



NORTH CAROLINA

Turnpike Authority

Operations Statistics Report

Triangle Expressway

2014 Third Quarter Report

July - September

1 S. Wilmington Street
Raleigh, NC 27601



Last Updated:
November 14, 2014

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INTRODUCTION

Purpose

The purpose of this report is to provide various North Carolina Turnpike Authority (NCTA) operations related performance metrics of the Triangle for the third quarter of 2014, which includes the months of July, August and September. The summarized data will provide a general overview of traffic statistics, toll system statistics, roadway operations and maintenance operations for the entire facility that will allow for comparison of monthly and annual statistical trends over time to show the progression of the roadway.

Project

The Triangle Expressway

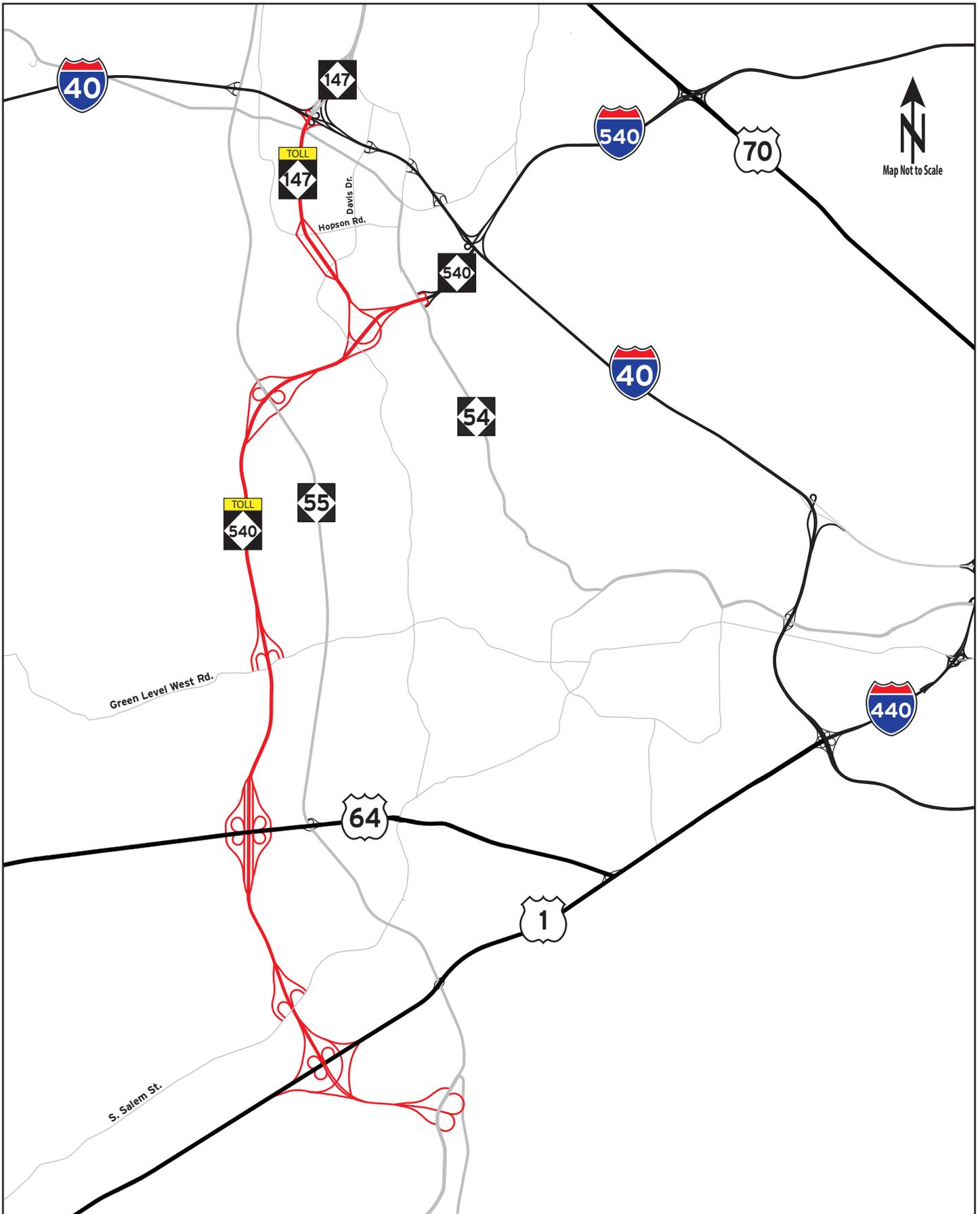
The Triangle Expressway is an 18.8 mile toll road that extends the partially complete “Outer Loop” around the greater Raleigh, North Carolina area from I-40 to NC-55 Bypass in Holly Springs. The six-lane controlled access toll facility relieves congestion on the paralleling NC-55 facility, while improving access to the Research Triangle Park by reducing travel times for commuters residing to the south and east. The Triangle Expressway is currently comprised of two elements; Toll NC-147 and Toll NC-540.

Toll NC-147 includes 3.4 miles of toll road between I-40 and Toll NC-540. This section of the Triangle Expressway includes interchanges at Hopson Road, Davis Drive, and NC-540 and opened to toll-free traffic on December 8, 2011. Tolling on this section began on January 3, 2012.

Toll NC-540 includes 12.6 miles of toll road between NC-55 in western Cary and the NC-55 Bypass near the Town of Holly Springs. The section from NC-55 to US-64 includes interchanges at NC-55, Green Level West Road and US-64 and opened to toll-free traffic on August 1, 2012. Tolling on this section began on August 2, 2012. The section from US-64 to NC-55 Bypass includes interchanges at S. Salem St., US-1 and NC-55 Bypass and opened to toll-free traffic on December 20, 2012. Tolling on this section began on January 2, 2013.

The Triangle Expressway utilizes an all-electronic, non-stop tolling system where there are no toll plazas at which drivers stop 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 Triangle Expressway at mainline and interchange ramp locations to ensure that there are no non-tolled trips. An illustration of the entire Triangle Expressway can be seen in *Figure 1* on the following page.



Triangle Expressway System Map

**Figure
1**

Traffic Statistics

TRAFFIC STATISTICS

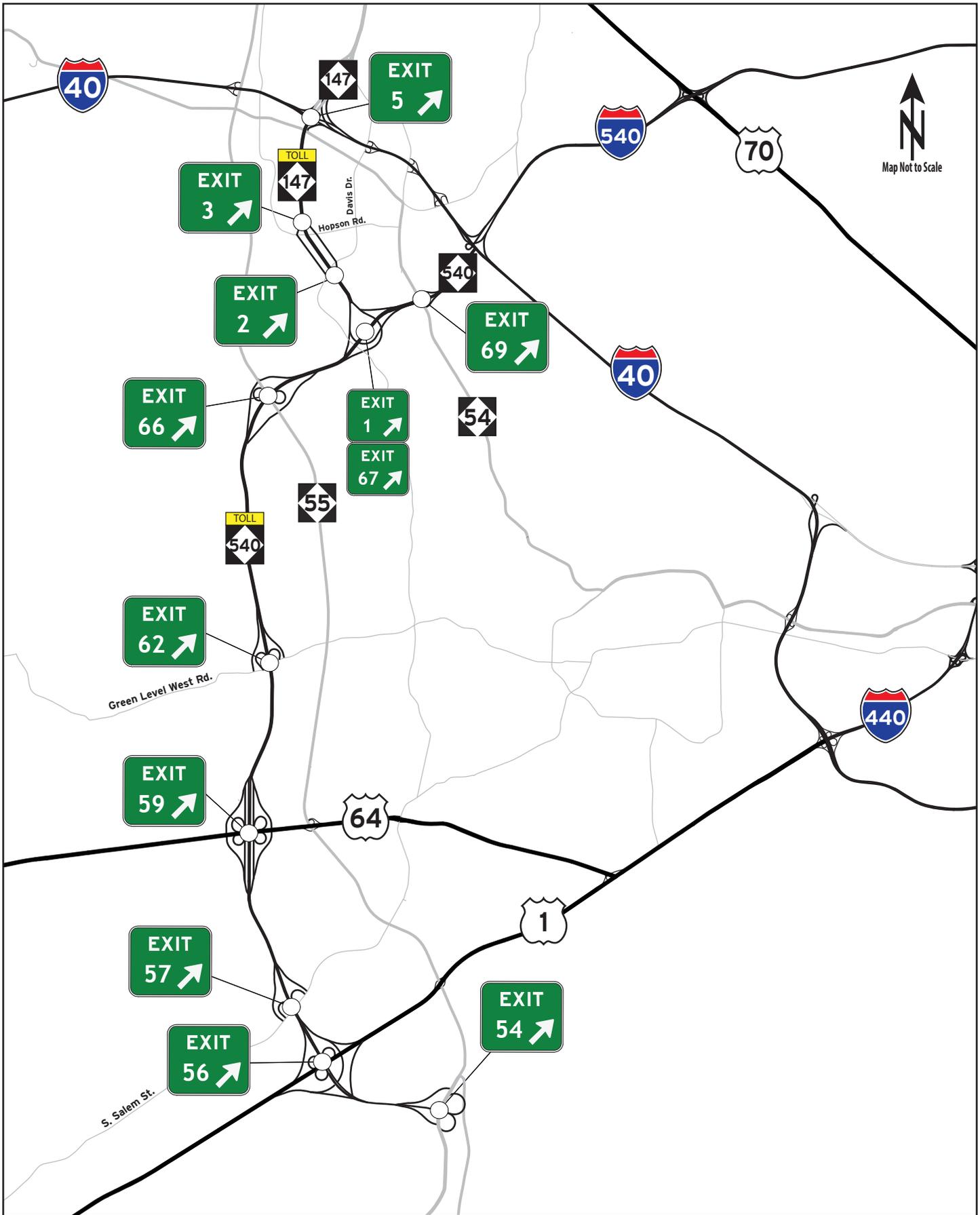
Current and historical traffic data is collected and stored through the use of roadside microwave vehicle detectors (MVD's) installed throughout the Triangle Expressway facility. The data gives an overview of the current utilization of the roadway. The data can also be analyzed to identify trends that could be used to determine a more accurate estimate of the future utilization of these facilities.

It should be noted that due to the recent completion of the Triangle Expressway the facility is currently experiencing a traffic pattern known as “ramp-up.” During a ramp-up period, the traffic volumes on a new facility increase at a faster rate than typical growth found at an existing facility. The growth rates increase as the customers become more familiar with the facility. The ramp-up period is expected to continue through 2014.

Average Weekday Traffic (AWT)

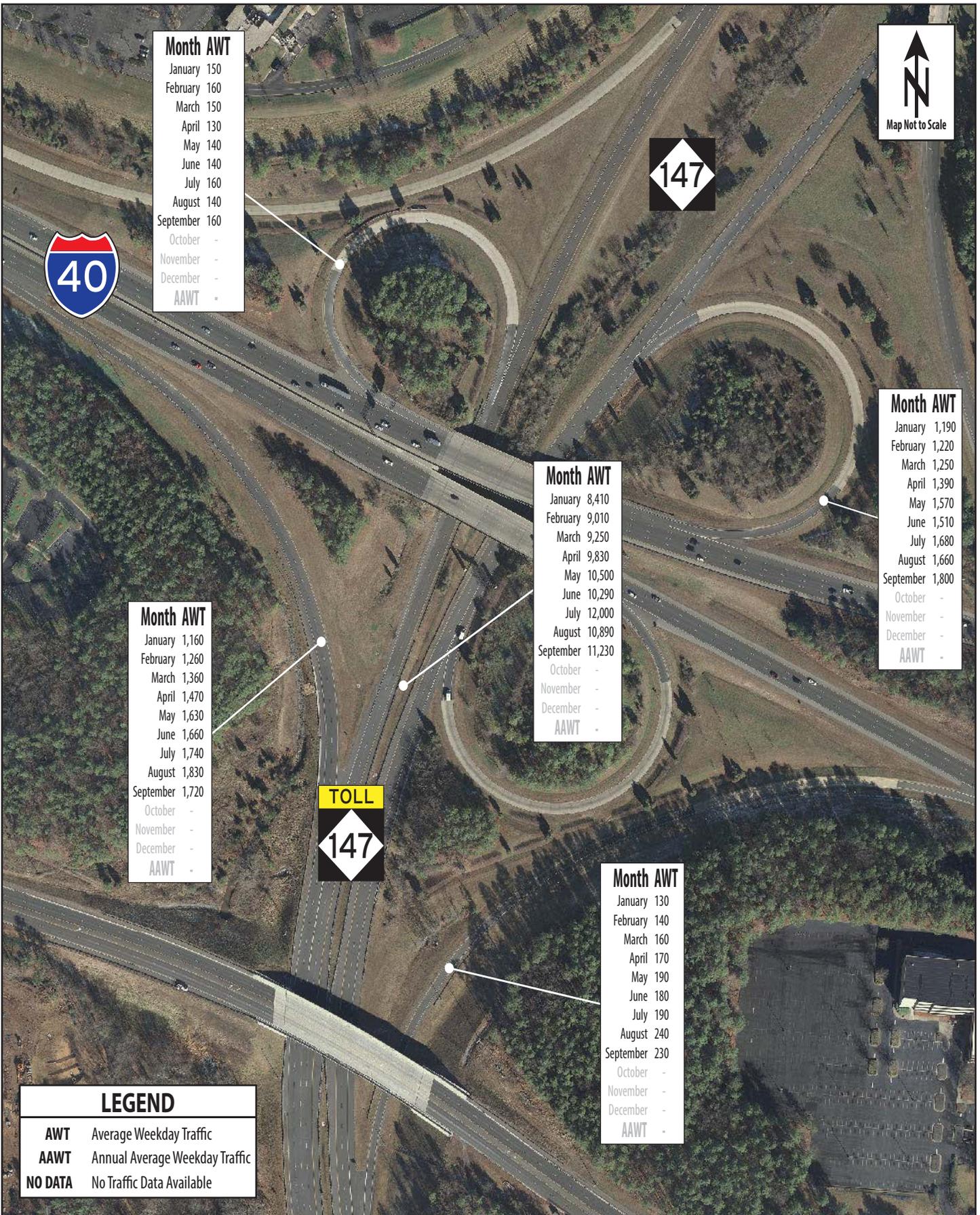
Traffic volume data is collected on all mainline segments between interchanges and on all ramp locations. The location of the interchanges in relation to the entire expressway can be seen on the following page in *Figure 2*. Typically there is a large difference between peak and off-peak volumes, as well as between weekday and weekend volumes. However, this gap becomes even larger for a tolled facility. This is due to the fact that toll roads tend to have a much higher percentage of traffic occurring during peak hours when compared to a normal roadway, as there is less of a benefit for toll users during off peak hours. For these reasons, 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.

The following pages contain visual representations of AWT along the facility which are representative of NCTA's MVD data. It should be noted that if there are not enough reliable days (5) for a particular month to report an AWT, then that MVD will report “NO DATA.” Due to equipment malfunction, this quarter three detectors reported “NO DATA” during the months of August and September. This problem is currently being addressed.



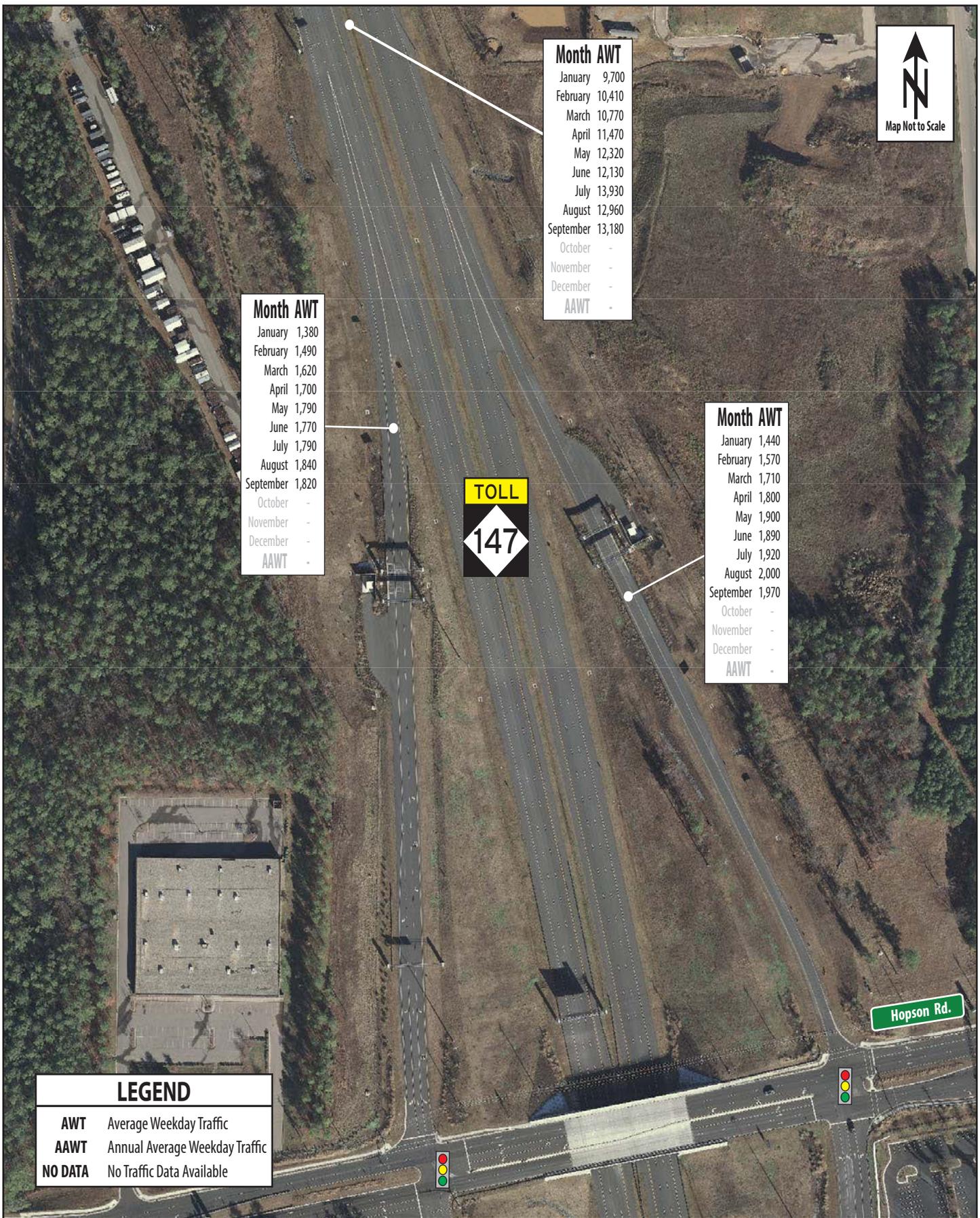
Triangle Expressway Interchange Map

Figure 2



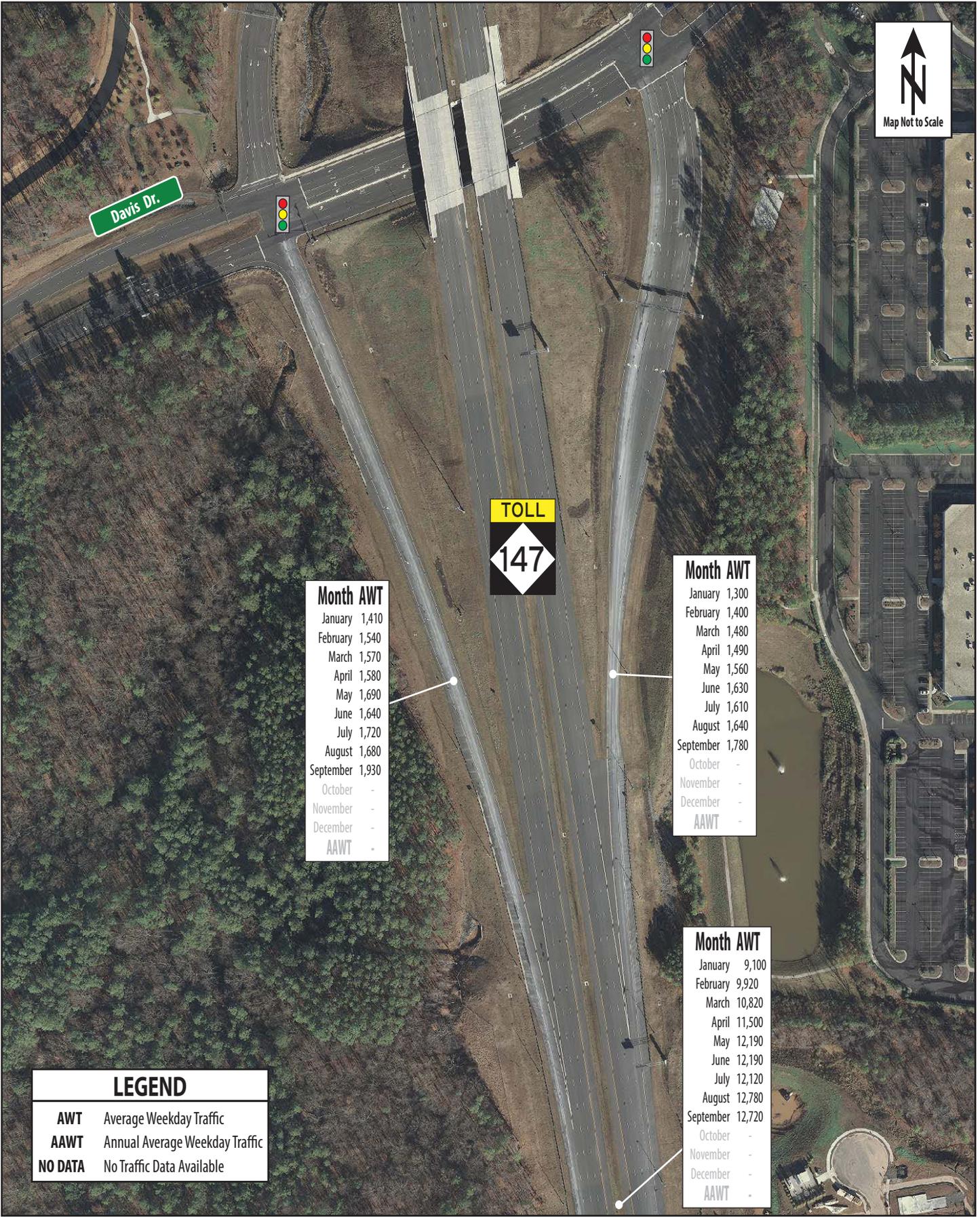
NC-147 at I-40 Interchange
2014 Average Weekday Traffic

Figure
3



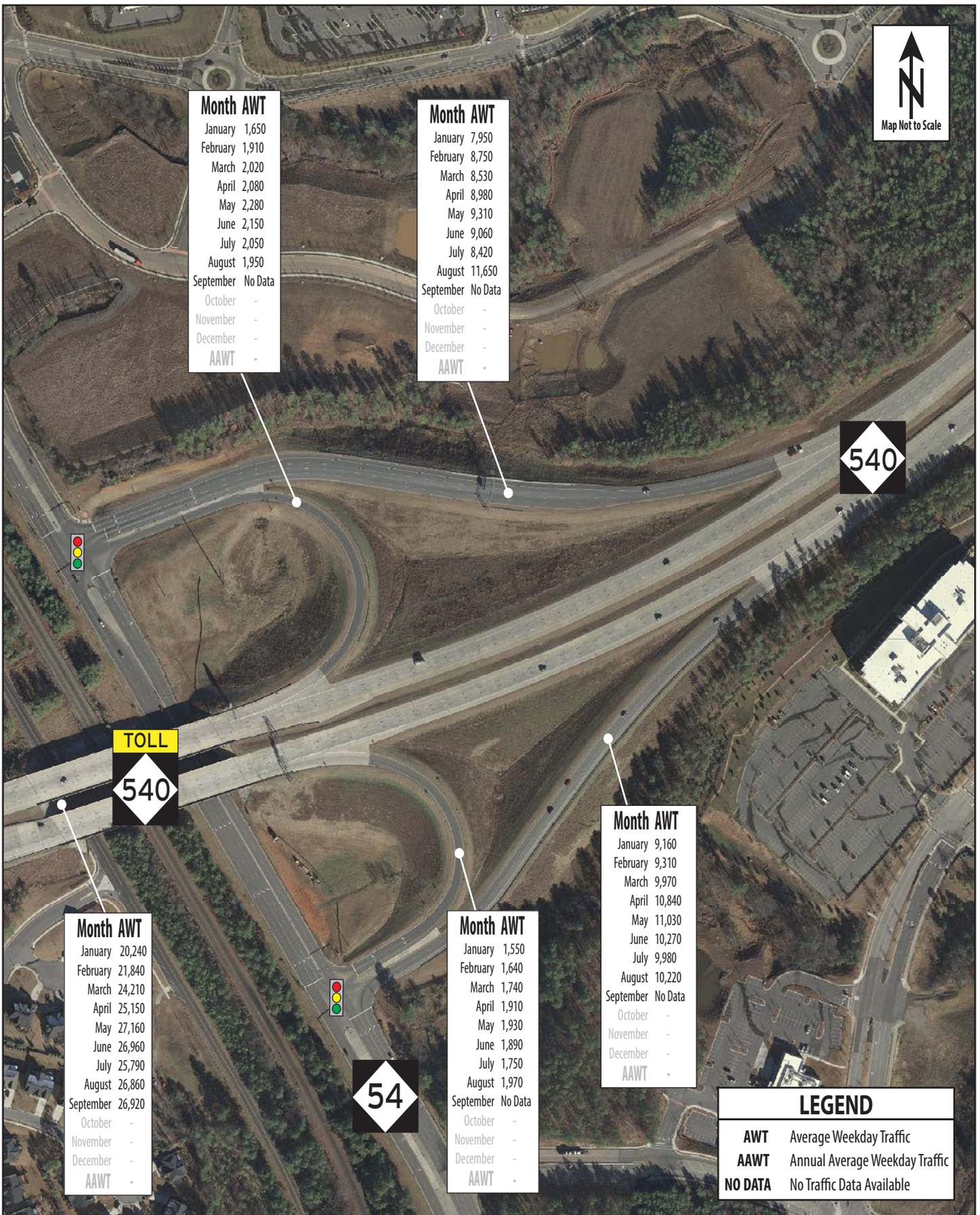
NC-147 at Hopson Rd. Interchange
2014 Average Weekday Traffic

Figure
4



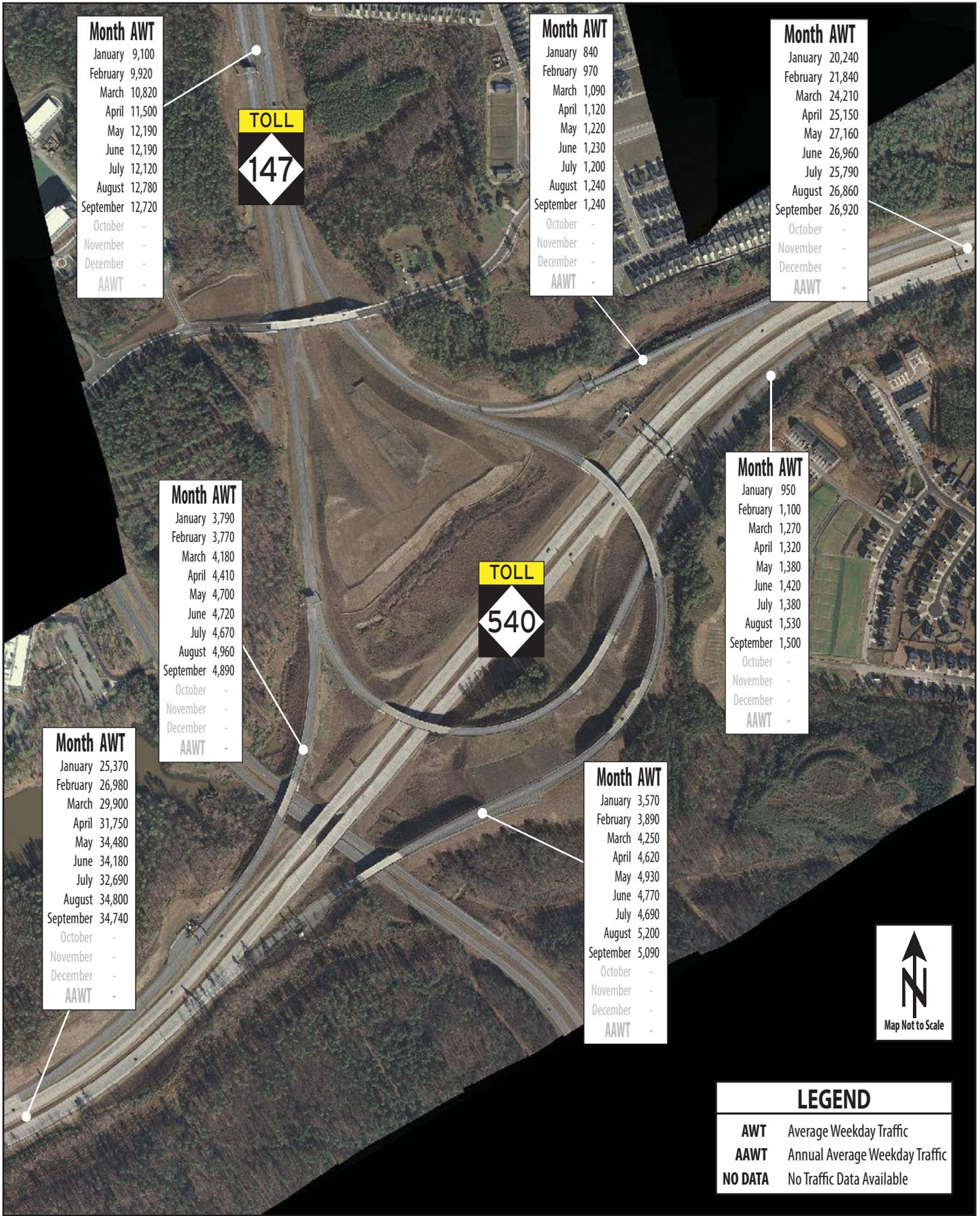
NC-147 at Davis Dr. Interchange
2014 Average Weekday Traffic

Figure 5



NC-540 at NC-54 Interchange
2014 Average Weekday Traffic

Figure
6



NC-540 at NC-147 Interchange
2014 Average Weekday Traffic

Figure
7

| Month AWT | |
|-----------|--------|
| January | 16,300 |
| February | 17,600 |
| March | 19,760 |
| April | 20,970 |
| May | 22,540 |
| June | 22,910 |
| July | 22,380 |
| August | 23,540 |
| September | 23,370 |
| October | - |
| November | - |
| December | - |
| AAWT | - |



| Month AWT | |
|-----------|-----|
| January | 660 |
| February | 700 |
| March | 770 |
| April | 810 |
| May | 870 |
| June | 860 |
| July | 840 |
| August | 920 |
| September | 970 |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| Month AWT | |
|-----------|-------|
| January | 850 |
| February | 920 |
| March | 1,020 |
| April | 1,020 |
| May | 1,120 |
| June | 1,090 |
| July | 1,060 |
| August | 1,150 |
| September | 1,210 |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| Month AWT | |
|-----------|-------|
| January | 680 |
| February | 750 |
| March | 790 |
| April | 870 |
| May | 1,000 |
| June | 1,000 |
| July | 950 |
| August | 990 |
| September | 1,150 |
| October | - |
| November | - |
| December | - |
| AAWT | - |

Green Level West Rd.

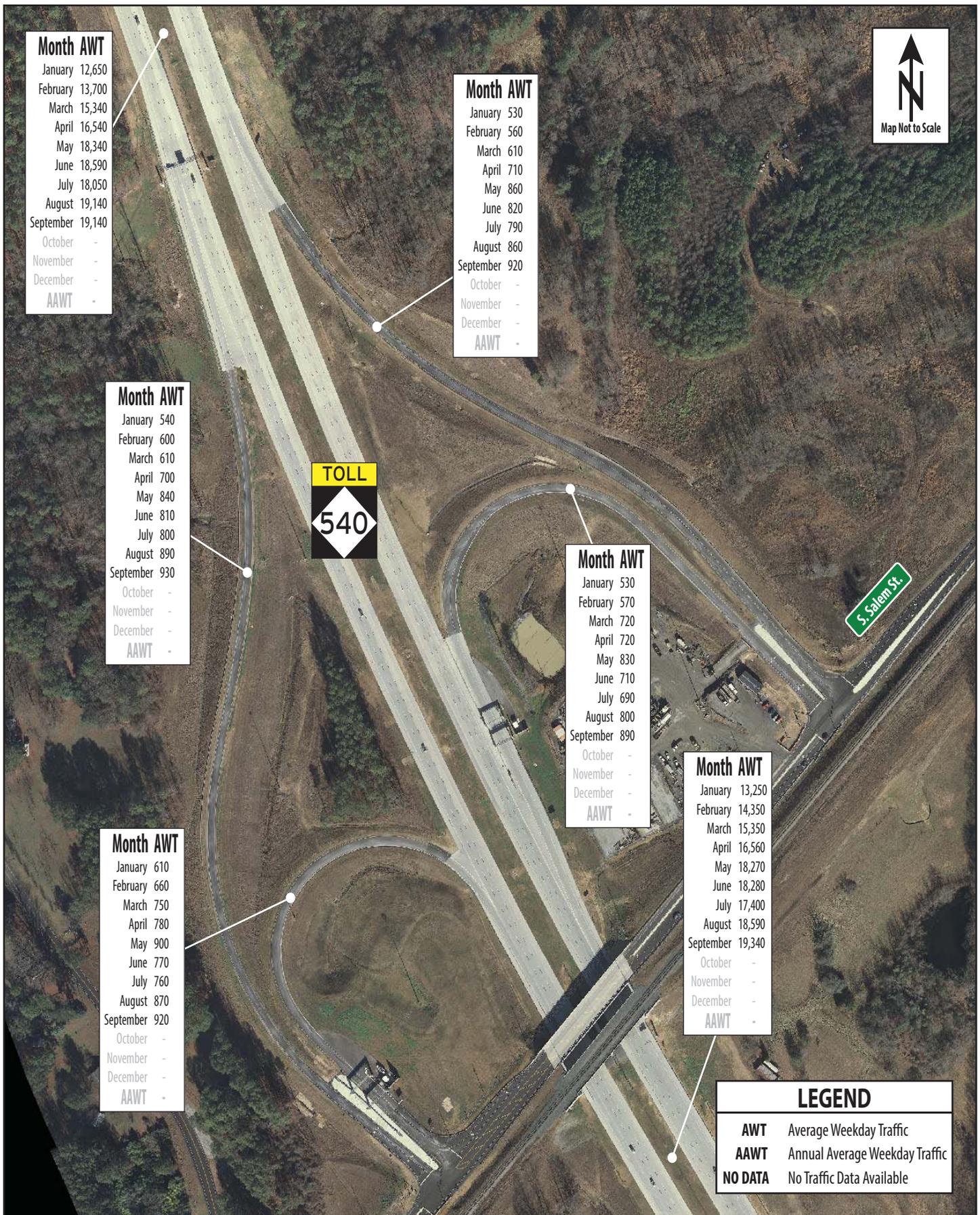
| Month AWT | |
|-----------|-------|
| January | 680 |
| February | 760 |
| March | 810 |
| April | 870 |
| May | 980 |
| June | 950 |
| July | 940 |
| August | 990 |
| September | 1,060 |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| Month AWT | |
|-----------|--------|
| January | 16,700 |
| February | 17,740 |
| March | 18,850 |
| April | 19,950 |
| May | 21,570 |
| June | 21,580 |
| July | 21,190 |
| August | 22,280 |
| September | 22,830 |
| October | - |
| November | - |
| December | - |
| AAWT | - |

| LEGEND | |
|---------|--------------------------------|
| AWT | Average Weekday Traffic |
| AAWT | Annual Average Weekday Traffic |
| NO DATA | No Traffic Data Available |

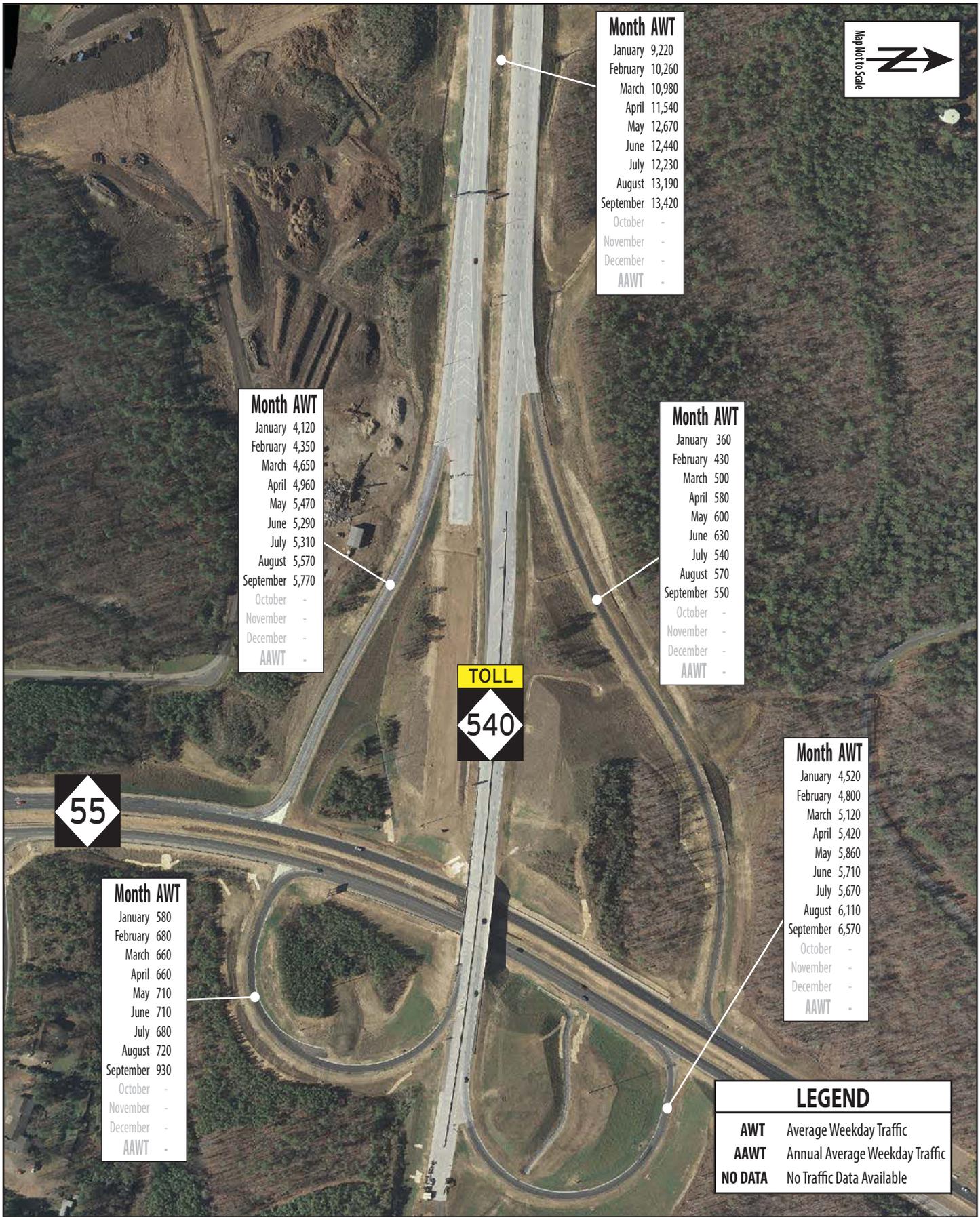
NC-540 at Green Level West Rd. Interchange
2014 Average Weekday Traffic

Figure 9



NC-540 at S. Salem St. Interchange
2014 Average Weekday Traffic

Figure
11



NC-540 at NC-55 Bypass Interchange
2014 Average Weekday Traffic

Figure 13

Toll System Statistics

TOLL SYSTEM STATISTICS

Current and historical toll system data is collected and reported through the NC Quick Pass Customer Service Center (CSC). The data provides an overview of the current toll operations on the facility and identifies any utilization trends. It also allows for comparison of historical and projected data. Transaction data is collected from the toll zones placed throughout the facility using an all-electronic tolling (AET) method. Toll gantries and the roadside toll vaults house the AET equipment.

Weekly, Monthly and Year-to-Date (YTD) Statistics

The statistics provided in the following section combine roadway and customer service data and reflect the overall Triangle Expressway facility. Statistics have been provided for the datasets listed below:

- Transactions
- Classification
- Accounts
- Transponders

Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

Transactions

The statistics provided in the following section outline the volume and percentage of NCQP users compared to Bill by Mail users. NCQP users have an established account that is identified using the vehicle’s onboard transponder, whereas Bill by Mail users do not have an established account and are identified using vehicle recognition software.

Table 1 presents a summary of the total weekly transactions for NC Quick Pass and Bill by Mail payment methods. All weeks begin on Monday and end on Sunday.

Table 1: Transactions, Third Quarter by Week

| Week Ending | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|--------------|--------------------------------|------------|-------------------------|------------|----------------|
| | Transactions | % of Total | Transactions | % of Total | |
| 7/6/2014* | 216,669 | 54% | 187,644 | 46% | 404,313 |
| 7/13/2014 | 338,162 | 57% | 257,753 | 43% | 595,915 |
| 7/20/2014 | 347,758 | 57% | 264,298 | 43% | 612,056 |
| 7/27/2014 | 348,283 | 57% | 265,254 | 43% | 613,537 |
| 8/3/2014 | 346,885 | 57% | 259,554 | 43% | 606,439 |
| 8/10/2014 | 352,183 | 58% | 258,347 | 42% | 610,530 |
| 8/17/2014 | 362,654 | 57% | 268,745 | 43% | 631,399 |
| 8/24/2014 | 381,451 | 58% | 272,070 | 42% | 653,521 |
| 8/31/2014 | 371,139 | 58% | 265,362 | 42% | 636,501 |
| 9/7/2014** | 338,470 | 57% | 251,253 | 43% | 589,723 |
| 9/14/2014 | 380,568 | 59% | 263,879 | 41% | 644,447 |
| 9/21/2014 | 393,390 | 58% | 279,991 | 42% | 673,381 |
| 9/28/2014 | 381,980 | 58% | 277,067 | 42% | 659,047 |
| 9/30/2014*** | 128,726 | 60% | 85,262 | 40% | 213,988 |

*Week ending consists of six days worth of data and includes Independence Day

**Week ending includes Labor Day weekend

***Week ending consists of two days worth of data

Table 2 presents a summary of the total monthly transactions for NC Quick Pass and Bill by Mail transactions.

Table 2: Transactions, Third Quarter by Month

| Month | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|-----------|--------------------------------|------------|-------------------------|------------|------------------|
| | Transactions | % of Total | Transactions | % of Total | |
| July | 1,495,380 | 57% | 1,141,009 | 43% | 2,636,389 |
| August | 1,569,804 | 58% | 1,158,018 | 42% | 2,727,822 |
| September | 1,623,134 | 58% | 1,157,452 | 42% | 2,780,586 |

Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

Figure 14 presents a visual summary of the total monthly transactions YTD for NC Quick Pass and Bill by Mail transactions.

Figure 14: Transactions, YTD

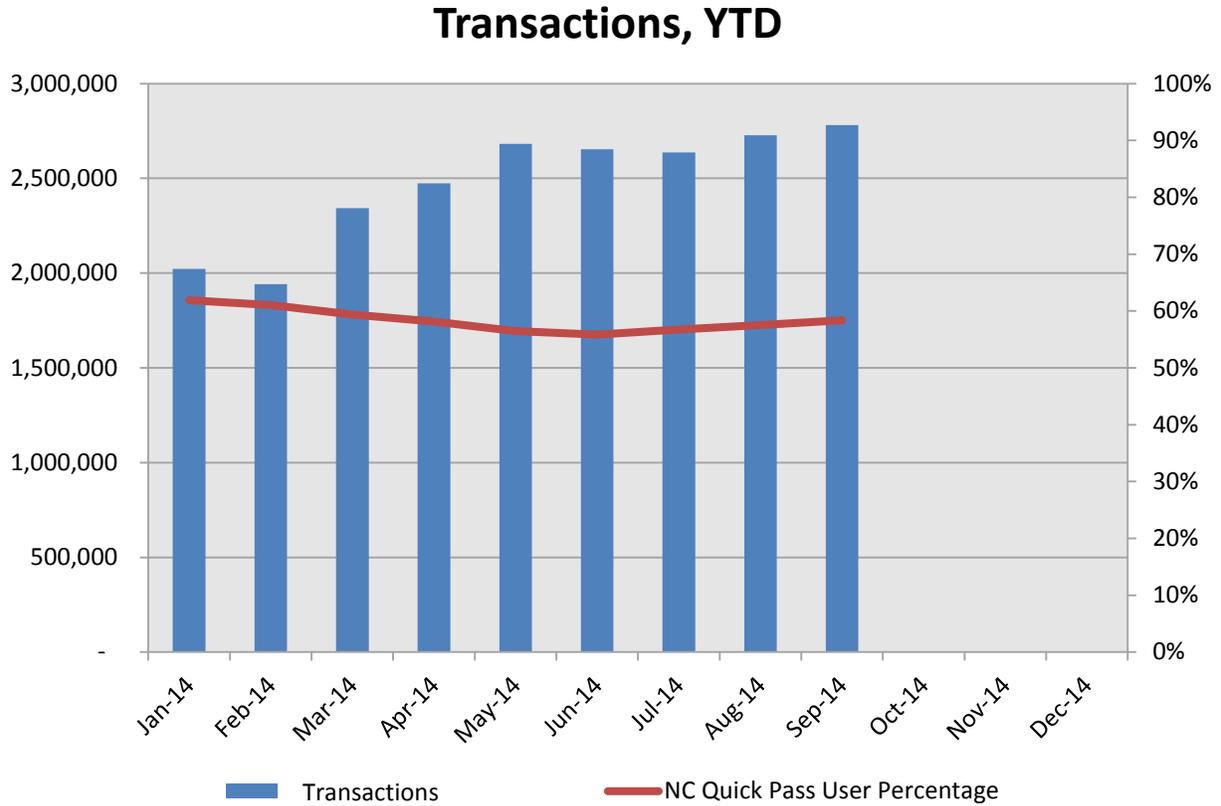


Table 3 presents a summary of the total yearly transactions for NC Quick Pass and Bill by Mail transactions. Project to date is the total number of transactions since the opening of the project.

Table 3: Transactions, by Year

| Year | Transponder (NC Quick Pass) | | Video (Bill by Mail) | | Total |
|------------------------|--------------------------------|------------|-------------------------|------------|-------------------|
| | Transactions | % of Total | Transactions | % of Total | |
| 2012 | 2,803,043 | 49% | 2,892,496 | 51% | 5,695,539 |
| 2013 | 13,249,972 | 58% | 9,792,975 | 42% | 23,042,947 |
| 2014 | 12,950,245 | 58% | 9,309,909 | 42% | 22,260,154 |
| Project to Date | 29,003,260 | 57% | 21,995,380 | 43% | 50,998,640 |

Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

Classification

The statistics provided in the following section outline the volume and percentage of users based on classification. The classification system used by NCTA contains three classifications designated by the number of axles that a vehicle has.

Table 4 presents a summary of the total weekly classification for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles. All weeks begin on Monday and end on Sunday.

Table 4: Classification, Third Quarter by Week

| Week Ending | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|--------------|---------------------|------------|---------------------|------------|---------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| 7/6/2014 | 390,359 | 97% | 5,053 | 1% | 8,901 | 2% |
| 7/13/2014 | 574,126 | 96% | 8,005 | 1% | 13,784 | 2% |
| 7/20/2014 | 591,264 | 97% | 7,004 | 1% | 13,788 | 2% |
| 7/27/2014 | 593,636 | 97% | 7,133 | 1% | 12,768 | 2% |
| 8/3/2014 | 586,034 | 97% | 7,403 | 1% | 13,002 | 2% |
| 8/10/2014 | 588,596 | 96% | 7,997 | 1% | 13,937 | 2% |
| 8/17/2014 | 609,921 | 97% | 7,631 | 1% | 13,847 | 2% |
| 8/24/2014 | 630,850 | 97% | 7,798 | 1% | 14,873 | 2% |
| 8/31/2014 | 613,130 | 96% | 8,130 | 1% | 15,241 | 2% |
| 9/7/2014** | 569,751 | 97% | 7,060 | 1% | 12,912 | 2% |
| 9/14/2014 | 624,345 | 97% | 6,946 | 1% | 13,156 | 2% |
| 9/21/2014 | 649,073 | 96% | 8,822 | 1% | 15,486 | 2% |
| 9/28/2014 | 637,648 | 97% | 7,424 | 1% | 13,975 | 2% |
| 9/30/2014*** | 205,985 | 96% | 2,658 | 1% | 5,345 | 2% |

*Week ending consists of six days worth of data and includes Independence Day

**Week ending includes Labor Day weekend

***Week ending consists of two days worth of data

Table 5 presents a summary of the total monthly classification for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles.

Table 5: Classification, Third Quarter by Month

| Month | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|-----------|---------------------|------------|---------------------|------------|---------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| July | 2,544,136 | 97% | 32,844 | 1% | 59,409 | 2% |
| August | 2,633,780 | 97% | 33,310 | 1% | 60,732 | 2% |
| September | 2,686,802 | 97% | 32,910 | 1% | 60,874 | 2% |

Figure 15 presents a visual summary of the total monthly percentage of transactions YTD for Class 1 (2-axle) vehicles.

Figure 15: Classification, Class 1 Percentage YTD

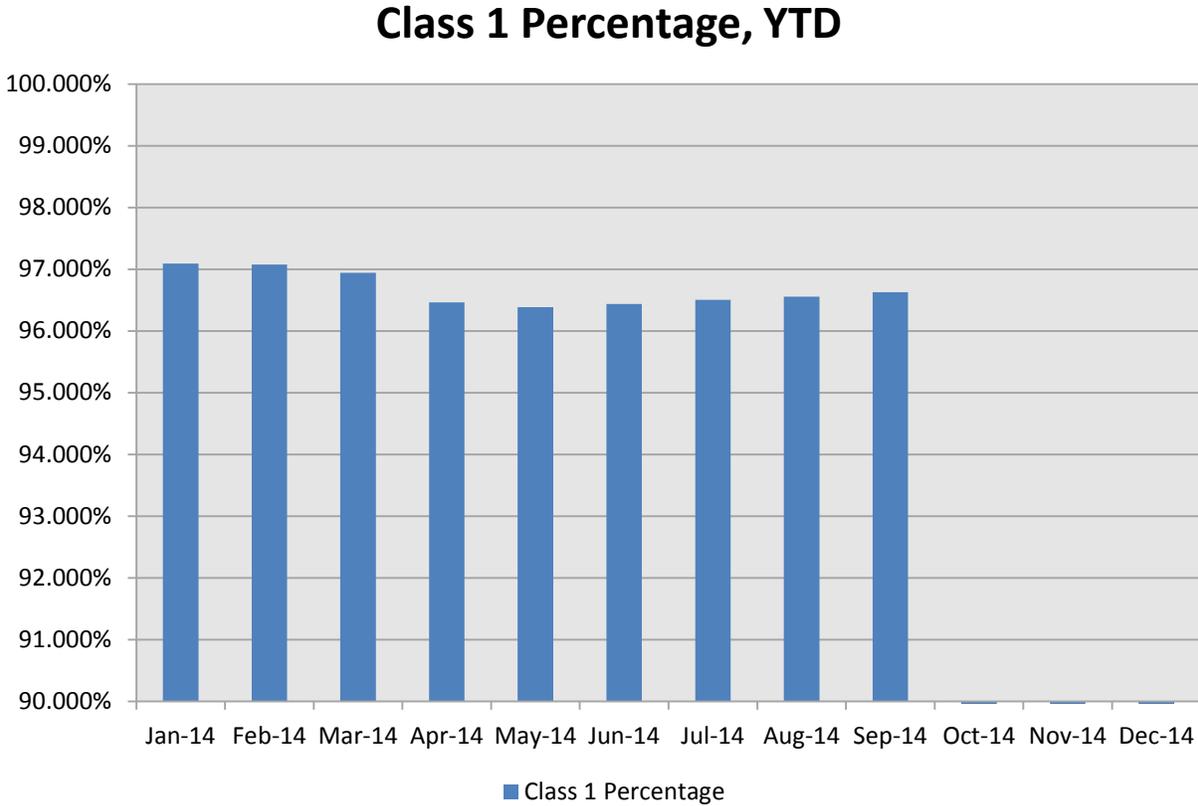


Table 6 presents a summary of the total yearly classification for Class 1 (2-axle), Class 2 (3-axle) and Class 3 (4+axle) vehicles. Project to date is the total number of transactions since the opening of the project.

Table 6: Classification, by Year

| Year | Class 1 (2-axle) | | Class 2 (3-axle) | | Class 3 (4+axle) | |
|------------------------|---------------------|------------|---------------------|------------|---------------------|------------|
| | Transactions | % of Total | Transactions | % of Total | Transactions | % of Total |
| 2012 | 5,562,061 | 97% | 46,935 | 1% | 86,543 | 2% |
| 2013 | 22,282,351 | 97% | 267,558 | 1% | 493,038 | 2% |
| 2014 | 21,513,753 | 97% | 482,297 | 1% | 482,297 | 2% |
| Project to Date | 49,358,165 | 97% | 578,597 | 1% | 1,061,878 | 2% |

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Accounts

The statistics provided in the following section outline the volume of accounts established and managed by the NCTA CSC.

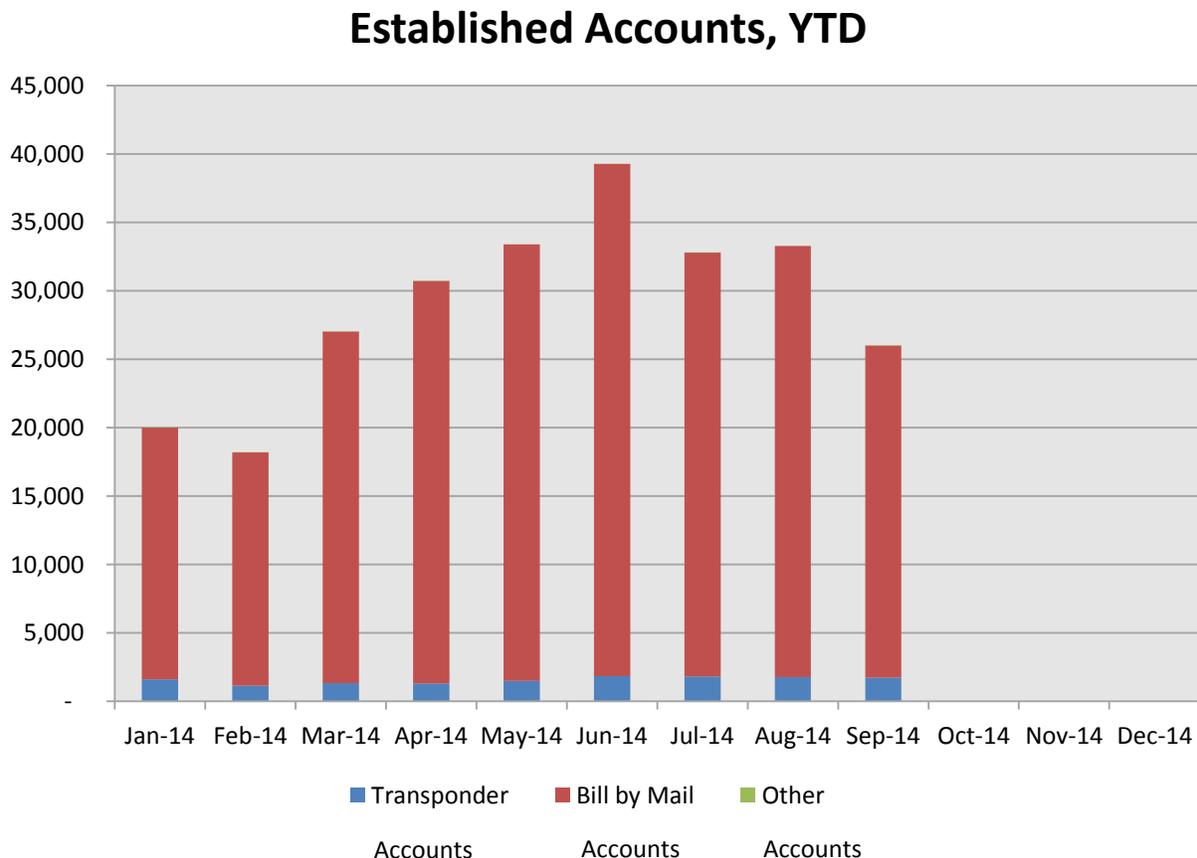
Table 7 presents a summary of the monthly established accounts being managed by the NCTA CSC. Numbers presented in parentheses represent a reduction in accounts.

Table 7: Established Accounts, Third Quarter by Month

| Month | Transponder (NC Quick Pass) | Bill by Mail | Registered Video | Non- Revenue | Government | Total |
|-----------|--------------------------------|-----------------|---------------------|-----------------|------------|---------------|
| July | 1,808 | 30,990 | 1 | 0 | 0 | 32,798 |
| August | 1,779 | 31,495 | 0 | 0 | 0 | 33,274 |
| September | 1,725 | 24,287 | 0 | 2 | 0 | 26,012 |

Figure 16 presents a visual summary of the monthly established accounts YTD being managed by the NCTA CSC. The “Other” category includes registered video, non-revenue and government accounts.

Figure 16: Established Accounts, YTD



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Table 8 presents a summary of the total yearly established accounts being managed by the NCTA CSC. Project to date is the total number of accounts established since the opening of the project. Numbers presented in parentheses represent a reduction in accounts.

Table 8: Established Accounts, by Year

| Year | Transponder (NC Quick Pass) | Bill by Mail | Registered Video | Non- Revenue | Government | Total |
|------------------------|--------------------------------|-----------------|---------------------|-----------------|------------|----------------|
| 2012 | 27,179 | 359,431 | 5 | 38 | 18 | 386,671 |
| 2013 | 24,268 | 306,581 | (1) | 19 | 9 | 330,876 |
| 2014 | 14,018 | 246,676 | 2 | 12 | 3 | 260,694 |
| Project to Date | 65,465 | 912,688 | 6 | 69 | 30 | 978,153 |

Transponders

The statistics provided in the following section outline the volume of transponders sold by the NC Quick Pass CSC.

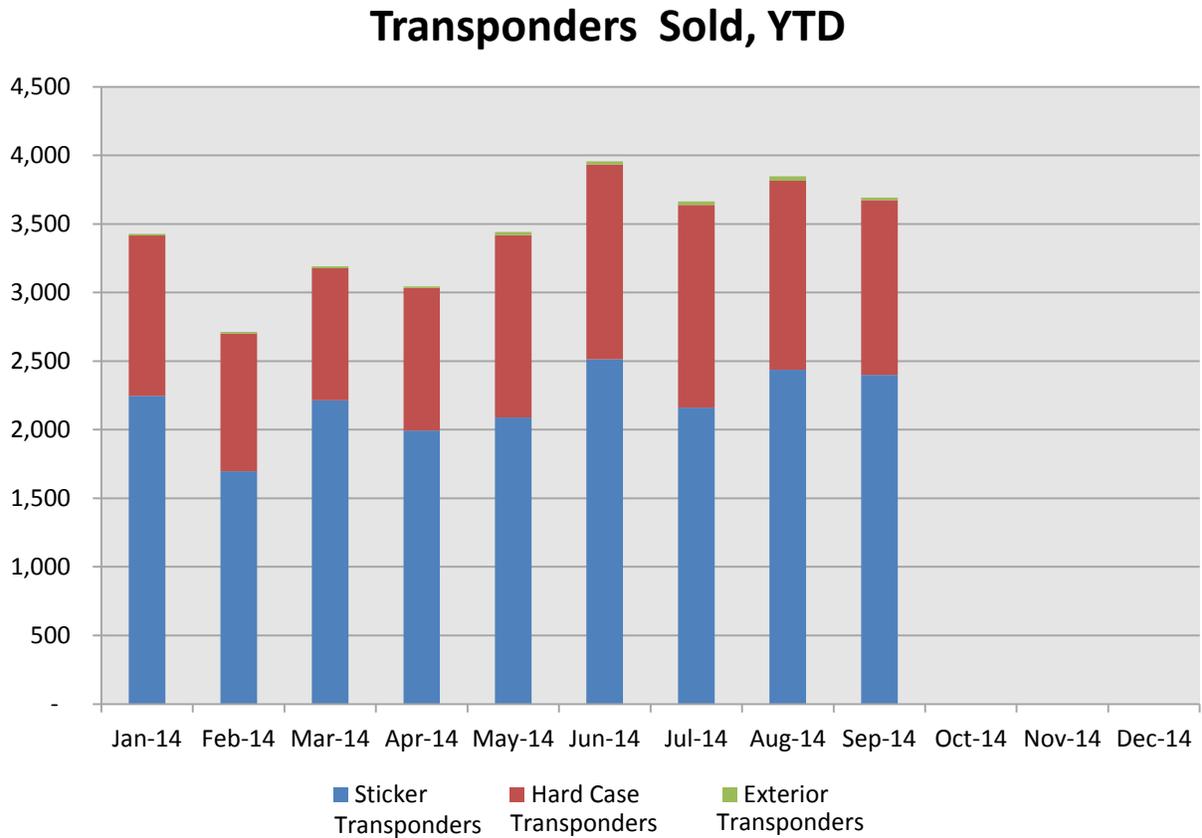
Table 9 presents a summary of the total monthly transponders sold.

Table 9: Transponders Sold, Third Quarter by Month

| Month | Sticker Tag | Hard Case Tag | Exterior Tag | Total |
|-----------|-------------|---------------|--------------|--------------|
| July | 2,160 | 1,479 | 25 | 3,664 |
| August | 2,437 | 1,378 | 32 | 3,847 |
| September | 2,400 | 1,273 | 18 | 3,691 |

Figure 17 presents a visual summary of the monthly transponders sold YTD.

Figure 17: Transponders Sold, YTD



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Table 10 presents a summary of the total yearly transponders sold. Transponders went on sale prior to the opening of the roadway to provide potential motorists sufficient time to establish their accounts. Project to date is the total number of transponders sold since the opening of the project and includes these transponders sold prior to the opening of the roadway to traffic.

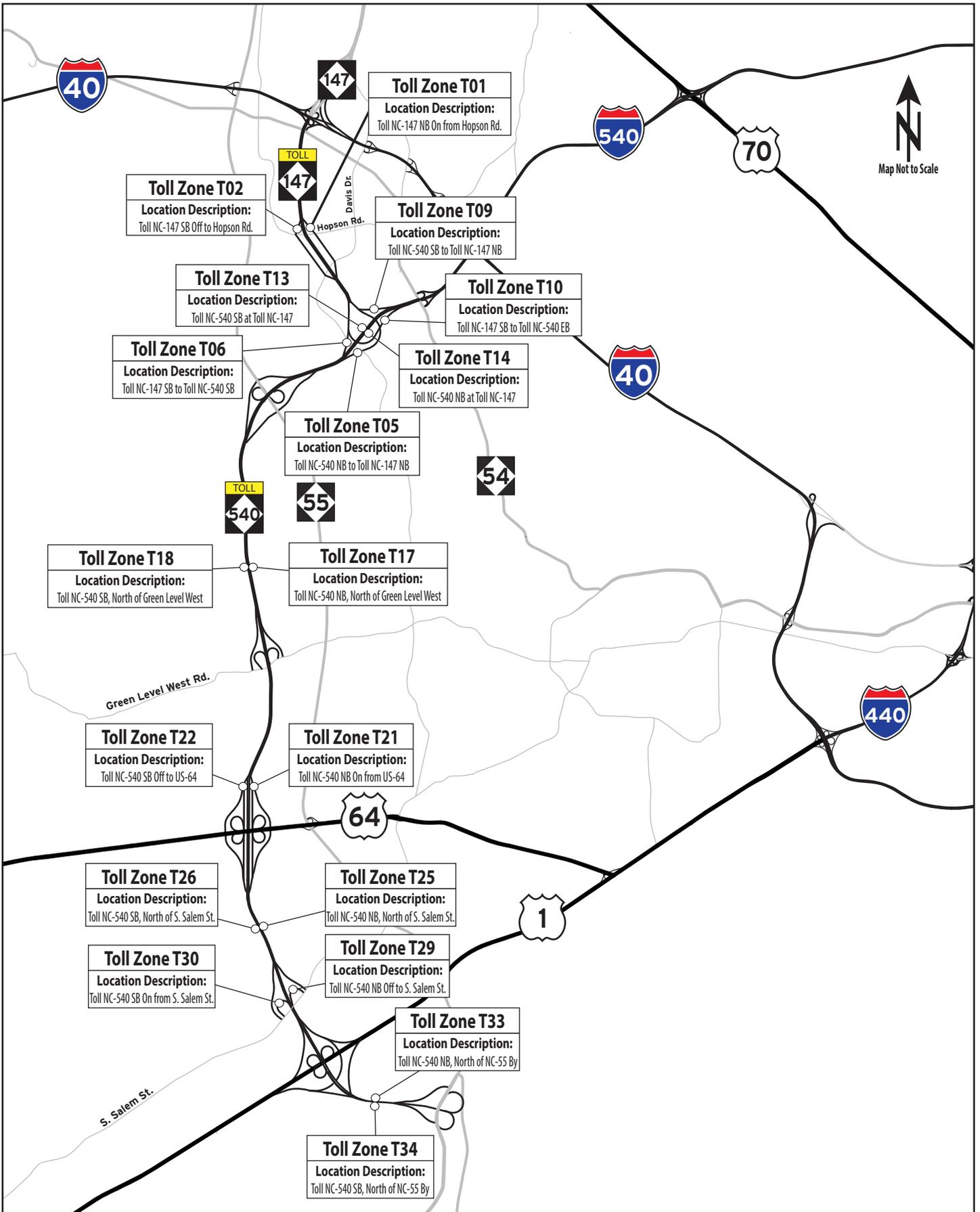
Table 10: Transponders Sold, by Year

| Year | Sticker Tag | Hard Case Tag | Exterior Tag | Total |
|------------------------|---------------|---------------|--------------|----------------|
| 2011 | 7,315 | 2,806 | 200 | 10,321 |
| 2012 | 35,338 | 6,861 | 250 | 42,449 |
| 2013 | 34,784 | 13,980 | 257 | 49,021 |
| 2014 | 19,752 | 11,051 | 173 | 30,976 |
| Project to Date | 97,189 | 34,698 | 880 | 132,767 |

Toll Zone Statistics

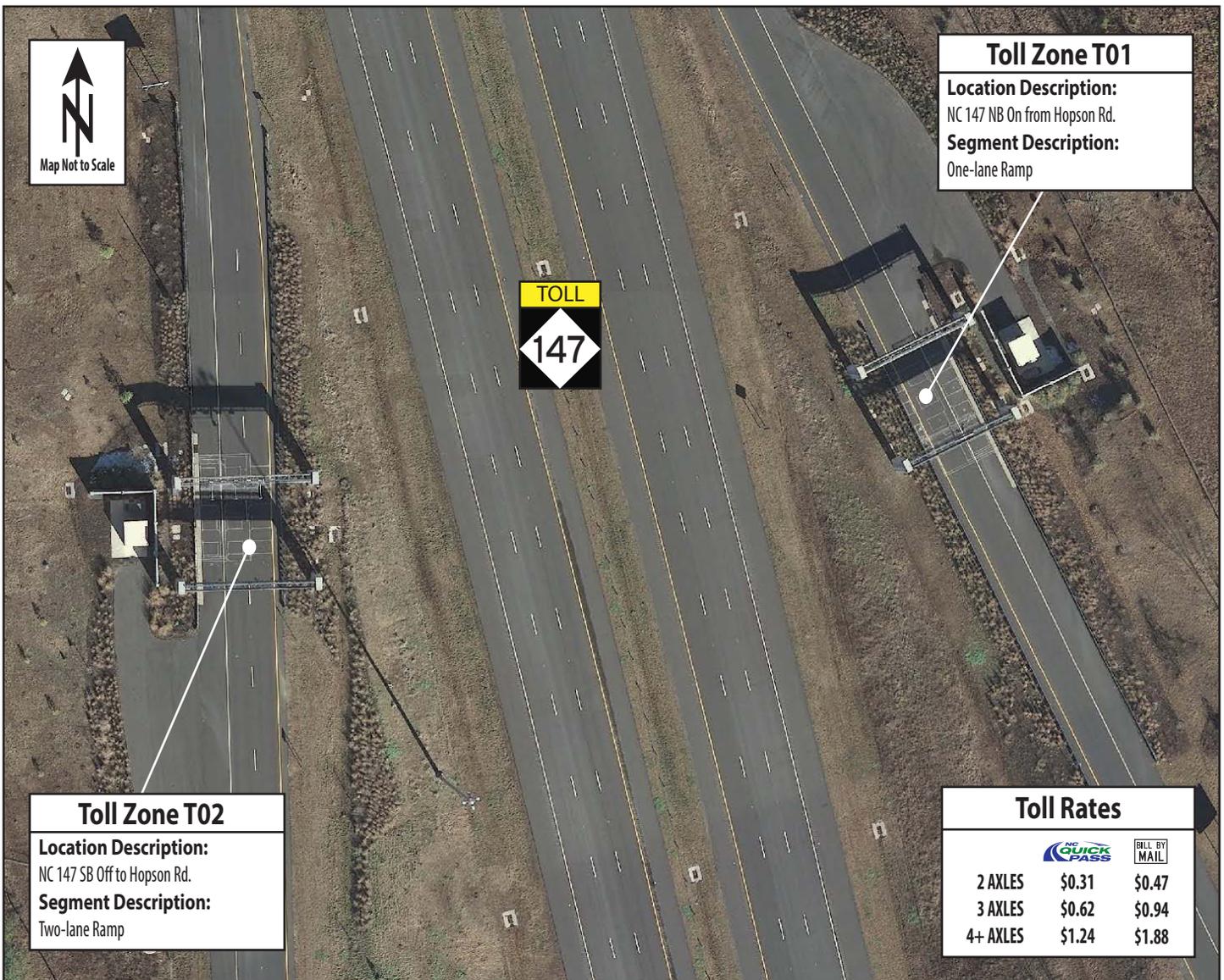
TOLL ZONE STATISTICS

The following pages contain visual representations of transactions that have occurred for all toll zones along the facility. The location of the toll zones in relation to the entire Triangle Expressway can be seen on the following page in *Figure 18*.



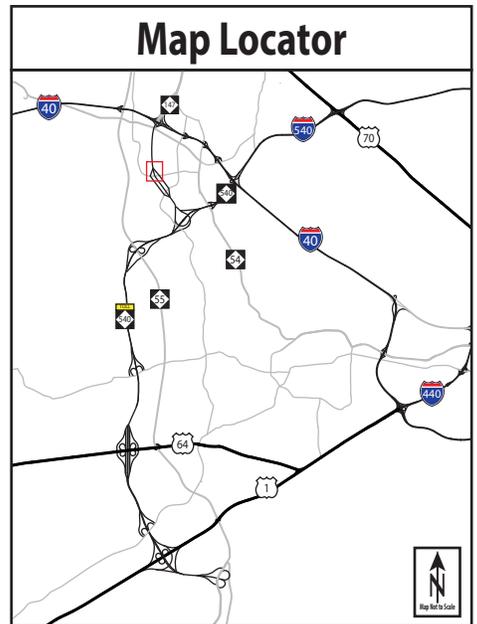
Triangle Expressway Toll Zone Map

Figure 18



| Month | T01 | T02 |
|-----------|-------|-------|
| January | 1,580 | 1,510 |
| February | 1,740 | 1,670 |
| March | 1,710 | 1,630 |
| April | 1,800 | 1,700 |
| May | 1,900 | 1,800 |
| June | 1,900 | 1,790 |
| July | 1,930 | 1,790 |
| August | 2,020 | 1,850 |
| September | 1,970 | 1,830 |
| October | - | - |
| November | - | - |
| December | - | - |

| Month | T01 | T02 |
|-----------|-----|-----|
| January | 65% | 65% |
| February | 63% | 64% |
| March | 62% | 63% |
| April | 61% | 61% |
| May | 59% | 59% |
| June | 58% | 59% |
| July | 58% | 59% |
| August | 59% | 59% |
| September | 60% | 61% |
| October | - | - |
| November | - | - |
| December | - | - |



Hopson Road Ramp Toll Zones
 2014 Average Weekday Toll Transactions

Figure 19



Toll Zone T06
Location Description:
 NC 540 SB On from NC 147 SB
Segment Description:
 Two-lane Ramp

Toll Zone T05
Location Description:
 NC 147 NB On from NC 540 NB
Segment Description:
 Two-lane Ramp

Toll Rates

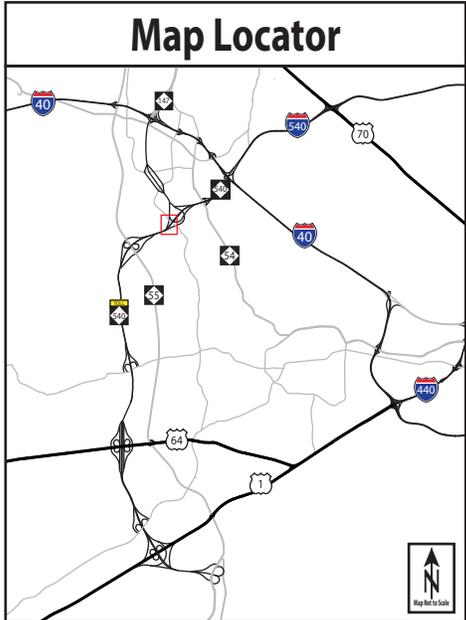
| | QUICK PASS | BILL BY MAIL |
|----------|------------|--------------|
| 2 AXLES | \$0.86 | \$1.31 |
| 3 AXLES | \$1.72 | \$2.62 |
| 4+ AXLES | \$3.44 | \$5.24 |

Transactions by Direction

| Month | T05 | T06 |
|-----------|-------|-------|
| January | 4,100 | 3,880 |
| February | 4,480 | 4,280 |
| March | 4,360 | 4,200 |
| April | 4,750 | 4,480 |
| May | 5,060 | 4,780 |
| June | 5,160 | 4,840 |
| July | 5,080 | 4,790 |
| August | 5,320 | 5,050 |
| September | 5,290 | 5,010 |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T05 | T06 |
|-----------|-----|-----|
| January | 67% | 68% |
| February | 67% | 68% |
| March | 64% | 66% |
| April | 63% | 65% |
| May | 62% | 63% |
| June | 61% | 62% |
| July | 62% | 62% |
| August | 62% | 63% |
| September | 63% | 64% |
| October | - | - |
| November | - | - |
| December | - | - |



NC-147 South Ramp Toll Zones
 2014 Average Weekday Toll Transactions

Figure 20



Toll Zone T14
Location Description:
 NC 540 SB Mainline at NC 147
Segment Description:
 Three-lane Mainline

Toll Zone T13
Location Description:
 NC 540 NB Mainline at NC 147
Segment Description:
 Three-lane Mainline

Toll Rates

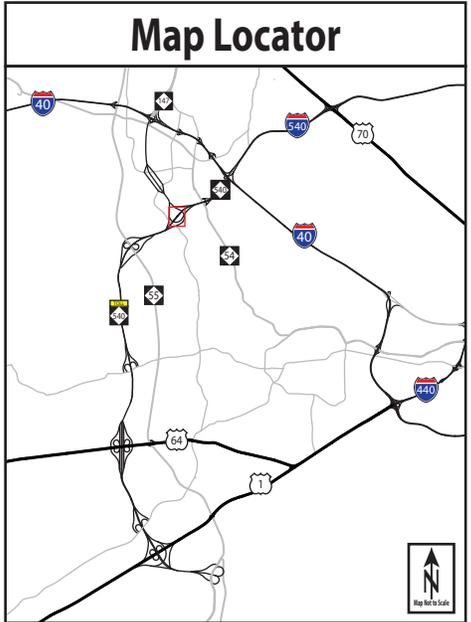
| 2 AXLES | \$0.55 | \$0.84 |
|----------|--------|--------|
| 3 AXLES | \$1.10 | \$1.68 |
| 4+ AXLES | \$2.20 | \$3.36 |

Transactions by Direction

| Month | T13 | T14 |
|-----------|--------|--------|
| January | 9,620 | 10,010 |
| February | 10,580 | 11,030 |
| March | 10,650 | 11,070 |
| April | 11,160 | 11,490 |
| May | 12,140 | 12,180 |
| June | 12,140 | 12,360 |
| July | 11,530 | 11,720 |
| August | 12,150 | 12,450 |
| September | 11,980 | 12,290 |
| October | - | - |
| November | - | - |
| December | - | - |

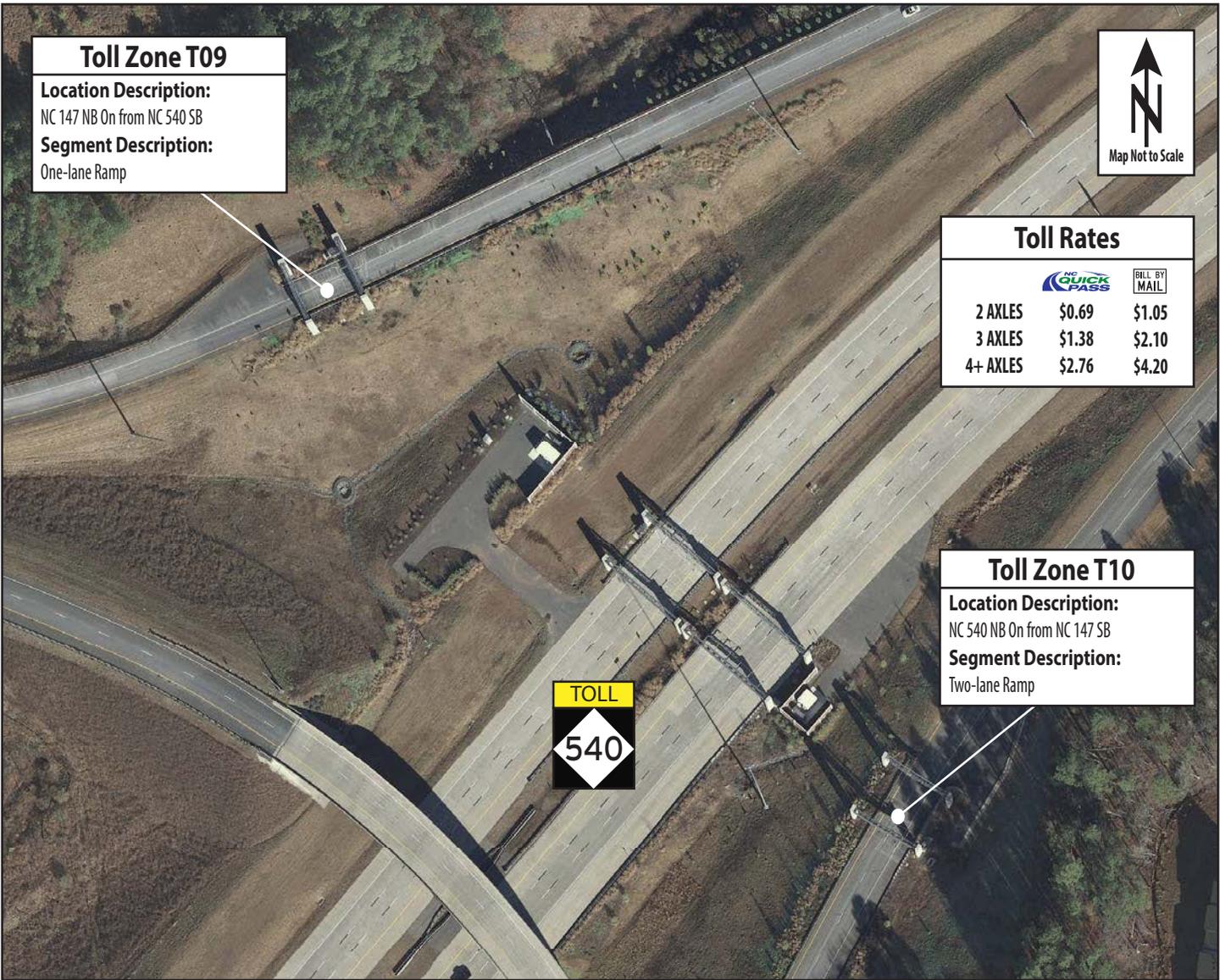
NC Quick Pass Percentage

| Month | T13 | T14 |
|-----------|-----|-----|
| January | 63% | 62% |
| February | 62% | 61% |
| March | 61% | 61% |
| April | 60% | 60% |
| May | 58% | 58% |
| June | 57% | 57% |
| July | 58% | 59% |
| August | 59% | 59% |
| September | 60% | 60% |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Morrisville Mainline Toll Zones
 2014 Average Weekday Toll Transactions

Figure 21



Toll Zone T09
Location Description:
 NC 147 NB On from NC 540 SB
Segment Description:
 One-lane Ramp



Toll Rates

| | ETC QUICK PASS | BILL BY MAIL |
|----------|----------------|--------------|
| 2 AXLES | \$0.69 | \$1.05 |
| 3 AXLES | \$1.38 | \$2.10 |
| 4+ AXLES | \$2.76 | \$4.20 |

Toll Zone T10
Location Description:
 NC 540 NB On from NC 147 SB
Segment Description:
 Two-lane Ramp

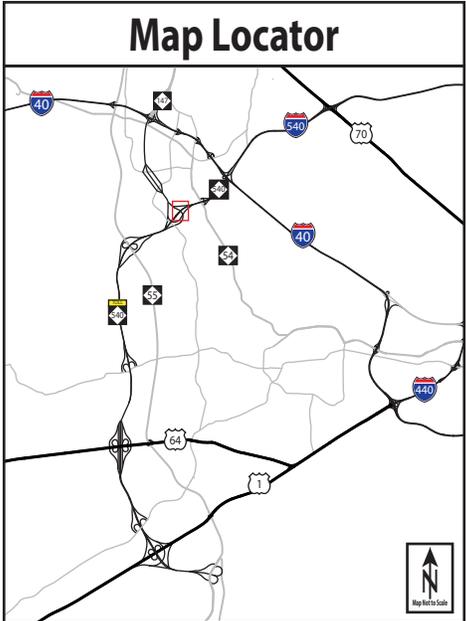


Transactions by Direction

| Month | T09 | T10 |
|-----------|-------|-------|
| January | 960 | 1,080 |
| February | 1,130 | 1,270 |
| March | 1,130 | 1,290 |
| April | 1,160 | 1,360 |
| May | 1,230 | 1,430 |
| June | 1,230 | 1,430 |
| July | 1,210 | 1,430 |
| August | 1,240 | 1,520 |
| September | 1,250 | 1,490 |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T09 | T10 |
|-----------|-----|-----|
| January | 60% | 64% |
| February | 59% | 63% |
| March | 59% | 60% |
| April | 58% | 59% |
| May | 54% | 57% |
| June | 54% | 55% |
| July | 55% | 55% |
| August | 56% | 57% |
| September | 58% | 58% |
| October | - | - |
| November | - | - |
| December | - | - |



NC-147 North Ramp Toll Zones
 2014 Average Weekday Toll Transactions

Figure 22



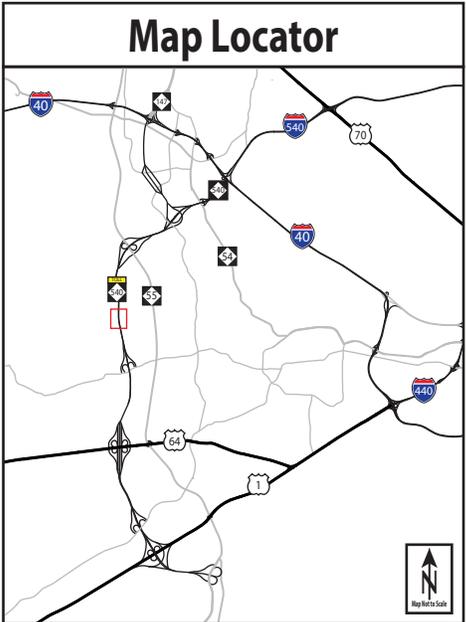
Toll Zone T18
Location Description:
 NC 540 SB, North of Green Level West
Segment Description:
 Three-lane Mainline

Toll Zone T17
Location Description:
 NC 540 NB, North of Green Level West
Segment Description:
 Three-lane Mainline

| Toll Rates | | |
|------------|--------|--------|
| | | |
| 2 AXLES | \$0.69 | \$1.05 |
| 3 AXLES | \$1.38 | \$2.10 |
| 4+ AXLES | \$2.76 | \$4.20 |

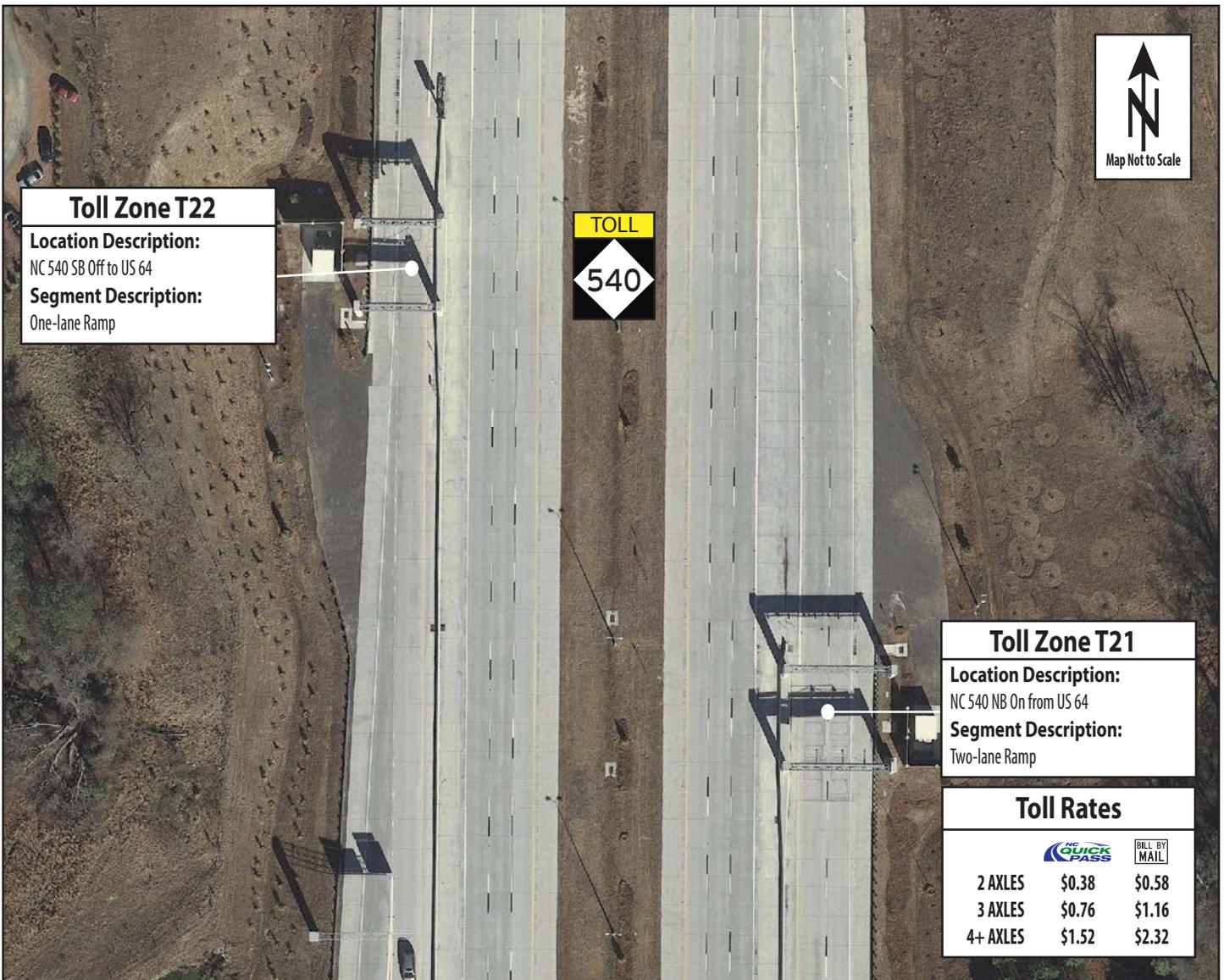
| Transactions by Direction | | |
|---------------------------|--------|--------|
| Month | T17 | T18 |
| January | 8,760 | 8,810 |
| February | 9,650 | 9,730 |
| March | 9,820 | 9,940 |
| April | 10,460 | 10,530 |
| May | 11,110 | 11,380 |
| June | 11,490 | 11,640 |
| July | 11,090 | 11,330 |
| August | 11,620 | 11,820 |
| September | 11,610 | 11,720 |
| October | - | - |
| November | - | - |
| December | - | - |

| NC Quick Pass Percentage | | |
|--------------------------|-----|-----|
| Month | T17 | T18 |
| January | 61% | 65% |
| February | 60% | 64% |
| March | 58% | 63% |
| April | 56% | 61% |
| May | 55% | 59% |
| June | 55% | 58% |
| July | 56% | 59% |
| August | 58% | 60% |
| September | 61% | 61% |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Cary Mainline Toll Zones
 2014 Average Weekday Toll Transactions

Figure 23



Toll Zone T22
Location Description:
 NC 540 SB Off to US 64
Segment Description:
 One-lane Ramp

Toll Zone T21
Location Description:
 NC 540 NB On from US 64
Segment Description:
 Two-lane Ramp

Toll Rates

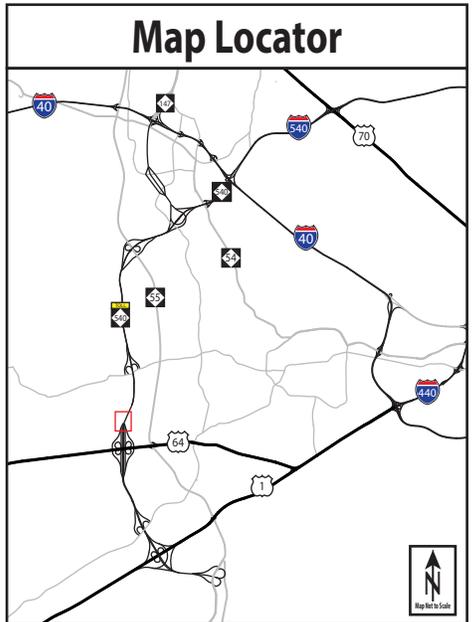
| | | BILL BY MAIL |
|----------|--------|--------------|
| 2 AXLES | \$0.38 | \$0.58 |
| 3 AXLES | \$0.76 | \$1.16 |
| 4+ AXLES | \$1.52 | \$2.32 |

Transactions by Direction

| Month | T21 | T22 |
|-----------|-------|-------|
| January | 2,920 | 2,940 |
| February | 3,170 | 3,220 |
| March | 3,210 | 3,270 |
| April | 3,370 | 3,470 |
| May | 3,550 | 3,680 |
| June | 3,570 | 3,660 |
| July | 3,540 | 3,620 |
| August | 3,630 | 3,760 |
| September | 3,620 | 3,690 |
| October | - | - |
| November | - | - |
| December | - | - |

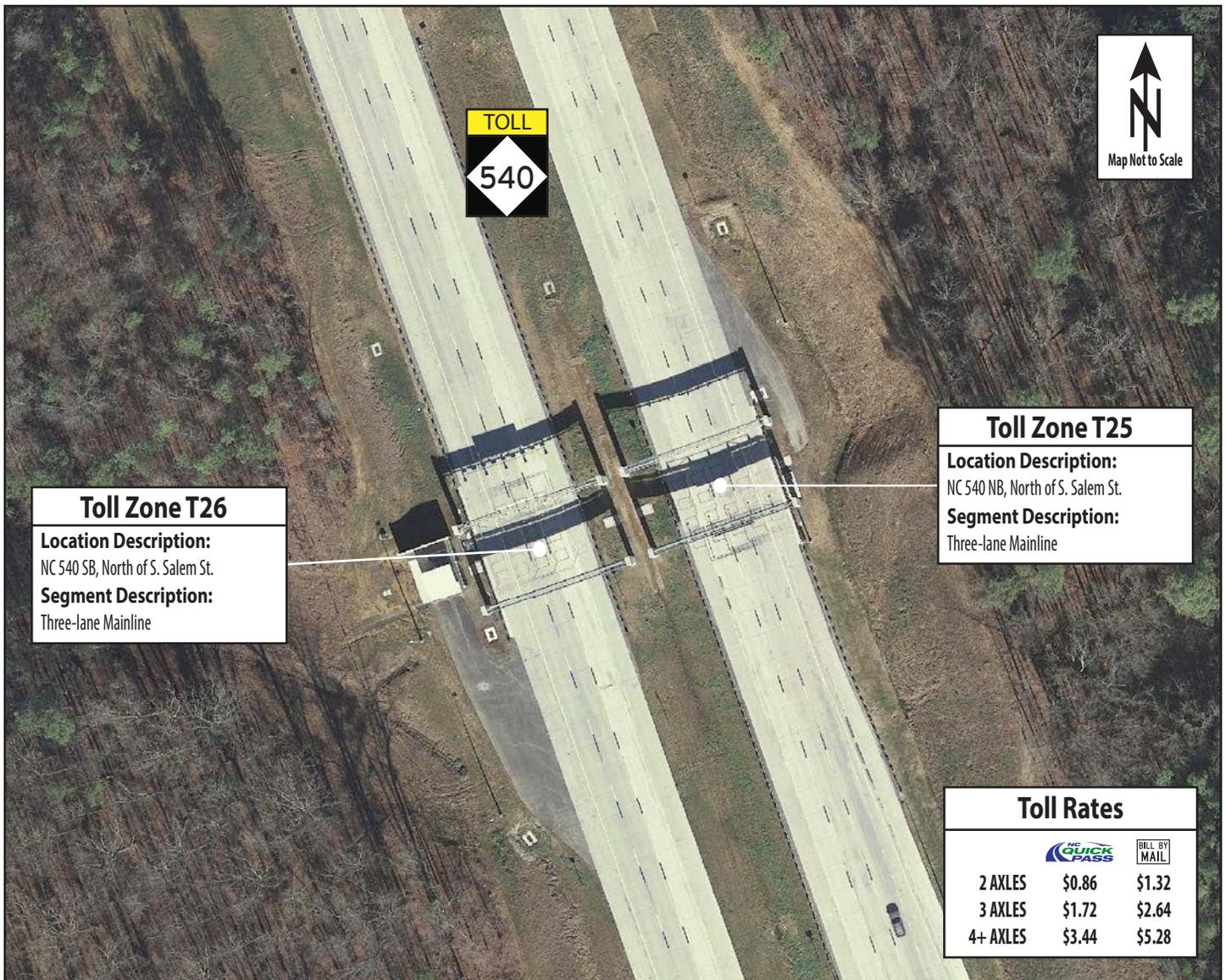
NC Quick Pass Percentage

| Month | T21 | T22 |
|-----------|-----|-----|
| January | 66% | 67% |
| February | 66% | 66% |
| March | 64% | 65% |
| April | 62% | 63% |
| May | 60% | 61% |
| June | 59% | 61% |
| July | 59% | 60% |
| August | 59% | 61% |
| September | 61% | 62% |
| October | - | - |
| November | - | - |
| December | - | - |



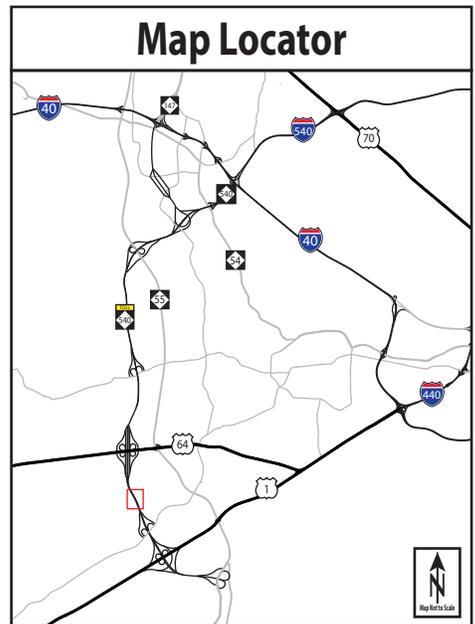
US-64 Ramp Toll Zones
 2014 Average Weekday Toll Transactions

Figure 24



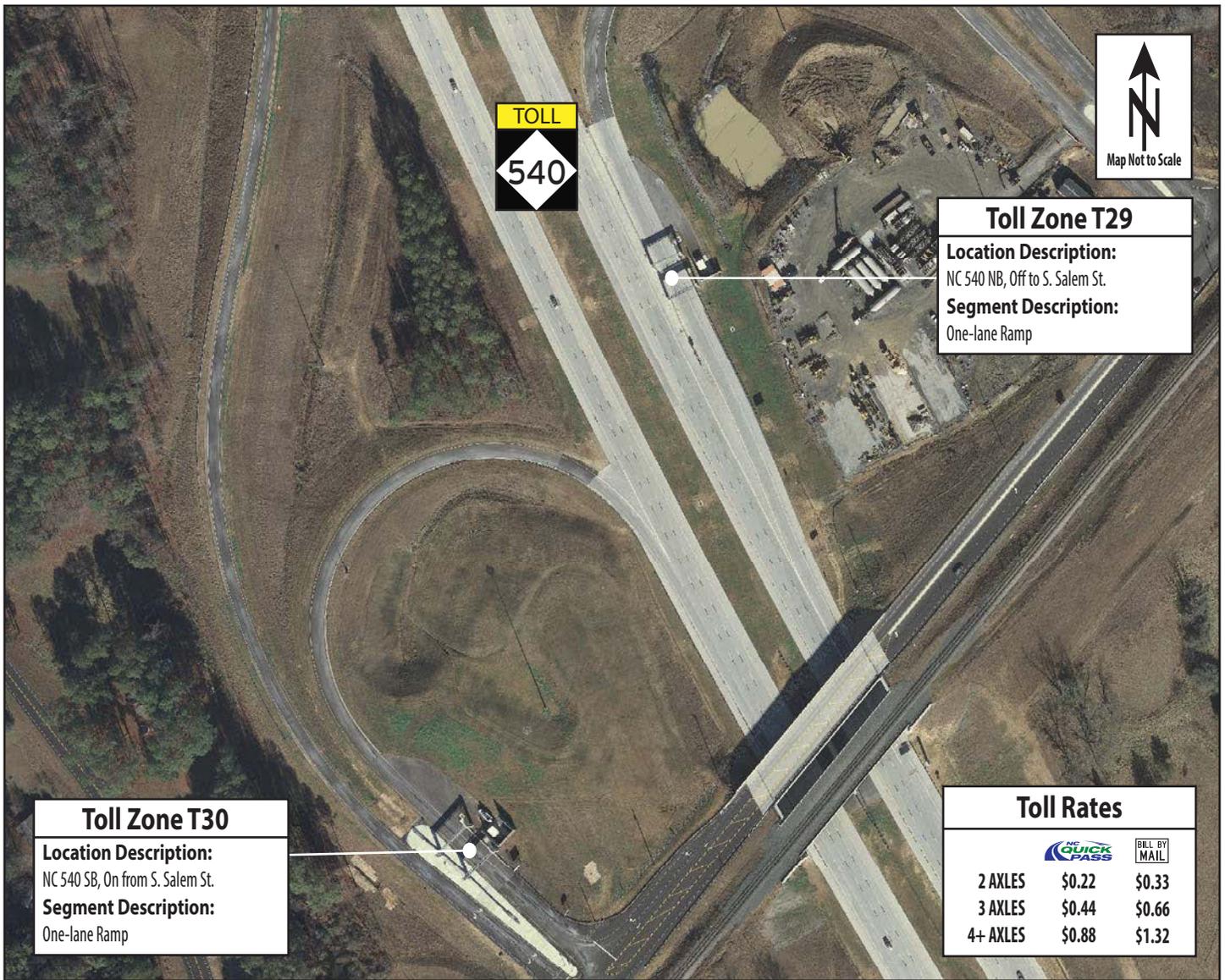
| Transactions by Direction | | |
|---------------------------|-------|-------|
| Month | T25 | T26 |
| January | 6,800 | 6,570 |
| February | 7,540 | 7,290 |
| March | 7,680 | 7,440 |
| April | 8,320 | 8,010 |
| May | 9,130 | 8,930 |
| June | 9,470 | 9,190 |
| July | 9,020 | 8,850 |
| August | 9,470 | 9,270 |
| September | 9,480 | 9,230 |
| October | - | - |
| November | - | - |
| December | - | - |

| NC Quick Pass Percentage | | |
|--------------------------|-----|-----|
| Month | T25 | T26 |
| January | 62% | 63% |
| February | 62% | 62% |
| March | 60% | 60% |
| April | 59% | 59% |
| May | 58% | 58% |
| June | 56% | 56% |
| July | 57% | 57% |
| August | 58% | 58% |
| September | 57% | 59% |
| October | - | - |
| November | - | - |
| December | - | - |



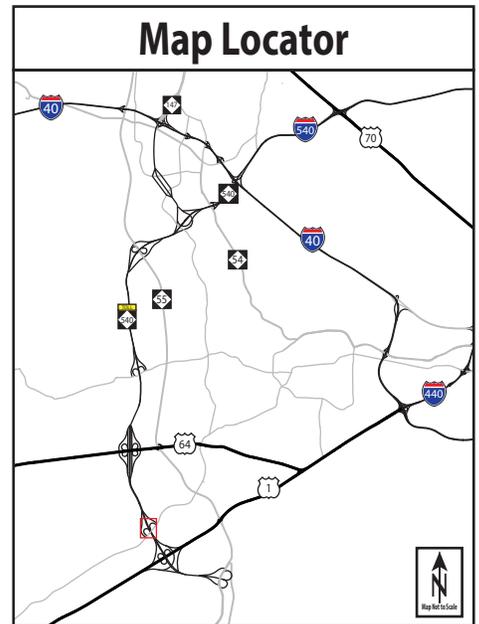
NC-540 Apex Mainline Toll Zones
 2014 Average Weekday Toll Transactions

Figure 25



| Transactions by Direction | | |
|---------------------------|-----|-----|
| Month | T29 | T30 |
| January | 600 | 660 |
| February | 680 | 730 |
| March | 680 | 740 |
| April | 720 | 780 |
| May | 830 | 910 |
| June | 720 | 780 |
| July | 690 | 760 |
| August | 800 | 870 |
| September | 880 | 920 |
| October | - | - |
| November | - | - |
| December | - | - |

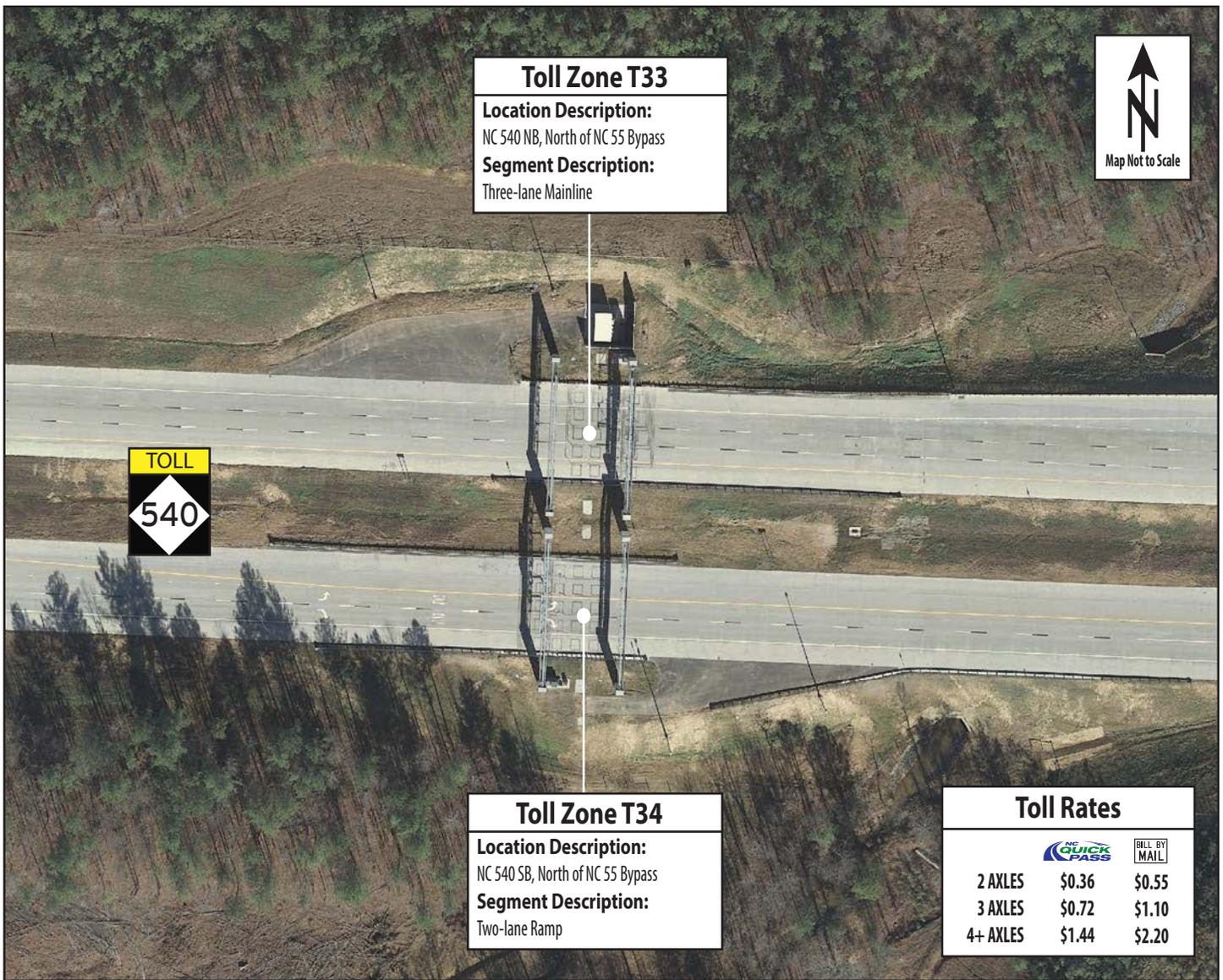
| NC Quick Pass Percentage | | |
|--------------------------|-----|-----|
| Month | T29 | T30 |
| January | 73% | 71% |
| February | 74% | 73% |
| March | 72% | 72% |
| April | 71% | 71% |
| May | 69% | 68% |
| June | 67% | 68% |
| July | 67% | 68% |
| August | 69% | 69% |
| September | 72% | 71% |
| October | - | - |
| November | - | - |
| December | - | - |



South Salem Street Ramp Toll Zones

2014 Average Weekday Toll Transactions

Figure 26



Toll Zone T33
Location Description:
 NC 540 NB, North of NC 55 Bypass
Segment Description:
 Three-lane Mainline

Toll Zone T34
Location Description:
 NC 540 SB, North of NC 55 Bypass
Segment Description:
 Two-lane Ramp

Toll Rates

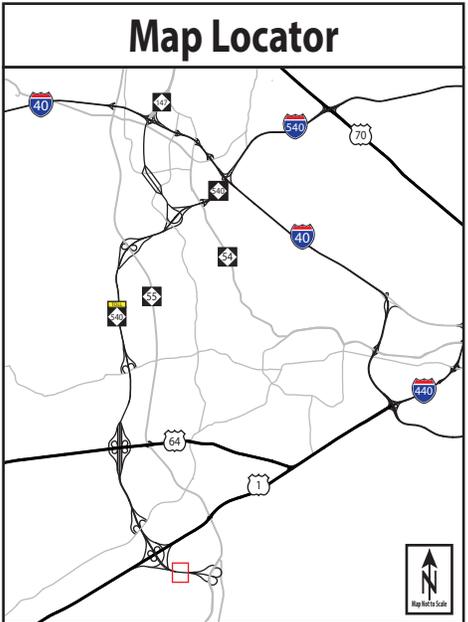
| 2 AXLES | \$0.36 | \$0.55 |
|----------|--------|--------|
| 3 AXLES | \$0.72 | \$1.10 |
| 4+ AXLES | \$1.44 | \$2.20 |

Transactions by Direction

| Month | T33 | T34 |
|-----------|-------|-------|
| January | 5,010 | 4,810 |
| February | 5,550 | 5,270 |
| March | 5,610 | 5,340 |
| April | 5,930 | 5,670 |
| May | 6,440 | 6,230 |
| June | 6,380 | 6,040 |
| July | 6,000 | 6,080 |
| August | 6,750 | 6,350 |
| September | 6,970 | 6,450 |
| October | - | - |
| November | - | - |
| December | - | - |

NC Quick Pass Percentage

| Month | T33 | T34 |
|-----------|-----|-----|
| January | 66% | 66% |
| February | 65% | 65% |
| March | 64% | 63% |
| April | 63% | 62% |
| May | 61% | 61% |
| June | 61% | 60% |
| July | 61% | 61% |
| August | 62% | 61% |
| September | 63% | 58% |
| October | - | - |
| November | - | - |
| December | - | - |



NC-540 Holly Springs Mainline Toll Zones
 2014 Average Weekday Toll Transactions

Figure 27

Roadway Operations Statistics

ROADWAY OPERATIONS STATISTICS

Operations statistics are collected by NCTA State Highway Patrol (SHP) and Incident Management Assistance Patrol (IMAP) for the NCTA Toll Safety Patrol program. This program consists of dedicated State Highway Patrol and Incident Management Assistance Patrol, which provides one Highway Patrol officer and one IMAP responder to the facility at all times from Monday through Friday. This section also presents response and traffic information for incidents that occurred during the first quarter of 2014.

The Turnpike Authority manages traffic and activities along the Triangle Expressway at the state-of-the-art Traffic Management Center located in the North Carolina National Guard's Joint Force Headquarters in Raleigh.

Highly trained operators monitor the entire length of the Triangle Expressway via closed-circuit TV, microwave speed detectors and interoperable 800MHz radio dispatch from local 911 and statewide Highway Patrol communications, as well as the Turnpike Authority's security cameras and Roadway Weather Information System.

More than 200 cameras are located along the Expressway to monitor traffic operations, ensure security of the toll gantries and collect license plate images used for Bill-by-Mail toll collection. Operators monitor the roadside technology and toll facilities and are able to quickly dispatch maintenance personnel to address any equipment issues or roadway traffic incidents.

Roadway updates are provided to motorists via 10 full-color Dynamic Message Boards (the first full-color message boards in the state), as well as through NCDOT's 511 system and Traveler Information Management System (TIMS) website.

The Triangle Expressway also has contracted Highway Patrol officers and a dedicated Incident Management Assistance Patrol (IMAP) that can be dispatched to respond to any incidents that occur, ranging from disabled motorists and debris to major traffic wrecks that could be detrimental to both motorist safety and toll collection.

Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

Table 11 presents operating statistics for the State Highway Patrol.

Table 11: SHP Statistics

| Charge | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|-----|-----|--------------|
| Speed Violations | 74 | 52 | 78 | 90 | 100 | 96 | 100 | 74 | 78 | | | | 742 |
| Alcohol Violations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | 1 |
| Seat Belt Violations | 3 | 11 | 5 | 8 | 15 | 14 | 9 | 10 | 8 | | | | 83 |
| Child Restraint Violations | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | | | | 2 |
| Other Violations | 43 | 53 | 74 | 51 | 53 | 49 | 73 | 60 | 36 | | | | 492 |
| Total Charges | 120 | 116 | 158 | 149 | 168 | 159 | 183 | 145 | 122 | | | | 1,320 |
| Warnings | 128 | 99 | 123 | 163 | 180 | 147 | 141 | 198 | 139 | | | | 1,318 |
| Vehicles Towed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 |
| Crashes Investigated | 7 | 7 | 8 | 7 | 5 | 4 | 9 | 3 | 11 | | | | 61 |

The IMAP assists with stranded motorists and incident clearance, thereby maintaining the flow of traffic along the roadway. Table 12 and Figure 28 present the monthly IMAP assists, by type, for the Triangle Expressway. The “other” category includes the reporting categories of traffic control, assist other unit, secured load, called for assistance, directions, transported, unable to locate and no assistance.

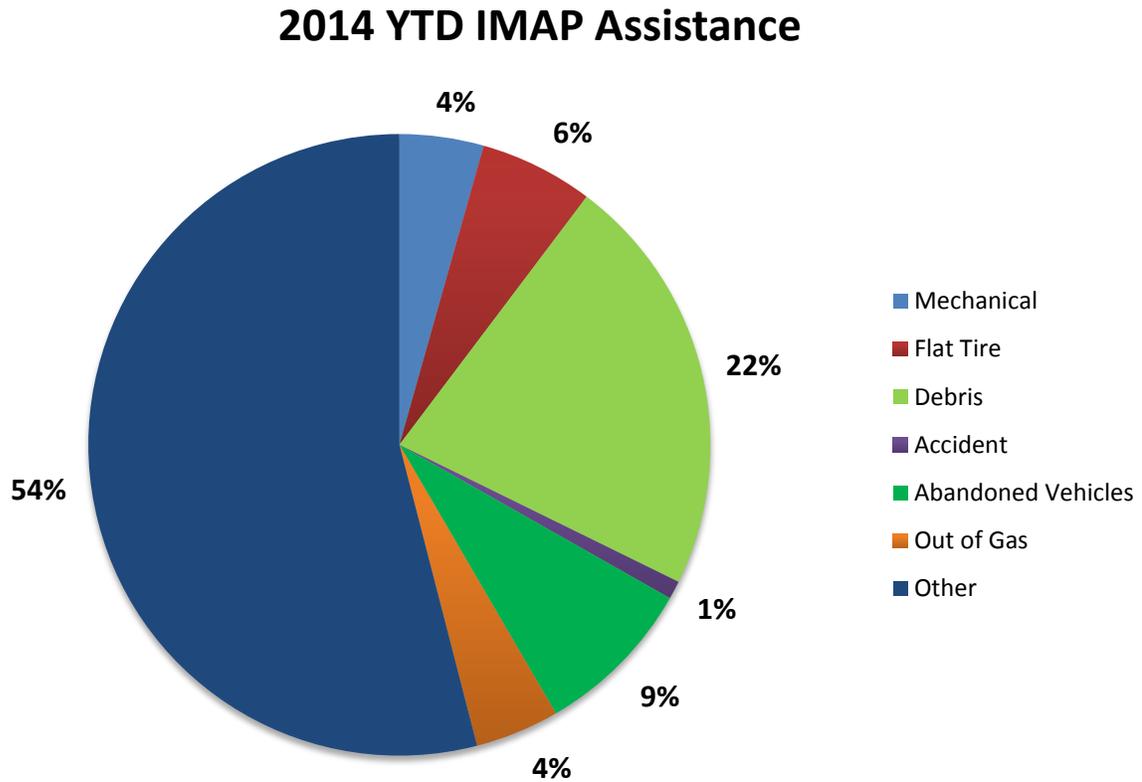
Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

Table 12: IMAP Assistance

| Assist Type | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec | Total |
|----------------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|-----------|-----|-----|-----|------------|
| Mechanical | 2 | 1 | 4 | 2 | 8 | 7 | 4 | 6 | 3 | | | | 37 |
| Flat Tire | 3 | 3 | 7 | 4 | 3 | 10 | 9 | 7 | 4 | | | | 50 |
| Debris | 18 | 14 | 18 | 28 | 21 | 26 | 19 | 28 | 14 | | | | 186 |
| Accident | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | | 8 |
| Abandoned Vehicles | 9 | 4 | 1 | 6 | 11 | 11 | 6 | 13 | 10 | | | | 71 |
| Out of Gas | 3 | 4 | 3 | 4 | 2 | 1 | 6 | 7 | 7 | | | | 37 |
| Other | 40 | 47 | 55 | 50 | 51 | 60 | 55 | 45 | 54 | | | | 457 |
| Total Charges | 75 | 76 | 88 | 94 | 96 | 115 | 99 | 106 | 97 | | | | 846 |

Figure 28: 2014 YTD IMAP Assistance



Operations Statistics Report for the Triangle Expressway

Third Quarter, July – September 2014

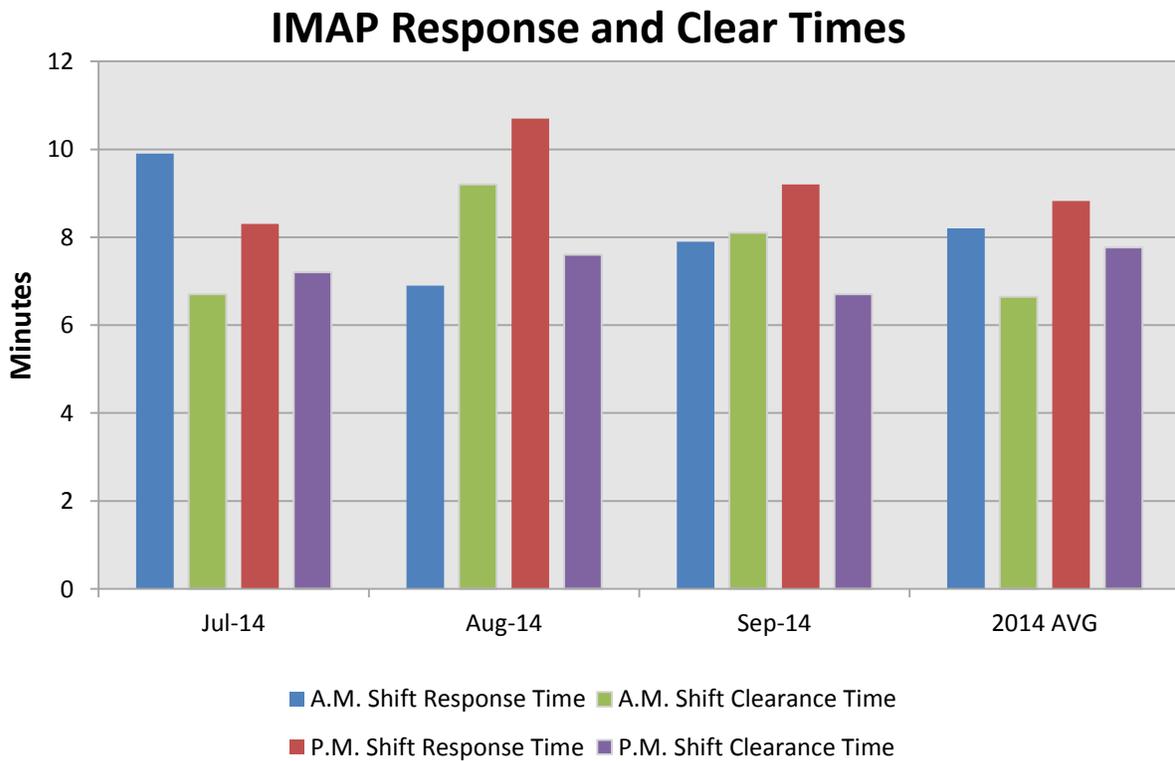
The response and clear times for all IMAP assists are logged by IMAP and provided to the NCTA. Response time is the time from which a responder receives a call to the time they arrive on the scene. Clear time is the time from which it takes the responder to clear the incident and return the roadway to normal operation. The IMAP staff AM shift occurs from 6AM to 2PM and the PM shift occurs from 2PM to 10PM. Shift response times may differ due to the number of drivers on duty and their coverage areas.

Table 13 and Figure 29 present the average IMAP assistance response and clear times, in minutes, for the Triangle Expressway.

Table 13: Average IMAP Assistance Response and Clear Times (in Minutes)

| Response Type | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec | 2014 Average |
|----------------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|--------------|
| A.M. Shift Response | 7 | 5 | 11 | 9 | 11 | 6 | 10 | 7 | 8 | | | | 8 |
| A.M. Shift Clearance | 6 | 6 | 4 | 6 | 5 | 8 | 7 | 9 | 8 | | | | 7 |
| P.M. Shift Response | 6 | 6 | 10 | 10 | 10 | 9 | 8 | 11 | 9 | | | | 9 |
| P.M. Shift Clearance | 6 | 7 | 9 | 7 | 9 | 9 | 7 | 8 | 7 | | | | 8 |

Figure 29: Average IMAP Assistance Response and Clear Times (in Minutes)



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 on the NCTA system. 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 survey results are rated against established threshold criteria. The program analysis is accomplished through the use of sampling procedures that capture the level of service being provided for individual asset features. Over time, these ratings will then 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 relationship 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 was scheduled to be completed for each newly opened roadway section, soon after opening to toll collection. The baseline assessments included complete inventory data collection and assessment on 100% of the roadway assets.

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

Assessment Results

A table consisting of the Quarterly and 2014 Annual MRP Assessment results is provided below (*Table 14*). In order to balance the occasional uneven sample sizes, the rating provided for the 2014 Annual Rating for each of the elements is a weighted average of the quarters rather than a simple average. 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 2014 Annual Rating will provide a 95% confidence level in statistical sampling. The Q4 Rating and 2014 Annual Rating will be included in the Annual Operations Statistics Report.

Table 14: MRP Assessment Results

| Element | Q1 2014 RATING | Q2 2014 RATING | Q3 2014 RATING | Q4 2014 RATING | 2014 ANNUAL RATING |
|---|---------------------------|---------------------------|---------------------------|---------------------------|-----------------------------------|
| Road Surface | 87.6 | 96.8 | 89.9 | | |
| Unpaved Shoulders | 91.5 | 87.6 | 92.9 | | |
| Drainage | 91.2 | 93.3 | 91.3 | | |
| Roadside | 94.6 | 84.7 | 87.6 | | |
| Traffic Control Devices | 94.4 | 86.1 | 85.0 | | |
| Overall MRP Performance Rating | 91.9 | 89.8 | 88.6 | | |