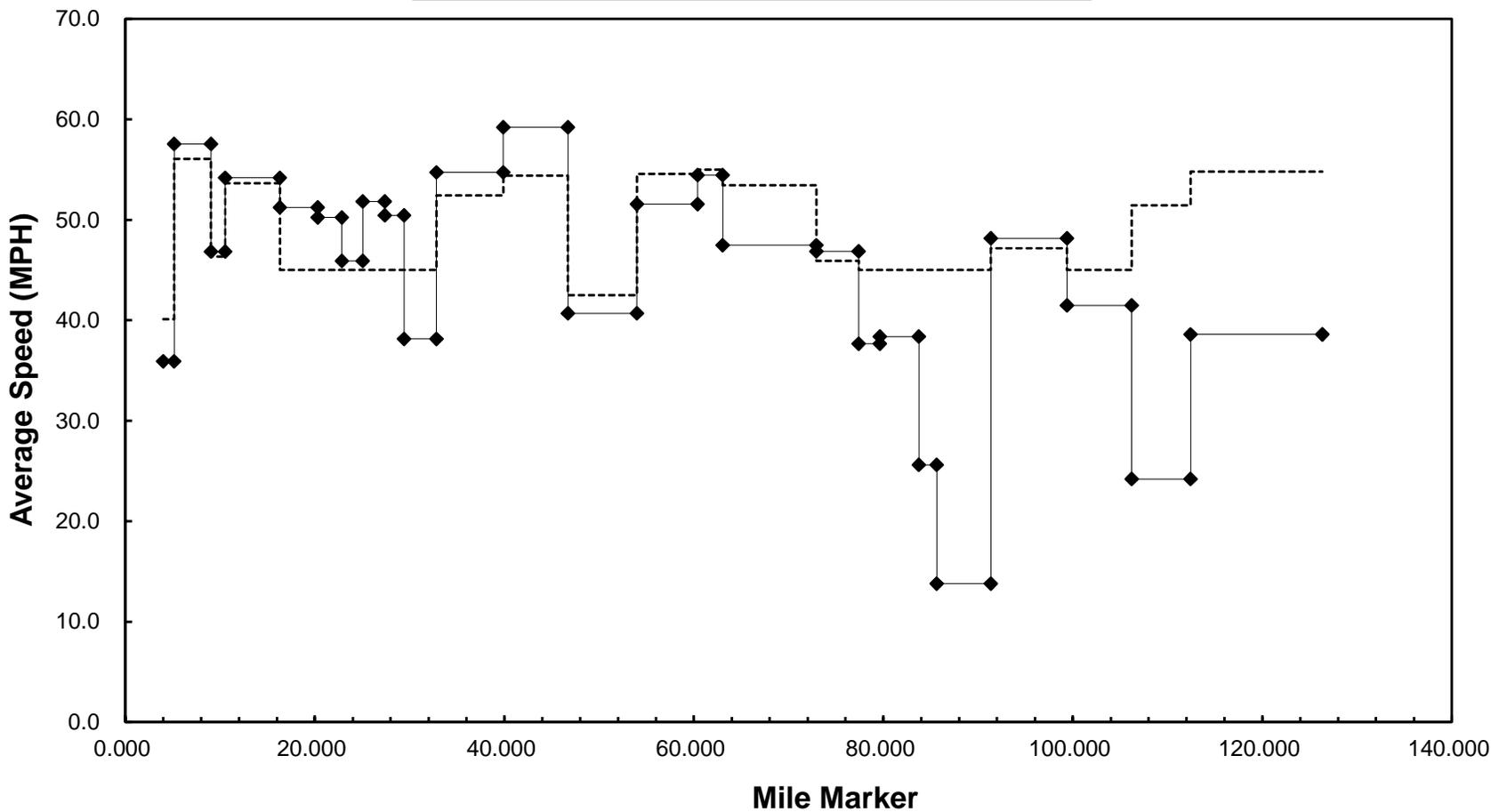
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Saturday, March 18, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	02:45:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	05:50:31 PM		CG = Congestion SE = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25	00:21:36	00:21:36		13.892	13.892		38.6	10+	CG	00:09:49	
C-905	24	00:37:03	00:15:27		20.123	6.231		24.2	10+	CG(2)	00:13:44	
Atlantic Blvd	23	00:46:56	00:09:53		26.956	6.833		41.5	10+	TS(2)	00:00:55	2
Ocean Blvd	22	00:56:57	00:10:01		34.998	8.042		48.2				5
Snake Creek Br (N)	21	01:21:47	00:24:50		40.701	5.703		13.8	10+	TS,CG	00:22:00	1
Whale Harbor Br (S)	20	01:26:09	00:04:22		42.566	1.865		25.6	10+	CG(2)	00:02:55	
Teatable Relf Br (N)	19	01:32:36	00:06:27		46.692	4.126		38.4				
Lignum V Br (S)	18	01:36:10	00:03:34		48.930	2.238		37.6	10+	CG	00:00:51	
Channel #2 Br (N)	17	01:41:54	00:05:44		53.408	4.478		46.9	10+	CG	00:00:03	
Long Key Br (S)	16	01:54:23	00:12:29		63.283	9.875		47.5				
Toms Harbor Ch Br (S)	15	01:57:18	00:02:55		65.931	2.648		54.5				
Coco Plum Dr	14	02:04:46	00:07:28		72.348	6.417		51.6				
7-Mile Br (N)	13	02:15:30	00:10:44		79.629	7.281		40.7				
7-Mile Br (S)	12	02:22:24	00:06:54		86.440	6.811		59.2				
Long Beach Dr	11	02:30:08	00:07:44		93.493	7.053		54.7				
N Pine Ch Br (N)	10	02:35:31	00:05:23		96.916	3.423		38.2	5	CG,TS	00:01:27	
Torch-Ramrod Br (S)	9	02:37:57	00:02:26		98.962	2.046		50.4				
E Shore Dr	8	02:40:37	00:02:40		101.266	2.304		51.8				
Spanish Main Dr	7	02:43:31	00:02:54		103.485	2.219		45.9				
Bow Channel Br (N)	6	02:46:34	00:03:03		106.039	2.554		50.2				
Harris Ch Br (N)	5	02:51:14	00:04:40		110.025	3.986		51.2				
Boca Chica Rd	4	02:57:37	00:06:23		115.790	5.765		54.2				
Rockland Dr	3	02:59:33	00:01:56		117.299	1.509		46.8				
Key Haven Blvd	2	03:03:37	00:04:04		121.200	3.901		57.6				
Cow Key Bridge (N)	1	03:05:31	00:01:54		122.337	1.137		35.9	7	TS	00:00:05	-1
OVERALL		-----	02:43:55	00:00:00	-----	108.445	0.000	39.7			00:42:00	7

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
SATURDAY, 03-18-23, 14:45 TO 17:51**



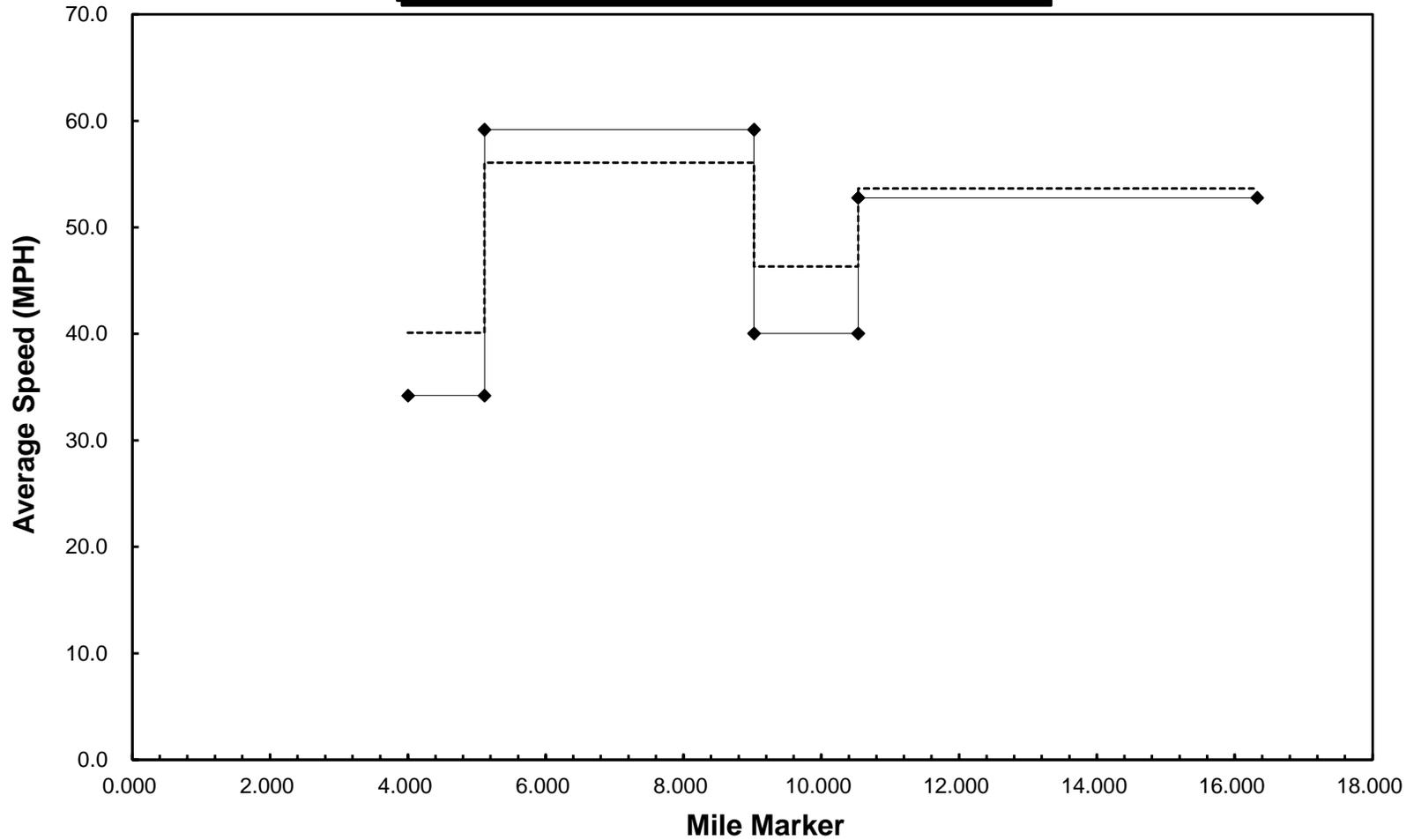
—◆— SEG. SPEED - - - - - AVG. SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Wednesday, March 15, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	05:35:20 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	05:50:06 PM Supplemental Run 1		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:57	00:01:57		1.112	1.112		34.2				
Rockland Dr	2	00:05:55	00:03:58		5.025	3.913		59.2				
Boca Chica Rd	3	00:08:11	00:02:16		6.537	1.512		40.0				
Harris Ch Br (N)	4	00:14:46	00:06:35		12.327	5.790		52.8				
Bow Channel Br (N)	5											
Spanish Main Dr	6											
E Shore Dr	7											
Torch-Ramrod Br (S)	8											
N Pine Ch Br (N)	9											
Long Beach Dr	10											
7-Mile Br (S)	11											
7-Mile Br (N)	12											
Coco Plum Dr	13											
Toms Harbor Ch Br (S)	14											
Long Key Br (S)	15											
Channel #2 Br (N)	16											
Lignum V Br (S)	17											
Teatable Relf Br (N)	18											
Whale Harbor Br (S)	19											
Snake Creek Br (N)	20											
Ocean Blvd	21											
Atlantic Blvd	22											
C-905	23											
County Line sign	24											
Card Sound Rd	25											
OVERALL		-----	00:14:46	00:00:00	-----	12.327	0.000	50.1			00:00:00	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-15-23, 17:36 TO 17:51**



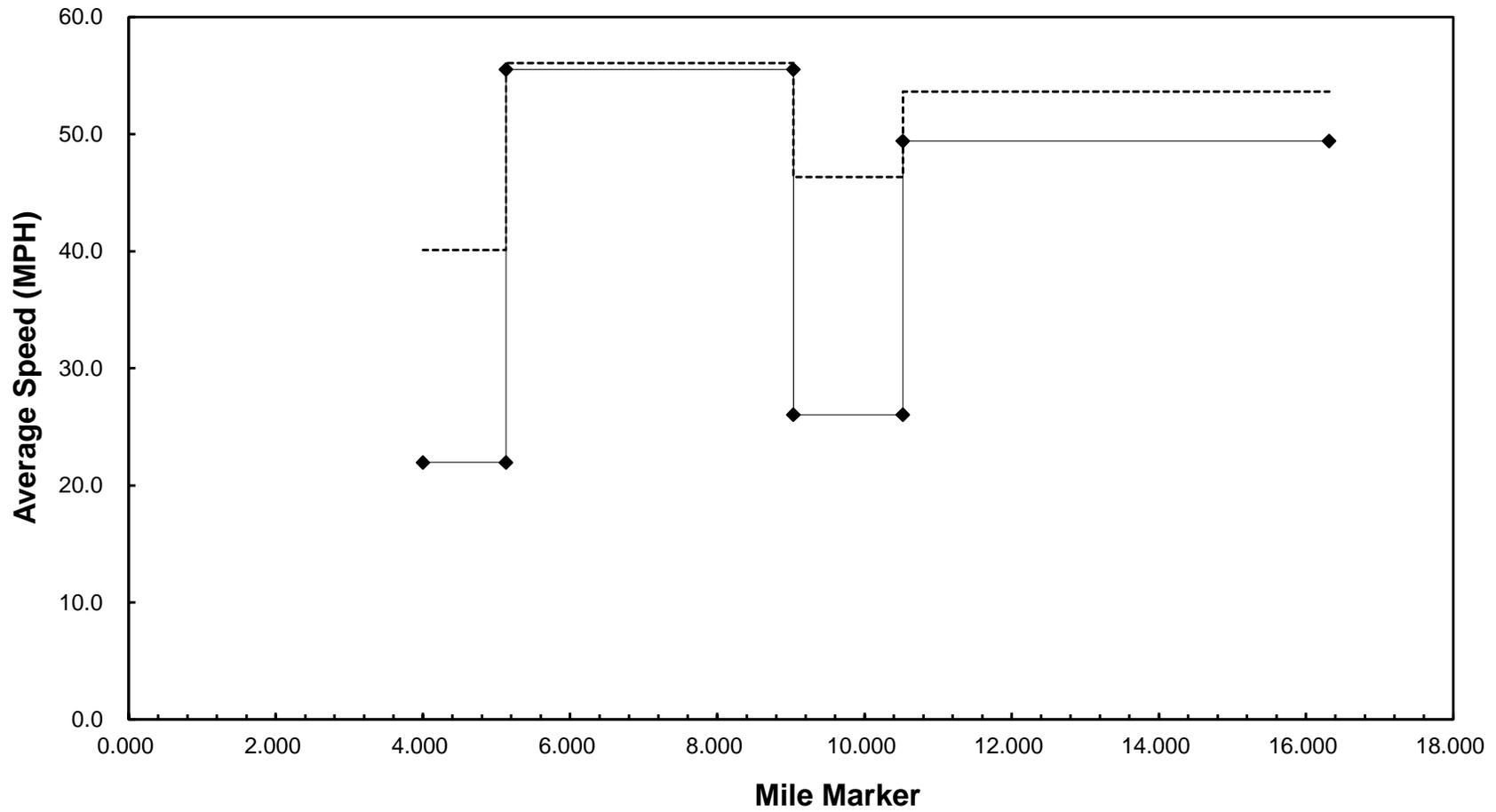
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Cloudy	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Wednesday, March 15, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:00:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:17:46 AM Supplemental Run 1		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	----	----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.120	0.000		0.0				
Boca Chica Rd	4	00:07:02	00:07:02		115.913	5.793		49.4	5	CG	00:00:11	
Rockland Dr	3	00:10:28	00:03:26		117.403	1.490		26.0	8	CG	00:02:11	
Key Haven Blvd	2	00:14:41	00:04:13		121.306	3.903		55.5				
Cow Key Bridge (N)	1	00:17:46	00:03:05		122.435	1.129		22.0	10+	TS	00:01:56	
OVERALL		-----	00:17:46	00:00:00	-----	12.315	0.000	41.6			00:04:18	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-15-23, 07:00 TO 07:18**



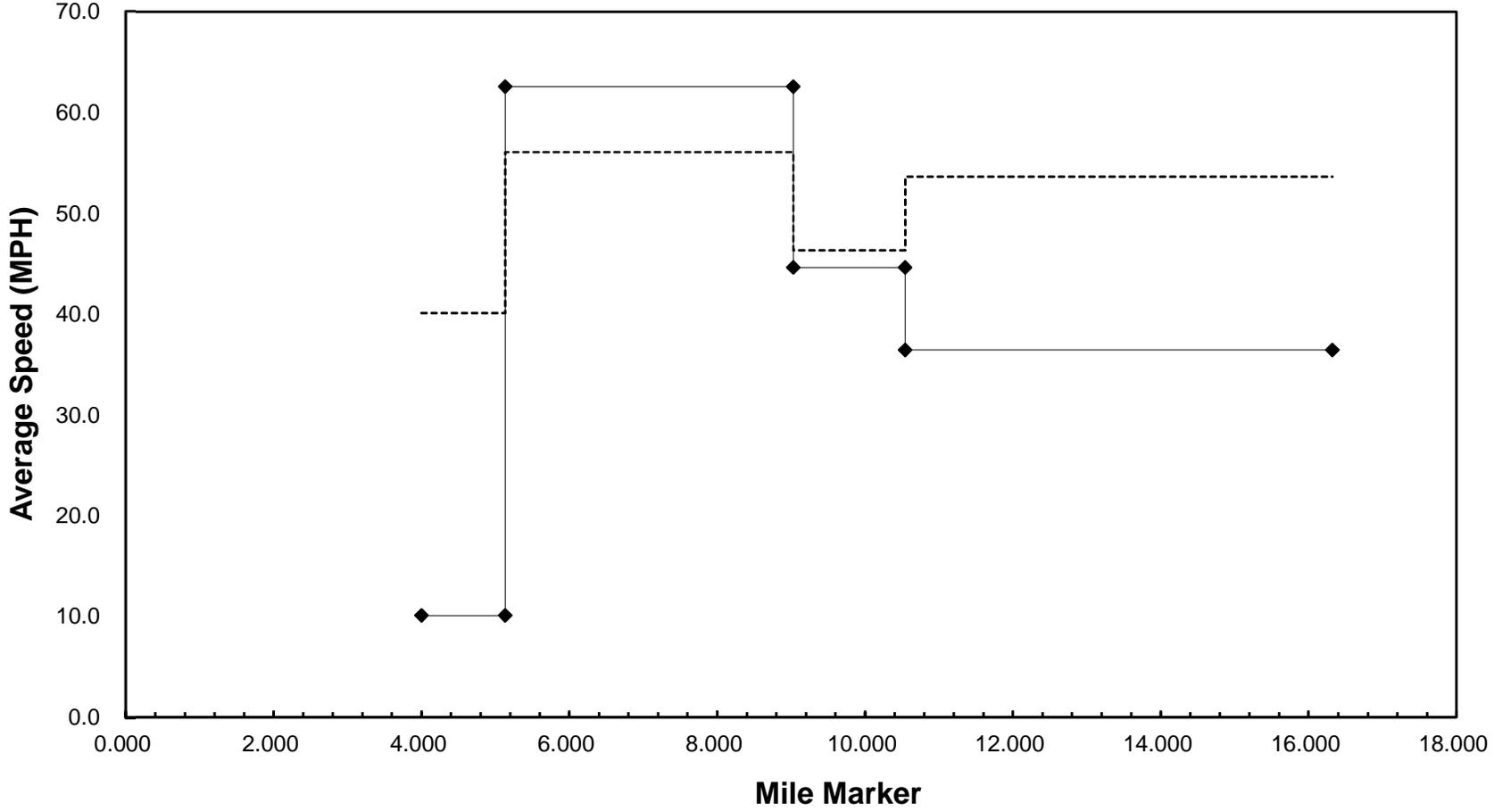
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Cloudy/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Wednesday, March 15, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:37:42 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:59:43 AM Supplemental Run 2		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.120	0.000		0.0				
Boca Chica Rd	4	00:09:31	00:09:31		115.902	5.782		36.5	10+	CG(2)	00:02:46	
Rockland Dr	3	00:11:33	00:02:02		117.415	1.513		44.6	10+	CG	00:00:43	
Key Haven Blvd	2	00:15:17	00:03:44		121.309	3.894		62.6				
Cow Key Bridge (N)	1	00:22:01	00:06:44		122.443	1.134		10.1	10+	CG	00:06:35	
OVERALL		-----	00:22:01	00:00:00	-----	12.323	0.000	33.6			00:10:04	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
WEDNESDAY, 03-15-23, 07:38 TO 08:00**



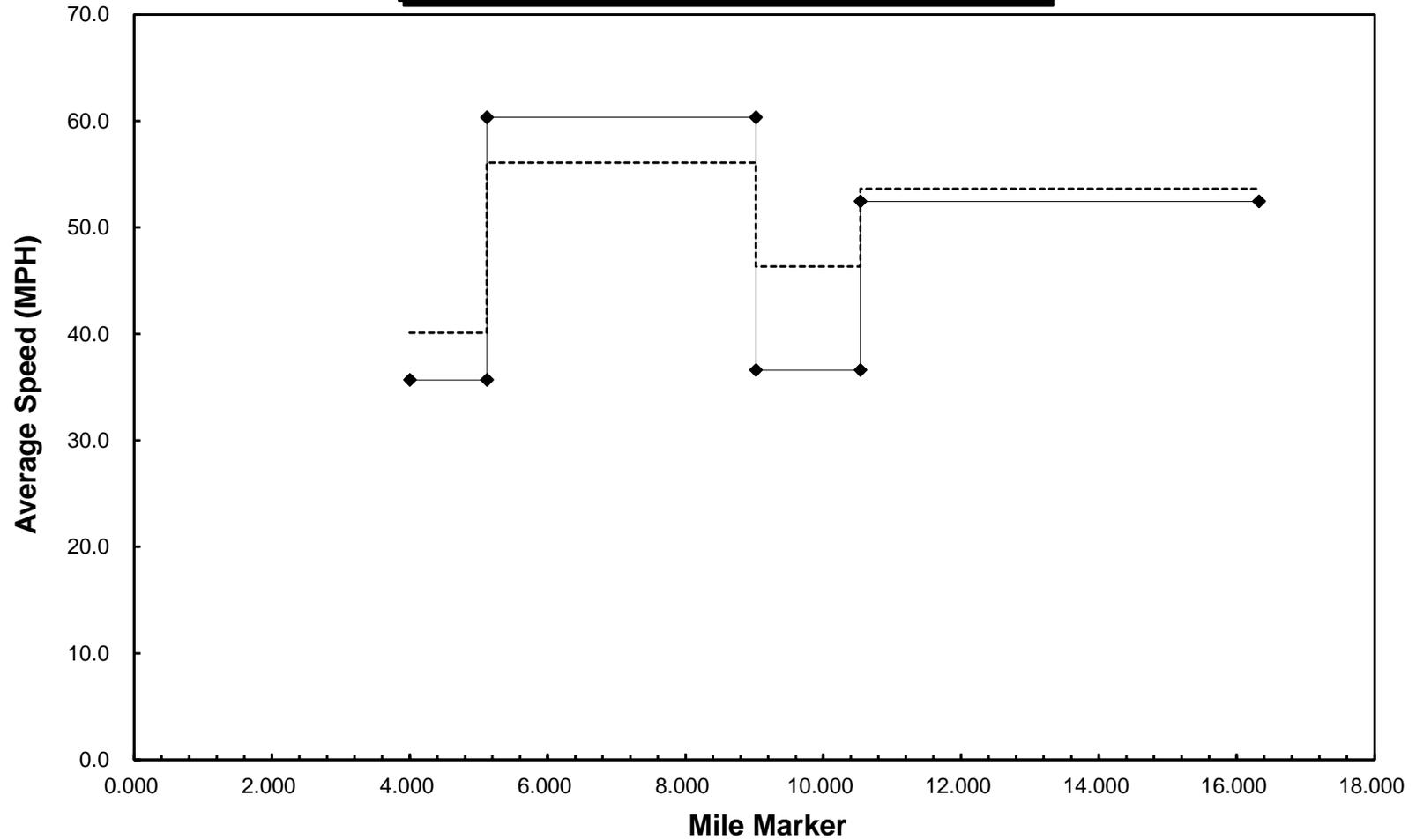
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY	
OBSERVERS:	OB		LT = Left Turn	CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn	SB = School Bus
DAY/DATE:	Thursday, March 16, 2023	Delay ends @ 15 mph	TS = Traffic Signal	EV = Emergency Vehicle
START TIME @ COW KEY BR:	05:15:00 PM		DB = Drawbridge	AC = Accident
FINISH TIME @ C SOUND RD:	05:29:52 PM	Supplemental Run 1	CG = Congestion	* = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:53	00:01:53		1.120	1.120		35.7				
Rockland Dr	2	00:05:46	00:03:53		5.025	3.905		60.3				
Boca Chica Rd	3	00:08:15	00:02:29		6.540	1.515		36.6	10+	CG	00:01:28	
Harris Ch Br (N)	4	00:14:52	00:06:37		12.324	5.784		52.4				
Bow Channel Br (N)	5											
Spanish Main Dr	6											
E Shore Dr	7											
Torch-Ramrod Br (S)	8											
N Pine Ch Br (N)	9											
Long Beach Dr	10											
7-Mile Br (S)	11											
7-Mile Br (N)	12											
Coco Plum Dr	13											
Toms Harbor Ch Br (S)	14											
Long Key Br (S)	15											
Channel #2 Br (N)	16											
Lignum V Br (S)	17											
Teatable Relf Br (N)	18											
Whale Harbor Br (S)	19											
Snake Creek Br (N)	20											
Ocean Blvd	21											
Atlantic Blvd	22											
C-905	23											
County Line sign	24											
Card Sound Rd	25											
OVERALL		-----	00:14:52	00:00:00	-----	12.324	0.000	49.7			00:01:28	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
THURSDAY, 03-16-23, 17:15 TO 17:30**



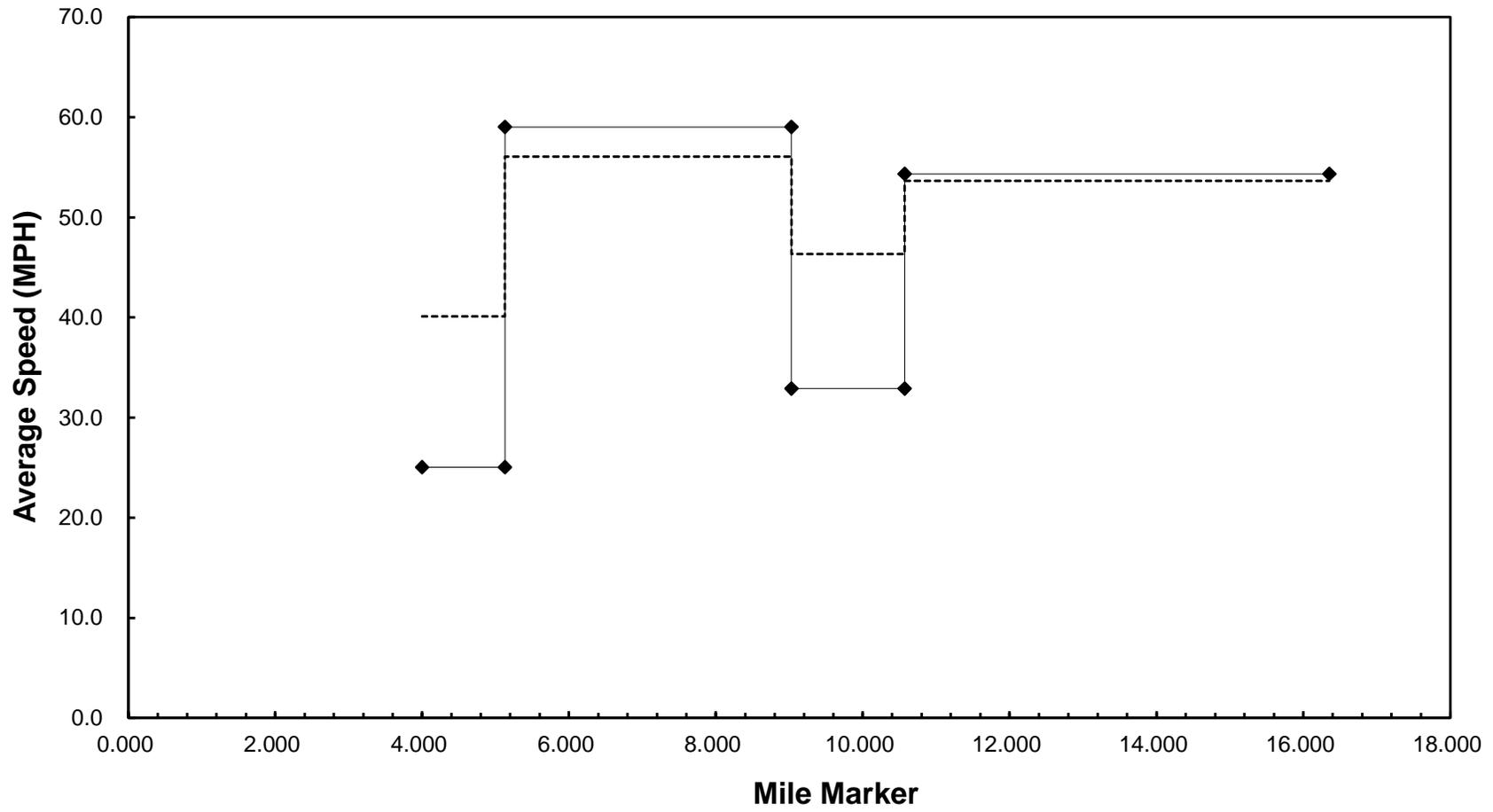
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Thursday, March 16, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:00:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:15:52 PM Supplemental Run 1		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.120	0.000		0.0				
Boca Chica Rd	4	00:06:23	00:06:23		115.900	5.780		54.3				
Rockland Dr	3	00:09:12	00:02:49		117.444	1.544		32.9	10+	CG	00:01:05	
Key Haven Blvd	2	00:13:10	00:03:58		121.346	3.902		59.0				
Cow Key Bridge (N)	1	00:15:52	00:02:42		122.473	1.127		25.0	10+	TS	00:01:01	
OVERALL		-----	00:15:52	00:00:00	-----	12.353	0.000	46.7			00:02:06	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
THURSDAY, 03-16-23, 7:00 TO 7:16**



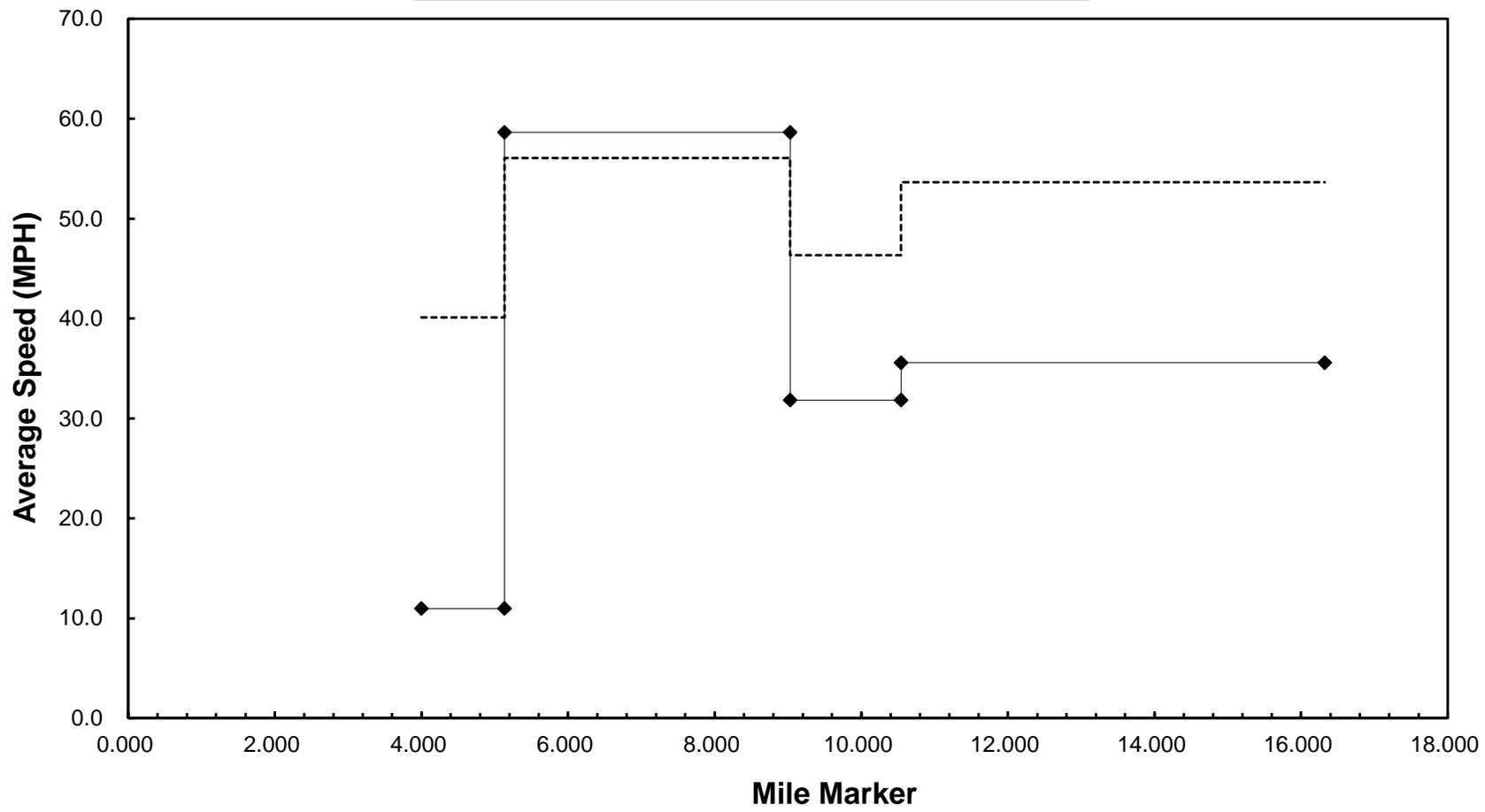
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Thursday, March 16, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:37:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:59:47 AM Supplemental Run 2		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	----	----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.120	0.000		0.0				
Boca Chica Rd	4	00:09:45	00:09:45		115.902	5.782		35.6	10+	CG(2)	00:04:02	
Rockland Dr	3	00:12:36	00:02:51		117.415	1.513		31.9	10+	CG(2)	00:01:45	
Key Haven Blvd	2	00:16:35	00:03:59		121.309	3.894		58.7				
Cow Key Bridge (N)	1	00:22:47	00:06:12		122.443	1.134		11.0	10+	CG,TS	00:05:28	
OVERALL		-----	00:22:47	00:00:00	-----	12.323	0.000	32.5			00:11:15	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
THURSDAY, 03-16-23, 07:37 TO 08:00**



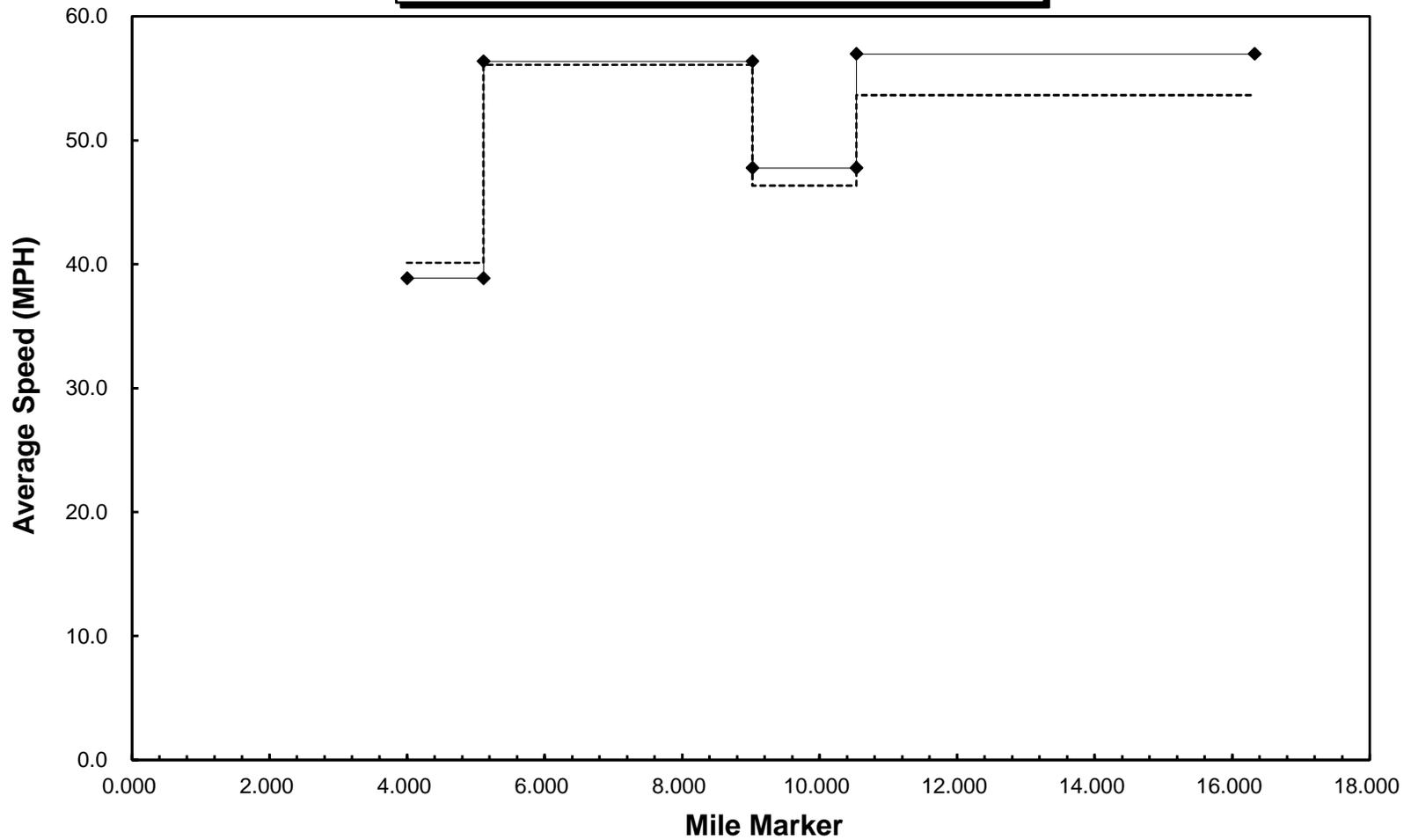
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Northbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 17, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ COW KEY BR:	05:15:00 PM		DB = Drawbridge AC = Accident
FINISH TIME @ C SOUND RD:	05:28:53 PM Supplemental Run 1		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Cow Key Bridge (N)	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
Key Haven Blvd	1	00:01:43	00:01:43		1.112	1.112		38.9	10+	CG	00:00:30	
Rockland Dr	2	00:05:53	00:04:10		5.025	3.913		56.3				
Boca Chica Rd	3	00:07:47	00:01:54		6.537	1.512		47.7				
Harris Ch Br (N)	4	00:13:53	00:06:06		12.327	5.790		57.0				
Bow Channel Br (N)	5											
Spanish Main Dr	6											
E Shore Dr	7											
Torch-Ramrod Br (S)	8											
N Pine Ch Br (N)	9											
Long Beach Dr	10											
7-Mile Br (S)	11											
7-Mile Br (N)	12											
Coco Plum Dr	13											
Toms Harbor Ch Br (S)	14											
Long Key Br (S)	15											
Channel #2 Br (N)	16											
Lignum V Br (S)	17											
Teatable Relf Br (N)	18											
Whale Harbor Br (S)	19											
Snake Creek Br (N)	20											
Ocean Blvd	21											
Atlantic Blvd	22											
C-905	23											
County Line sign	24											
Card Sound Rd	25											
OVERALL		-----	00:13:53	00:00:00	-----	12.327	0.000	53.3			00:00:30	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 NORTHBOUND TRAVEL SPEEDS
FRIDAY, 03-17-23, 17:15 TO 17:29**



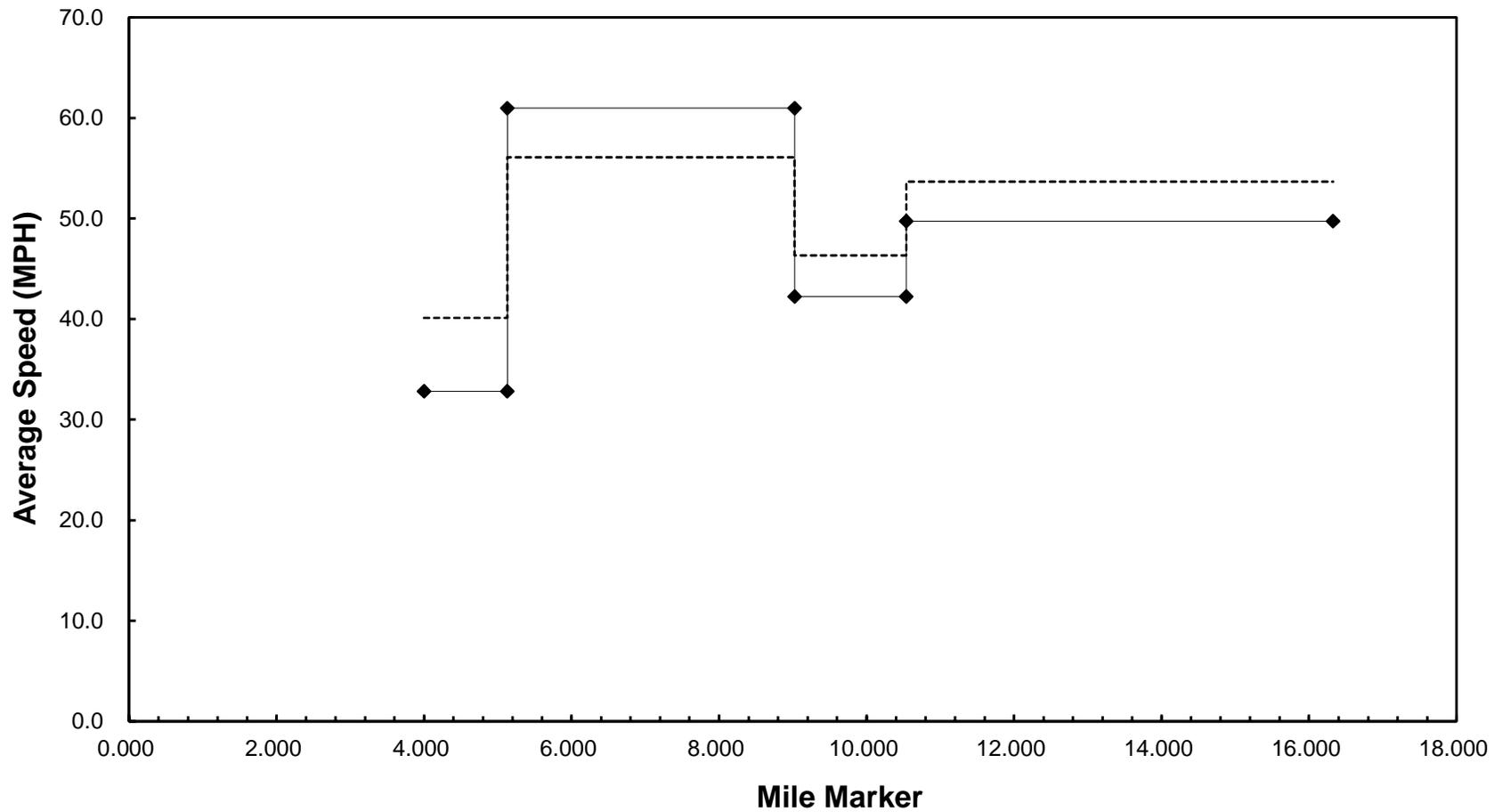
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 17, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:00:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:15:02 AM Supplemental Run 1		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.120	0.000		0.0				
Boca Chica Rd	4	00:06:59	00:06:59		115.907	5.787		49.7				
Rockland Dr	3	00:09:08	00:02:09		117.420	1.513		42.2				
Key Haven Blvd	2	00:12:58	00:03:50		121.315	3.895		61.0				
Cow Key Bridge (N)	1	00:15:02	00:02:04		122.445	1.130		32.8	10+	TS	00:00:25	
OVERALL		-----	00:15:02	00:00:00	-----	12.325	0.000	49.2			00:00:25	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
FRIDAY, 03-17-23, 07:00 TO 07:16**



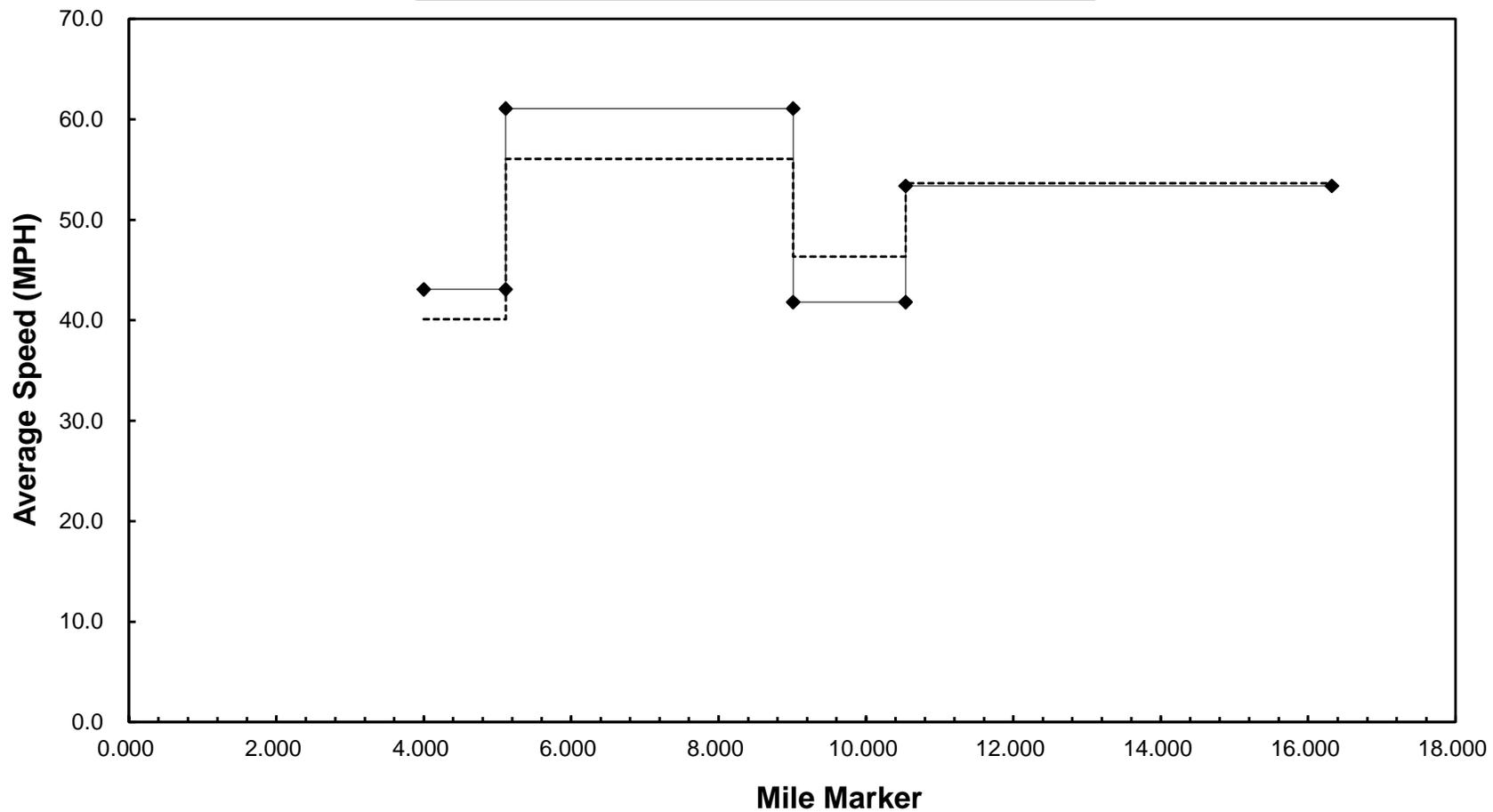
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

ROAD/DIRECTION:	US-1, Southbound	DEFINITION OF DELAY	TYPES OF DELAY
OBSERVERS:	OB		LT = Left Turn CS = Construction
WEATHER/CONDITIONS:	Clear/Sunny	Delay begins @ 5 mph	RT = Right Turn SB = School Bus
DAY/DATE:	Friday, March 17, 2023	Delay ends @ 15 mph	TS = Traffic Signal EV = Emergency Vehicle
START TIME @ C SOUND RD:	07:40:00 AM		DB = Drawbridge AC = Accident
FINISH TIME @ COW KEY BR:	07:54:04 AM Supplemental Run 2		CG = Congestion * = Special Event

Control Point	End Segment #	Cumulative Time	Segment Time	Excluded Time	Cumulative Distance	Segment Distance	Excluded Distance	Segment Travel Speed	Platoon Size	Delay Type	Segment Delay	Passing Score
Card Sound Rd	Begin	00:00:00	00:00:00	-----	0.000	0.000	-----	-----	-	--	-----	-
County Line sign	25											
C-905	24											
Atlantic Blvd	23											
Ocean Blvd	22											
Snake Creek Br (N)	21											
Whale Harbor Br (S)	20											
Teatable Relf Br (N)	19											
Lignum V Br (S)	18											
Channel #2 Br (N)	17											
Long Key Br (S)	16											
Toms Harbor Ch Br (S)	15											
Coco Plum Dr	14											
7-Mile Br (N)	13											
7-Mile Br (S)	12											
Long Beach Dr	11											
N Pine Ch Br (N)	10											
Torch-Ramrod Br (S)	9											
E Shore Dr	8											
Spanish Main Dr	7											
Bow Channel Br (N)	6											
Harris Ch Br (N)	5	00:00:00	00:00:00		110.117	0.000		0.0				
Boca Chica Rd	4	00:06:30	00:06:30		115.900	5.783		53.4				
Rockland Dr	3	00:08:41	00:02:11		117.422	1.522		41.8				
Key Haven Blvd	2	00:12:31	00:03:50		121.324	3.902		61.1				
Cow Key Bridge (N)	1	00:14:04	00:01:33		122.437	1.113		43.1				
OVERALL		-----	00:14:04	00:00:00	-----	12.320	0.000	52.5			00:00:00	0

Note: Segment 25 (Dade County) is excluded from the "OVERALL" measurements.

**US - 1 SOUTHBOUND TRAVEL SPEEDS
FRIDAY, 03-17-23, 07:40 TO 07:55**



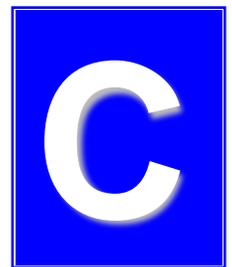
—◆— SEG. SPEED - - - - - AVG. POSTED SPEED

APPENDIX C

2023 Traffic Volume Summary



**A
P
P
E
N
D
I
X**



AECOM

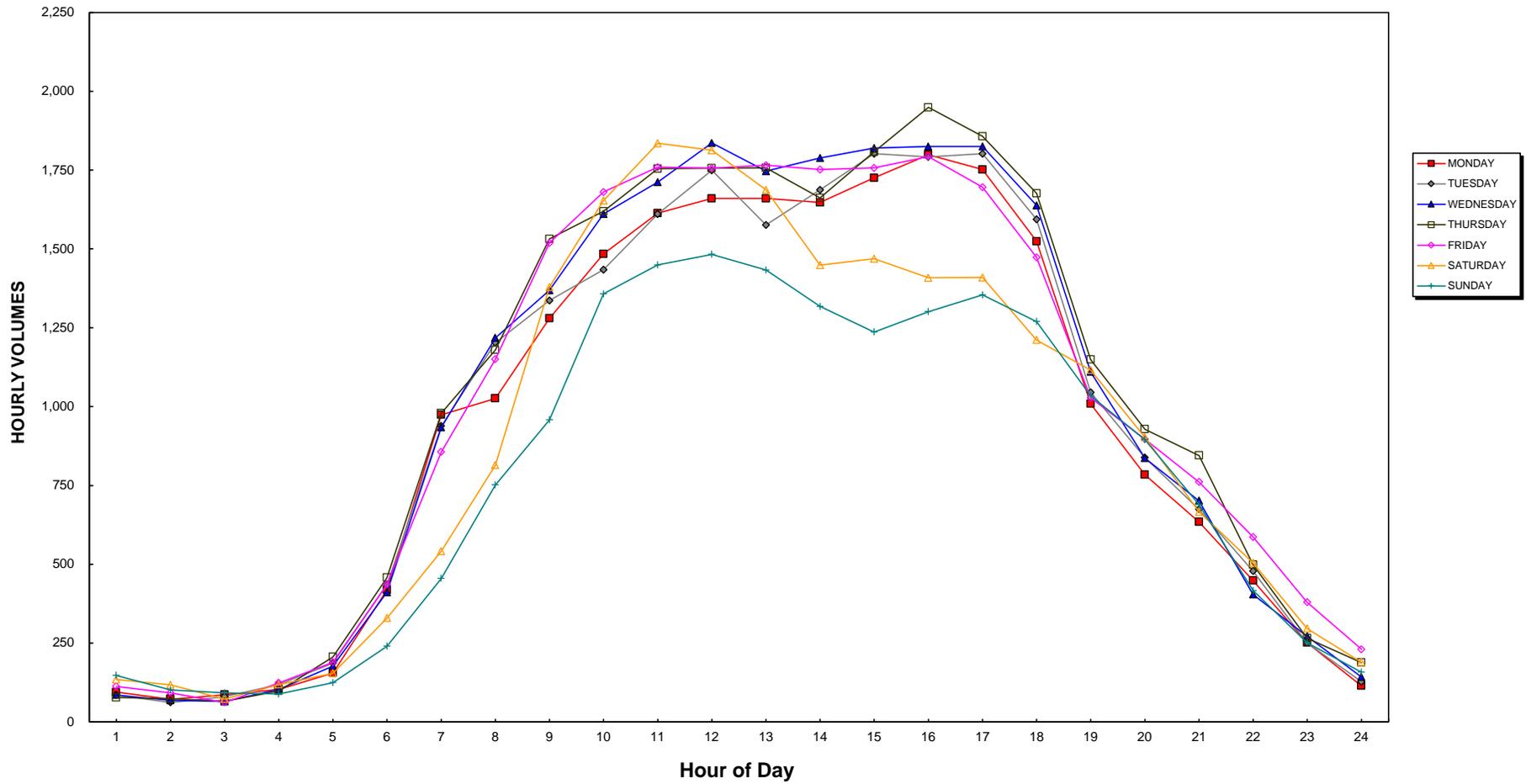
2023 TRAFFIC VOLUME SUMMARY
BIG PINE KEY (MM 29): NORTH PINE CHANNEL BRIDGE

Hour Ending	Monday 03/13/2023			Tuesday 03/14/2023			Wednesday 03/15/2023			Thursday 03/16/2023			Friday 03/17/2023			Saturday 03/18/2023			Sunday 03/19/2023		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
1 AM	32	62	94	36	49	85	25	60	85	37	40	77	61	51	112	64	70	134	79	68	147
2 AM	29	42	71	27	34	61	24	44	68	26	47	73	48	44	92	61	56	117	56	45	101
3 AM	32	54	86	39	41	80	33	31	64	27	38	65	24	37	61	43	29	72	62	30	92
4 AM	66	37	103	60	58	118	60	43	103	63	35	98	77	46	123	77	41	118	47	41	88
5 AM	76	79	155	105	81	186	103	74	177	107	99	206	113	76	189	94	60	154	77	47	124
6 AM	244	174	418	243	192	435	237	174	411	275	182	457	279	157	436	236	93	329	164	76	240
7 AM	494	480	974	467	471	938	445	489	934	480	499	979	485	371	856	384	157	541	315	140	455
8 AM	505	521	1,026	601	602	1,203	620	598	1,218	618	562	1,180	661	489	1,150	568	246	814	518	233	751
9 AM	673	607	1,280	724	612	1,336	732	636	1,368	786	746	1,532	904	615	1,519	911	468	1,379	610	348	958
10 AM	808	676	1,484	728	706	1,434	886	725	1,611	886	733	1,619	1034	646	1,680	1017	636	1,653	808	549	1,357
11 AM	859	754	1,613	800	811	1,611	901	811	1,712	943	811	1,754	900	859	1,759	1020	815	1,835	812	637	1,449
12 NOON	763	897	1,660	852	897	1,749	839	997	1,836	809	947	1,756	874	882	1,756	860	953	1,813	737	746	1,483
1 PM	681	979	1,660	716	860	1,576	803	944	1,747	793	964	1,757	802	963	1,765	731	956	1,687	608	825	1,433
2 PM	751	896	1,647	774	913	1,687	795	993	1,788	835	827	1,662	845	907	1,752	636	812	1,448	613	704	1,317
3 PM	827	898	1,725	868	934	1,802	868	952	1,820	884	924	1,808	852	905	1,757	661	808	1,469	564	673	1,237
4 PM	878	921	1,799	862	930	1,792	885	940	1,825	974	975	1,949	860	933	1,793	629	779	1,408	547	754	1,301
5 PM	831	921	1,752	834	968	1,802	882	943	1,825	930	927	1,857	911	785	1,696	717	692	1,409	587	767	1,354
6 PM	748	776	1,524	839	755	1,594	864	774	1,638	867	809	1,676	839	634	1,473	629	582	1,211	559	711	1,270
7 PM	480	529	1,009	498	547	1,045	573	537	1,110	625	524	1,149	518	510	1,028	527	589	1,116	426	608	1,034
8 PM	403	381	784	466	372	838	498	338	836	540	388	928	466	431	897	469	434	903	433	462	895
9 PM	363	271	634	368	306	674	402	299	701	533	312	845	437	324	761	396	270	666	371	318	689
10 PM	247	201	448	283	195	478	256	148	404	295	203	498	331	255	586	324	180	504	203	213	416
11 PM	110	141	251	107	143	250	139	132	271	132	133	265	214	165	379	172	124	296	122	129	251
12 MID-NIGHT	46	68	114	61	66	127	67	75	142	87	101	188	119	111	230	88	101	189	62	95	157
Daily Total	10,946	11,365	22,311	11,358	11,543	22,901	11,937	11,757	23,694	12,552	11,826	24,378	12,654	11,196	23,850	11,314	9,951	21,265	9,380	9,219	18,599
AADT*	9,556	9,922	19,478	9,916	10,077	19,993	10,421	10,264	20,685	10,958	10,324	21,282	11,047	9,774	20,821	9,877	8,687	18,564	8,189	8,048	16,237

* AADT = Raw Count*Seasonal Factor*Axle Factor

5-Day ADT 23,427
7-Day ADT 22,428
2021 Seasonal Factor 0.90
2021 Axle Factor 0.97
5-Day AADT 20,452
7-Day AADT 19,580

US-1 NON-DIRECTIONAL HOURLY VOLUMES
BIG PINE KEY (MM 29) 03-13-2023 TO 03-19-2023



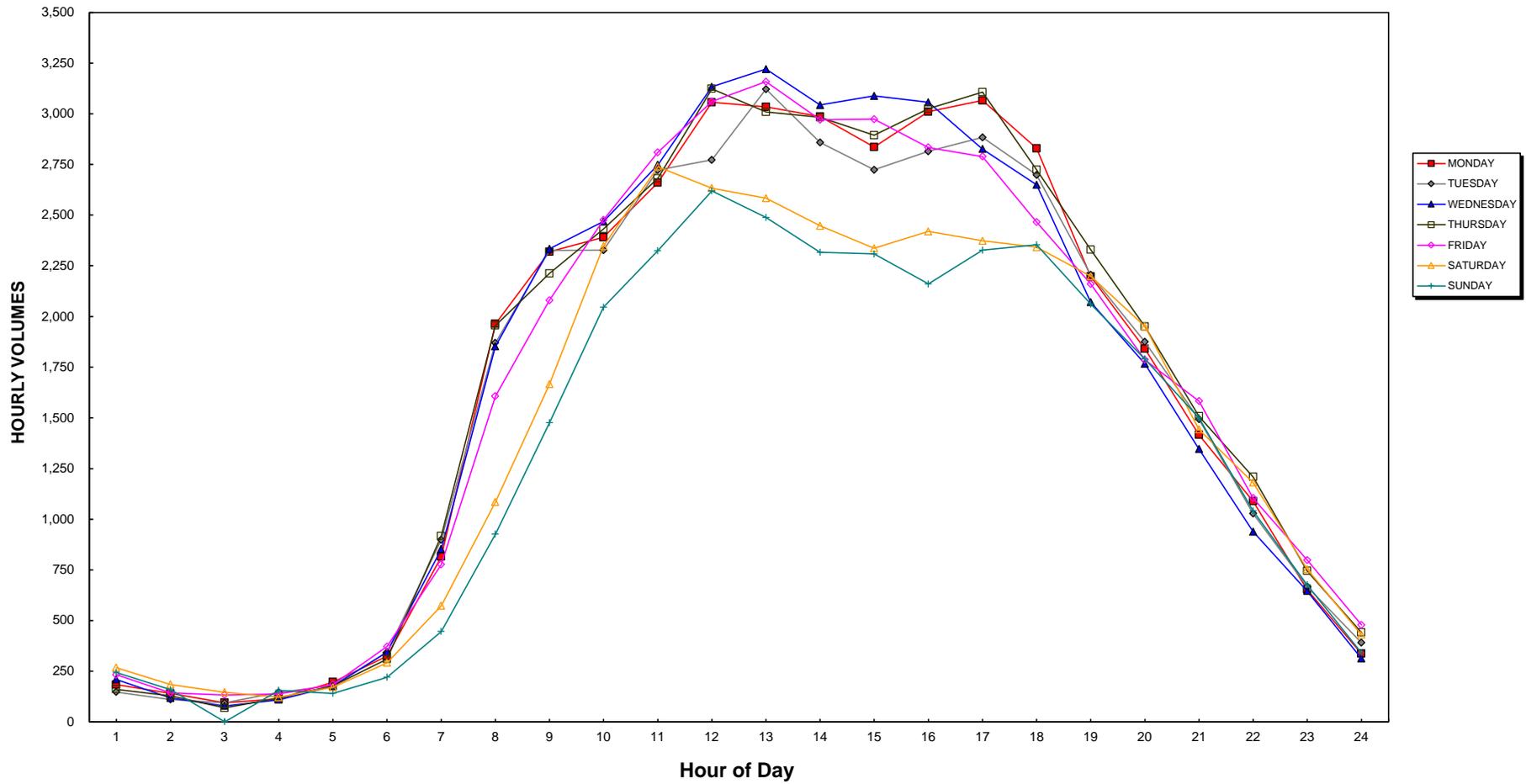
2023 TRAFFIC VOLUME SUMMARY
MARATHON (MM 50): NORTH OF SOMBRERO BEACH ROAD

Hour Ending	Monday 03/13/2023			Tuesday 03/14/2023			Wednesday 03/15/2023			Thursday 03/16/2023			Friday 03/17/2023			Saturday 03/18/2023			Sunday 03/19/2023		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
1 AM	78	105	183	88	59	147	100	109	209	86	74	160	118	114	232	149	118	267	134	109	243
2 AM	53	87	140	55	55	110	58	59	117	68	60	128	69	74	143	101	83	184	79	79	158
3 AM	34	60	94	33	60	93	38	40	78	23	45	68	68	64	132	67	78	145	0	0	0
4 AM	59	54	113	62	83	145	42	66	108	41	77	118	72	66	138	54	67	121	83	72	155
5 AM	81	115	196	82	96	178	77	99	176	69	108	177	76	107	183	87	83	170	80	60	140
6 AM	133	191	324	154	189	343	152	192	344	141	168	309	172	199	371	168	123	291	105	115	220
7 AM	331	483	814	363	535	898	338	514	852	374	543	917	354	422	776	321	251	572	212	234	446
8 AM	837	1126	1,963	833	1037	1,870	785	1067	1,852	842	1114	1,956	747	860	1,607	552	532	1,084	436	490	926
9 AM	1120	1199	2,319	1103	1223	2,326	1157	1176	2,333	1095	1117	2,212	1033	1047	2,080	836	830	1,666	707	769	1,476
10 AM	1163	1228	2,391	1135	1192	2,327	1282	1187	2,469	1216	1215	2,431	1271	1205	2,476	1197	1150	2,347	1030	1015	2,045
11 AM	1290	1370	2,660	1372	1350	2,722	1401	1347	2,748	1272	1409	2,681	1408	1401	2,809	1369	1370	2,739	1127	1197	2,324
12 NOON	1442	1615	3,057	1335	1438	2,773	1509	1625	3,134	1529	1595	3,124	1550	1511	3,061	1323	1310	2,633	1202	1418	2,620
1 PM	1461	1573	3,034	1494	1628	3,122	1545	1676	3,221	1418	1591	3,009	1534	1625	3,159	1282	1302	2,584	1203	1285	2,488
2 PM	1450	1537	2,987	1374	1485	2,859	1475	1569	3,044	1465	1518	2,983	1443	1528	2,971	1177	1270	2,447	1176	1140	2,316
3 PM	1383	1453	2,836	1287	1437	2,724	1525	1564	3,089	1453	1441	2,894	1550	1424	2,974	1111	1225	2,336	1154	1154	2,308
4 PM	1481	1529	3,010	1383	1432	2,815	1510	1547	3,057	1476	1549	3,025	1372	1462	2,834	1253	1167	2,420	1032	1128	2,160
5 PM	1499	1567	3,066	1474	1409	2,883	1444	1382	2,826	1568	1539	3,107	1462	1327	2,789	1132	1241	2,373	1220	1107	2,327
6 PM	1417	1412	2,829	1365	1333	2,698	1319	1331	2,650	1441	1283	2,724	1249	1217	2,466	1064	1278	2,342	1233	1121	2,354
7 PM	1228	969	2,197	1149	1056	2,205	1157	914	2,071	1259	1071	2,330	1160	1000	2,160	1045	1154	2,199	1044	1017	2,061
8 PM	1024	816	1,840	1124	751	1,875	1082	684	1,766	1108	842	1,950	991	795	1,786	1091	861	1,952	986	804	1,790
9 PM	816	600	1,416	929	564	1,493	814	532	1,346	949	558	1,507	917	666	1,583	909	534	1,443	874	625	1,499
10 PM	693	395	1,088	647	380	1,027	582	356	938	784	424	1,208	640	464	1,104	740	441	1,181	651	389	1,040
11 PM	418	234	652	430	237	667	378	267	645	454	290	744	459	339	798	434	319	753	421	255	676
12 MID-NIGHT	186	150	336	217	173	390	172	140	312	245	195	440	256	222	478	249	181	430	184	156	340
Daily Total	19,677	19,868	39,545	19,488	19,202	38,690	19,942	19,443	39,385	20,376	19,826	40,202	19,971	19,139	39,110	17,711	16,968	34,679	16,373	15,739	32,112
AADT*	17,178	17,345	34,523	17,013	16,763	33,776	17,409	16,974	34,383	17,788	17,308	35,096	17,435	16,708	34,143	15,462	14,813	30,275	14,294	13,740	28,034

* AADT = Raw Count*Seasonal Factor*Axle Factor

5-Day ADT 39,386
7-Day ADT 37,675
2021 Seasonal Factor 0.90
2021 Axle Factor 0.97
5-Day AADT 34,384
7-Day AADT 32,890

US-1 NON-DIRECTIONAL HOURLY VOLUMES
MARATHON (MM 50) 03-13-2023 TO 03-19-2023



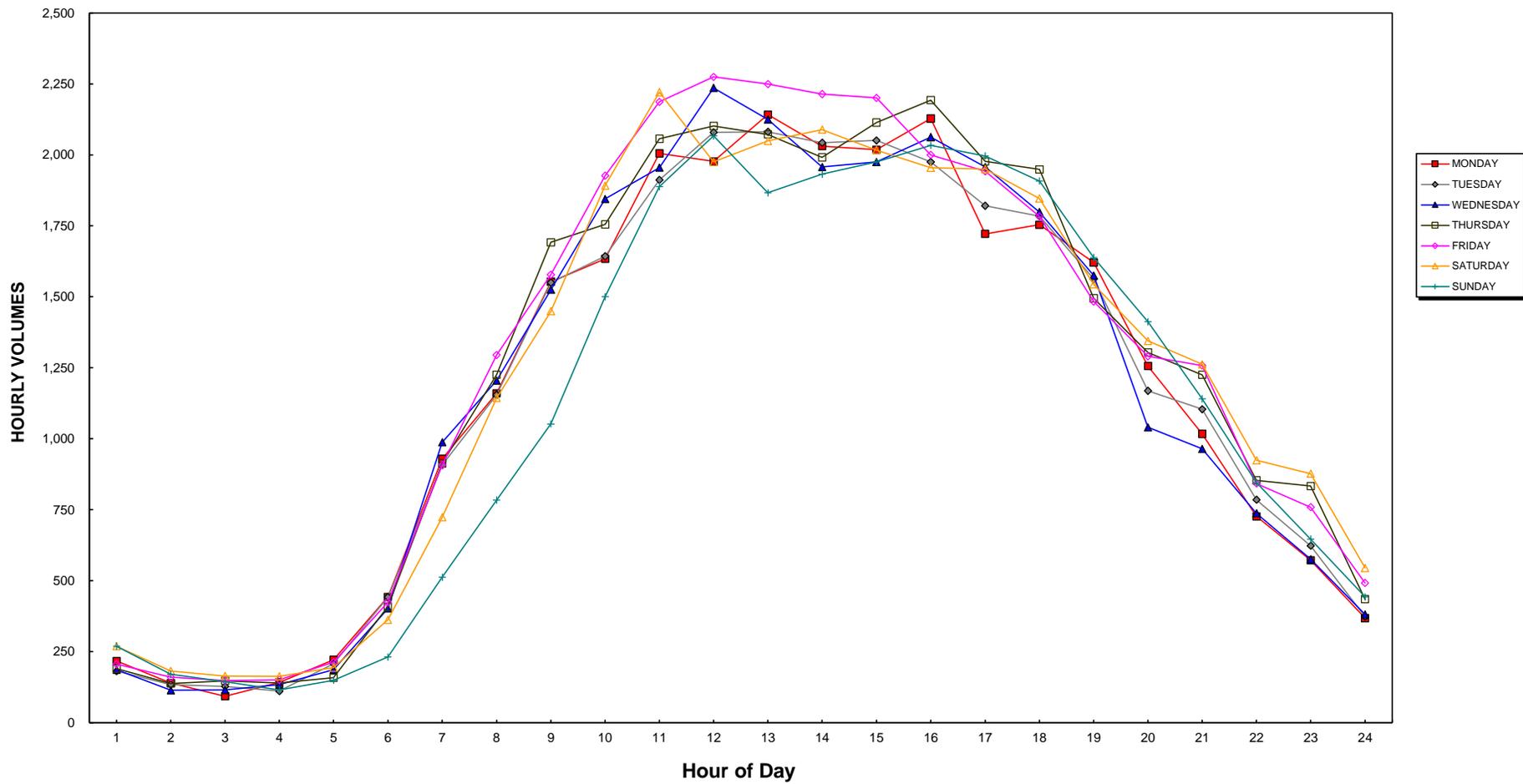
2023 TRAFFIC VOLUME SUMMARY
UPPER MATECUMBE (MM 84): WHALE HARBOR CHANNEL BRIDGE

Hour Ending	Monday 03/13/2023			Tuesday 03/14/2023			Wednesday 03/15/2023			Thursday 03/16/2023			Friday 03/17/2023			Saturday 03/18/2023			Sunday 03/19/2023		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
1 AM	118	99	217	106	75	181	119	67	186	100	90	190	118	88	206	153	116	269	176	93	269
2 AM	50	89	139	76	58	134	54	60	114	72	66	138	86	74	160	96	86	182	80	90	170
3 AM	37	56	93	47	81	128	60	55	115	73	74	147	78	70	148	68	96	164	70	74	144
4 AM	56	86	142	37	74	111	57	77	134	39	100	139	64	87	151	87	76	163	71	44	115
5 AM	77	144	221	77	130	207	65	121	186	66	92	158	97	115	212	97	97	194	72	77	149
6 AM	123	320	443	124	318	442	106	296	402	112	297	409	139	285	424	144	218	362	87	144	231
7 AM	205	724	929	218	689	907	229	758	987	212	701	913	236	672	908	260	463	723	165	347	512
8 AM	409	751	1,160	396	759	1,155	462	743	1,205	425	801	1,226	445	850	1,295	495	649	1,144	300	484	784
9 AM	594	959	1,553	566	984	1,550	594	931	1,525	615	1077	1,692	635	943	1,578	627	822	1,449	436	616	1,052
10 AM	661	973	1,634	745	898	1,643	860	985	1,845	756	999	1,755	885	1042	1,927	900	992	1,892	625	875	1,500
11 AM	923	1082	2,005	924	988	1,912	945	1010	1,955	934	1123	2,057	1075	1112	2,187	1120	1101	2,221	832	1056	1,888
12 NOON	877	1100	1,977	961	1118	2,079	1159	1077	2,236	1058	1044	2,102	1128	1147	2,275	1024	951	1,975	1027	1040	2,067
1 PM	1038	1104	2,142	955	1126	2,081	1123	1002	2,125	1033	1039	2,072	1116	1133	2,249	1028	1021	2,049	978	888	1,866
2 PM	956	1075	2,031	955	1088	2,043	1057	900	1,957	959	1032	1,991	1063	1151	2,214	1070	1019	2,089	970	962	1,932
3 PM	913	1105	2,018	965	1086	2,051	1062	913	1,975	978	1136	2,114	1082	1119	2,201	978	1039	2,017	935	1040	1,975
4 PM	1013	1115	2,128	956	1019	1,975	984	1078	2,062	1094	1099	2,193	1062	938	2,000	895	1059	1,954	906	1128	2,034
5 PM	933	789	1,722	1008	813	1,821	926	1031	1,957	1068	909	1,977	1112	830	1,942	845	1105	1,950	988	1008	1,996
6 PM	990	764	1,754	1026	758	1,784	1030	768	1,798	1098	851	1,949	1005	778	1,783	843	1003	1,846	926	982	1,908
7 PM	1000	621	1,621	1003	560	1,563	1038	537	1,575	869	626	1,495	809	674	1,483	845	699	1,544	976	662	1,638
8 PM	734	522	1,256	728	441	1,169	652	388	1,040	799	505	1,304	708	582	1,290	786	559	1,345	888	524	1,412
9 PM	647	370	1,017	713	391	1,104	607	357	964	804	421	1,225	767	491	1,258	847	415	1,262	762	379	1,141
10 PM	442	284	726	495	290	785	451	286	737	614	239	853	521	321	842	654	270	924	579	266	845
11 PM	407	165	572	407	216	623	375	201	576	567	266	833	491	268	759	650	227	877	454	192	646
12 MID-NIGHT	257	111	368	255	118	373	239	142	381	276	159	435	322	170	492	376	169	545	297	146	443
Daily Total	13,460	14,408	27,868	13,743	14,078	27,821	14,254	13,783	28,037	14,621	14,746	29,367	15,044	14,940	29,984	14,888	14,252	29,140	13,600	13,117	26,717
AADT*	11,751	12,578	24,329	11,998	12,290	24,288	12,444	12,033	24,476	12,764	12,873	25,637	13,133	13,043	26,176	12,997	12,442	25,439	11,873	11,451	23,324

* AADT = Raw Count*Seasonal Factor*Axle Factor

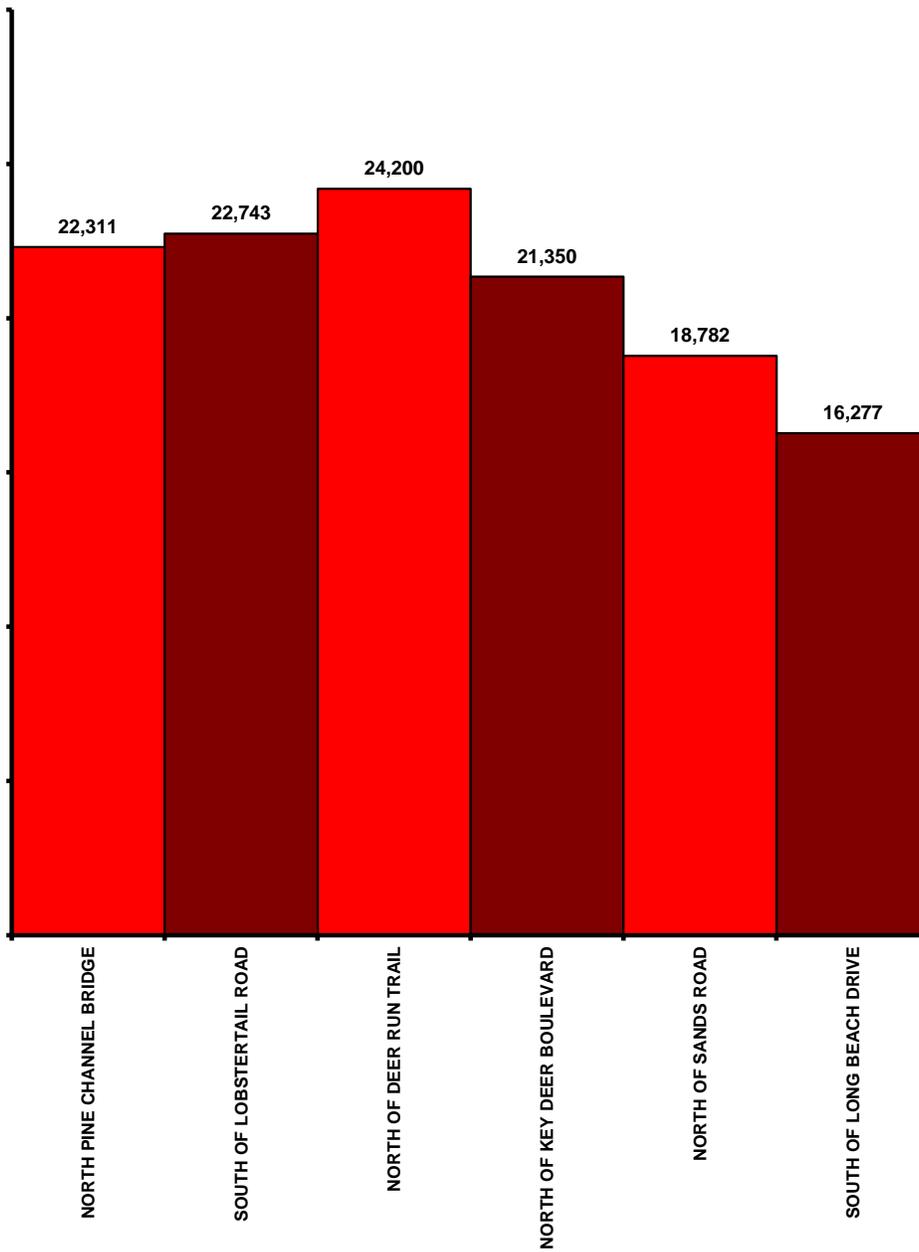
5-Day ADT 28,615
7-Day ADT 28,419
2021 Seasonal Factor 0.90
2021 Axle Factor 0.97
5-Day AADT 24,981
7-Day AADT 24,810

**US-1 NON-DIRECTIONAL HOURLY VOLUMES
UPPER MATECUMBE (MM 84) 03-13-2023 TO 03-19-2023**



TO KEY WEST
←

TO MARATHON
→

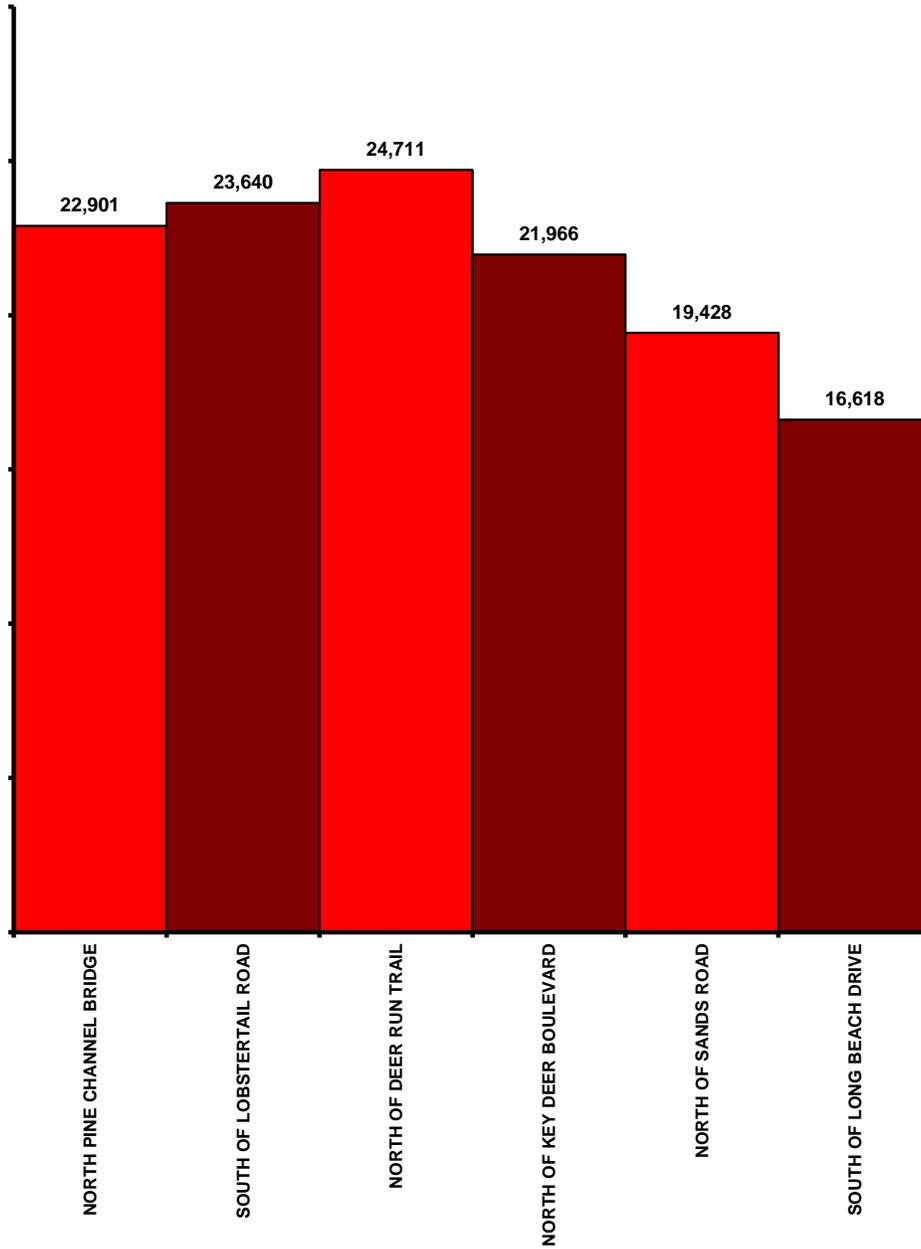


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-1
TWO-WAY DAILY VOLUMES
US 1 - MONDAY

TO KEY WEST
←

TO MARATHON
→

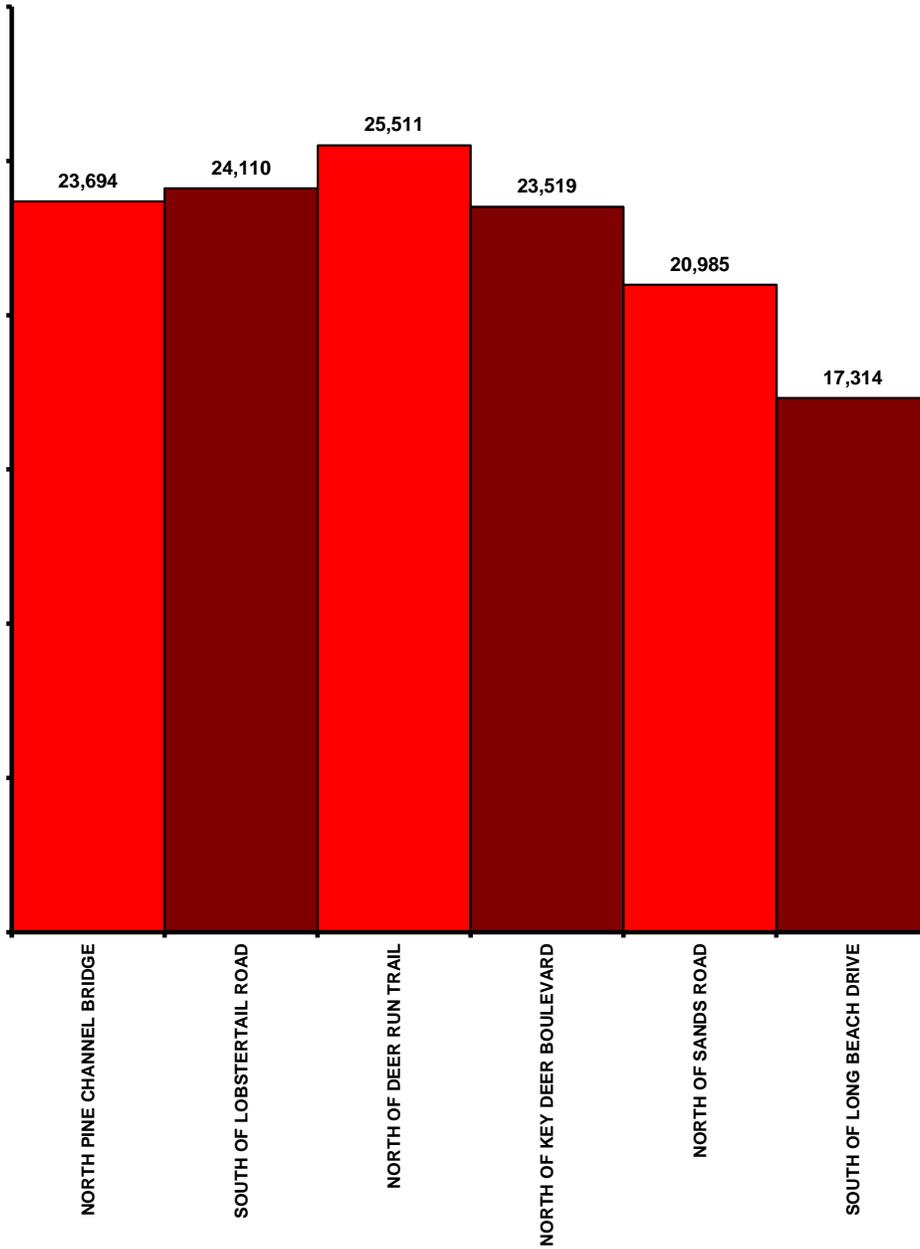


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-2
TWO-WAY DAILY VOLUMES
US 1 - TUESDAY

TO KEY WEST
←

TO MARATHON
→

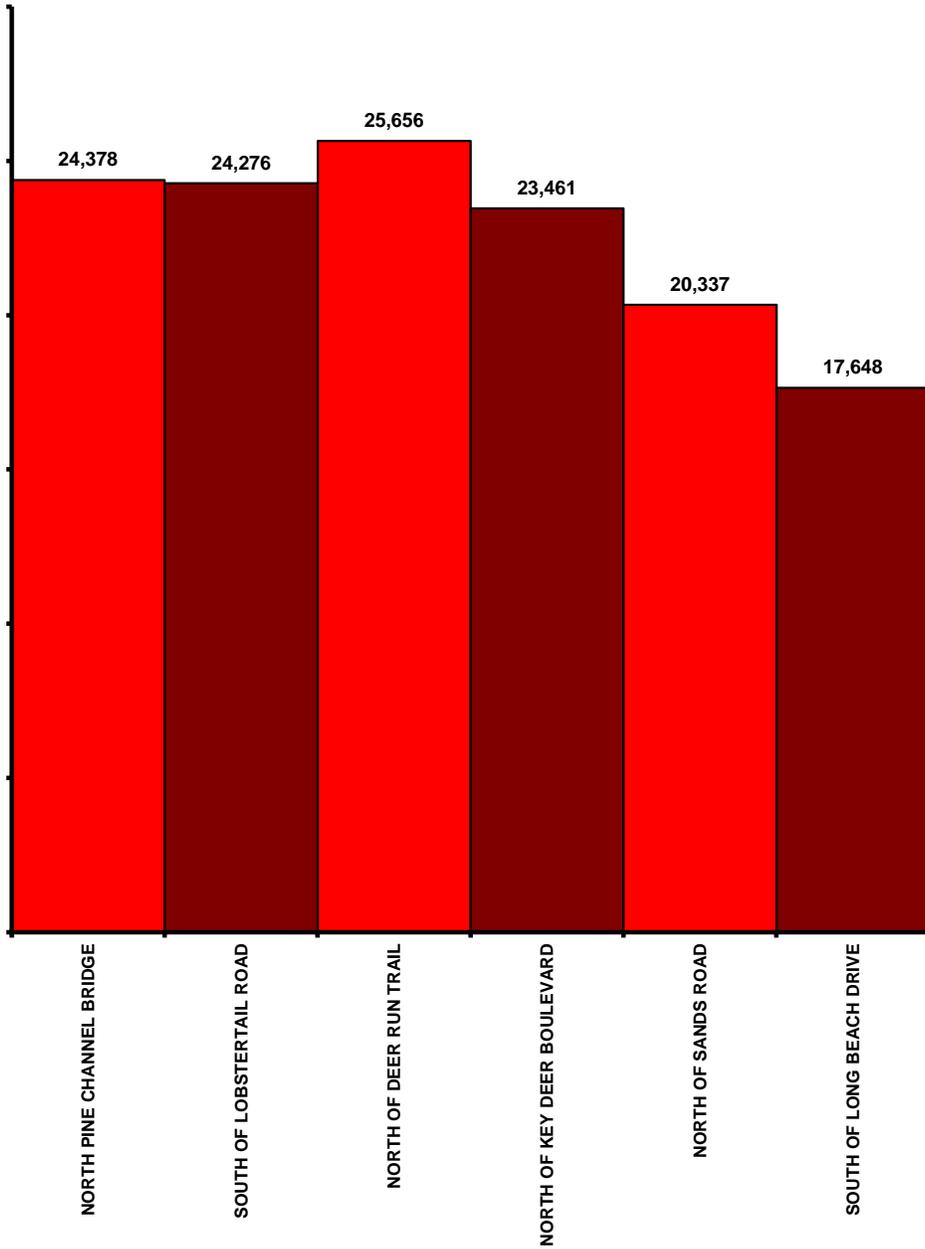


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-3
TWO-WAY DAILY VOLUMES
US 1 - WEDNESDAY

TO KEY WEST
←

TO MARATHON
→

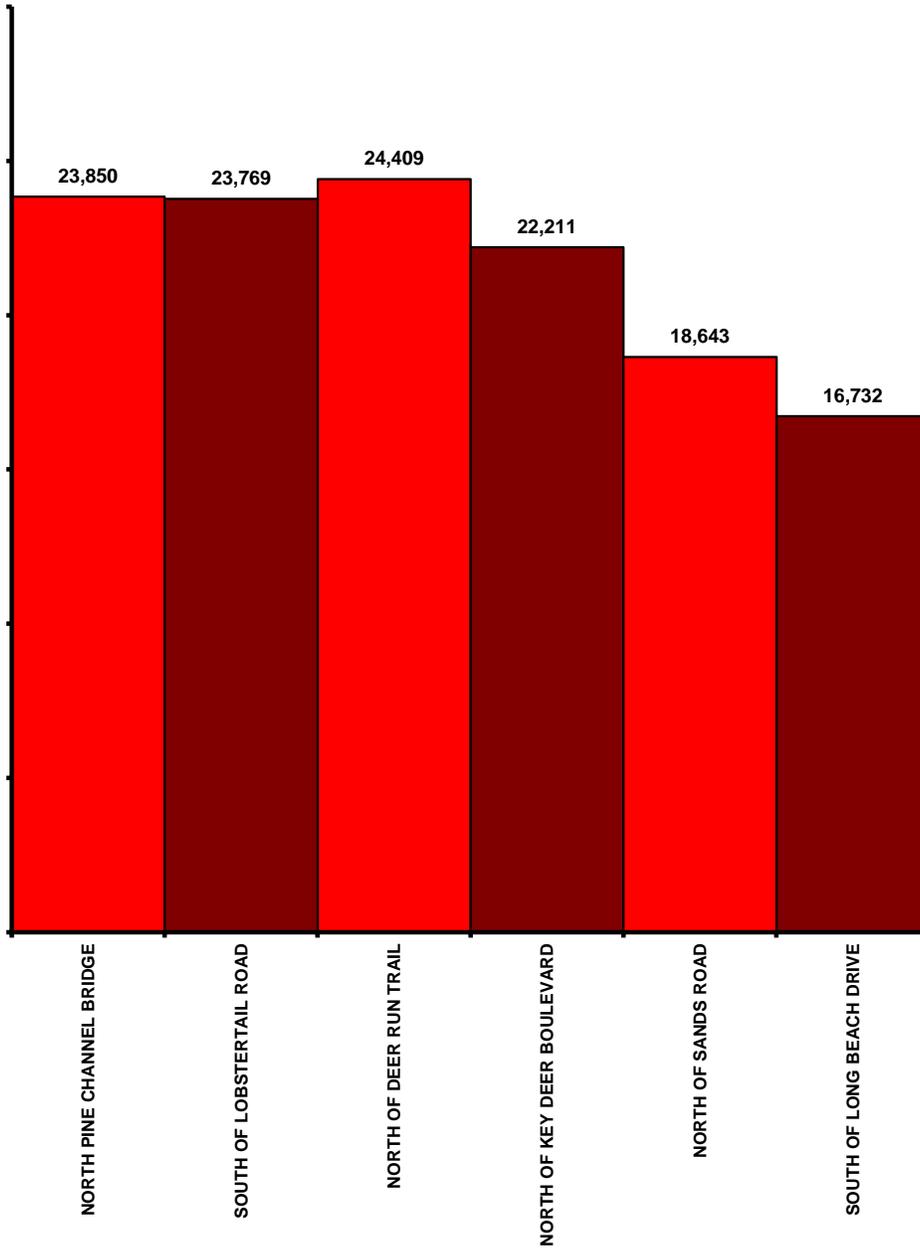


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-4
TWO-WAY DAILY VOLUMES
US 1 - THURSDAY

TO KEY WEST
←

TO MARATHON
→

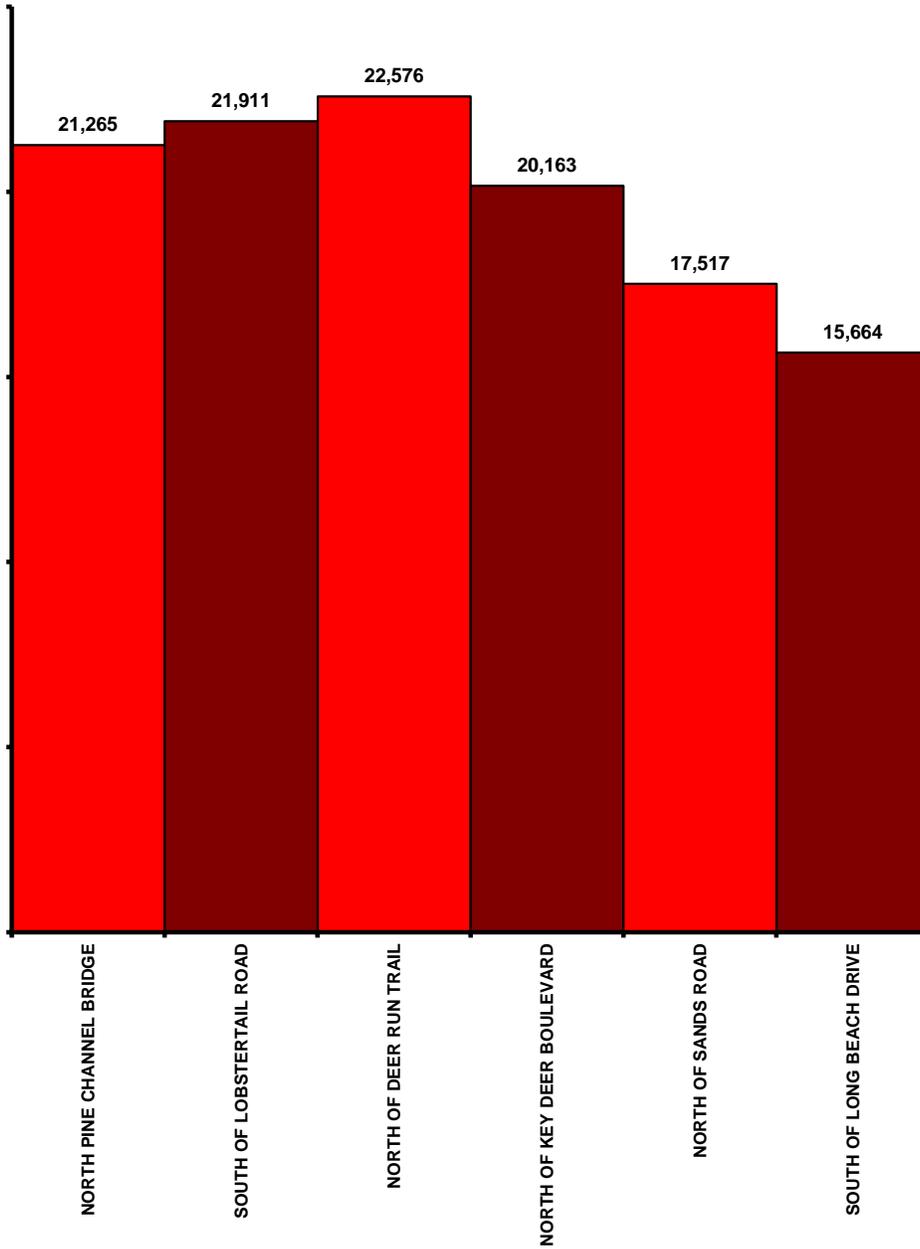


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-5
TWO-WAY DAILY VOLUMES
US 1 - FRIDAY

TO KEY WEST
←

TO MARATHON
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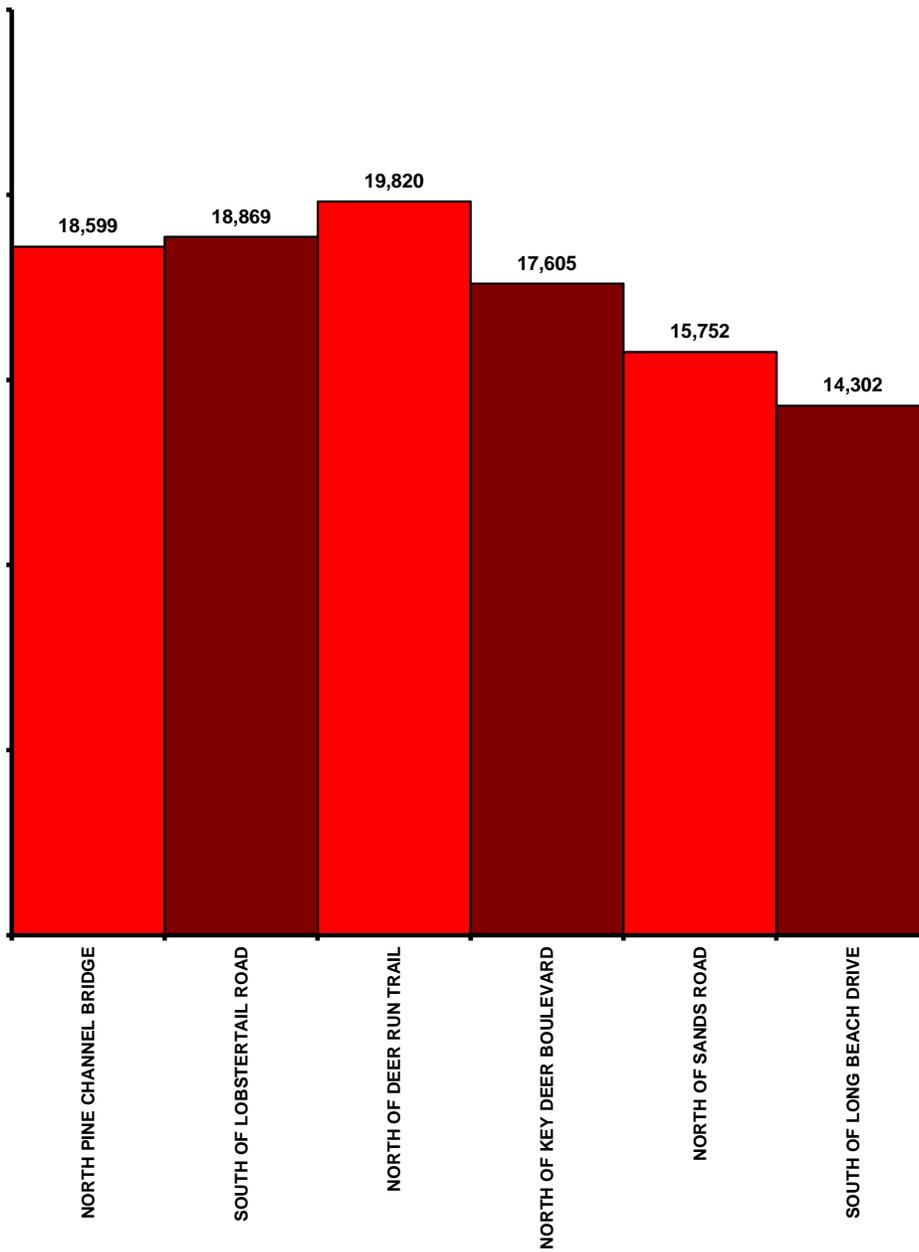


2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-6
TWO-WAY DAILY VOLUMES
US 1 - SATURDAY

TO KEY WEST
←

TO MARATHON
→



2023
TRAVEL TIME DELAY STUDY
MONROE COUNTY, FLORIDA

EXHIBIT C-7
TWO-WAY DAILY VOLUMES
US 1 - SUNDAY

APPENDIX D

Historical Count Data



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HISTORICAL COUNT DATA

	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003	
	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change
Big Pine																						
5 – Day Average	23,811	-13.47%	20,604	-13.47%	27,533	33.63	24,270	11.85%	25,295	4.22%	24,224	-4.23%	25,819	6.58%	26,846	3.98%	23,403	-12.38%	22,612	-3.38%	23,341	3.22%
7 – Day Average	23,893	-14.01%	20,545	-14.01%	26,885	30.86%	23,476	-12.68%	24,371	3.81%	23,786	-2.40%	24,955	4.91%	26,070	4.47%	22,648	-13.13%	21,937	-3.14%	22,788	3.88%
AA DT	-	-10.11%	17,743	-10.11%	22,688	27.87%	21,186	-6.62%	21,496	1.46%	19,866	-7.58%	20,843	4.92%	21,774	4.47%	19,991	-8.19%	19,364	-3.14%	20,115	3.88%
Marathon																						
5 – Day Average	34,515	-8.78%	31,484	-8.78%	35,771	13.62%	33,620	-6.01%	34,528	2.70%	35,417	-2.57%	38,619	9.04%	36,431	-5.67%	33,777	-7.29%	36,989	9.51%	36,817	-0.47%
7 – Day Average	33,517	-9.15%	30,449	-9.15%	34,278	12.58%	31,919	-6.88%	32,800	2.76%	34,305	-4.59%	36,818	7.33%	34,742	-5.64%	32,106	-7.59%	35,442	10.39%	35,984	1.53%
AA DT	27,688	-5.02%	26,297	-5.02%	28,927	10.00%	27,924	-3.47%	28,930	3.60%	28,651	-0.96%	30,750	7.33%	29,017	-5.64%	28,340	-2.33%	31,285	10.39%	31,763	1.53%
Upper Matecumbe																						
5 – Day Average	22,312	-1.72%	21,929	-1.72%	24,026	9.56%	22,987	-4.32%	24,539	6.75%	24,988	1.83%	26,512	6.10%	26,642	0.49%	24,177	-9.25%	26,589	9.98%	26,759	0.64%
7 – Day Average	23,358	-2.87%	22,687	-2.87%	24,260	6.93%	22,826	-5.91%	24,489	7.29%	25,504	4.14%	26,465	3.77%	26,831	1.38%	24,719	-7.87%	26,475	7.10%	26,514	0.15%
AA DT	19,296	1.54%	19,593	1.54%	20,473	4.49%	20,083	-1.90%	21,599	7.55%	21,301	-1.38%	22,103	3.77%	22,410	1.39%	21,819	-2.64%	23,369	7.10%	23,404	0.15%

HISTORICAL COUNT DATA (Continued)

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013	
	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change
Big Pine																						
5 – Day Average	23,341	3.22%	23,108	-0.0101	24,304	5.17%	22,451	-7.62%	25,235	12.40%	21,495	-14.82%	21,242	-1.18%	20,651	-2.78%	20,468	-0.88%	21,056	2.87%	20,986	-0.33%
7 – Day Average	22,788	3.88%	22,538	-1.10%	23,788	5.55%	21,691	-8.82%	25,550	17.79%	20,612	-19.33%	20,656	0.21%	20,115	-2.62%	20,070	-0.22%	20,579	2.53%	20,066	-2.49%
AA DT	20,115	3.88%	19,894	-1.10%	19,844	-0.25%	18,095	-8.81%	20,215	11.72%	16,308	-19.33%	16,680	2.28%	17,842	6.97%	17,684	-0.88%	18,011	1.85%	17,943	-0.38%
Marathon																						
5 – Day Average	36,817	-0.47%	37,604	2.14%	37,405	-0.53%	35,388	-5.39%	36,742	3.83%	34,414	-6.34%	34,193	-0.64%	31,883	-6.76%	32,156	0.85%	34,145	6.19%	34,097	-0.14%
7 – Day Average	35,984	1.53%	36,563	1.61%	36,085	-1.32%	33,414	-7.40%	34,811	4.18%	31,731	-8.85%	32,298	1.79%	30,548	-5.42%	31,097	1.79%	32,985	6.07%	32,783	-0.61%
AA DT	31,763	1.53%	32,274	1.61%	30,102	-7.22%	27,874	-7.40%	27,542	-1.19%	25,106	-8.84%	26,081	3.88%	27,547	5.62%	27,782	0.85%	29,208	5.13%	29,153	-0.19%
Upper Matecumbe																						
5 – Day Average	26,759	0.64%	27,194	1.63%	27,980	2.89%	23,982	-14.29%	27,933	16.47%	23,416	-16.17%	23,071	-1.47%	22,588	-2.09%	24,326	7.69%	24,561	0.97%	23,656	-3.68%
7 – Day Average	26,514	0.15%	27,561	3.95%	27,693	0.48%	23,916	-13.64%	28,410	18.79%	23,024	-18.96%	23,016	-0.03%	22,634	-1.66%	24,508	8.27%	24,936	1.75%	23,164	-7.11%
AA DT	23,404	0.15%	24,328	3.95%	22,927	-6.11%	19,951	-12.98%	23,455	17.56%	19,008	-18.96%	18,585	-2.23%	19,516	5.01%	21,017	7.69%	21,009	-0.04%	20,226	-3.73%

HISTORICAL COUNT DATA (Continued)

	2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025	
	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change	Count	Change
Big Pine																						
5 – Day Average	22,833	8.80%			21,915	-4.02%			22,408	2.25%			22,799	1.74%			23,427	2.75%				
7 – Day Average	22,106	10.17%			21,595	-2.31%			21,722	0.59%			22,009	1.32%			22,428	1.90%				
AA DT	20,139	12.24%			19,047	-5.42%			18,753	-1.54%			19,427	3.59%			19,580	0.79%				
Marathon																						
5 – Day Average	38,824	13.86%			39,382	1.44%			43,041	9.29%			38,262	-11.10%			39,386	2.94%				
7 – Day Average	38,144	16.35%			39,239	2.87%			42,530	8.39%			36,739	-13.62%			37,675	2.55%				
AA DT	34,243	17.46%			34,609	1.07%			36,716	6.09%			32,430	-11.67%			32,890	1.42%				
Upper Matecumbe																						
5 – Day Average	26,079	10.24%			25,598	-1.84%			25,856	1.01%			26,152	1.14%			28,615	9.42%				
7 – Day Average	25,817	11.45%			26,126	1.20%			25,837	-1.11%			26,908	4.15%			28,419	5.62%				
AA DT	23,002	13.72%			23,043	0.18%			22,305	-3.20%			23,751	6.48%			24,810	4.46%				

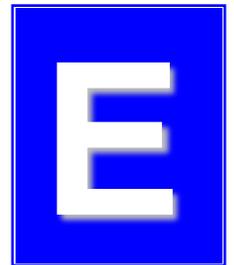
Note: For the years that the Travel Time Delay study is not scheduled (2014, 2016), volumes were obtained from the nearest FDOT FTI count site which may only have three (3) days of data.

APPENDIX E

2023 Travel Speed Summary Data and Statistics



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AECOM

2023 TRAVEL SPEED DATA

	Stock Island	Boca Chica	Big Coppitt	Saddlebunch	Sugarloaf	Cudjoe	Summerland	Ramrod	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Marathon	Grassy	Duck	Long	L. Matecumbe	Tea Table	U. Matecumbe	Windley	Plantation	Tavernier	Largo	Cross	Dade	
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	
Sunday 03-05-23 Northbound Southbound	41.5 38.3	53.8 56.9	52.8 42.9	55.7 53.4	49.1 46.3	48.3 46.4	47.4 46.8	53.2 47.0	48.9 47.8	45.1 36.5	51.2 51.0	56.2 57.0	39.4 41.2	51.5 51.3	51.9 54.1	54.4 48.6	47.0 44.6	45.4 47.3	17.0 37.1	24.2 33.3	33.4 28.5	44.0 48.4	42.2 42.6	21.5 36.2	53.5 54.5	41.0 44.8
Monday 03-06-23 Northbound Southbound	26.4 43.0	52.3 57.9	41.3 43.5	52.6 54.5	48.9 45.7	46.7 45.1	45.4 41.6	50.1 43.7	46.8 43.6	42.4 38.8	52.5 51.8	59.4 57.8	35.9 34.6	51.8 43.2	56.4 53.2	52.4 50.3	50.2 42.2	48.8 44.8	41.1 33.3	43.5 30.7	43.4 34.0	45.1 46.5	45.9 49.4	45.5 55.7	49.8 59.0	47.1 45.1
Tuesday 03-07-23 Northbound Southbound	43.2 44.0	56.5 58.1	48.1 39.2	52.6 50.0	55.5 51.6	48.1 51.8	43.0 42.8	41.7 46.9	45.5 48.6	43.1 38.7	52.5 53.2	55.3 59.4	29.4 33.2	53.5 41.3	58.3 49.5	55.8 51.8	48.4 46.4	50.2 36.5	38.5 39.7	22.4 42.7	27.9 35.3	36.9 45.7	43.1 46.1	44.2 49.5	55.1 58.6	43.5 45.7
Wednesday 03-08-23 Northbound Southbound	46.8 31.8	57.4 59.5	52.2 42.1	52.3 50.8	44.6 48.7	45.3 47.7	45.7 44.9	45.9 41.5	51.0 47.6	40.9 42.3	52.9 50.0	48.2 53.8	35.7 35.3	46.9 53.2	45.6 53.5	46.4 50.9	43.2 45.5	47.0 46.0	42.2 39.6	32.8 35.5	42.9 57.2	45.0 48.8	33.4 41.7	47.1 30.0	52.9 52.4	44.6 45.2
Thursday 03-09-23 Northbound Southbound	29.3 39.5	54.8 59.4	48.0 45.4	51.8 50.8	43.2 50.8	46.2 48.1	43.6 45.2	50.5 47.1	40.1 48.1	50.5 24.6	50.0 53.7	48.3 52.5	35.0 30.3	49.7 52.7	55.1 51.5	52.9 45.0	42.3 44.2	56.3 44.3	36.2 40.5	42.8 41.6	41.8 40.1	47.0 57.3	47.2 44.5	50.0 52.0	54.0 59.0	46.2 44.9
Friday 03-10-23 Northbound Southbound	27.6 33.8	62.6 56.7	44.8 48.2	50.5 55.6	44.0 47.0	44.5 43.7	42.1 45.4	51.3 47.1	47.8 47.7	39.7 40.4	56.2 50.7	48.5 47.9	30.6 32.8	50.7 48.7	53.8 51.7	50.2 51.2	50.6 47.0	47.8 44.8	27.7 36.6	36.4 32.5	36.3 22.4	42.1 44.1	46.1 49.9	28.1 48.7	53.6 55.3	42.4 43.3
Saturday 03-11-23 Northbound Southbound	40.0 39.3	60.6 59.6	51.4 47.7	58.7 53.9	57.0 45.2	48.4 47.4	48.4 45.4	48.7 44.4	48.4 47.5	46.6 38.0	51.6 54.6	53.8 54.1	35.9 38.1	54.8 51.2	53.7 51.2	51.4 51.9	44.6 49.3	44.5 48.2	39.2 38.4	41.6 34.4	40.2 27.0	44.0 48.1	51.3 42.4	42.6 25.6	61.6 32.9	47.6 43.6
Sunday 03-12-23 Northbound Southbound	40.7 30.2	59.5 59.8	43.7 43.9	51.4 48.7	45.5 47.8	44.9 47.0	44.8 46.7	44.6 47.6	45.2 47.9	44.0 40.2	55.7 53.3	57.4 56.7	35.1 39.0	51.8 51.7	52.1 55.6	50.3 53.9	46.4 49.0	46.6 44.5	17.2 43.4	27.1 25.6	40.0 28.9	45.5 48.6	44.1 49.5	44.2 24.1	56.9 25.0	43.4 43.7
Monday 03-13-23 Northbound Southbound	38.3 32.5	62.6 58.7	49.4 46.7	53.1 54.4	50.8 51.0	45.8 51.4	47.2 49.3	46.1 48.5	50.5 52.4	45.6 39.9	53.0 51.2	56.1 55.5	28.5 37.4	50.0 53.0	56.2 55.9	54.5 49.5	45.8 44.4	44.4 50.8	44.1 35.6	40.2 44.6	30.4 39.4	45.2 50.1	42.4 42.3	60.3 53.3	57.7 59.0	45.9 47.3
Tuesday 03-14-23 Northbound Southbound	37.0 4.8	59.4 58.0	47.2 39.1	52.9 47.1	43.7 42.9	46.4 42.7	44.4 44.6	53.2 44.8	54.4 48.6	40.5 32.0	54.9 53.2	56.4 53.0	34.0 36.5	52.2 49.3	56.6 55.6	53.4 50.8	41.5 45.2	42.6 47.3	31.6 30.3	38.3 39.6	40.4 20.6	45.9 48.9	44.4 42.9	55.7 48.1	57.6 58.6	46.4 39.6
Wednesday 03-15-23 Northbound Southbound	29.0 7.2	57.7 58.4	47.4 46.2	51.3 52.6	43.0 44.4	44.4 45.3	42.1 42.1	40.2 47.8	47.7 49.7	47.0 29.5	51.6 52.3	52.3 56.1	34.4 37.9	48.6 50.8	51.8 50.1	50.0 51.4	45.0 38.0	21.6 45.2	18.0 34.7	28.1 -	26.2 33.3	40.5 46.0	44.0 47.3	49.7 43.3	53.0 59.8	41.3 42.9
Thursday 03-16-23 Northbound Southbound	32.5 4.1	59.8 58.0	46.4 43.5	52.6 52.7	49.5 47.4	45.4 44.3	44.5 43.2	47.0 46.5	47.0 52.9	45.4 20.7	51.2 50.0	52.9 53.7	29.3 33.0	49.5 50.5	51.9 52.1	49.8 47.1	43.7 44.6	43.6 41.9	35.9 25.0	35.2 20.6	26.0 19.8	37.0 46.3	43.2 41.8	51.5 50.3	57.1 59.8	42.9 36.6
Friday 03-17-23 Northbound Southbound	32.6 24.5	66.6 56.5	47.6 43.4	53.8 54.5	49.3 47.5	47.7 50.6	43.3 43.1	45.7 50.5	48.9 48.4	45.8 41.5	51.6 53.7	48.2 54.8	25.1 39.7	48.0 51.3	54.6 51.0	49.5 50.3	46.5 44.1	37.4 38.1	18.2 37.6	34.4 33.9	32.1 40.6	35.1 44.6	44.1 39.7	50.1 54.3	56.8 59.7	40.8 46.1
Saturday 03-18-23 Northbound Southbound	37.8 35.9	55.3 57.6	49.3 46.8	52.9 54.2	50.2 51.2	47.6 50.2	45.5 45.9	45.0 51.8	46.0 50.4	38.7 38.2	53.6 54.7	51.1 59.2	35.5 40.7	52.0 51.6	55.5 54.5	51.7 47.5	46.2 46.9	42.8 37.6	39.9 38.4	34.3 25.6	32.5 13.8	43.7 48.2	48.8 41.5	51.7 24.2	55.8 38.6	46.1 39.7
Highest Speed	46.8	66.6	52.8	58.7	57.0	51.8	49.3	53.2	54.4	50.5	56.2	59.4	41.2	54.8	58.3	55.8	50.6	56.3	44.1	44.6	57.2	57.3	51.3	60.3	61.6	47.6
Lowest Speed	4.1	52.3	39.1	47.1	42.9	42.7	41.6	40.2	40.1	20.7	50.0	47.9	25.1	41.3	45.6	45.0	38.0	21.6	17.0	20.6	13.8	35.1	33.4	21.5	25.0	36.6

2023 TRAVEL SPEED DATA

	Stock Island	Boca Chica	Big Coppitt	Saddlebunch	Sugarloaf	Cudjoe	Summerland	Rainrod	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Marathon	Grassy	Duck	Long	L. Matecumbe	Tea Table	U. Matecumbe	Windley	Plantation	Tavernier	Largo	Cross	Dade	
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	
Sunday 03-05-23 Northbound Southbound	41.5 38.3	53.8 56.9	52.8 42.9	55.7 53.4	49.1 46.3	48.3 46.4	47.4 46.8	53.2 47.0	48.9 47.8	45.1 36.5	51.2 51.0	56.2 57.0	39.4 41.2	51.5 51.3	51.9 54.1	54.4 48.6	47.0 44.6	45.4 47.3	17.0 37.1	24.2 33.3	33.4 28.5	44.0 48.4	42.2 42.6	21.5 36.2	53.5 54.5	41.0 44.8
Monday 03-06-23 Northbound Southbound	26.4 43.0	52.3 57.9	41.3 43.5	52.6 54.5	48.9 45.7	46.7 45.1	45.4 41.6	50.1 43.7	46.8 43.6	42.4 38.8	52.5 51.8	59.4 57.8	35.9 34.6	51.8 43.2	56.4 53.2	52.4 50.3	50.2 42.2	48.8 44.8	41.1 33.3	43.5 30.7	43.4 34.0	45.1 46.5	45.9 49.4	45.5 55.7	49.8 59.0	47.1 45.1
Tuesday 03-07-23 Northbound Southbound	43.2 44.0	56.5 58.1	48.1 39.2	52.6 50.0	55.5 51.6	48.1 51.8	43.0 42.8	41.7 46.9	45.5 48.6	43.1 38.7	52.5 53.2	55.3 59.4	29.4 33.2	53.5 41.3	58.3 49.5	55.8 51.8	48.4 46.4	50.2 36.5	38.5 39.7	22.4 42.7	27.9 35.3	36.9 45.7	43.1 46.1	44.2 49.5	55.1 58.6	43.5 45.7
Wednesday 03-08-23 Northbound Southbound	46.8 31.8	57.4 59.5	52.2 42.1	52.3 50.8	44.6 48.7	45.3 47.7	45.7 44.9	45.9 41.5	51.0 47.6	40.9 42.3	52.9 50.0	48.2 53.8	35.7 35.3	46.9 53.2	45.6 53.5	46.4 50.9	43.2 45.5	47.0 46.0	42.2 39.6	32.8 35.5	42.9 57.2	45.0 48.8	33.4 41.7	47.1 30.0	52.9 52.4	44.6 45.2
Thursday 03-09-23 Northbound Southbound	29.3 39.5	54.8 59.4	48.0 45.4	51.8 50.8	43.2 50.8	46.2 48.1	43.6 45.2	50.5 47.1	40.1 48.1	50.5 24.6	50.0 53.7	48.3 52.5	35.0 30.3	49.7 52.7	55.1 51.5	52.9 45.0	42.3 44.2	56.3 44.3	36.2 40.5	42.8 41.6	41.8 40.1	47.0 57.3	47.2 44.5	50.0 52.0	54.0 59.0	46.2 44.9
Friday 03-10-23 Northbound Southbound	27.6 33.8	62.6 56.7	44.8 48.2	50.5 55.6	44.0 47.0	44.5 43.7	42.1 45.4	51.3 47.1	47.8 47.7	39.7 40.4	56.2 50.7	48.5 47.9	30.6 32.8	50.7 48.7	53.8 51.7	50.2 51.2	50.6 47.0	47.8 44.8	27.7 36.6	36.4 32.5	36.3 22.4	42.1 44.1	46.1 49.9	28.1 48.7	53.6 55.3	42.4 43.3
Saturday 03-11-23 Northbound Southbound	40.0 39.3	60.6 59.6	51.4 47.7	58.7 53.9	57.0 45.2	48.4 47.4	48.4 45.4	48.7 44.4	48.4 47.5	46.6 38.0	51.6 54.6	53.8 54.1	35.9 38.1	54.8 51.2	53.7 51.2	51.4 51.9	44.6 49.3	44.5 48.2	39.2 38.4	41.6 34.4	40.2 27.0	44.0 48.1	51.3 42.4	42.6 25.6	61.6 32.9	47.6 43.6
Sunday 03-12-23 Northbound Southbound	40.7 30.2	59.5 59.8	43.7 43.9	51.4 48.7	45.5 47.8	44.9 47.0	44.8 46.7	44.6 47.6	45.2 47.9	44.0 40.2	55.7 53.3	57.4 56.7	35.1 39.0	51.8 51.7	52.1 55.6	50.3 53.9	46.4 49.0	46.6 44.5	17.2 43.4	27.1 25.6	40.0 28.9	45.5 48.6	44.1 49.5	44.2 24.1	56.9 25.0	43.4 43.7
Monday 03-13-23 Northbound Southbound	38.3 32.5	62.6 58.7	49.4 46.7	53.1 54.4	50.8 51.0	45.8 51.4	47.2 49.3	46.1 48.5	50.5 52.4	45.6 39.9	53.0 51.2	56.1 55.5	28.5 37.4	50.0 53.0	56.2 55.9	54.5 49.5	45.8 44.4	44.4 50.8	44.1 35.6	40.2 44.6	30.4 39.4	45.2 50.1	42.4 42.3	60.3 53.3	57.7 59.0	45.9 47.3
Tuesday 03-14-23 Northbound Southbound	37.0 4.8	59.4 58.0	47.2 39.1	52.9 47.1	43.7 42.9	46.4 42.7	44.4 44.6	53.2 44.8	54.4 48.6	40.5 32.0	54.9 53.2	56.4 53.0	34.0 36.5	52.2 49.3	56.6 55.6	53.4 50.8	41.5 45.2	42.6 47.3	31.6 30.3	38.3 39.6	40.4 20.6	45.9 48.9	44.4 42.9	55.7 48.1	57.6 58.6	46.4 42.8
Wednesday 03-15-23 Northbound Southbound	29.0 7.2	57.7 58.4	47.4 46.2	51.3 52.6	43.0 44.4	44.4 45.3	42.1 42.1	40.2 47.8	47.7 49.7	47.0 29.5	51.6 52.3	52.3 56.1	34.4 37.9	48.6 50.8	51.8 50.1	50.0 51.4	45.0 38.0	21.6 45.2	18.0 34.7	28.1 -	26.2 33.3	40.5 46.0	44.0 47.3	49.7 43.3	53.0 59.8	41.3 45.5
Thursday 03-16-23 Northbound Southbound	32.5 4.1	59.8 58.0	46.4 43.5	52.6 52.7	49.5 47.4	45.4 44.3	44.5 43.2	47.0 46.5	47.0 52.9	45.4 20.7	51.2 50.0	52.9 53.7	29.3 33.0	49.5 50.5	51.9 52.1	49.8 47.1	43.7 44.6	43.6 41.9	35.9 25.0	35.2 20.6	26.0 19.8	37.0 46.3	43.2 41.8	51.5 50.3	57.1 59.8	42.9 39.8
Friday 03-17-23 Northbound Southbound	32.6 24.5	66.6 56.5	47.6 43.4	53.8 54.5	49.3 47.5	47.7 50.6	43.3 43.1	45.7 50.5	48.9 48.4	45.8 41.5	51.6 53.7	48.2 54.8	25.1 39.7	48.0 51.3	54.6 51.0	49.5 50.3	46.5 44.1	37.4 38.1	18.2 37.6	34.4 33.9	32.1 40.6	35.1 44.6	44.1 39.7	50.1 54.3	56.8 59.7	40.8 46.1
Saturday 03-18-23 Northbound Southbound	37.8 35.9	55.3 57.6	49.3 46.8	52.9 54.2	50.2 51.2	47.6 50.2	45.5 45.9	45.0 51.8	46.0 50.4	38.7 38.2	53.6 54.7	51.1 59.2	35.5 40.7	52.0 51.6	55.5 54.5	51.7 47.5	46.2 46.9	42.8 37.6	39.9 38.4	34.3 25.6	32.5 13.8	43.7 48.2	48.8 41.5	51.7 24.2	55.8 38.6	46.1 39.7
Highest Speed	46.8	66.6	52.8	58.7	57.0	51.8	49.3	53.2	54.4	50.5	56.2	59.4	41.2	54.8	58.3	55.8	50.6	56.3	44.1	44.6	57.2	57.3	51.3	60.3	61.6	47.6
Lowest Speed	24.5	52.3	39.1	47.1	42.9	42.7	41.6	40.2	40.1	20.7	50.0	47.9	25.1	41.3	45.6	45.0	38.0	21.6	17.0	20.6	13.8	35.1	33.4	21.5	25.0	39.7

Note: In this table, the travel speeds in the 3 SB runs in segment 1 (Stock Island) from 3-14-23 to 3-16-23 are circled and were excluded from segment and overall travel speed calculations as they were very low (4-7 mph) and considered outliers.

2023 TRAVEL SPEED DATA

	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	OVERALL
	Stock Island	Boca Chica	Big Coppitt	Saddlebunch	Sugarloaf	Cudjoe	Summerland	Ramrod	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Marathon	Grassy	Duck	Long	L. Matecumbe	Tea Table	U. Matecumbe	Windley	Plantation	Tavernier	Largo	Cross	Dade	
TRAVEL SPEED ANALYSIS																										
<i>Mean</i>	32.6	58.4	46.0	52.7	47.9	46.8	44.8	47.1	48.2	39.9	52.6	54.1	34.8	50.4	53.3	50.8	45.5	44.1	34.2	34.1	33.4	45.3	44.4	44.2	53.8	43.8
<i>Median</i>	34.9	58.1	46.6	52.7	47.7	46.5	44.8	47.0	48.0	40.4	52.5	54.5	35.2	51.3	53.6	50.9	45.3	44.8	36.9	34.4	33.3	45.6	44.1	48.4	56.3	44.2
<i>Standard Deviation</i>	11.1	2.8	3.5	2.3	3.6	2.3	2.0	3.3	2.8	6.6	1.7	3.5	3.9	2.9	2.7	2.5	2.7	6.1	8.2	6.8	9.0	4.4	3.7	11.0	8.3	2.6
<i>Highest Speed</i>	46.8	66.6	52.8	58.7	57.0	51.8	49.3	53.2	54.4	50.5	56.2	59.4	41.2	54.8	58.3	55.8	50.6	56.3	44.1	44.6	57.2	57.3	51.3	60.3	61.6	47.6
<i>Lowest Speed</i>	4.1	52.3	39.1	47.1	42.9	42.7	41.6	40.2	40.1	20.7	50.0	47.9	25.1	41.3	45.6	45.0	38.0	21.6	17.0	20.6	13.8	35.1	33.4	21.5	25.0	36.6
<i>95% Confidence Interv</i>	4.1	1.0	1.3	0.8	1.3	0.8	0.7	1.2	1.0	2.4	0.6	1.3	1.5	1.1	1.0	0.9	1.0	2.3	3.0	2.5	3.3	1.6	1.4	4.1	3.1	1.0
<i>Upper Speed</i>	36.7	59.4	47.3	53.5	49.3	47.7	45.5	48.3	49.2	42.3	53.2	55.4	36.2	51.5	54.3	51.7	46.5	46.4	37.2	36.7	36.7	46.9	45.7	48.3	56.9	44.8
<i>Lower Speed</i>	28.4	57.3	44.7	51.9	46.6	46.0	44.1	45.9	47.2	37.4	52.0	52.8	33.3	49.3	52.3	49.9	44.4	41.9	31.2	31.6	30.0	43.7	43.0	40.1	50.7	42.9
LOS ANALYSIS																										
<i>Posted Speed</i>	40.1	54.7	46.3	53.6	45.0	45.0	45.0	45.0	45.0	45.0	50.9	54.4	42.3	54.6	55.0	53.4	45.9	45.0	45.0	45.0	45.0	47.2	45.0	51.4	54.8	49.4
<i>Signal Adjustment</i>	N/A	N/A	N/A	N/A	6.4	N/A	N/A	N/A	N/A	5.3	N/A	N/A	N/A	2.1	N/A	N/A	N/A	N/A	N/A	N/A	5.4	5.7	5.2	N/A	N/A	N/A
<i>Level of Service Median</i>	B	A	B	B	A	A	B	A	A	B	A	B	A	C	B	C	B	B	E	E	D	A	A	C	N/A	D
<i>95% Upper</i>	A	A	B	B	A	A	B	A	A	A	A	B	A	C	B	C	B	B	E	E	C	A	A	C	N/A	D
<i>95% Lower</i>	B	A	C	C	A	B	B	B	A	C	B	C	B	D	C	C	B	C	F	E	E	A	A	E	N/A	D
<i>LOS C Standard</i>	22.0	50.2	41.8	49.1	34.1	40.5	40.5	40.5	40.5	35.2	46.4	49.9	22.0	48.0	50.5	48.9	41.4	40.5	40.5	40.5	35.1	37.0	35.3	46.9	N/A	45.0
<i>Reserve</i>	12.9	7.9	4.7	3.5	13.6	6.0	4.3	6.5	7.5	5.2	6.1	4.6	13.2	3.3	3.1	2.0	4.0	4.3	-3.6	-6.1	-1.8	8.6	8.8	1.5	N/A	-0.8

2023 TRAVEL SPEED DATA

	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	OVERALL	
	Stock Island	Boca Chica	Big Coppitt	Saddlebunch	Sugarloaf	Cudjoe	Summerland	Ramrod	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Marathon	Grassy	Duck	Long	L. Matecumbe	Tea Table	U. Matecumbe	Windley	Plantation	Tavernier	Largo	Cross	Dade		
TRAVEL SPEED ANALYSIS																											
<i>Mean</i>	35.8	58.4	46.0	52.7	47.9	46.8	44.8	47.1	48.2	39.9	52.6	54.1	34.8	50.4	53.3	50.8	45.5	44.1	34.2	34.1	33.4	45.3	44.4	44.2	53.8	44.2	
<i>Median</i>	37.0	58.1	46.6	52.7	47.7	46.5	44.8	47.0	48.0	40.4	52.5	54.5	35.2	51.3	53.6	50.9	45.3	44.8	36.9	34.4	33.3	45.6	44.1	48.4	56.3	44.7	
<i>Standard Deviation</i>	6.0	2.8	3.5	2.3	3.6	2.3	2.0	3.3	2.8	6.6	1.7	3.5	3.9	2.9	2.7	2.5	2.7	6.1	8.2	6.8	9.0	4.4	3.7	11.0	8.3	2.2	
<i>Highest Speed</i>	46.8	66.6	52.8	58.7	57.0	51.8	49.3	53.2	54.4	50.5	56.2	59.4	41.2	54.8	58.3	55.8	50.6	56.3	44.1	44.6	57.2	57.3	51.3	60.3	61.6	47.6	
<i>Lowest Speed</i>	24.5	52.3	39.1	47.1	42.9	42.7	41.6	40.2	40.1	20.7	50.0	47.9	25.1	41.3	45.6	45.0	38.0	21.6	17.0	20.6	13.8	35.1	33.4	21.5	25.0	39.7	
<i>95% Confidence Interv</i>	2.2	1.0	1.3	0.8	1.3	0.8	0.7	1.2	1.0	2.4	0.6	1.3	1.5	1.1	1.0	0.9	1.0	2.3	3.0	2.5	3.3	1.6	1.4	4.1	3.1	0.8	
<i>Upper Speed</i>	38.1	59.4	47.3	53.5	49.3	47.7	45.5	48.3	49.2	42.3	53.2	55.4	36.2	51.5	54.3	51.7	46.5	46.4	37.2	36.7	36.7	46.9	45.7	48.3	56.9	45.0	
<i>Lower Speed</i>	33.6	57.3	44.7	51.9	46.6	46.0	44.1	45.9	47.2	37.4	52.0	52.8	33.3	49.3	52.3	49.9	44.4	41.9	31.2	31.6	30.0	43.7	43.0	40.1	50.7	43.3	
LOS ANALYSIS																											
<i>Posted Speed</i>	40.1	54.7	46.3	53.6	45.0	45.0	45.0	45.0	45.0	45.0	50.9	54.4	42.3	54.6	55.0	53.4	45.9	45.0	45.0	45.0	45.0	47.2	45.0	51.4	54.8	49.4	
<i>Signal Adjustment</i>	N/A	N/A	N/A	N/A	6.4	N/A	N/A	N/A	N/A	5.3	N/A	N/A	N/A	2.1	N/A	N/A	N/A	N/A	N/A	N/A	5.4	5.7	5.2	N/A	N/A	N/A	
<i>Level of Service Median</i>	A	A	B	B	A	A	B	A	A	B	A	B	A	C	B	C	B	B	E	E	D	A	A	C	N/A	D	
<i>95% Upper</i>	A	A	B	B	A	A	B	A	A	A	A	B	A	C	B	C	B	B	E	E	C	A	A	C	N/A	D	
<i>95% Lower</i>	B	A	C	C	A	B	B	B	A	C	B	C	B	D	C	C	B	C	F	E	E	A	A	E	N/A	D	
<i>LOS C Standard</i>	22.0	50.2	41.8	49.1	34.1	40.5	40.5	40.5	40.5	35.2	46.4	49.9	22.0	48.0	50.5	48.9	41.4	40.5	40.5	40.5	35.1	37.0	35.3	46.9	N/A	45.0	
<i>Reserve</i>	15.0	7.9	4.7	3.5	13.6	6.0	4.3	6.5	7.5	5.2	6.1	4.6	13.2	3.3	3.1	2.0	4.0	4.3	-3.6	-6.1	-1.8	8.6	8.8	1.5	N/A	-0.3	

2023 TRAVEL SPEED DATA (SUPPLEMENTAL RUNS)

	<i>Stock Island</i>	<i>Boca Chica</i>	<i>Big Coppitt</i>	<i>Saddlebunch</i>	
	1.0	2.0	3.0	4.0	
Wednesday 03-15-23 Northbound (Run 1)	34.2	59.2	40.0	52.8	50.1
Southbound (Run 1)	22.0	55.5	26.0	49.4	41.6
Wednesday 03-15-23 Southbound (Run 2)	10.1	62.6	44.6	36.5	33.6
Thursday 03-16-23 Northbound (Run 1)	35.7	60.3	36.6	52.4	49.7
Southbound (Run 1)	25.0	59.0	32.9	54.3	46.7
Thursday 03-16-23 Southbound (Run 2)	11.0	58.7	31.9	35.6	32.5
Friday 03-17-23 Northbound (Run 1)	38.9	56.3	47.7	57.0	53.3
Southbound (Run 1)	32.8	61.0	42.2	49.7	49.2
Friday 03-17-23 Southbound (Run 2)	43.1	61.1	41.8	53.4	52.5
Highest Speed	43.1	62.6	47.7	57.0	53.3
Lowest Speed	10.1	55.5	26.0	35.6	32.5

2023 TRAVEL SPEED DATA (SUPPLEMENTAL RUNS)

PAGE 2 OF 2

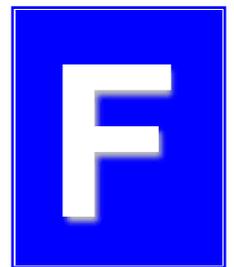
	<i>Stock Island</i>	<i>Boca Chica</i>	<i>Big Coppitt</i>	<i>Saddlebunch</i>	OVERALL
	1.0	2.0	3.0	4.0	OVERALL
TRAVEL SPEED ANALYSIS					
<i>Mean</i>	28.1	59.3	38.2	49.0	45.5
<i>Median</i>	32.8	59.2	40.0	52.4	49.2
<i>Standard Deviation</i>	11.8	2.3	6.9	7.7	7.8
<i>Highest Speed</i>	43.1	62.6	47.7	57.0	53.3
<i>Lowest Speed</i>	10.1	55.5	26.0	35.6	32.5
<i>95% Confidence Interval</i>	4.4	0.8	2.6	2.9	2.9
<i>Upper Speed</i>	32.5	60.1	40.8	51.9	48.4
<i>Lower Speed</i>	23.7	58.5	35.6	46.2	42.6
LOS ANALYSIS					
<i>Posted Speed</i>	40.1	56.1	46.3	53.6	49.5
<i>Signal Adjustment</i>	N/A	N/A	N/A	N/A	N/A
<i>Level of Service Median</i>	B	A	D	B	B
<i>95% Upper</i>	F	A	D	C	B
<i>95% Lower</i>	B	A	E	D	D
<i>LOS C Standard</i>	22.0	51.6	41.8	49.1	45.0
<i>Reserve</i>	10.8	7.6	-1.8	3.3	4.2

APPENDIX F

Comparisons of Historical Travel Speed Data

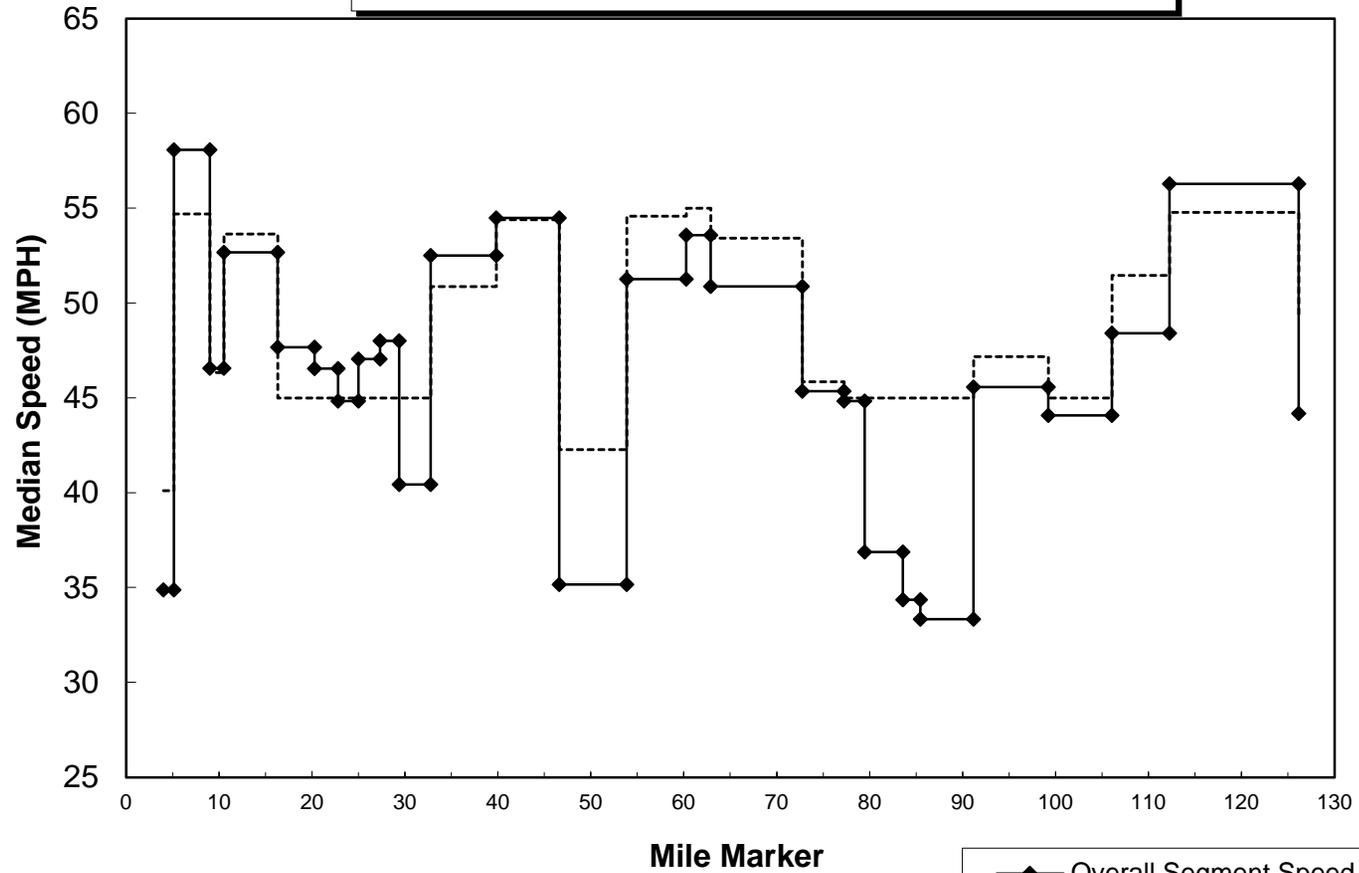


A P P E N D I X



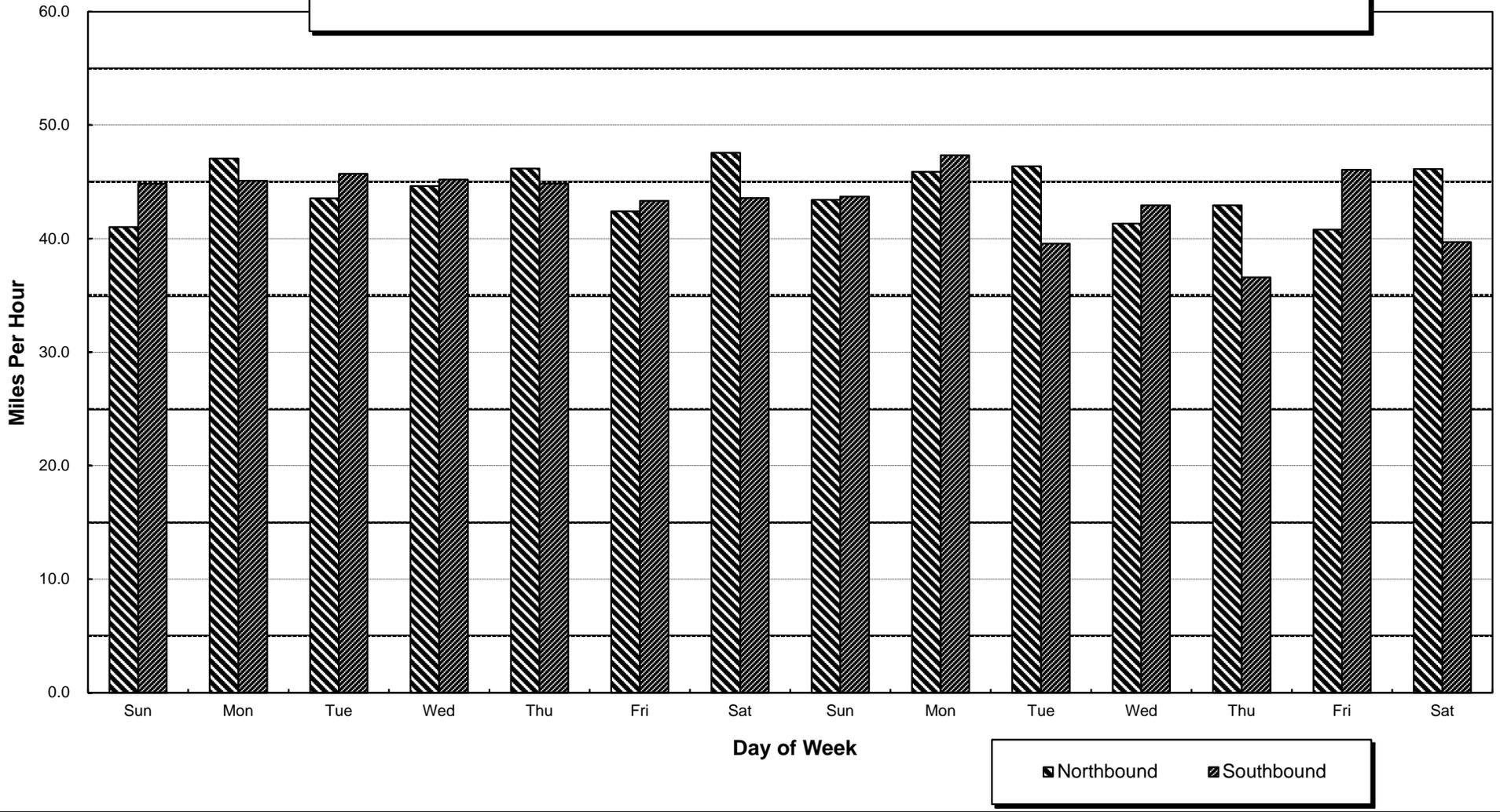
AECOM

US - 1 MEDIAN NON-DIRECTIONAL SPEEDS 2023

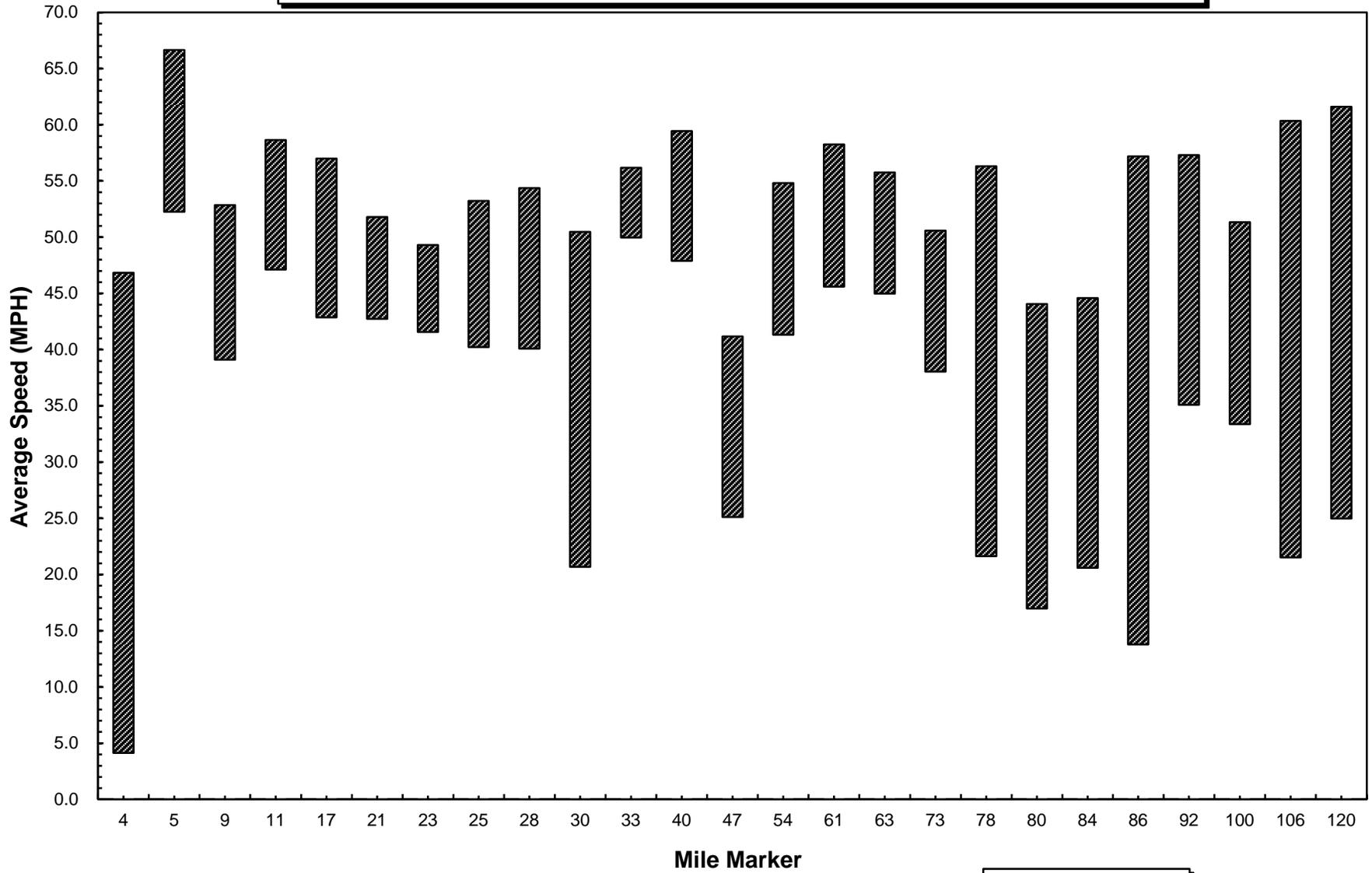


—◆— Overall Segment Speed
- - - - - Avg. Posted Speed

US -1 OVERALL TRAVEL SPEEDS BY DAY OF WEEK 2023



US - 1 RANGE OF NON-DIRECTIONAL TRAVEL SPEEDS 2023



Range of...

COMPARISON OF HISTORICAL TRAVEL SPEED DATA (SHEET 1 OF 2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Date	Overall
	Stock Island	Boca Chica	Big Cypress	Sakabakunch	Sugarloaf	Coloche	Summerland	Rainbow	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Mirrahon	Grassy	Duck	Long	L. Matcumbe	Tea Table	U. Matcumbe	Widley	Plantation	Tavernier	Key Largo	Cross			
Mean (mph)																											
2023	32.6	58.4	46.0	52.7	47.9	46.8	44.8	47.1	48.2	39.9	52.6	54.1	34.8	50.4	53.3	50.8	45.5	44.1	34.2	34.1	33.4	45.3	44.4	44.2	53.8	43.8	
2021	37.3	60.0	46.9	53.5	48.9	48.3	45.8	46.2	48.5	41.2	54.5	53.6	39.6	51.2	52.7	49.5	47.2	44.2	33.8	35.1	32.9	48.3	44.6	45.8	55.7	45.0	
2019	33.0	56.1	45.8	51.8	47.8	47.1	45.0	46.4	47.9	41.1	53.7	52.9	38.1	51.2	53.9	51.6	49.4	46.6	34.6	35.5	33.6	44.7	44.0	45.4	52.7	44.4	
2017	27.7	59.2	47.4	53.1	47.5	47.7	45.2	46.2	47.7	38.6	53.3	53.6	37.7	51.8	53.6	50.9	50.1	47.7	36.7	38.7	37.6	46.1	43.4	49.1	56.9	45.0	
2015	33.1	57.7	46.8	52.2	47.7	46.4	44.4	46.5	47.2	35.2	51.8	52.3	37.6	50.8	50.1	48.3	48.5	45.6	37.0	35.1	36.3	47.2	44.8	50.0	55.1	44.8	
2013	33.0	56.4	45.5	52.1	47.1	47.4	44.9	45.9	47.0	39.9	53.6	53.5	35.9	48.9	44.1	50.8	49.3	47.8	40.5	38.3	39.4	47.4	43.6	52.1	57.5	45.7	
2012	33.5	56.8	44.9	52.3	46.0	46.4	43.8	46.5	46.6	37.4	52.4	54.1	36.7	51.4	53.3	52.4	49.1	46.4	40.4	41.4	39.2	48.1	45.9	50.9	55.9	46.1	
2011	32.9	58.1	44.8	52.5	47.3	47.3	46.1	46.6	47.7	37.8	53.1	55.3	36.5	51.4	53.8	51.8	49.7	49.4	40.8	41.8	41.7	48.8	44.7	52.1	55.2	46.9	
2010	32.7	57.4	45.1	51.6	47.9	47.2	45.8	46.4	46.2	39.2	53.8	53.9	36.6	46.3	54.6	52.2	49.6	49.0	40.7	43.4	40.2	47.5	46.1	51.0	49.1	46.6	
2009	34.7	56.7	42.2	51.6	46.4	47.4	45.0	47.5	47.5	35.3	51.7	55.2	38.4	49.8	50.4	51.4	51.0	47.8	39.9	39.4	39.2	47.8	46.0	50.7	51.5	46.3	
2008	31.4	54.7	44.3	51.7	46.9	46.8	45.5	47.1	46.6	35.0	52.1	54.9	37.8	50.7	53.5	51.8	50.5	49.6	41.9	44.1	41.4	46.8	43.7	38.2	52.0	45.5	
2007	33.6	58.3	46.1	52.0	47.1	49.9	45.7	47.9	46.8	36.9	54.3	55.3	37.9	50.9	53.0	51.6	51.2	49.3	41.0	40.1	49.4	46.4	46.4	37.7	54.0	45.6	
2006	31.8	57.2	46.5	52.6	48.1	48.3	46.2	46.0	47.5	37.8	53.3	54.2	36.4	50.3	54.6	52.4	49.2	49.5	39.5	40.8	41.7	49.2	45.9	42.6	56.5	45.9	
2005	29.5	54.4	44.3	49.7	46.4	47.2	45.4	47.5	46.8	35.1	51.7	54.5	34.4	49.3	51.2	49.4	49.1	47.9	39.8	40.4	38.7	46.6	44.2	43.9	56.0	44.2	
Change(1)	-0.4	2.3	0.2	0.9	0.1	-0.2	-0.2	0.7	0.3	-1.2	-1.1	1.2	-3.4	-0.9	-0.6	-0.8	-4.0	-2.5	-0.4	-1.4	-0.2	0.6	0.4	-1.2	1.2	-0.5	
Change(2)	-3.0	1.7	0.7	1.2	-1.9	3.6	0.1	-0.7	1.8	1.8	-0.8	1.2	-4.9	-0.7	1.2	0.0	-4.2	-5.3	-6.1	-7.6	-5.1	-3.5	-2.7	-5.5	-2.7	-3.1	
Median (mph)																											
2023	34.9	58.1	46.6	52.7	47.7	46.5	44.8	47.0	48.0	40.4	52.5	54.5	35.2	51.3	53.6	50.9	45.3	44.8	36.9	34.4	33.3	45.6	44.1	48.4	56.3	44.2	
2021	40.0	59.9	47.5	53.5	48.8	47.9	46.1	46.5	48.8	42.7	54.8	53.2	39.6	51.4	53.2	49.9	48.2	46.6	35.3	39.3	34.7	49.4	45.0	49.1	58.1	45.5	
2019	33.0	55.8	46.1	52.0	48.1	47.2	45.2	46.7	48.1	42.4	54.2	53.4	37.9	50.7	53.3	52.0	49.6	46.9	36.4	37.0	35.3	46.9	44.2	50.2	55.9	44.6	
2017	29.4	59.6	46.6	53.3	48.3	48.2	45.0	46.1	47.7	39.4	53.7	53.3	37.9	51.6	53.3	50.5	49.8	47.6	39.2	41.0	40.5	47.4	44.4	52.7	57.6	46.0	
2015	32.9	58.1	47.2	51.7	47.5	46.9	44.1	46.6	47.5	38.0	52.1	52.6	37.9	51.5	50.1	48.8	48.4	45.7	38.5	37.9	38.5	48.5	44.8	52.0	55.8	45.1	
2013	33.1	57.1	46.5	51.2	47.4	48.0	44.9	45.8	47.9	40.1	53.7	54.9	35.8	51.0	47.8	51.2	49.9	47.4	40.2	41.2	41.3	46.9	43.9	52.9	58.3	45.9	
2012	32.0	57.0	45.3	52.6	46.4	45.4	44.7	45.8	47.4	39.2	53.5	53.5	36.7	51.0	53.0	52.6	49.2	45.2	40.7	41.3	41.9	48.7	46.9	52.2	57.2	47.0	
2011	33.7	58.4	45.9	52.8	46.7	46.8	46.0	46.4	48.0	38.7	53.4	55.1	36.4	51.3	53.7	52.2	49.6	49.2	41.9	42.7	41.5	48.8	44.8	52.4	55.5	47.1	
2010	34.0	57.3	43.8	52.3	48.0	47.1	45.9	45.4	46.5	39.7	53.8	53.8	36.7	47.2	54.0	53.1	49.2	49.6	41.4	45.6	41.3	47.7	45.8	50.7	48.9	46.9	
2009	34.2	56.7	42.3	52.4	46.8	47.0	44.7	47.6	47.9	37.9	51.7	55.4	38.2	50.3	51.3	51.3	51.4	48.5	40.8	42.2	39.6	48.2	46.0	52.1	51.1	46.6	
2008	31.7	55.5	45.7	51.6	47.2	47.7	46.4	47.7	46.6	35.7	52.3	56.1	37.3	50.7	54.4	52.3	51.0	50.0	42.1	43.8	41.9	47.6	44.4	38.3	52.0	46.4	
2007	34.6	57.9	45.2	52.2	47.8	48.5	45.6	48.1	47.1	39.0	54.1	55.1	37.7	50.9	52.9	51.3	51.1	49.8	41.4	42.4	41.8	49.9	45.7	37.1	53.9	45.7	
2006	31.2	57.7	46.2	52.1	48.1	48.1	45.7	46.3	48.2	38.0	54.3	53.9	36.0	50.3	53.9	52.1	49.0	50.1	40.6	41.4	42.2	49.0	45.9	44.0	56.5	45.9	
2005	30.2	55.8	44.7	50.9	46.6	47.8	45.7	47.8	46.8	36.4	52.6	56.6	35.2	49.5	53.6	50.8	50.0	49.9	39.1	41.8	39.4	47.7	44.7	44.4	57.5	45.3	
Change(1)	1.8	2.3	0.4	0.7	-0.4	-0.7	-0.4	0.3	-0.1	-1.9	-1.7	1.1	-2.7	0.5	0.2	-1.1	-4.2	-2.0	0.5	-2.6	-1.9	-1.3	-0.2	-1.8	0.4	-0.5	
Change(2)	-1.2	2.0	-0.1	0.9	-2.6	3.5	0.0	-1.3	1.5	1.5	-0.8	2.1	-4.5	0.2	1.0	0.2	-5.1	-4.9	-3.2	-9.0	-5.4	-2.6	-2.7	-2.8	-0.5	-2.7	
Highest (mph)																											
2023	46.8	66.6	52.8	58.7	57.0	51.8	49.3	53.2	54.4	50.5	56.2	59.4	41.2	54.8	58.3	55.8	50.6	56.3	44.1	44.6	57.2	57.3	51.3	60.3	61.6	47.6	
2021	53.2	62.2	56.0	60.0	55.6	55.7	51.1	53.1	53.9	49.5	58.1	62.1	45.2	57.3	60.5	57.8	52.5	53.1	43.5	46.9	44.5	57.9	51.9	57.1	65.9	49.6	
2019	47.3	59.9	56.6	56.7	52.6	50.7	50.3	52.7	53.2	52.1	58.6	57.1	46.4	57.4	60.2	58.0	56.5	55.5	44.3	48.9	46.1	52.5	50.0	56.2	60.6	50.5	
2017	44.0	60.4	51.5	58.9	51.8	52.6	51.1	52.8	51.0	46.4	57.3	61.0	43.1	57.1	59.2	57.6	56.9	59.4	48.0	48.6	45.2	51.4	49.0	57.4	65.6	49.4	
2015	47.1	59.9	55.8	57.5	52.0	51.3	50.8	50.2	52.3	44.6	59.4	58.0	46.5	55.0	57.3	53.9	57.8	55.4	43.4	46.7	46.4	51.9	49.3	57.1	61.4	49.1	
2013	45.2	61.0	53.4	58.1	51.6	50.5	49.0	53.4	55.9	56.6	57.0	59.2	42.6	55.0	66.6	56.7	55.7	54.2	45.7	48.6	55.7	53.5	49.9	56.5	62.6	48.4	
2012	47.8	64.5	52.7	58.8	51.3	54.8	49.7	51.6	53.1	45.0	59.6	59.9	50.6	57.4	61.2	60.4	56.2	54.1	45.1	62.8	47.5	53.1	51.9	59.4	61.0	49.2	
2011	42.0	62.5	53.1	57.8	55.3	55.9	52.1	52.0	52.3	45.4	57.1	61.3	41.1	60.1	64.8	58.4	57.0	59.4	47.4	49.4	54.9	55.3	50.6	58.3	60.0	48.7	
2010	46.3	61.5	54.5	58.5	60.9	51.9	52.6	57.8	51.8	46.4	56.0	61.0	42.6	50.5	78.5	57.1	54.8	55.9	45.4	49.3	53.6	51.9	51.0	56.3	53.4	48.4	
2009	41.6	61.7	49.9	55.9	53.2	52.6	51.0	52.6	52.4	45.1	56.3	59.3	44.0	54.3	60.4	56.0	55.7	54.4	45.8	55.2	45.2	50.9	51.6	59.2	55.9	48.4	
2008	45.4	59.1	49.5	56.2	50.6	51.1	49.2	50.6	52.4	42.9	54.9	58.9	44.4	54.6	57.4	54.8	54.6	59.0	47.5	56.3	46.5	50.7	54.0	50.8	57.4	48.2	
2007	47.3	65.9	58.9	57.0	56.5	66.0	54.6	56.7	53.3	55.6	59.0	65.4	43.9	58.4	62.0	60.6	56.0	56.8	47.3	52.0	46.5	54.5	60.0	54.5	62.6	48.3	
2006	44.4	60.2	54.7	59.3	57.5	54.0	53.8	53.4	52.2	44.6	58.7	61.0	47.4	57.0	61.8	60.0	56.3	61.5	48.2	51.1	51.0	55.3	52.9	48.7	61.4	48.3	
2005	40.9	58.5	49.7	56.1	51.2	51.6	51.9	53.2	53.3	44.4	59.4	64.8	40.3	58.5	57.7	56.1	57.6	57.3	45.5	48.7	45.7	50.2	49.2				

COMPARISON OF HISTORICAL TRAVEL SPEED DATA (SHEET 2 OF 2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Overall
	Stock Island	Boca Chica	Big Coppitt	Sakdabunuch	Sugarcroft	Cudjoe	Summerland	Ramrod	Torch	Big Pine	Bahia Honda	7-Mile Bridge	Marathon	Grassy	Duck	Long	L. Mascumbe	Tea Table	U. Mascumbe	Winekey	Planation	Tavernier	Key Largo	Cross	Date	
Mean (mph)																										
2004	31.8	57.5	46.2	52.5	48.1	47.5	46.3	46.2	48.4	37.2	52.5	52.7	34.9	50.1	54.1	52.7	50.1	48.6	41.4	39.4	38.5	48.1	45.2	45.7	57.6	45.1
2003	35.7	56.8	45.3	52.4	47.8	47.2	45.4	46.7	47.1	38.2	54.4	54.2	36.8	50.0	52.6	51.5	49.5	48.6	41.1	39.6	40.5	50.1	48.3	47.4	57.9	45.9
2002	34.0	56.6	45.8	51.5	48.0	47.9	44.4	44.3	44.2	32.3	51.1	51.8	36.1	50.3	54.3	52.4	50.7	49.2	41.6	38.9	40.1	48.9	46.1	48.3	55.3	45.8
2001	35.3	59.4	48.2	53.5	49.0	48.4	44.7	47.3	47.0	31.5	54.7	53.9	37.9	50.8	53.8	54.4	51.4	50.4	40.5	37.5	41.3	49.8	47.4	48.4	58.1	46.4
2000	31.9	58.6	47.0	53.2	48.8	49.0	45.0	47.4	45.4	35.1	52.7	52.6	38.0	51.0	53.8	52.2	50.7	50.2	39.9	37.7	37.5	48.9	46.4	42.3	57.8	45.7
1999	28.5	57.1	45.8	52.7	51.0	47.5	44.9	47.1	46.8	34.1	52.7	52.5	37.4	49.8	53.1	51.4	50.5	49.8	41.0	37.5	42.2	49.0	46.8	49.1	57.9	46.2
1998	28.8	57.3	46.4	52.1	50.0	48.2	44.7	47.1	46.3	33.3	52.7	52.8	38.2	51.6	52.1	50.9	50.2	48.8	40.8	36.7	38.4	48.9	47.2	48.4	58.2	45.9
1997	32.4	58.4	47.2	53.1	50.2	48.9	45.6	47.1	46.2	35.4	53.5	51.7	40.5	52.0	53.0	52.2	50.8	49.5	41.7	35.0	40.5	49.9	46.6	45.8	58.4	46.7
1996	31.5	57.2	48.2	52.9	50.1	47.8	44.9	48.1	46.9	35.8	53.7	52.4	39.1	51.7	53.6	50.3	51.0	48.9	41.2	38.4	40.5	49.6	46.4	47.7	56.2	46.8
1995	35.5	57.8	47.4	52.5	50.9	47.5	44.4	46.8	46.4	34.6	53.5	52.2	39.5	51.3	51.1	51.5	50.9	49.2	41.8	40.2	41.7	49.7	49	50.6	57.9	47.4
1994	35.9	57.7	47.2	51.7	50.9	49.0	45.4	47.5	46.8	35.0	53.2	52.1	39.3	50.9	53.5	51.2	50.2	50.1	41.6	39.3	41.6	49.7	48.6	49.3	57.2	46.7
1993	36.7	57.9	47.8	53.0	50.8	49.1	44.9	48.8	47.3	35.4	53.0	51.2	40.4	52.0	53.2	52.0	50.9	49.6	41.8	41.1	42.2	49.3	47.5	49.7	57.3	47.2
1992	35.6	56.7	45.3	51.5	49.8	43.2	44.7	47.8	46.4	38.1	53.4	52.9	39.7	51.1	52.1	50.8	49.7	49.4	40.3	41.7	38.5	48.8	47.1	49.7	56.5	46.9
Change(1)	-0.4	2.3	0.2	0.9	0.1	-0.2	-0.2	0.7	0.3	-1.2	-1.1	1.2	-3.4	-0.9	-0.6	-0.8	-4.0	-2.5	-0.4	-1.4	-0.2	0.6	0.4	-1.2	1.2	-0.5
Change(2)	-3.0	1.7	0.7	1.2	-1.9	3.6	0.1	-0.7	1.8	1.8	-0.8	1.2	-4.9	-0.7	1.2	0.0	-4.2	-5.3	-6.1	-7.6	-5.1	-3.5	-2.7	-5.5	-2.7	-3.1
Median (mph)																										
2004	32.0	58.2	46.1	53.7	48.3	48.1	46.4	46.4	47.6	38.4	52.5	53.1	35.2	50.3	54.4	52.9	50.5	49.0	40.9	41.8	40.0	48.3	45.5	45.0	58.4	45.4
2003	35.8	58.0	46.1	52.3	48.3	47.5	45.3	46.7	47.2	39.7	54.2	54.3	38.2	50.9	53.0	52.3	50.1	49.2	41.4	42.2	41.3	49.9	48.4	47.7	58.9	46.1
2002	33.3	57.1	45.7	51.3	47.9	48.1	45.6	47.3	46.7	35.4	53.2	52.4	35.8	50.7	54.0	52.5	51.5	50.0	41.2	41.2	42.3	48.6	45.4	51.1	57.5	47.1
2001	34.6	59.6	48.6	53.0	49.2	47.6	44.9	47.5	47.6	32.9	54.7	53.2	37.7	51.3	55.1	54.5	51.3	50.0	41.2	39.5	42.5	49.7	47.5	48.9	58.5	46.9
2000	30.5	58.4	46.9	53.5	49.4	48.7	45.3	47.1	47.1	35.8	53.0	52.4	38.2	50.8	53.5	52.5	50.7	50.3	41.2	39.5	39.0	48.8	46.8	47.7	58.2	46.4
1999	27.3	57.0	45.5	52.8	51.4	47.6	45.2	47.8	47.7	34.1	52.1	52.6	37.4	50.7	53.1	52.1	50.4	49.6	41.6	38.4	42.0	49.1	45.7	50.5	57.6	46.7
1998	30.1	57.3	46.0	52.6	50.0	48.2	45.0	47.0	46.6	33.9	52.6	52.6	37.6	52.3	52.5	51.4	50.2	48.6	40.6	38.3	41.4	48.8	47.3	52.7	58.4	45.7
1997	32.6	58.5	46.1	53.4	49.9	48.5	45.1	47.6	46.8	36.7	53.2	52.8	40.1	51.9	52.4	52.3	51.3	50.7	42.0	38.4	41.6	50.5	47.4	49.1	58.8	46.5
1996	30.7	57.3	48.0	52.4	49.3	47.7	45.0	48.8	46.7	37.0	53.9	52.5	38.9	52.0	53.7	51.0	51.6	48.6	41.2	41.2	42.6	49.3	46.0	50.7	56.8	47.1
1995	34.7	57.3	47.5	52.2	50.9	47.4	44.5	47.3	46.4	35.1	53.6	51.8	39.3	51.0	51.5	51.2	51.9	49.5	41.7	41.1	43.1	49.6	48.6	52.2	58.2	47.8
1994	36.2	57.6	47.5	52.4	51.4	48.9	45.6	46.9	47.3	36.0	53.0	52.1	39.2	51.8	52.4	51.6	50.3	50.3	42.0	40.9	42.6	49.9	48.7	50.2	57.6	47.3
1993	37.1	57.9	48.2	53.3	51.1	49.2	45.3	49.4	47.4	37.7	53.5	51.3	40.5	52.7	53.9	51.4	50.7	49.1	41.9	41.4	43.7	49.2	47.6	50.6	57.3	47.4
1992	36.1	56.1	46.7	51.8	50.3	43.0	44.8	48.3	46.5	38.9	53.3	52.4	39.7	51.1	52.6	50.7	50.4	49.7	40.1	43.4	38.7	48.2	46.8	51.2	56.8	46.9
Change(1)	1.8	2.3	0.4	0.7	-0.4	-0.7	-0.4	0.3	-0.1	-1.9	-1.7	1.1	-2.7	0.5	0.2	-1.1	-4.2	-2.0	0.5	-2.6	-1.9	-1.3	-0.2	-1.8	0.4	-0.5
Change(2)	-1.2	2.0	-0.1	0.9	-2.6	3.5	0.0	-1.3	1.5	1.5	-0.8	2.1	-4.5	0.2	1.0	0.2	-5.1	-4.9	-3.2	-9.0	-5.4	-2.6	-2.7	-2.8	-0.5	-2.7
Highest (mph)																										
2004	59.7	62.4	56.9	61.4	54.0	51.8	63.5	52.6	65.2	45.4	59.0	59.5	41.5	55.8	58.9	56.8	56.8	56.2	48.5	50.9	43.9	52.8	53.4	55.6	62.4	47.9
2003	44.7	65.4	56.6	59.1	52.9	55.1	49.2	51.7	63.6	45.9	57.7	64.6	44.2	53.4	61.4	61.8	56.1	56.1	45.7	50.7	47.0	59.2	55.9	59.0	64.7	49.0
2002	44.8	64.1	59.2	56.2	55.2	53.6	51.4	52.1	52.4	43.6	56.9	58.5	51.7	54.5	61.8	58.3	56.7	57.8	52.1	53.8	53.2	53.7	50.9	55.0	64.4	49.3
2001	57.8	69.0	57.3	68.7	54.1	55.8	52.8	54.8	62.2	40.4	64.1	61.7	44.8	56.9	58.3	58.7	59.0	62.5	48.6	47.0	74.0	55.6	52.4	61.3	62.8	49.4
2000	45.5	66.6	57.2	61.1	54.8	57.7	51.0	56.6	54.0	44.7	57.5	57.3	43.6	56.1	59.0	56.0	56.1	71.7	44.3	50.5	46.0	53.9	52.6	55.6	64.5	49.0
1999	45.1	64.2	53.2	60.5	57.2	54.7	49.2	52.3	52.9	41.4	58.1	59.3	43.9	59.4	60.1	58.1	55.7	58.5	44.5	50.2	50.8	52.4	51.8	59.3	63.1	48.4
1998	37.6	66.1	57.1	59.2	57.0	55.5	49.8	53.5	53.7	43.9	56.6	59.9	45.7	56.2	56.6	57.3	56.9	57.6	47.2	47.8	51.5	52.0	51.7	59.1	62.4	48.8
1997	51.8	62.1	68.0	61.1	58.9	57.4	52.1	60.6	52.6	49.6	59.5	60.3	46.2	61.0	61.4	58.1	54.0	55.6	45.1	59.9	60.4	52.5	48.9	61.1	63.0	50.7
1996	42.4	64.9	55.7	61.6	58.5	54.5	50.5	52.2	54.9	42.9	60.3	61.5	46.8	56.5	59.9	57.0	55.1	56.0	45.8	46.8	47.1	53.9	50.6	63.1	62.4	49.7
1995	48.3	63.0	53.6	61.8	63.1	54.6	50.4	53.7	51.9	44.0	57.1	60.4	44.7	56.9	59.2	56.8	56.8	55.1	46.2	47.6	48.0	54.2	55.3	59.1	63.4	50.1
1994	48.2	61.5	54.7	57.9	55.5	54.4	49.5	55.7	54.5	41.2	56.7	59.1	44.5	55.2	69.6	56.4	57.3	56.5	45.0	46.6	48.1	53.4	52.7	58.6	63.5	50.1
1993	44.1	63.2	55.3	59.9	55.9	56.3	49.6	54.5	55.2	44.9	56.5	58.6	45.1	55.8	58.2	57.0	59.1	60.4	45.5	47.3	47.5	53.2	51.1	56.9	61.2	49.7
1992	45.0	62.6	53.8	55.2	53.7	50.7	51.9	52.4	52.6	45.2	59.0	60.7	43.7	58.0	57.7	58.0	55.8	56.1	48.1	49.3	44.0	58.2	53.4	56.4	63.1	48.8
Change(1)	-0.4	6.7	-3.7	1.9	4.4	1.1	-1.0	0.5	1.2	-1.7	-2.4	2.4	-5.2	-2.6	-1.9	-2.3	-5.9	0.8	-0.2	-4.3	11.1	4.8	1.3	4.2	1.0	-2.9
Change(2)	1.8	4.0	-1.0	3.5	3.3	1.1	-2.6	0.8	1.8	5.3	-2.8	-1.3	-2.5	-3.2	0.6	-2.2	-5.2	0.2	-4.0	-4.7	13.2	-0.9	-2.1	3.9	-1.5	-1.2
Lowest (mph)																										
2004	19.5	48.9	22.9	25.7	41.5	26.3	31.0	30.6	43.7	9.6	34.1	45.3	26.9	43.2	47.5	46.1	37.9</									

APPENDIX G

2023 Level of Service and Reserve Capacity



A P P E N D I X



AECOM

2023 LEVEL OF SERVICE AND RESERVE CAPACITY

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2023		2021
			Limits (mph)	Average (mph)						MAXIMUM RESERVE	5% ALLOCATION	MAXIMUM RESERVE
										VOLUME (trips)	BELOW LOS C (trips)	VOLUME (trips)
1 Stock Island (4.0 - 5.0)	1.10	4-L/D	30/35/45	40.1	N/A	22.0	34.9	B	12.9	2,350	2,544	3,279
2 Boca Chica (5.0- 9.0)	3.9	4-L/D	45/55	54.7	N/A	50.2	58.1	A	7.9	5,102	6,714	6,265
3 Big Coppitt (9.0- 10.5)	1.5	2-L/U	45/55	46.3	N/A	41.8	46.6	B	4.7	1,167	1,691	1,391
4 Saddlebunch (10.5- 16.5)	5.8	2-L/U	45/55	53.6	N/A	49.1	52.7	B	3.5	3,362	5,747	4,130
5 Sugarloaf (16.5- 20.5)	3.9	2-L/U	45	45.0	6.4	34.1	47.7	A	13.6	8,783	9,866	9,752
6 Cudjoe (20.5- 23.0)	2.5	2-L/U	45	45.0	N/A	40.5	46.5	A	6.0	2,484	3,337	3,064
7 Summerland (23.0- 25.0)	2.2	2-L/U	45	45.0	N/A	40.5	44.8	B	4.3	1,567	2,311	2,040
8 Ramrod (25.0- 27.5)	2.3	2-L/U	45	45.0	N/A	40.5	47.0	A	6.5	2,476	3,261	2,285
9 Torch (27.5- 29.5)	2.1	2-L/U	45	45.0	N/A	40.5	48.0	A	7.5	2,608	3,310	2,886
10 Big Pine (29.5- 33.0)	3.4	2-L/U	45	45.0	5.3	35.2	40.4	B	5.2	2,928	3,935	4,561
11 Bahia Honda (33.0- 40.0)	7.0	2-L/U (70%) 4-L/D (30%)	45/50/55	50.9	N/A	46.4	52.5	A	6.1	7,071	9,804	7,998
12 7-Mile Bridge (40.0- 47.0)	6.8	2-L/U	35/45/50/55	54.4	N/A	49.9	54.5	B	4.6	5,180	7,971	3,716
13 Marathon (47.0- 54.0)	7.3	2-L/U (13%) 4-L/D (87%)	35/45	42.3	N/A	22.0	35.2	A	13.2	15,957	17,240	21,276
14 Grassy (54.0- 60.5)	6.4	2-L/U	45/55	54.6	2.1	48.0	51.3	C	3.3	3,497	6,010	3,603
15 Duck (60.5- 63.0)	2.7	2-L/U	55	55.0	N/A	50.5	53.6	B	3.1	1,386	2,499	1,207
16 Long (63.0- 73.0)	9.9	2-L/U	45/50/55	53.4	N/A	48.9	50.9	C	2.0	3,279	7,207	1,639
17 L Matecumbe (73.0- 77.5)	4.5	2-L/U	45/50	45.9	N/A	41.4	45.3	B	4.0	2,981	4,509	149
18 Tea Table (77.5- 79.5)	2.2	2-L/U	45	45.0	N/A	40.5	44.8	B	4.3	1,567	2,315	2,222
19 U Matecumbe (79.5- 84.0)	4.1	2-L/U	45	45.0	N/A	40.5	36.9	E	-3.6	(2,444)	(1,091)	(3,531)
20 Windley (84.0- 86.0)	1.9	2-L/U	45	45.0	N/A	40.5	34.4	E	-6.1	(1,919)	(1,296)	(378)
21 Plantation (86.0- 91.5)	5.8	2-L/U	45	45.0	5.4	35.1	33.3	D	-1.8	(1,729)	(14)	1,921
22 Tavernier (91.5- 99.5)	8.0	4-L/D	45/50	47.2	5.7	37.0	45.6	A	8.6	11,393	13,832	12,983
23 Key Largo (99.5- 106.0)	6.8	4-L/D	45	45.0	5.2	35.3	44.1	A	8.8	9,910	11,865	11,148
24 Cross (106.0- 112.5)	6.2	2-L/U	45/55	51.4	N/A	46.9	48.4	C	1.5	1,540	3,900	2,259
Overall	108.3					45.0	44.2	D	-0.8	N/A		

2023 LEVEL OF SERVICE AND RESERVE CAPACITY

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2023		2021
			Limits (mph)	Average (mph)						MAXIMUM RESERVE	5% ALLOCATION	MAXIMUM RESERVE
										VOLUME (trips)	BELOW LOS C (trips)	VOLUME (trips)
1 Stock Island (4.0 - 5.0)	1.10	4-L/D	30/35/45	40.1	N/A	22.0	37.0	A	15.0	2,732	2,925	3,279
2 Boca Chica (5.0- 9.0)	3.9	4-L/D	45/55	54.7	N/A	50.2	58.1	A	7.9	5,102	6,714	6,265
3 Big Coppitt (9.0- 10.5)	1.5	2-L/U	45/55	46.3	N/A	41.8	46.6	B	4.7	1,167	1,691	1,391
4 Saddlebunch (10.5- 16.5)	5.8	2-L/U	45/55	53.6	N/A	49.1	52.7	B	3.5	3,362	5,747	4,130
5 Sugarloaf (16.5- 20.5)	3.9	2-L/U	45	45.0	6.4	34.1	47.7	A	13.6	8,783	9,866	9,752
6 Cudjoe (20.5- 23.0)	2.5	2-L/U	45	45.0	N/A	40.5	46.5	A	6.0	2,484	3,337	3,064
7 Summerland (23.0- 25.0)	2.2	2-L/U	45	45.0	N/A	40.5	44.8	B	4.3	1,567	2,311	2,040
8 Ramrod (25.0- 27.5)	2.3	2-L/U	45	45.0	N/A	40.5	47.0	A	6.5	2,476	3,261	2,285
9 Torch (27.5- 29.5)	2.1	2-L/U	45	45.0	N/A	40.5	48.0	A	7.5	2,608	3,310	2,886
10 Big Pine (29.5- 33.0)	3.4	2-L/U	45	45.0	5.3	35.2	40.4	B	5.2	2,928	3,935	4,561
11 Bahia Honda (33.0- 40.0)	7.0	2-L/U (70%) 4-L/D (30%)	45/50/55	50.9	N/A	46.4	52.5	A	6.1	7,071	9,804	7,998
12 7-Mile Bridge (40.0- 47.0)	6.8	2-L/U	35/45/50/55	54.4	N/A	49.9	54.5	B	4.6	5,180	7,971	3,716
13 Marathon (47.0- 54.0)	7.3	2-L/U (13%) 4-L/D (87%)	35/45	42.3	N/A	22.0	35.2	A	13.2	15,957	17,240	21,276
14 Grassy (54.0- 60.5)	6.4	2-L/U	45/55	54.6	2.1	48.0	51.3	C	3.3	3,497	6,010	3,603
15 Duck (60.5- 63.0)	2.7	2-L/U	55	55.0	N/A	50.5	53.6	B	3.1	1,386	2,499	1,207
16 Long (63.0- 73.0)	9.9	2-L/U	45/50/55	53.4	N/A	48.9	50.9	C	2.0	3,279	7,207	1,639
17 L Matecumbe (73.0- 77.5)	4.5	2-L/U	45/50	45.9	N/A	41.4	45.3	B	4.0	2,981	4,509	149
18 Tea Table (77.5- 79.5)	2.2	2-L/U	45	45.0	N/A	40.5	44.8	B	4.3	1,567	2,315	2,222
19 U Matecumbe (79.5- 84.0)	4.1	2-L/U	45	45.0	N/A	40.5	36.9	E	-3.6	(2,444)	(1,091)	(3,531)
20 Windley (84.0- 86.0)	1.9	2-L/U	45	45.0	N/A	40.5	34.4	E	-6.1	(1,919)	(1,296)	(378)
21 Plantation (86.0- 91.5)	5.8	2-L/U	45	45.0	5.4	35.1	33.3	D	-1.8	(1,729)	(14)	1,921
22 Tavernier (91.5- 99.5)	8.0	4-L/D	45/50	47.2	5.7	37.0	45.6	A	8.6	11,393	13,832	12,983
23 Key Largo (99.5- 106.0)	6.8	4-L/D	45	45.0	5.2	35.3	44.1	A	8.8	9,910	11,865	11,148
24 Cross (106.0- 112.5)	6.2	2-L/U	45/55	51.4	N/A	46.9	48.4	C	1.5	1,540	3,900	2,259
Overall	108.3					45.0	44.7	D	-0.3	N/A		

Note: This table is based on all travel time runs except 3 SB runs in segment 1 (Stock Island) from 3-14-23 to 3-16-23. These 3 SB runs were excluded as the average travel speeds were very low (4-7 mph) and were considered as outliers. The overall travel speed is 44.7 mph as compared to the previous page table that has an overall travel speed of 44.2 mph and is based on all travel time runs.

2023 LEVEL OF SERVICE AND RESERVE CAPACITY (SUPPLEMENTAL RUNS FOR INFORMATIONAL PURPOSES ONLY)

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2023	
			Limits (mph)	Average (mph)						MAXIMUM RESERVE VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)
1 Stock Island (4.0 - 5.0)	1.10	4-L/D	30/35/45	40.1	N/A	22.0	32.8	B	10.8	1,967	2,169
2 Boca Chica (5.0- 9.0)	3.9	4-L/D	45/55	56.1	N/A	51.6	59.2	A	7.6	4,908	6,579
3 Big Coppitt (9.0- 10.5)	1.5	2-L/U	45/55	46.3	N/A	41.8	40.0	D	-1.8	(447)	69
4 Saddlebunch (10.5- 16.5)	5.8	2-L/U	45/55	53.6	N/A	49.1	52.4	B	3.3	3,170	5,543

Supplemental travel time runs were conducted (as required by the 2021 US 1 LOS Methodology Update) between March 15, 2023 and March 17, 2023 in the four southernmost segments to better reflect AM and PM peak conditions associated with traffic entering and exiting the City of Key West.

The supplemental runs indicate that the travel speeds in Segment 1 and 3 are relatively lower during peak hours, as compared to the travel speeds measured during travel time runs conducted using the staggered schedule. As such, the peak hour LOS for segment 3 is also lower. Segment 1 had the same LOS (LOS B) during peak and non-peak hours. Segment 3 had LOS D during peak hours as compared to LOS B during non-peak hours. The LOS for Segments 2 and 4 remained unchanged (LOS A for segment 2 and LOS B for segment 4). The results of the supplemental runs are included in the 2023 ATTDS Report for informational purposes only and are not used in the LOS calculations. This information is to be reviewed to decide if supplemental runs should be incorporated into future ATTDS and LOS calculations, as directed by the Monroe County BOCC. Further discussions and changes to the methodology would be required for the supplemental runs to be used into ATTDS. If these runs were to be used, they could be incorporated in the individual segments that supplemental runs were performed but the Monroe's County growth management process should be changed. Supplemental runs have the advantage of capturing the peak hour conditions in the lower keys. However, they cannot capture any other peak hour conditions as the staggered schedule does.

APPENDIX H

Summary of Delay Events



A P P E N D I X



AECOM

NB	EXCLUDED FROM OVERALL TIME	EXCLUDED FROM SEGMENT TIME	TOTAL	TS	# OF TS	DB	# OF DB	AC	# OF AC	LT	# OF LT	SPECIAL EVENT	# OF SE	RT	# OF RT	CG	# OF CG	SB	# OF SB	CS	# OF CS	SZ	# OF SZ	TOTAL #	
	DELAY TIME	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	DELAY	EVENTS	OF EVENTS	
1	00:00:00	00:00:00	00:02:36	00:02:36	5																			5	
2	00:03:04	00:03:04	00:03:04																		00:03:04	1			1
3	00:00:00	00:00:00	00:00:00																					0	
4	00:00:00	00:00:00	00:00:00																					0	
5	00:00:00	00:00:00	00:01:23	00:01:23	3																			3	
6	00:00:00	00:00:00	00:00:00																					0	
7	00:00:00	00:00:00	00:00:24													00:00:24	1							1	
8	00:00:00	00:00:00	00:00:43							00:00:43	2													2	
9	00:00:00	00:00:00	00:00:00																					0	
10	00:00:00	00:00:00	00:00:54	00:00:38	2											00:00:16	1							3	
11	00:00:00	00:00:00	00:00:00																					0	
12	00:00:00	00:00:00	00:00:00																					0	
13	00:06:19	00:06:19	00:40:56	00:25:12	21					00:01:23	5	00:03:34	2			00:08:02	6			00:02:45	1			35	
14	00:00:00	00:00:00	00:00:13													00:00:13	1							1	
15	00:00:00	00:00:00	00:00:00																					0	
16	00:00:00	00:00:00	00:00:00																					0	
17	00:00:00	00:00:00	00:00:45							00:00:21	1					00:00:24	1							2	
18	00:02:00	00:02:00	00:06:01													00:04:01	2			00:02:00	1			3	
19	00:51:38	00:51:38	01:40:05			00:06:00	1			00:00:46	2					00:47:41	8			00:45:38	2			13	
20	00:06:13	00:06:13	00:20:33													00:14:20	7			00:06:13	1			8	
21	00:19:13	00:19:13	00:58:30	00:05:38	13					00:00:24	1					00:33:15	15			00:19:13	1			30	
22	00:14:23	00:14:23	00:35:20	00:20:21	21					00:00:36	2	00:03:50	1					00:00:29	1	00:10:04	1			26	
23	00:00:00	00:00:00	00:12:23	00:08:07	19					00:00:05	1					00:04:11	2							22	
24	00:00:00	00:00:00	00:26:12													00:26:12	6							6	
25	00:06:27	00:06:27	00:07:58					00:06:27	1							00:01:31	2							3	
TOTAL	01:42:50	01:42:50	05:10:02	01:03:55	84	00:06:00	1	00:00:00	0	00:04:18	14	00:07:24	3	00:00:00	0	02:18:59	50	00:00:29	1	01:28:57	8	00:00:00	0	161	
SB																									
25	00:00:00	00:00:00	00:50:26													00:50:26	8							8	
24	00:00:00	00:00:00	00:46:56													00:46:56	13							13	
23	00:10:33	00:10:33	00:21:43	00:11:10	15							00:10:13	1					00:00:20	1					17	
22	01:05:57	01:05:57	01:18:23	00:12:26	10							00:00:25	1							01:05:32	1			12	
21	02:09:10	02:09:10	03:22:00	00:07:05	13	00:29:32	5	00:08:58	1							01:05:45	15			01:30:40	3			37	
20	00:08:51	00:08:51	00:26:03					00:00:04	1							00:17:12	11			00:08:47	2			14	
19	00:14:44	00:14:44	00:26:05							00:01:02	1	00:06:49	1			00:10:19	5			00:07:55	2			9	
18	00:00:00	00:00:00	00:02:02													00:02:02	3							3	
17	00:00:00	00:00:00	00:01:25													00:01:25	2							2	

16	00:00:00	00:00:00	00:01:04												00:01:04	1							1	
15	00:00:00	00:00:00	00:00:00																				0	
14	00:00:11	00:00:11	00:00:44	00:00:33	1												00:00:11	1					2	
13	00:01:52	00:01:52	00:21:49	00:14:06	24					00:02:09	6	00:01:52	1			00:03:42	3						34	
12	00:00:00	00:00:00	00:00:00																				0	
11	00:00:00	00:00:00	00:00:18							00:00:18	1												1	
10	00:05:36	00:05:36	00:26:02	00:18:13	11											00:02:13	2				00:05:36	1	14	
9	00:00:00	00:00:00	00:00:00																				0	
8	00:00:00	00:00:00	00:00:00																				0	
7	00:00:00	00:00:00	00:00:00																				0	
6	00:00:00	00:00:00	00:00:14													00:00:14	1						1	
5	00:00:15	00:00:15	00:00:15									00:00:15	1										1	
4	00:00:00	00:00:00	00:00:00																				0	
3	00:00:00	00:00:00	00:00:00																				0	
2	00:00:00	00:00:00	00:00:00																				0	
1	00:02:28	00:02:28	00:43:28	00:10:44	6											00:30:16	3				00:02:28	1	10	
TOTAL	03:59:37	03:59:37	08:18:31	01:14:17	80	00:29:32	5	00:09:02	2	00:03:29	8	00:19:34	5	00:00:00	0	03:01:08	59	00:00:31	2	03:00:58	10	00:00:00	0	171
COMB. (NB & SB)	05:42:27	05:42:27	13:28:33	02:18:12	164	00:35:32	6	00:09:02	2	00:07:47	22	00:26:58	8	00:00:00	0	05:20:07	109	00:01:00	3	04:29:55	18	00:00:00	0	332
=	Mean Delay per Event		00:02:26	00:00:51		00:05:55		00:04:31		00:00:21		00:03:22		-		00:02:56		00:00:20		00:15:00		-		
	Mean Delay per Trip		00:28:53	00:04:56		00:01:16		00:00:19		00:00:17		00:00:58		00:00:00		00:11:26		00:00:02		00:09:38		00:00:00		

SUMMARY OF DELAY EVENTS

2023 TTDS

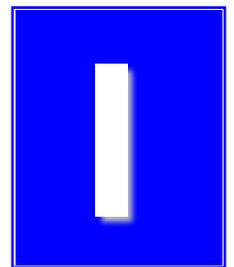
Delay Source	Segment Number	Segment Limits			Number of Events	Total Delay	Mean Delay Per Event	Mean Delay Per Trip
		From	To	Length (miles)				
Traffic Signal	1	Cow Key Bridge (N) - MM 4.0	Key Haven Blvd - MM 5.0	1.1	11	00:13:20	00:01:13	00:00:29
	5	Harris Channel Bridge (N) - MM 16.5	Bow Channel Bridge (N) -MM 20.5	3.9	3	00:01:23	00:00:28	00:00:03
	10	N Pine Channel Br (N) - MM 29.5	Long Beach Dr - MM 33.0	3.4	13	00:18:51	00:01:27	00:00:40
	13	7-Mile Bridge (N) -MM 47.0	Coco Plum Drive -MM 54.0	7.3	45	00:39:18	00:00:52	00:01:24
	14	Cocoa Plum Dr - MM 54.0	Toms Harbor Ch Br (S) - MM 60.5	6.4	1	00:00:33	00:00:33	00:00:01
	21	Snake Creek Br (N) - MM 86.0	Ocean Blvd - MM 91.5	5.8	26	00:12:43	00:00:29	00:00:27
	22	Ocean Blvd - MM 91.5	Atlantic Blvd - MM 99.5	8.0	31	00:32:47	00:01:03	00:01:10
	23	Atlantic Blvd - MM 99.5	C-905 (Flashing Light) - MM 106.0	6.8	34	00:19:17	00:00:34	00:00:41
				Subtotal	164	02:18:12	00:00:51	00:04:56
Congestion	1	Cow Key Bridge (N) - MM 4.0	Key Haven Blvd - MM 5.0	1.1	3	00:30:16	00:10:05	00:01:05
	6	Bow Channel Bridge (N) - MM 20.5	Spanish Main Drive - MM 23.0	2.5	1	00:00:14	00:00:14	00:00:01
	7	Spanish Main Drive - MM 23.0	East Shore Drive - MM 25.0	2.0	1	00:00:24	00:00:24	00:00:01
	10	N Pine Channel Br (N) - MM 29.5	Long Beach Dr - MM 33.0	3.4	3	00:02:29	00:00:50	00:00:05
	13	7-Mile Bridge (N) - MM 47.0	Coco Plum Drive - MM 54.0	7.0	9	00:11:44	00:01:18	00:00:25
	14	Coco Plum Drive - MM 54.0	Toms Harbor Ch Bridge (S) - MM 60.5	6.5	1	00:00:13	00:00:13	00:00:00
	16	Long Key Bridge (S) - MM 63.0	Channel #2 Bridge (N) - MM 73.0	10.0	1	00:01:04	00:01:04	00:00:02
	17	Channel #2 Br (N) - MM 73.0	Lignum V Br (S) - MM 77.5	4.5	3	00:01:49	00:00:36	00:00:04
	18	Lignumvitae Bridge (S) -MM 77.5	Tea Table Relief Bridge (N) -MM 79.5	2.2	5	00:06:03	00:01:13	00:00:13
	19	Tea Table Relief Bridge (N) - MM 79.5	Whale Harbor Bridge (S) -MM 84.0	4.1	13	00:58:00	00:04:28	00:02:04
	20	Whale Harbor Br (S) - MM 84.0	Snake Creek Br (N) - MM 86.0	1.9	18	00:31:32	00:01:45	00:01:08
	21	Snake Creek Br (N) - MM 86.0	Ocean Blvd - MM 91.5	5.8	30	01:39:00	00:03:18	00:03:32
	23	Atlantic Blvd - MM 99.5	C-905 (Flashing Light) - MM 106.0	6.8	2	00:04:11	00:02:05	00:00:09
	24	C-905 - MM 106.0	County Line Sign - MM 112.5	6.2	19	01:13:08	00:03:51	00:02:37
				Subtotal	109	05:20:07	00:02:56	00:11:26
Left Turn/Right Turn	8	East Shore Drive - MM 25.0	Torch Ramrod Bridge (S) - MM 27.5	2.3	2	00:00:43	00:00:21	00:00:02
	11	Long Beach Dr - MM 33.0	7-Mile Bridge (S) - MM 40.0	7.0	1	00:00:18	00:00:18	00:00:01
	13	7-Mile Bridge (N) -MM 47.0	Cocoa Plum Drive -MM 54.0	7.3	11	00:03:32	00:00:19	00:00:08
	17	Channel #2 Br (N) - MM 73.0	Lignum V Br (S) - MM 77.5	4.5	1	00:00:21	00:00:21	00:00:01
	19	Tea Table Relief Bridge (N) - MM 79.5	Whale Harbor Bridge (S) -MM 84.0	4.1	3	00:01:48	00:00:36	00:00:04
	21	Snake Creek Br (N) - MM 86.0	Ocean Blvd - MM 91.5	5.8	1	00:00:24	00:00:24	00:00:01
	22	Ocean Blvd - MM 91.5	Atlantic Blvd - MM 99.5	8.0	2	00:00:36	00:00:18	00:00:01
	23	Atlantic Blvd - MM 99.5	C-905 (Flashing Light) - MM 106.0	6.8	1	00:00:05	00:00:05	00:00:00
				Subtotal	22	00:07:47	00:00:21	00:00:17
Drawbridge Signal	19	Tea Table Relief Bridge (N) - MM 79.5	Whale Harbor Bridge (S) -MM 84.0	4.1	1	00:06:00	00:06:00	00:00:13
	21	Snake Creek Br (N) - MM 86.0	Ocean Blvd - MM 91.5	5.8	5	00:29:32	00:05:54	00:01:03
				Subtotal	6	00:35:32	00:05:55	00:01:16
Construction / Accident / School Bus / School Zone / Special Events	1	Cow Key Bridge (N) - MM 4.0	Key Haven Blvd - MM 5.0	1.1	1	00:02:28	00:02:28	00:00:05
	2	Key Haven Boulevard - MM 5.0	Rockland Drive - MM 9.0	4.0	1	00:03:04	00:03:04	00:00:07
	5	Harris Channel Bridge (N) - MM 16.5	Bow Channel Bridge (N) -MM 20.5	3.9	1	00:00:15	00:00:15	00:00:01
	10	N Pine Channel Br (N) - MM 29.5	Long Beach Dr - MM 33.0	3.4	1	00:05:36	00:05:36	00:00:12
	13	7-Mile Bridge (N) -MM 47.0	Cocoa Plum Drive -MM 54.0	7.3	4	00:08:11	00:02:03	00:00:18
	14	Coco Plum Drive - MM 54.0	Toms Harbor Ch Bridge (S) - MM 60.5	6.5	1	00:00:11	00:00:11	00:00:00
	18	Lignumvitae Bridge (S) -MM 77.5	Tea Table Relief Bridge (N) -MM 79.5	2.2	1	00:02:00	00:02:00	00:00:04
	19	Tea Table Relief Bridge (N) - MM 79.5	Whale Harbor Bridge (S) -MM 84.0	4.1	5	01:00:22	00:12:04	00:02:09
	20	Whale Harbor Br (S) - MM 84.0	Snake Creek Br (N) - MM 86.0	1.9	4	00:15:04	00:03:46	00:00:32
	21	Snake Creek Br (N) - MM 86.0	Ocean Blvd - MM 91.5	5.8	5	01:58:51	00:23:46	00:04:15
	22	Ocean Blvd - MM 91.5	Atlantic Blvd - MM 99.5	8.0	5	01:20:20	00:16:04	00:02:52
	23	Atlantic Blvd - MM 99.5	C-905 (Flashing Light) - MM 106.0	6.8	2	00:10:33	00:05:16	00:00:23
					Subtotal	31	05:06:55	00:09:54
All Sources				TOTAL	332	13:28:33	00:02:26	00:28:53

APPENDIX I

2023 Data Collection Schedule



**A
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P
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D
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X**



AECOM

<div style="display: flex; justify-content: space-between;"> 2023 <i>Monroe County Travel Time & Delay Study</i> 2023 </div>						
<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
<i>February/March</i>						
<i>26 Feb</i>	<i>27 Feb</i>	<i>28 Feb</i>	<i>1 Mar</i>	<i>2 Mar</i>	<i>3 Mar</i>	<i>4 Mar</i>
<i>5 Mar</i> 1 - HS 11:15am 2 - KW 3:30pm	<i>6 Mar</i> 3 - HS 11:45am 4 - KW 4:00pm	<i>7 Mar</i> 5 - HS 9:30am 6 - KW 1:45pm	<i>8 Mar</i> 7 - HS 9:45am 8 - KW 1:30pm	<i>9 Mar</i> 9 - HS 9:45am 10 - KW 2:00pm	<i>10 Mar</i> 11 - HS 10:15am 12 - KW 2:30pm	<i>11 Mar</i> 13 - HS 10:45am 14 - KW 3:00pm
<i>12 Mar</i> 15 - KW 11:30am 16 - HS 3:15pm	<i>13 Mar</i> 17 - KW 12:00pm 18 - HS 3:45pm	<i>14 Mar</i> 19 - KW 10:45am 20 - HS 2:30pm	<i>15 Mar</i> 21 - KW 10:15am 22 - HS 1:45pm	<i>16 Mar</i> 23 - KW 10:00am 24 - HS 1:45pm	<i>17 Mar</i> 25 - KW 10:30am 26 - HS 2:15pm	<i>18 Mar</i> 27 - KW 11:00am 28 - HS 2:45pm
<i>19 Mar</i>	<i>20 Mar</i>	<i>21 Mar</i>	<i>22 Mar</i>	<i>23 Mar</i>	<i>24 Mar</i>	<i>25 Mar</i>

- Notes:
1. Data should be downloaded from the DMI and QCd immediately after every travel run.
 2. A copy of the raw data sheet should be faxed/emailed to the office every day.
 3. Vehicle tire pressure should be checked before every run and maintained as constant.
 4. HS - Start at Homestead; KW - Start at Key West.

2023 Monroe County Travel Time & Delay Study – Supplemental Runs

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
<i>February/March</i>						
<i>26 Feb</i>	<i>27 Feb</i>	<i>28 Feb</i>	<i>1 Mar</i>	<i>2 Mar</i>	<i>3 Mar</i>	<i>4 Mar</i>
<i>5 Mar</i>	<i>6 Mar</i>	<i>7 Mar</i>	<i>8 Mar</i>	<i>9 Mar</i>	<i>10 Mar</i>	<i>11 Mar</i>
<i>12 Mar</i>	<i>13 Mar</i>	<i>14 Mar</i>	<i>15 Mar</i>	<i>16 Mar</i>	<i>17 Mar</i>	<i>18 Mar</i>
			1,2 - HC 7:00am 3 - KW 5:00pm	4,5 - HC 7:00am 6 - KW 5:00pm	7,8 - HC 7:00am 9 - KW 5:00pm	
<i>19 Mar</i>	<i>20 Mar</i>	<i>21 Mar</i>	<i>22 Mar</i>	<i>23 Mar</i>	<i>24 Mar</i>	<i>25 Mar</i>

Notes:

1. Data should be downloaded from the DMI and QCd immediately after every travel run.
2. A copy of the raw data sheet should be faxed/emailed to the office every day.
3. Vehicle tire pressure should be checked before every run and maintained as constant.
4. HC - Start at Harris Channel Bridge; KW - Start at Key West.