

NORTH CAROLINA
Turnpike Authority

Monroe Expressway

Operations Statistics Report

2025 Third Quarter
July - September

Table of Contents

List of Figures **4**

Introduction **5**

Purpose 5

Project 5

Traffic Statistics **8**

Average Weekday Traffic (AWT) 8

Roadway Statistics **19**

Roadway Operations Statistics **22**

Roadway Maintenance Statistics **27**

Assessment Schedule 27

Assessment Results 28

List of Figures

Figure 1: Monroe Expressway System Map 6
Figure 2: Toll US 74 Expressway at US 74 West 9
Figure 3: Toll US 74 Expressway at IT-Fairview Interchange 10
Figure 4: Toll US 74 Expressway at Unionville-IT Interchange 11
Figure 5: Toll US 74 Expressway at Rocky River Interchange 12
Figure 6: Toll US 74 Expressway at US 601 Interchange 13
Figure 7: Toll US 74 Expressway at NC 200 Interchange 14
Figure 8: Toll US 74 Expressway at Austin Chaney Interchange 15
Figure 9: Toll US 74 Expressway at US 74 East Interchange 16
Figure 10: 2025 IMAP Services by Type, YTD 24
Figure 11: Average IMAP Response and Clearance Times (Minutes), Third Quarter by Month 25

List of Tables

Table 1: Safety Statistics, September 2022 -August 2025 20
Table 2: 2025 SHP Chargeable Activities, YTD 23
Table 3: 2025 SHP Non-Chargeable Activities, YTD 23
Table 4: 2025 IMAP Services, YTD 24
Table 5: 2025 Average IMAP Response and Clearance Times (Minutes), YTD 25
Table 6: MRP Assessment Results 28

Introduction

Purpose

The North Carolina Turnpike Authority (NCTA) presents the operations statistics for the Monroe Expressway during the third quarter (July - September) of 2025. The report includes data related to traffic volumes, roadway operations, and maintenance. The statistics will allow for future analysis to identify quarterly and annual trends over time, providing a quantifiable method to track performance.

Project

The Monroe Expressway is a 18.5-mile toll road that extends from US 74 near I-485 in Mecklenburg County to US 74 between the towns of Wingate and Marshville in Union County. The four-lane, controlled-access toll facility relieves congestion on US 74, which serves as an important commercial corridor for residents and businesses in Union and Mecklenburg counties as it gives retail, commercial and employment centers in the area direct access to and from the route.

The Monroe Expressway utilizes an all-electronic, non-stop tolling system that does not require drivers to stop at toll plazas and pay cash tolls. Instead, free-flow toll zones are employed where vehicles are detected while traveling at highway speeds. Payments are accepted through an Electronic Toll Collection (ETC) program called NC Quick Pass® or a video billing program called Bill by Mail.

NCTA toll zones are located along the Monroe Expressway and are located on the mainline between all interchanges. An illustration of the Monroe Expressway can be seen in *Figure 1*.

Figure 1: Monroe Expressway System Map



Traffic Statistics

Traffic Statistics

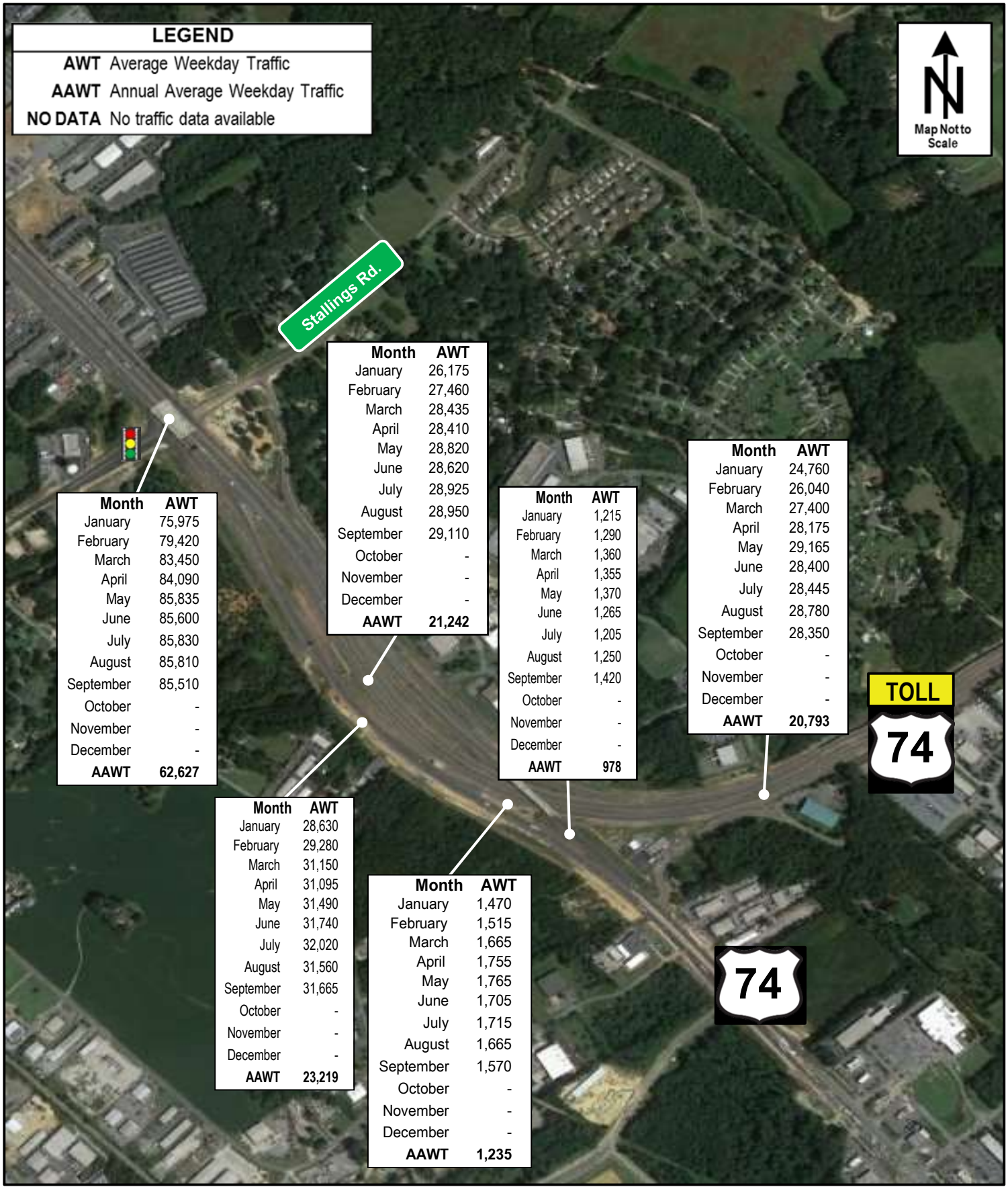
Traffic data is collected and stored using roadside inductive loops installed throughout the Monroe Expressway. The data provides an overview of the roadway's current utilization. The data can also be analyzed to identify trends that could more accurately predict future utilization.

It should be noted that the Monroe Expressway opened in November 2018. Traffic volumes increase significantly as the customers become more familiar with the facility.

Average Weekday Traffic (AWT)

Traffic volume data is collected at all ramps and mainline segments between interchanges. The location of interchanges along the Monroe Expressway can be seen in *Figure 1*. Typically, there is a large difference between peak and off-peak volumes, as well as between weekday and weekend volumes. This gap becomes significantly larger for a tolled facility because it tends to have a much higher percentage of traffic on weekdays during peak hours than non-toll facilities, as there is less benefit for toll users during off-peak hours. For this reason, Average Weekday Traffic (AWT) is reported instead of Average Daily Traffic (ADT). AWT is a measure of the average daily traffic collected on a typical Monday through Friday over a designated time period.

Figures 2 to 9 contain visual representations of AWT along the facility which are representative of NCTA's loop detector data. It should be noted that if a loop detector fails to provide reliable data (meeting the established threshold) for at least five days in a month then "NO DATA" is reported for that loop detector.



Month	AWT
January	75,975
February	79,420
March	83,450
April	84,090
May	85,835
June	85,600
July	85,830
August	85,810
September	85,510
October	-
November	-
December	-
AAWT	**62,627**

Month	AWT
January	26,175
February	27,460
March	28,435
April	28,410
May	28,820
June	28,620
July	28,925
August	28,950
September	29,110
October	-
November	-
December	-
AAWT	**21,242**

Month	AWT
January	1,215
February	1,290
March	1,360
April	1,355
May	1,370
June	1,265
July	1,205
August	1,250
September	1,420
October	-
November	-
December	-
AAWT	**978**

Month	AWT
January	24,760
February	26,040
March	27,400
April	28,175
May	29,165
June	28,400
July	28,445
August	28,780
September	28,350
October	-
November	-
December	-
AAWT	**20,793**

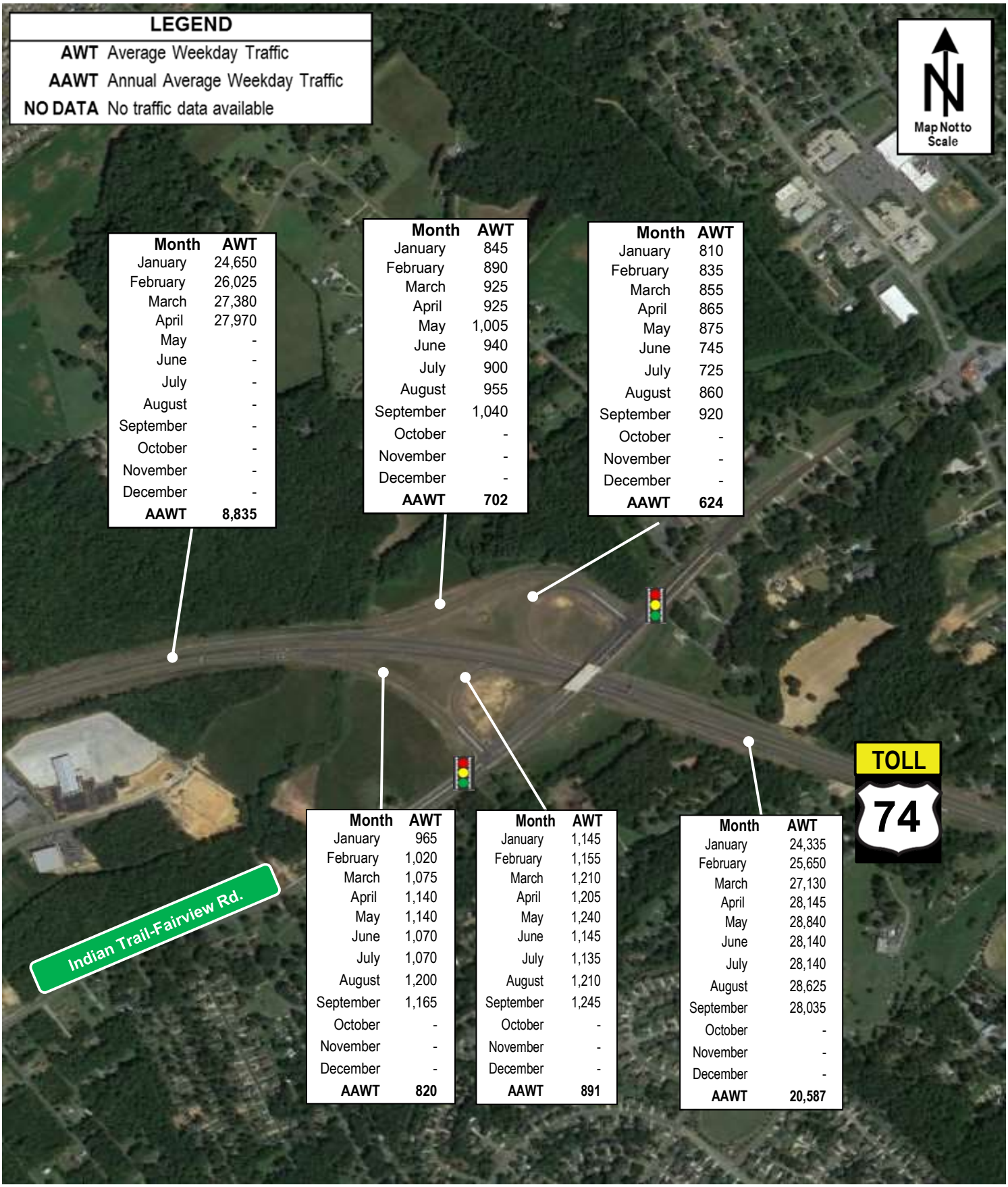
Month	AWT
January	28,630
February	29,280
March	31,150
April	31,095
May	31,490
June	31,740
July	32,020
August	31,560
September	31,665
October	-
November	-
December	-
AAWT	**23,219**

Month	AWT
January	1,470
February	1,515
March	1,665
April	1,755
May	1,765
June	1,705
July	1,715
August	1,665
September	1,570
October	-
November	-
December	-
AAWT	**1,235**

Toll US 74 Exp at US 74 West Interchange

2025 Average Weekday Traffic

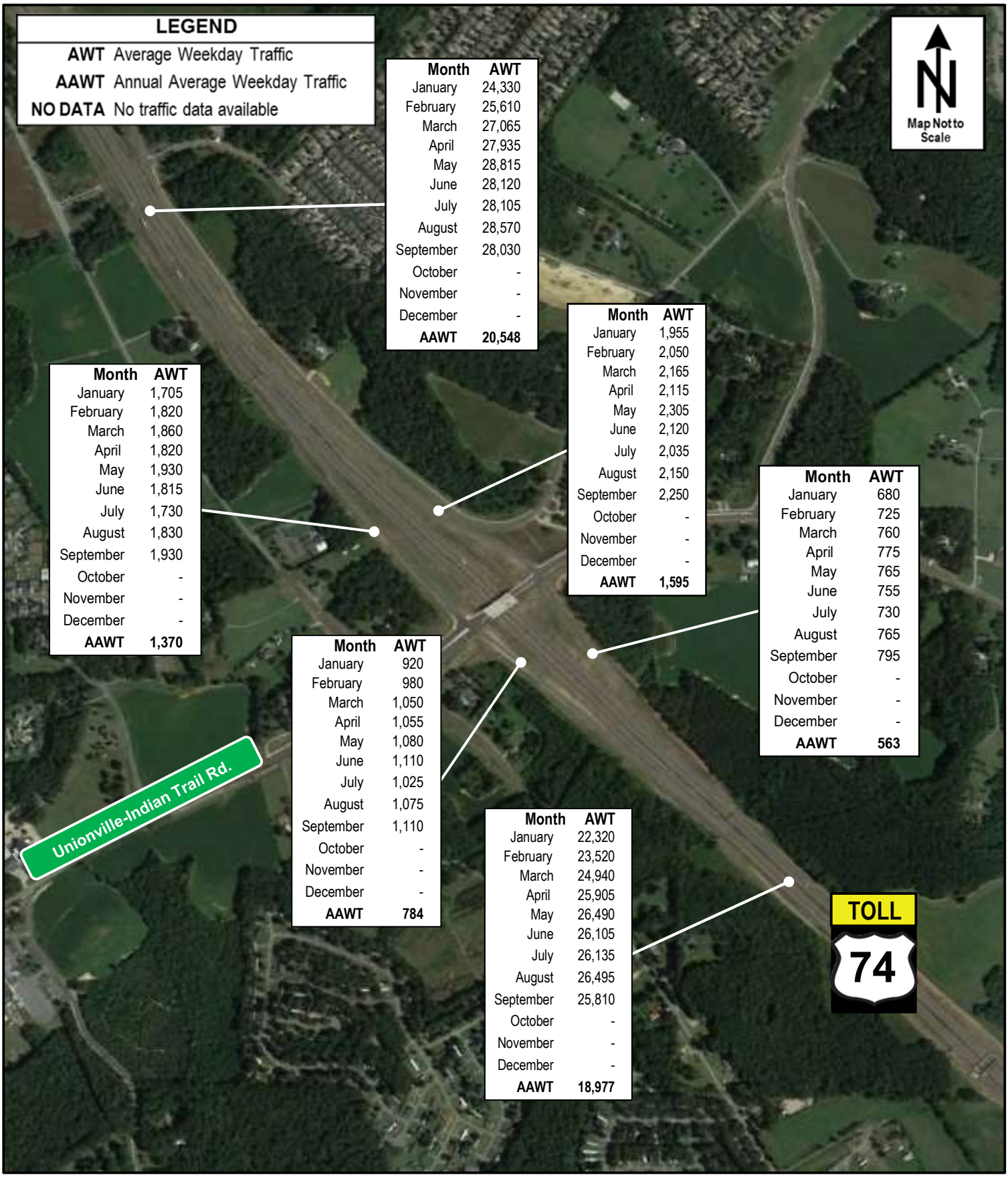
Figure 2



Toll US 74 Exp at IT-Fairview Interchange

2025 Average Weekday Traffic

Figure 3



Month	AWT
January	24,330
February	25,610
March	27,065
April	27,935
May	28,815
June	28,120
July	28,105
August	28,570
September	28,030
October	-
November	-
December	-
AAWT	**20,548**

Month	AWT
January	1,705
February	1,820
March	1,860
April	1,820
May	1,930
June	1,815
July	1,730
August	1,830
September	1,930
October	-
November	-
December	-
AAWT	**1,370**

Month	AWT
January	1,955
February	2,050
March	2,165
April	2,115
May	2,305
June	2,120
July	2,035
August	2,150
September	2,250
October	-
November	-
December	-
AAWT	**1,595**

Month	AWT
January	680
February	725
March	760
April	775
May	765
June	755
July	730
August	765
September	795
October	-
November	-
December	-
AAWT	**563**

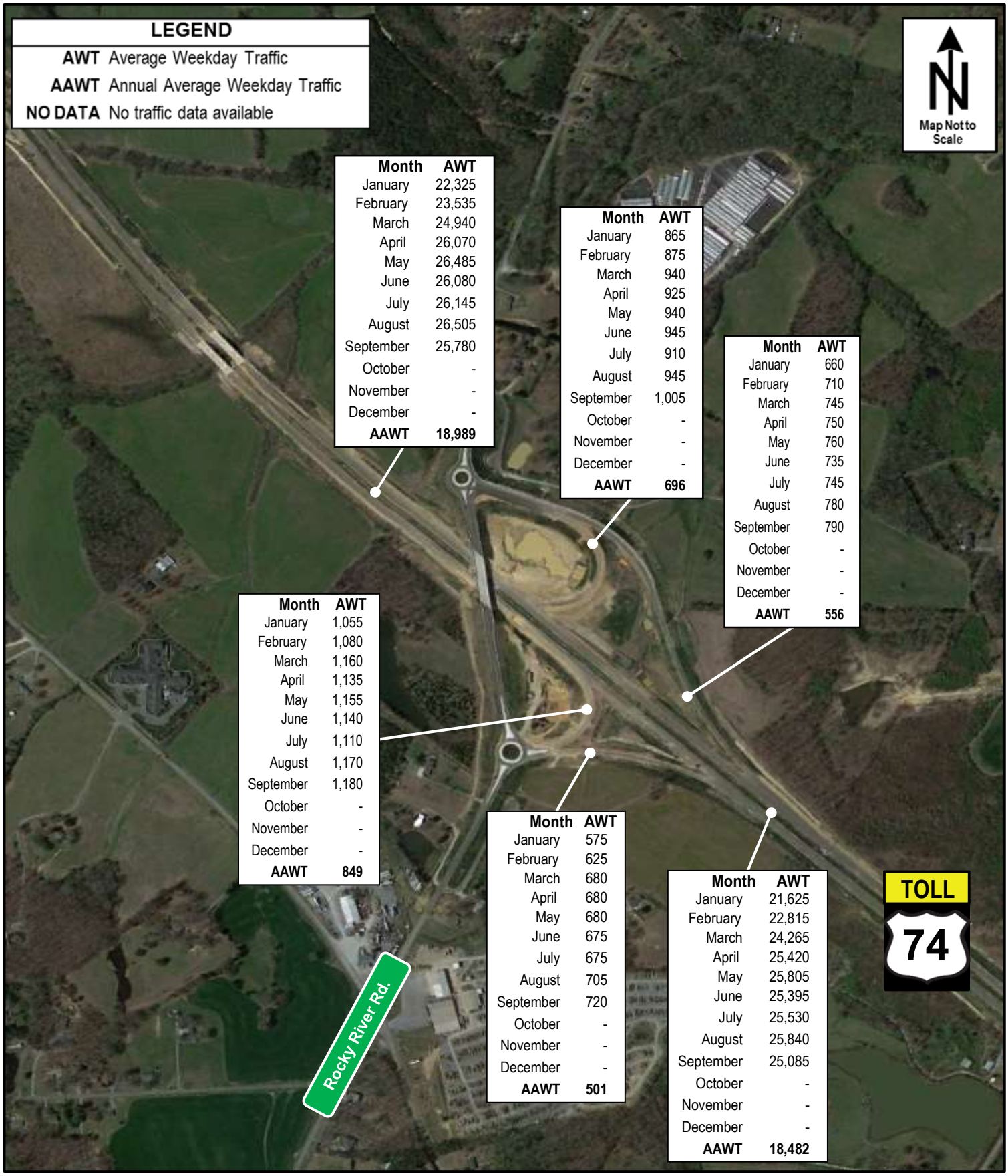
Month	AWT
January	920
February	980
March	1,050
April	1,055
May	1,080
June	1,110
July	1,025
August	1,075
September	1,110
October	-
November	-
December	-
AAWT	**784**

Month	AWT
January	22,320
February	23,520
March	24,940
April	25,905
May	26,490
June	26,105
July	26,135
August	26,495
September	25,810
October	-
November	-
December	-
AAWT	**18,977**

Toll US 74 Exp at Unionville-IT Interchange

2025 Average Weekday Traffic

Figure 4



Month	AWT
January	22,325
February	23,535
March	24,940
April	26,070
May	26,485
June	26,080
July	26,145
August	26,505
September	25,780
October	-
November	-
December	-
AAWT	**18,989**

Month	AWT
January	865
February	875
March	940
April	925
May	940
June	945
July	910
August	945
September	1,005
October	-
November	-
December	-
AAWT	**696**

Month	AWT
January	660
February	710
March	745
April	750
May	760
June	735
July	745
August	780
September	790
October	-
November	-
December	-
AAWT	**556**

Month	AWT
January	1,055
February	1,080
March	1,160
April	1,135
May	1,155
June	1,140
July	1,110
August	1,170
September	1,180
October	-
November	-
December	-
AAWT	**849**

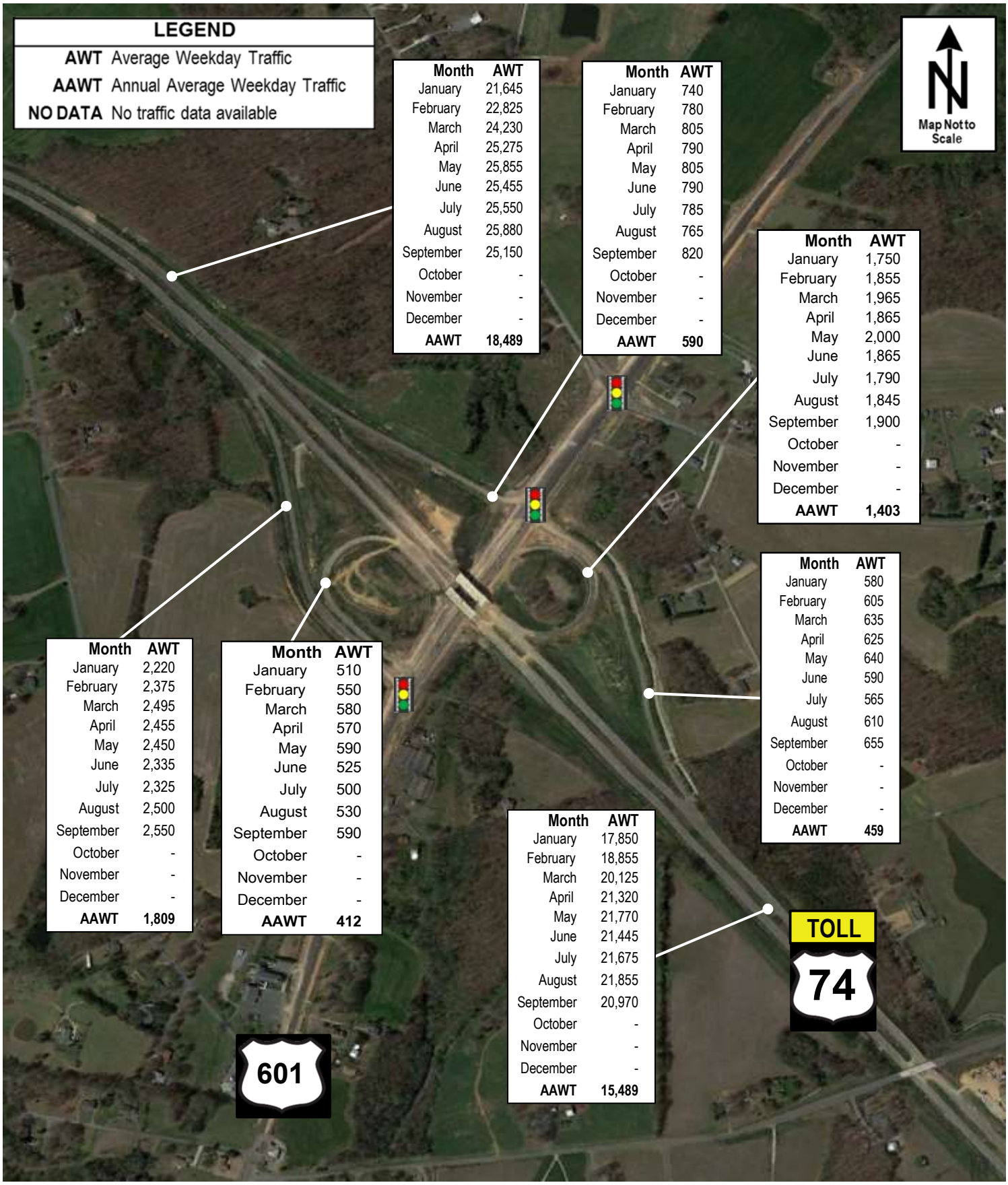
Month	AWT
January	575
February	625
March	680
April	680
May	680
June	675
July	675
August	705
September	720
October	-
November	-
December	-
AAWT	**501**

Month	AWT
January	21,625
February	22,815
March	24,265
April	25,420
May	25,805
June	25,395
July	25,530
August	25,840
September	25,085
October	-
November	-
December	-
AAWT	**18,482**

Toll US 74 Exp at Rocky River Interchange

2025 Average Weekday Traffic

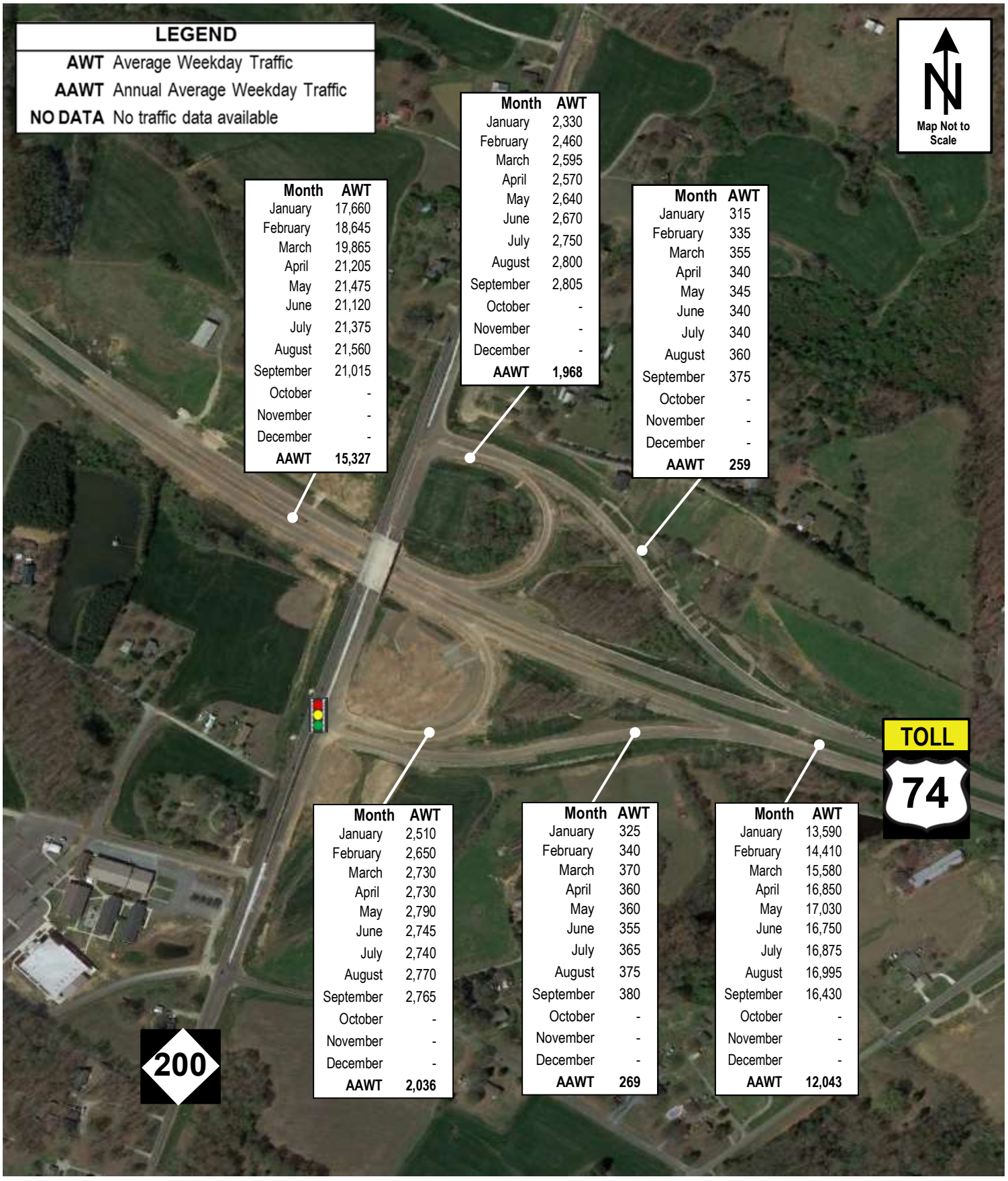
Figure 5



Toll US 74 Exp at US-601 Interchange

2025 Average Weekday Traffic

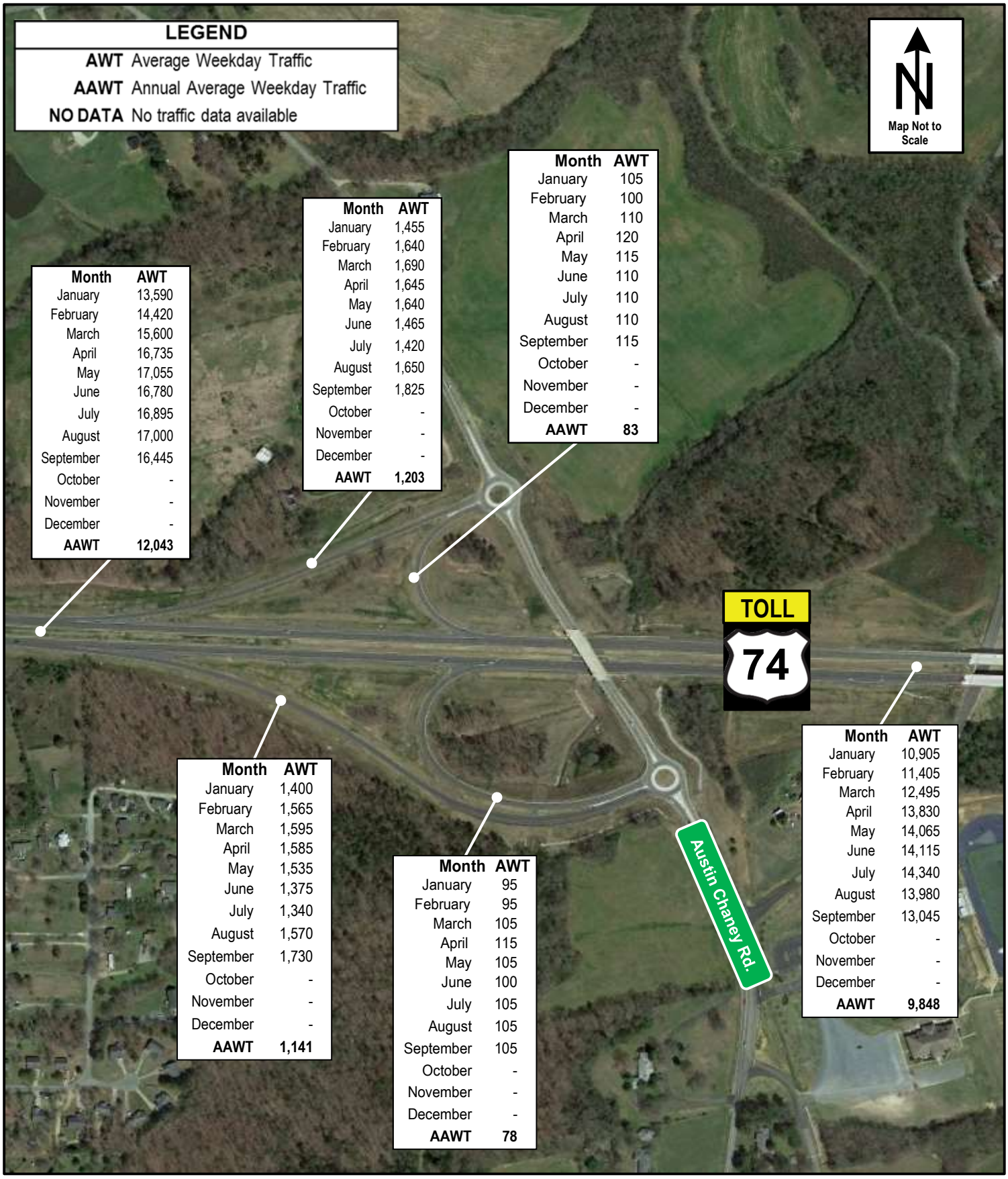
Figure 6



Toll US 74 Exp at NC-200 Interchange

2025 Average Weekday Traffic

Figure 7



Month	AWT
January	13,590
February	14,420
March	15,600
April	16,735
May	17,055
June	16,780
July	16,895
August	17,000
September	16,445
October	-
November	-
December	-
AAWT	**12,043**

Month	AWT
January	1,455
February	1,640
March	1,690
April	1,645
May	1,640
June	1,465
July	1,420
August	1,650
September	1,825
October	-
November	-
December	-
AAWT	**1,203**

Month	AWT
January	105
February	100
March	110
April	120
May	115
June	110
July	110
August	110
September	115
October	-
November	-
December	-
AAWT	**83**

Month	AWT
January	1,400
February	1,565
March	1,595
April	1,585
May	1,535
June	1,375
July	1,340
August	1,570
September	1,730
October	-
November	-
December	-
AAWT	**1,141**

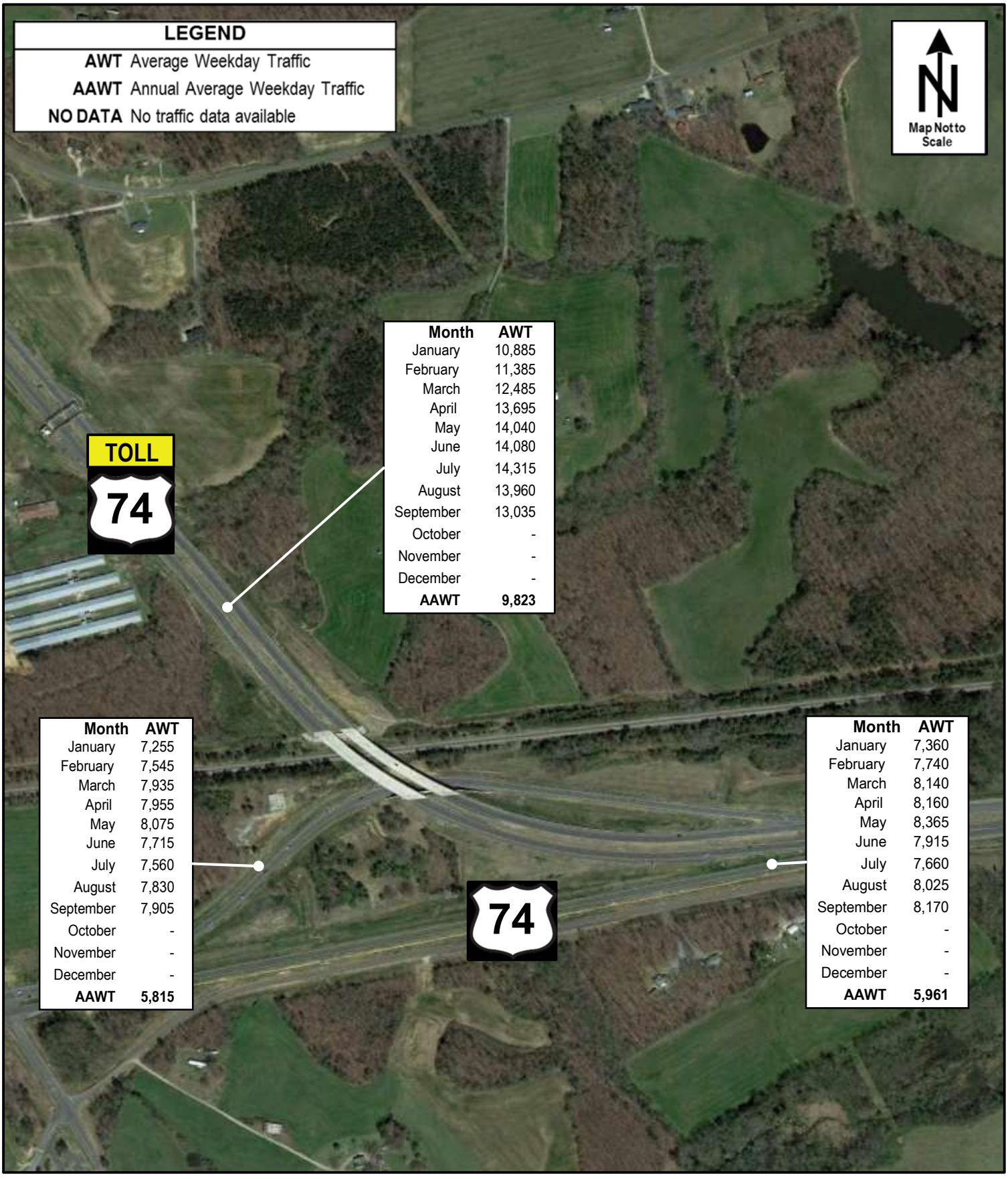
Month	AWT
January	95
February	95
March	105
April	115
May	105
June	100
July	105
August	105
September	105
October	-
November	-
December	-
AAWT	**78**

Month	AWT
January	10,905
February	11,405
March	12,495
April	13,830
May	14,065
June	14,115
July	14,340
August	13,980
September	13,045
October	-
November	-
December	-
AAWT	**9,848**

Toll US 74 Exp at Austin Chaney Interchange

2025 Average Weekday Traffic

Figure 8



Toll US 74 Exp at US 74 East Interchange

2025 Average Weekday Traffic

Figure 9

Roadway Safety Statistics

Roadway Statistics

Traffic crashes are often related to deficiencies in the safety and capacity characteristics of a transportation facility. To identify these deficiencies early and reduce the likelihood of crashes on the Monroe Expressway, NCTA monitors safety conditions on the facility through quarterly crash analyses. These analyses involve the use of the Traffic Engineering Accident Analysis System (TEAAS) to collect monthly crash data along the facility, which is separated into four (4) segments:

- Toll US 74, from Exit 255 (US 74) to Exit 259 (Unionville-Indian Trail Road)
- Toll US 74, from Exit 259 (Unionville-Indian Trail Road) to Exit 264 (US 601)
- Toll US 74, from Exit 264 (US 601) to Exit 266 (NC 200)
- Toll US 74, from Exit 266 (NC 200) to Exit 273 (US 74)

The data collected includes total crashes and the number of fatal and injury crashes reported along each segment. This data is analyzed over a rolling three-year period to determine the Total Crash Rate of each of the four segments selected, as well as for the entire facility. The Monroe Expressway opened to traffic in November 2018. Comparison to the statewide critical crash rate was performed for every quarter.

Total Crash Rates are a function of the length of roadway, average daily traffic, and number of reported crashes along a route during a specific time frame. These rates are expressed in crashes per 100 million vehicle miles traveled (MVMT). In the crash analysis conducted during the third quarter, the Total Crash Rates of the four segments selected and the entire facility were calculated based on the roadway segment length, the average annual daily traffic (AADT) and the number of crashes recorded from September 1, 2022, through August 31, 2025, for each segment. The AADT used for this quarter analysis was collected from the Vehicle Detection System loops from 2023. The Statewide Crash Rate (134.51 crashes per 100 MVMT) used for comparison purposes in this analysis was collected from the 2020-2024 NCDOT Statewide Total Crash Rates for urban interstate facilities, as the Monroe Expressway operates more like an interstate than a state route.

Critical Crash Rates are crash rates that have been statistically adjusted with a 95% level of confidence to remove the elements of chance and randomness. They are used as a reference to determine if the Total Crash Rate at a given location is significantly higher than a predetermined average rate for locations with similar characteristics. Monroe Expressway continues to report a Total Crash Rate significantly lower than both the Statewide Crash Rate and Critical Crash Rate.

Table 1 provides a summary of the crash data collected.

Table 1: Safety Statistics, September 1, 2022 – August 31, 2025

Segment	Length	AADT	Total Crashes	Vehicle Exposure (MVMT)	Total Crash Rate	Statewide Crash Rate	Critical Crash Rate
Toll US 74 US 74 to Unionville-Indian Trail Rd	5.62	18,500	69	113.91	60.58	134.51	152.82
Toll US 74 Unionville-Indian Trail Rd to US 601	5.33	17,000	88	99.12	88.78	134.51	154.18
Toll US 74 US 601 to Austin Chaney Rd	5.74	13,300	65	83.54	77.81	134.51	155.98
Toll US 74 Austin Chaney Rd to US 74	3.00	11,000	27	36.17	74.65	134.51	167.61
Monroe Expressway	**19.69**	**15,400**	**249**	**332.74**	**74.83**	**134.51**	**145.12**

Roadway Operations Statistics

Roadway Operations Statistics

Highly trained NCTA operators monitor and manage traffic operations and coordinate incident response and maintenance/construction work along the Monroe Expressway. These operators work at the Metrolina Regional Transportation Management Center (MRTMC) located in Charlotte. They are responsible for monitoring the facility from 5AM to 9PM. During non-working hours, monitoring is turned over to the Statewide Transportation Operations Center in Raleigh (STOC) and is monitored for 24 hours a day, 7 days a week, 365 days a year using closed-circuit television (CCTV) cameras, vehicle detectors (VDS), and toll zone security cameras. Additionally, STOC monitors roadside toll technology and toll facilities.

Operators can communicate travel conditions and emergencies to customers via 10 full-color Dynamic Message Signs (DMS), NCDOT's 511 system, and NCDOT's Traveler Information Management System (TIMS) website. Operators can also quickly dispatch toll technology technicians to address equipment failures via the Transportal maintenance ticket system. Additionally, in the event of incidents on the facility, operators can use interoperable 800MHz radio frequency dispatch from local 911 and statewide Highway Patrol communications to dispatch Incident Management Assistance Patrol (IMAP).

The NCTA Toll Safety Patrol Program consists of dedicated State Highway Patrol (SHP) and IMAP services provided on the Monroe Expressway. This program provides two SHP officers and two IMAP responders to the facility between the hours of 5 AM and 9 PM, Monday through Friday. During this time, the assigned SHP officers and IMAP drivers are responsible for patrolling the facility and responding to incidents reported by operators.

This section presents operations statistics reported by SHP and IMAP during the third quarter of 2025. It includes driver violations and warnings issued by SHP and total IMAP assistance recorded, as well as average monthly IMAP response and clearance time.

Table 2 and *Table 3* present SHP operation statistics during 2025. "Chargeable Activities" are SHP activities involving fines. It should be noted that the "Other Violations" category includes chargeable activities such as load and equipment violations, driver's license violations, vehicle registration violations, and littering.

Table 2: 2025 SHP Chargeable Activities, YTD

Chargeable Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Speed Violations	20	32	36	36	56	56	59	57	61				
Alcohol Violations	0	0	0	0	0	0	0	0	0				
Seat Belt Violations	4	7	6	0	7	12	11	5	7				
Child Restraint Violations	0	2	0	1	1	0	1	0	1				
Reckless Driving	4	10	10	9	14	12	9	12	17				
Drug Violations	0	0	0	0	0	0	0	0	0				
Obstructed Plates	0	0	0	0	0	0	0	0	0				
Other Violations	16	7	13	5	15	11	11	15	12				
Total Charges	**44**	**58**	**65**	**51**	**93**	**91**	**91**	**89**	**98**				

Table 3: 2025 SHP Non-Chargeable Activities, YTD

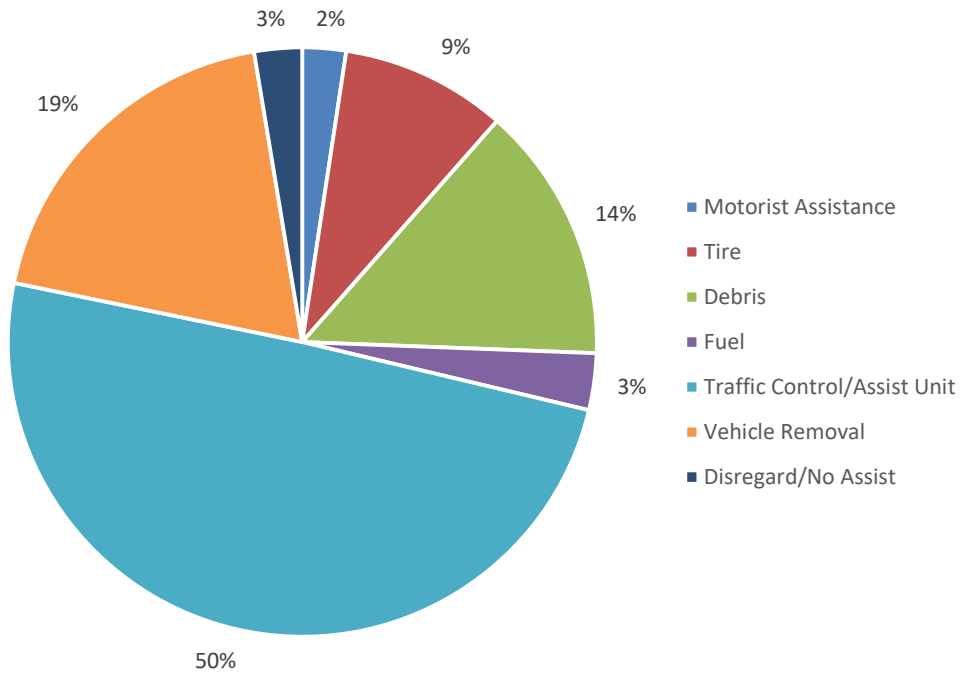
Non-Chargeable Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Warnings	17	19	25	40	11	24	32	39	19				
Crashes Investigated	3	1	5	1	5	4	0	6	1				
Calls for Service	25	19	25	29	27	19	22	20	23				
Total	**45**	**39**	**55**	**70**	**43**	**47**	**54**	**65**	**43**				

The IMAP assists with stranded motorists and incident clearance, thereby maintaining the flow of traffic along the roadway. *Table 4* and *Figure 10* present the monthly breakdown of IMAP services, by type, for the Monroe Expressway during 2025. The “other” category includes extinguish fire service, first aid service, and other rare miscellaneous services.

Table 4: 2025 IMAP Services, YTD

Assist Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Motorist Assistance	0	2	0	1	1	0	0	2	4				**10**
Tire	0	4	1	2	4	0	3	15	9				**38**
Debris	1	3	3	6	6	5	6	16	13				**59**
Fuel	3	0	0	1	2	1	0	4	2				**13**
Check on Welfare	0	0	0	0	0	0	0	0	0				**0**
Traffic Control / Assist Unit	14	10	17	12	32	21	8	51	31				**207**
Vehicle Removal	4	4	6	4	18	16	7	10	11				**80**
Disregard/ No Assist	1	1	1	0	0	0	0	7	2				**11**
Other	0	0	0	0	0	0	0	0	0				**0**
Total Charges	**23**	**24**	**28**	**26**	**63**	**43**	**24**	**105**	**72**				**418**

Figure 10: 2025 IMAP Services by Type, YTD



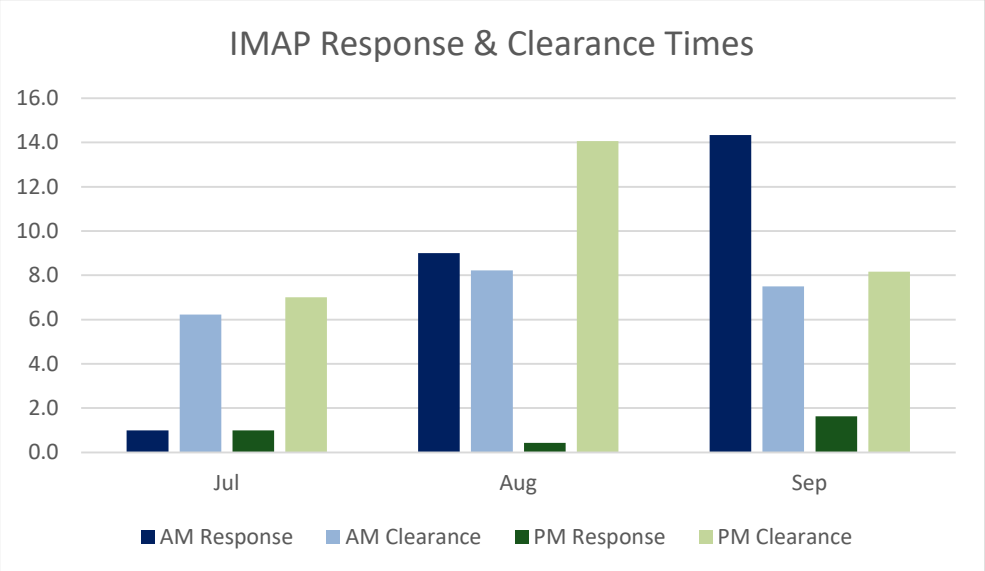
The response and clearance times for all IMAP assists are logged by IMAP and provided to the NCTA. Response time is the time from which a responder receives a call to the time they arrive on the scene. Clearance time is the time it takes the responder to clear the incident and return the roadway to normal operation. The IMAP staff's A.M. shift occurs from 6 AM to 1 PM, while the P.M. shift occurs from 1 PM to 9 PM. Shift response times may differ due to the number of drivers on duty and their coverage areas.

Table 5 and *Figure 11* present the average IMAP assistance response and clearance times, in minutes, for the Monroe Expressway.

Table 5: 2025 Average IMAP Response and Clearance Times (Minutes), YTD

Response Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2025 Average
A.M. Shift Response	16.0	33.0	10.7	8.0	4.0	1.0	1.0	9.0	14.3				**10.8**
A.M. Shift Clearance	4.0	14.3	20.8	5.7	5.8	5.6	6.2	8.2	7.5				**8.7**
P.M. Shift Response	1.0	1.0	2.4	1.0	1.0	1.0	1.0	0.4	1.6				**1.2**
P.M. Shift Clearance	12.6	9.1	6.8	3.5	8.3	12.0	7.0	14.1	8.2				**9.1**

Figure 11: Average IMAP Response and Clearance Times (Minutes), Third Quarter, by Month



Roadway Maintenance Statistics

Roadway Maintenance Statistics

This section outlines the NCTA Maintenance Rating Program (MRP), which is a maintenance evaluation program for roadway features and toll facilities. MRP is a comprehensive planning, measuring, and managing process that provides a means for communicating to managers, stakeholders, and key customers the impacts of policy and budget decisions on program service delivery.

Using outcome-based performance measures and the service level scale (0 through 100), the inspection results are rated against established threshold criteria. The program analysis is accomplished using sampling procedures that capture the level of service being provided for individual asset features. Over time, these ratings will be charted to identify work needs and subsequent necessary actions. The evaluations are based on the establishment of threshold conditions that quantify the maximum defect allowed to exist for a characteristic before it is considered unacceptable. The NCTA performance standards, threshold criteria, and Maintenance Rating Program were developed through a collaborative effort by NCTA managers, NCDOT maintenance staff, and consultants.

Using field survey information, a maintenance matrix can be developed to show the ties between maintenance activities and the characteristics of various roadway features. The purpose of this evaluation is to provide information that will be used to schedule and prioritize routine maintenance activities and provide uniform maintenance conditions that meet established objectives.

Assessment Schedule

As part of the NCTA MRP, a “baseline” assessment is scheduled for each newly opened roadway section soon after opening to toll collection. The baseline assessments include a complete inventory data collection and assessment on 100% of the roadway assets.

After the baseline assessment is completed, future assessments for that segment switch over to a statistical sampling assessment. Inspections are performed during the months of February, May, August, and November to account for dynamic seasonal changes to assets. These inspections are accomplished using statistically valid, random sampling procedures that capture the level of service for individual assets with a 95% confidence level in sampling.

Assessment Results

Table 6 presents the 2025 quarterly and annual MRP Assessment rating. It is important to note that the Quarterly Ratings are only representative of the samples inspected during each quarter. Therefore, they are not a statistically valid representation of the assets' conditions; only the annual rating will provide a 95% confidence level in statistical sampling.

Table 6: MRP Assessment Results

Element	Q4 2024 Rating	Q1 2025 Rating	Q2 2025 Rating	Q3 2025 Rating	Rolling Rating
Road Surface	95.7	96.7	100.0	97.9	**97.6**
Unpaved Shoulders and Ditches	99.3	100.0	98.7	99.3	**99.3**
Drainage	95.8	100.0	94.9	99.4	**97.5**
Roadside	95.3	97.7	98.1	97.2	**97.1**
Traffic Control Devices	96.8	95.4	96.0	99.3	**96.9**
Overall MRP Performance Rating	**96.4**	**97.4**	**97.6**	**98.6**	**97.5**