CONGESTION MANAGEMENT PROCESS

STATUS OF THE SYSTEM FY 2025 REPORT - DRAFT

Capital Area Metropolitan Planning Organization

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Table of Contents

TABLE OF FIGURES

Executive Summary

0.0 Summary of Report

The FY 2025 Status of the System Report evaluates the performance of the Capital Area MPO's (CAMPO) transportation network through the framework established in the latest Congestion Management Process (CMP) Update, adopted in October 2024. This report is the first full Status of the System prepared using the updated CMP network, performance measures, and objectives, all of which are directly derived from and aligned with the recommendations and investment priorities of Connect 2050, CAMPO's Metropolitan Transportation Plan (MTP). As a result, every congestion finding, bottleneck trend, and system performance measure presented here reflects the region's adopted long-range vision and the strategies prioritized in the MTP.

Drawing on six fiscal quarters of INRIX/RITIS probe data, the report identifies where congestion is most severe, what operational and recurring factors drive delay, and how these conditions affect economic vitality, freight reliability, public health, and multimodal mobility. Across FY24 Q3 through FY25 Q4, congestion remained concentrated along the I-40 approaches to RTP and RDU, the US-1 commuter corridor toward Wake Forest, and emerging growth corridors such as US-70 and I-540. Although the Raleigh–Cary region continues to rank as the least congested metro area with a population above one million in the nation, total delay, duration, and economic costs are increasing.

The report also documents how Wake Transit investments, freight reliability trends, and safety outcomes intersect with congestion patterns. The overlap between major bottlenecks and CAMPO's High Injury Network underscores the growing importance of integrating congestion management with safety and public health objectives—an emphasis embedded in both the CMP Update and the 2050 MTP.

0.1 Policy Impacts

The findings reinforce the importance of CAMPO's performance-based planning framework and validate the policy direction set by the 2050 MTP and reinforced by the 2025 CMP update. Key policy implications include:

- Operational strategies are now as essential as capacity expansion. Incidents remain the largest driver of delay—particularly in the AM peak—while PM congestion reflects compounded effects of incidents, weather, and recurring demand. This elevates the importance of incident management, adaptive signal control, work-zone coordination, and weather-responsive operations.
- CMP bottlenecks and MTP investments are strongly aligned. Nearly every top bottleneck is associated with multiple programmed or planned MTP projects, demonstrating a corridor-based approach to congestion mitigation and strengthening the region's competitiveness for state and federal funding.
- Freight reliability requires targeted interventions. Truck Travel Time Reliability Index (TTTRI) values frequently exceed CAMPO's 1.7 target during peak periods, and a small number of bottlenecks disproportionately affect freight mobility. Improvements to clearance times, interchange geometry, and work-zone management will yield outsized economic benefits.
- Transit expansion is reshaping corridor performance. Wake Transit's investments in frequent service, BRT, microtransit, and supporting capital infrastructure are improving reliability and access along the region's most congested corridors, supporting both congestion management and safety goals.
- Safety and congestion are inseparable policy domains. With 22% of the High Injury Network overlapping major bottlenecks, the Blueprint for Safety provides a complementary framework for reducing incident-related delay and improving system reliability.

0.2 Conclusions

The FY 2025 Status of the System Report shows a region experiencing rapid growth, increasing travel demand, and rising congestion impacts; nevertheless, it is still positioned to manage these challenges through coordinated, data-driven strategies. The CMP network is increasingly constrained during peak periods, particularly along I-40, US-1, and US-70, where suburban expansion, incident sensitivity, and freight activity converge. However, CAMPO's long-range planning, targeted operational strategies, and multimodal investments provide a strong foundation for improving reliability and safety.

Looking ahead, the adoption of Destination 2055 will guide the next CMP update and future Status of the System reports. Quarterly bottleneck reporting will enhance transparency and support more responsive decision-making. Continued investment in transit, safety, and operational management, paired with strategic capacity improvements, will be essential to maintaining mobility, supporting economic growth, and protecting public health as the region continues to evolve.

Introduction

1.0 CAMPO's CMP, Background and Federal Requirements

In 2005, the United States Congress passed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). To better serve its planning region, maintain compliance under the new law (23 CFR 450.322), on June 10, 2010, North Carolina's Capital Area Metropolitan Planning Organization (CAMPO) adopted its first Congestion Management Process (CMP). This policy document was meant to (1) report on the regional congestion mitigation planning efforts, and (2) create a compendium of performance measures and implementation strategies for the management and mitigation of traffic congestion. CAMPO recently, on October 16, 2024, updated this document to develop an updated CMP network – see *Figure 1: CAMPO's Congestion Management Process Network* – from which to study congestion mitigation and management performance targets and strategies from the MPO's most recent planning efforts. Notable examples of CAMPO's planning efforts, from which the recent CMP was derived include CAMPO's most recent MTP, Connect 2050; the Wake County Transit Plan Update (2021); the Commuter Corridor Study (2019); and the Triangle Region ITS Strategic Deployment Plan Update (2020) (CAMPO 2024).

1.1 What is a CMP?

A CMP is a federally required, performance-based planning tool, recommended by the Federal Highway Administration (FHWA), that metropolitan planning organizations use to systematically identify, monitor, and address recurring and non-recurring congestion. The CMP establishes a consistent set of measures and analytical methods to evaluate where congestion occurs, how it affects system performance, and which strategies are most effective in improving reliability, safety, and mobility. CAMPO's FY 2025 CMP Update provides the foundation for this Status of the System Report, defining the network, performance measures, and objectives. The CMP is directly derived from and aligned with the CAMPO 2050 Metropolitan Transportation Plan (Connect 2050), ensuring that congestion management strategies evaluated in this report are grounded in the region's adopted long-range transportation investments and priorities.

1.2 Why the Status of the System Report?

The following Status of the System FY 2025 Report, an implementation element of CAMPO's Congestion Management Process, analyzes the efficiency of the CMP Network, reporting on the economic and social impact traffic congestion has on the individuals and goods that traverse our regional network. For the FY 2025 update, reporting elements were derived directly from the CMP Adopted FY 2025 Update's five Regional CMP Objectives:

- Objective 1: Improve Travel Time Reliability and Efficiency
- Objective 2: Enhance Public Transit Services and Infrastructure
- Objective 3: Enhance Safety and Operational Performance
- Objective 4: Promote the Development of a Sustainable, Health-Oriented, and Multimodal Transportation Network
- Objective 5: Enhance Traveler Information and Demand Management

The chosen analysis to illustrate the CMP objectives are as follows:

- Current overall system performance;
- The region's top bottlenecks for each fiscal quarter – and the relevant corridor investments;
- Travel reliability of freight traffic through the region;
- Investments in transit, and its impact on how the region interacts with traffic congestion;
- The impact of traffic congestion on regional public health.

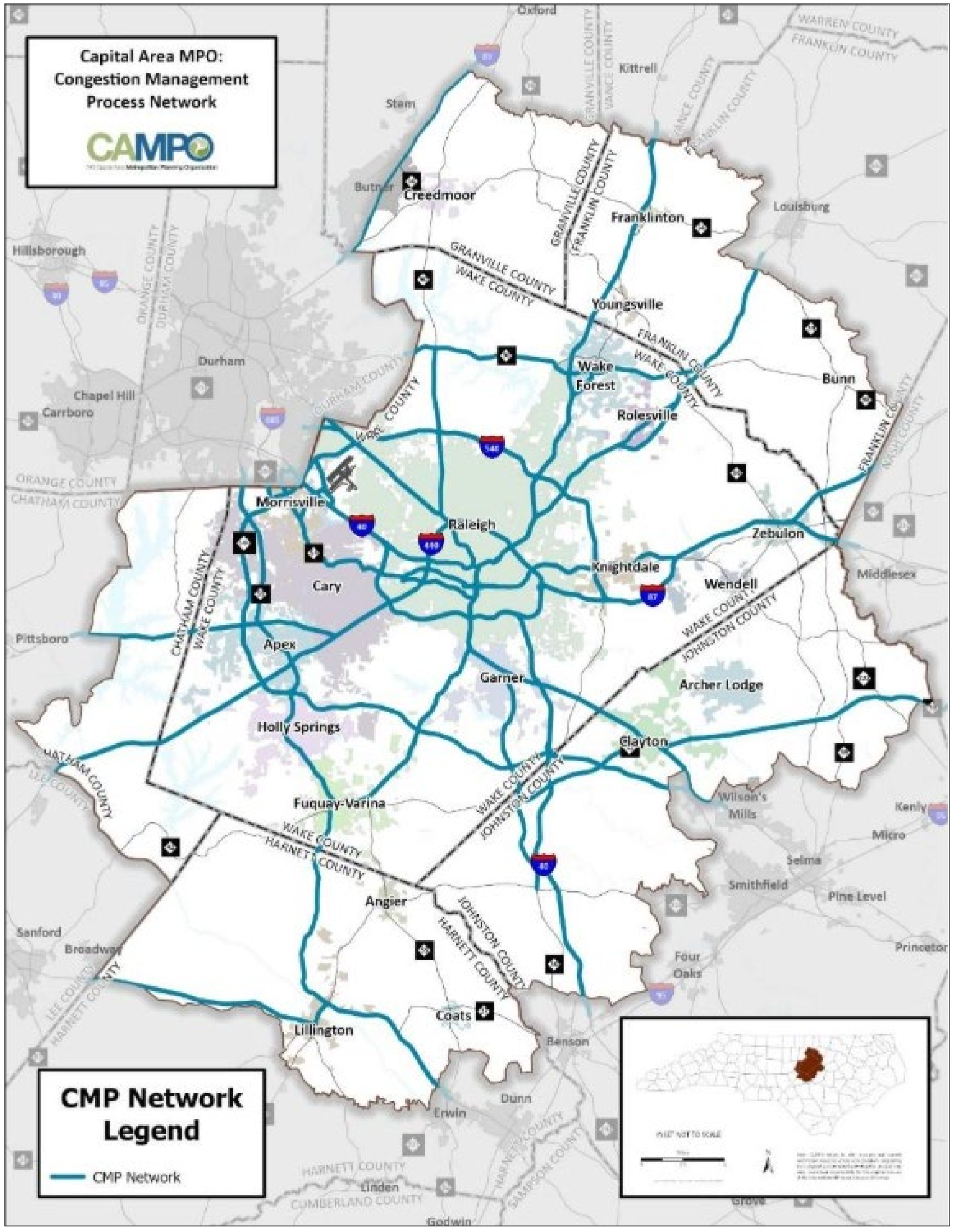

Figure 1: CAMPO's Congestion Management Process Network

Bottlenecks in the Capital Area MPO

2.0 Identifying Bottlenecks & How They are Tracked

What is a traffic bottleneck?

"A localized section of highway that experiences reduced speeds and inherent delays due to a recurring operational influence or a nonrecurring impacting event." (FHWA, 2017)

According to the FHWA, a traffic bottleneck is, "a localized section of highway that experiences reduced speeds and inherent delays due to a recurring operational influence or a nonrecurring impacting event" (Spiller 2017). Tracking the top ten most impactful bottlenecks in the CAMPO planning area by fiscal quarter is a primary implementation element of CAMPO's CMP. For this reason, we track and rank all bottlenecks occurring on facilities designated within the CAMPO CMP network – see *Appendix A: Quarterly Bottleneck Reports (FY24 Q3 – FY25 Q4)*. This ranking is based on a technical, measurable evaluation of key mobility factors.

Bottlenecks are tracked by implementing a methodology to observe their occurrence and subsequent severity. CAMPO implements the methodology developed for the RITIS Probe Data Analytics platform, which defines an occurrence of bottleneck congestion as any time the reported speed of a series of consecutive road segments falls below 60% of the reference (or free-flow) speed (RITIS 2026). Upon identification of a bottleneck, each "occurrence is assigned a set of attributes derived from the source data, including head location (defined as the furthest downstream segment), the date and time at which the occurrence was observed, the set of road segments included, and an impact value. The impact of an occurrence is currently calculated as the total length for all road segments included in the occurrence" (RITIS 2026). The lifespan of a bottleneck is based upon how long the speed of vehicles on all impacted road segments falls beneath 60% of free-flow traffic. This "life of a bottleneck" is described in below in *Figure 2: Lifespan of a Bottleneck*.

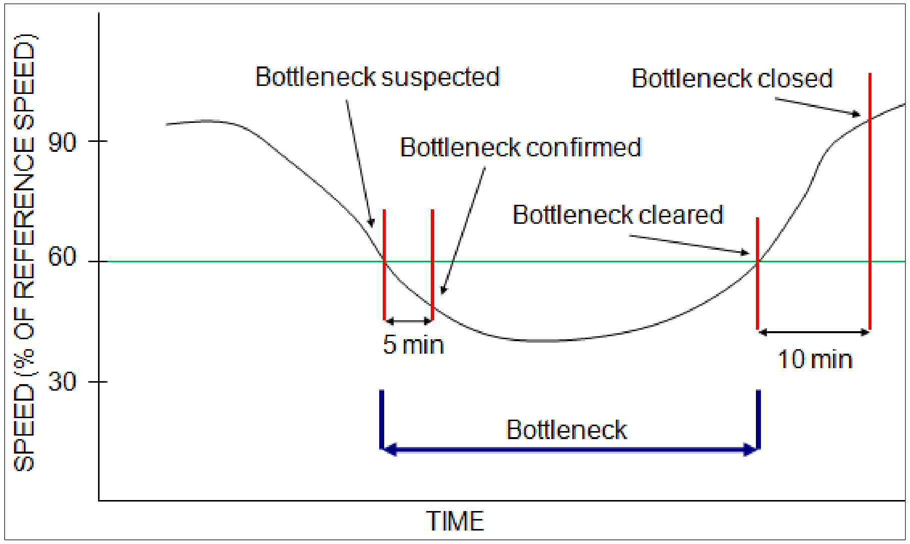

Figure 2: Lifespan of a Bottleneck

Once the bottlenecks are identified by occurrence and severity, that severity can be ranked within the RITIS PDA platform by three different weighted impact factors: speed differential, congestion, and total delay. For the purposes of this report, we will be ranking the bottlenecks by their "total delay" because it identifies the impact of the bottleneck on the community at large rather than presenting the impact to the individual user within the bottleneck (this is what "speed differential" and "congestion" accomplish). In the RITIS PDA platform "total delay" is calculated by taking the "base impact (the sum of queue lengths over the duration of the bottleneck) weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor (RITIS 2026).

2.1 Bottlenecks & Their Impacts Upon the Region's Economy

In 2021 the Regional Transportation Alliance director penned an op-ed describing the economic benefits our region receives because of its relatively low congestion given its growing economic impact, referring to the Texas A&M Transportation Institute's (TTI) annual Urban Mobility Report. Mr. Milazzo stated, "[...] the Raleigh-Cary metro ended up ranked as having the lowest traffic congestion in America for any major metropolitan area of over 1 million people" (Milazzo II, PE 2021). Despite a full return to pre-pandemic levels of congestion in 2024[1], in which congestion indicators provided by TTI rose across the board, our region continues to hold the mantle of having the lowest congestion in America of any urbanized area over 1 million people (Schrank, et al. 2025).

While congestion in the Raleigh urbanized area remains low relative to its peer cities, as illustrated in *Table 1: Impacts of Congestion in the Raleigh Urbanized Area*, congestion and its impacts have increased from 2023 to 2024[2] (Schrank, et al. 2025). Whether these increases are part of the economic rebound from the COVID-19 pandemic, or part of a larger trend from increased population and economic activity remains to be seen and will require data from future versions of the TTI Urban Mobility Report.

Texas Transportation Institute – 2025 Urban Mobility Report (Raleigh-Cary UZA)			
System Performance		**2023**	**2024**
Congested Travel (% of Peak VMT)		16.1	19.2
Congested System (% of Lane-Miles)		9.8	11.9
Congested Time (number of "Rush Hours"		1.6	2.4
Annual Excess Fuel Consumed			
	Total Fuel (1000 gallons)	7,220	8,069

[1] Congested Travel as a % of total Vehicle Miles Traveled (VMT) was 19.2% in 2017 and 19.2% in 2024 (Schrank, et al. 2025)

[2] Metrics signifying an increase in congestion are highlighted in red, metrics that remain stable are highlighted in yellow, and metrics that show improved congestion are highlighted in green

System Performance	2023	2024
Annual Excess Fuel Consumed		
Rank	57	55
Fuel per Peak Auto Commuter (gallons)	13	14
Rank	82	76
Annual Delay		
Total Delay (1000s of person-hours)	24,692	28,085
Rank	56	55
Delay per Peak Auto Commuter (person-hours)	39	42
Rank	76	75
Travel Time Index	1.13	1.15
Rank	78	75
Commuter Stress Index	1.16	1.21
Rank	77	61
Freeway Planning Time Index (95th Percentile)	1.37	1.48
Rank	63	56
Excess CO_2 Due to Congestion		
Congested CO_2 (tons)	71,981	80,456
Rank	57	55
Excess CO_2 Due to Truck Congestion		
Congested CO_2 (tons)	11,788	13,218
Rank	69	69
Truck Congestion Cost ($ thousands)	62,000	74,000
Congestion Cost		
Total Cost ($ thousands)	652,000	748,000
Rank	56	55
Cost per Peak Auto Commuter ($)	894	987
Rank	79	72

Table 1: Impacts of Congestion in the Raleigh Urbanized Area

In the years since CAMPO last published the Status of the System Report, impacts of the e-commerce, logistics, and supply chain industries are more observable to the everyday consumer than ever before. "A major contributor to the truck congestion cost increase has been the value of time associated with truck travel [...]" (Schrank, et al. 2025). Therefore, concerning the freight and logistics industries, it is more important than ever to reduce the impact of congestion bottlenecks. *Figure 3: Impact of Congestion on Freight in the Raleigh Urbanized Area from 1982 to 2024* shows us that while trucking delay as a percent of total delay in our region has remained flat[3] the cost of congestion on the freight industry has been rising steadily over the last decade (Schrank, et al. 2025).

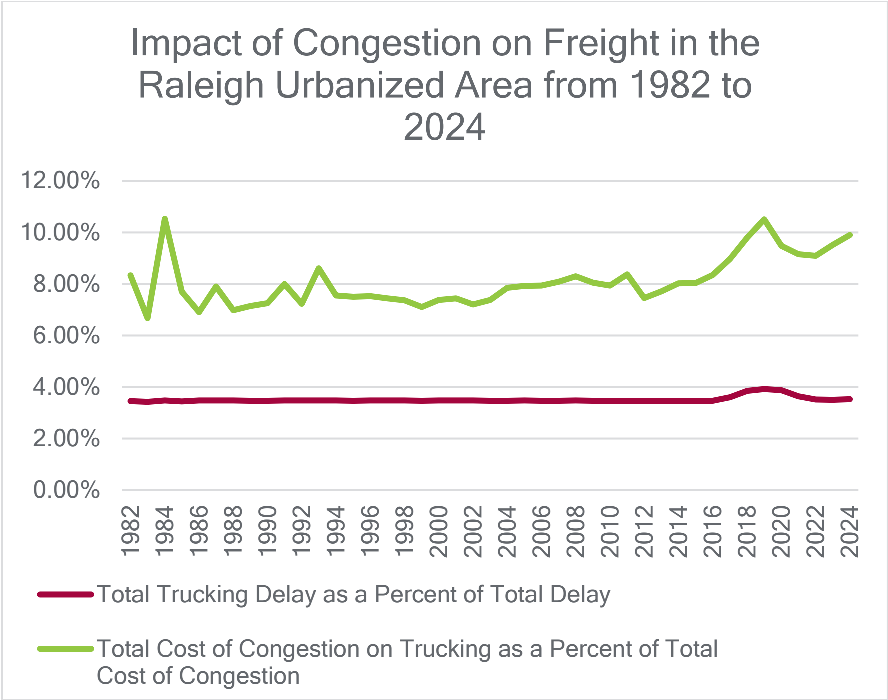

Figure 3: Impact of Congestion on Freight in the Raleigh Urbanized Area from 1982 to 2024

[3] there was a small increase during the COVID-19 pandemic due to the reduction of non-freight traffic

The remainder of this section “Bottlenecks in the Capital Area MPO” will cover where CAMPO’s most impactful bottlenecks exist, what are their possible causes, and what projects are planned for delivery to help in alleviating their impact.

2.2 Top Ten Bottlenecks by Fiscal Quarter

In *Appendix A: Quarterly Bottleneck Reports FY24 Q3 – FY25 Q4*, one can find the six tables that address the head location of the most impactful bottlenecks in CAMPO’s CMP network from FY2024 Q3 through FY2025 Q4, their ranking, and planned operational improvements. This data was sourced from INRIX using the RITIS Probe Data Analytics platform’s Bottleneck Ranking application. This appendix was developed to provide a summary of the bottlenecks as well as to present maps of each bottleneck location and a spiral graph showing its time-of-day impact. As described in Section 2.0: Identifying Bottlenecks & How They Are Tracked, the bottleneck ranking is based on the bottleneck’s “total delay”. This attribute is based on weighing the “Base Impact” factor, which in turn is developed by first understanding the bottleneck’s average maximum length (in miles) and average daily duration, which are provided as attributes in the appendix A tables (RITIS 2026)[4].

Effective congestion management in CAMPO’s planning area begins with a clear understanding of where the region’s most impactful bottlenecks occur. Building on this foundation, the next step is to identify improvements within the Metropolitan Transportation Plan’s (MTP) universe of projects that have the potential to relieve congestion or more efficiently reallocate demand across the network. For this reason, each identified bottleneck is paired with one or more 2050 MTP projects that directly influence the operational efficiency of the affected facility.

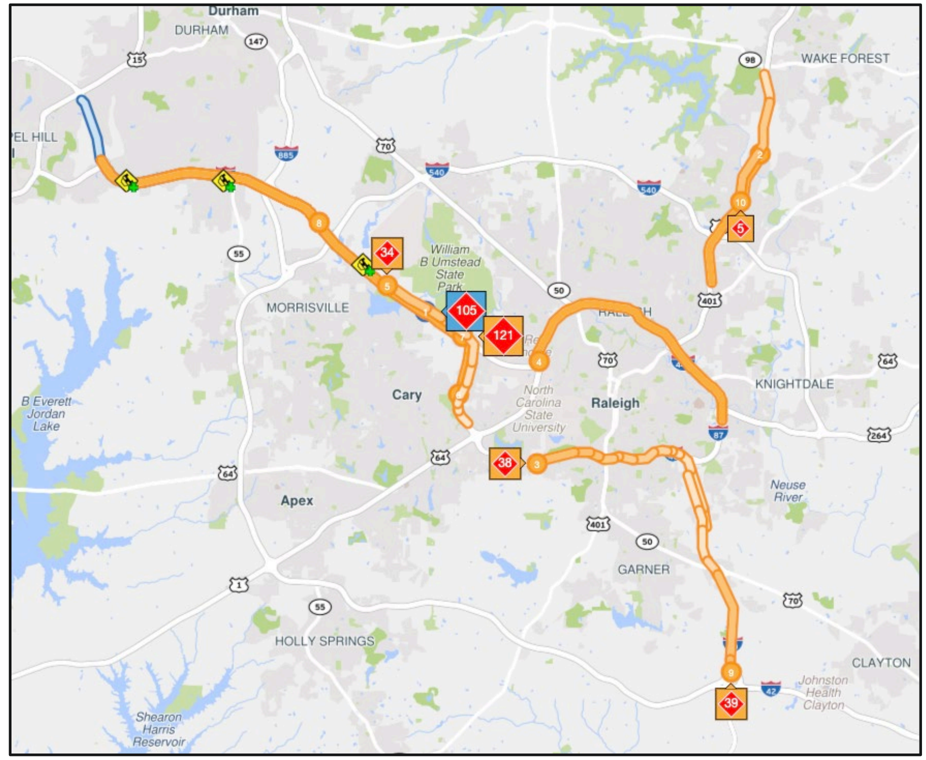

Figure 4: Top 10 Bottlenecks in the Region - Q3 FY 2024

Analysis for the months during FY 2024 Q3 (January 2024 – March 2024), congestion was dominated by the I-40 corridor near RTP and RDU, with Harrison Avenue leading the region in total delay – see *Figure 4: Top 10 Bottlenecks in the Region - Q3 FY 2024*. In addition to the delay on I-40 near Harrison, the I-40 corridor near Aviation Parkway and NC-54 presented with a significant number of crash and construction events - increasing the number and severity of the bottlenecks. During this time span, US-1 North at Burlington Mills Road continued its history as a chronic bottleneck, and in this quarter, it held the dubious distinction of longest daily duration, signaling persistent commuter pressure toward

[4] Please note that for each table, the bottleneck with most impactful measurement of each attribute will be highlighted in red. For example, in FY24 Q3 – the bottle with the greatest average maximum queue length (in miles) was Rank 7: 1-40 East @ Raleigh Chapel Hill Expressway/Exit 282

Wake Forest. Overall, this quarter reflected strong AM inbound, and PM outbound patterns tied to employment centers and growing suburban demand.

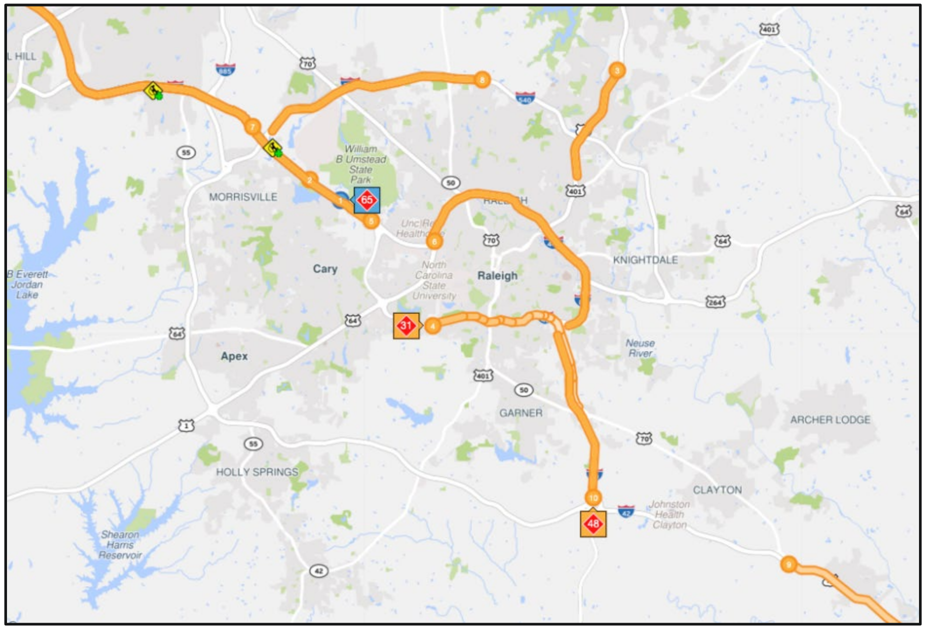

Figure 5: Top 10 Bottlenecks in the Region - Q4 FY 2024

The months of FY2024 Q4, brought intensified congestion on the I-40 eastbound approaches to RTP and RDU Airport, with Harrison Avenue and Aviation Parkway ranking first and second – see *Figure 5: Top 10 Bottlenecks in the Region – Q4 FY 2024*. US-1 North continued to exhibit extreme PM peak durations, while US-70 near Clayton appeared with the longest spatial extent, highlighting the sub-urban growth-driven congestion queuing in Johnston County. I-540 East at Six Forks Road appeared on the list this quarter, further demonstrating the strong PM outbound patterns of continued suburban growth. Lastly, it is worth noting that spring's seasonal factors such as graduation and leisure travel can amplify delays and be reflected in the increase in total delay seen during the quarter, particularly along I-40 near the airport and event venues.

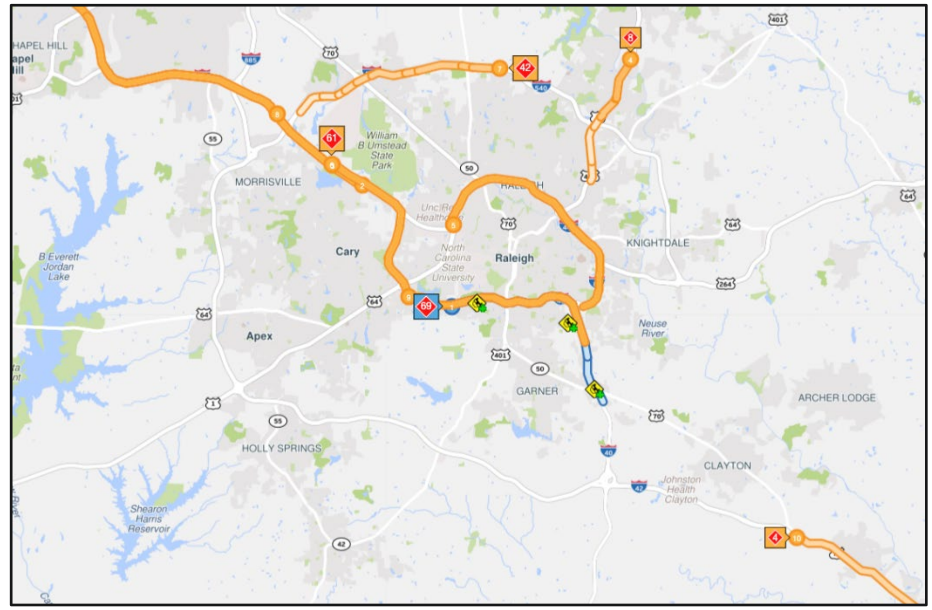

Figure 6: Top 10 Bottlenecks in the Region - Q1 FY 2025

The summer travel months of FY 2025 Q1 shifted the top bottleneck to I-40 West at Gorman Street, which was also compounded by the #9 bottleneck of I-40 at I-440/US-1/US-64/EXIT 293 – see *Figure 6: Top 10 Bottlenecks in the Region – Q1 FY 2025*. Both bottlenecks reflect heavy AM peak travel from Raleigh towards job hubs in Cary, Apex, and RTP. In the opposite direction and during the opposite time of day (PM peak) I-40 East at Aviation Parkway and Harrison Avenue remained high on the list, driven by airport traffic and RTP employment flows back towards Cary, Raleigh, and additional downstream destinations. US-70 near Clayton sustained its presence and its long corridor queues, underscoring continued development pressures in the eastern region.

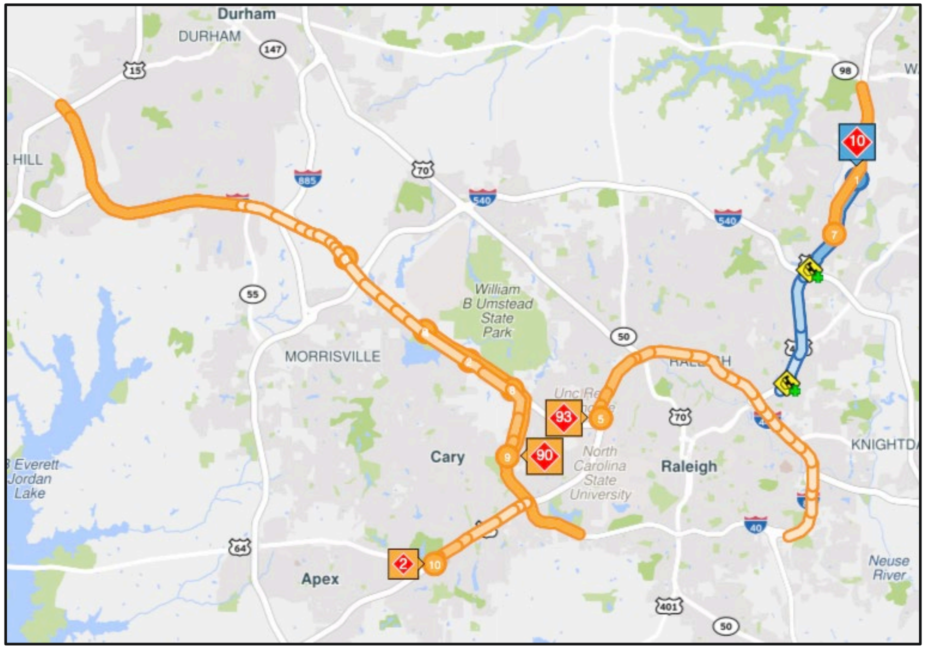

Figure 7: Top 10 Bottlenecks in the Region - Q2 FY 2025

Autumn travel and early darkness during FY 2025 Q2 produced the most severe congestion of the entire study period. Evening peak travel on US-1 North at Burlington Mills Road set records for total delay, daily duration, and base impact, solidifying its role as the most problematic commuter corridor – see *Figure 7: Top 10 Bottlenecks in the Region – Q2 FY 2025*. Evening travel on I-40 eastbound from Durham, RDU, and RTP towards Cary and Raleigh near Harrison Avenue followed closely. This bottleneck was compounded by the I-40 eastbound evening peak bottlenecks at Page Road (#3), Raleigh Chapel Hill Expressway (#8) and NC-54/Exit 290 (#9). Congestion along I-40 eastbound at Raleigh Chapel Hill Expressway was also compounded by the high number of "Agency-Reported Events" and the bottleneck's "Average Maximum Length". Lastly, this was the first time during the period of study that US-1 South towards Apex during the PM peak cracked the region's top 10 bottlenecks, further illustrating the congestion issues that arise from increasing suburban and exurban development.

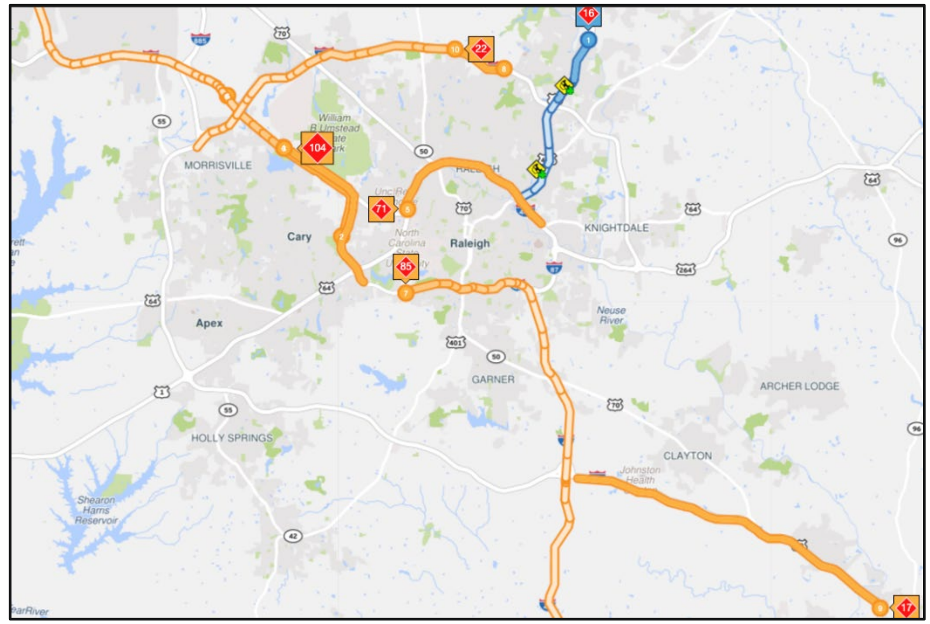

Figure 8: Top 10 Bottlenecks in the Region - Q3 FY 2025

During FY 2025 Q3, post-holiday moderation reduced overall delays, but US-1 North, primarily due to the evening peak, retained the top spot in total delay as well as duration – see *Figure 8: Top 10 Bottlenecks in the Region - Q3 FY2025*. Additionally, evening peak travel along I-40 eastbound near NC-54/Exit 290 rose in prominence, reflecting sustained demand from the RTP and RDU generators towards a densifying eastern Cary and western Raleigh. Likewise, the evening peak from RTP and generators further upstream explains the congestion observed along I-540 at Falls of Neuse Road/Exit 14. The attraction of trips to RDU caused congestion along I-40 at Aviation Parkway in both the eastern and western directions. Furthermore, congestion along US-70 East at Buffalo Road during evening peak recorded the longest spatial extent of any quarter, solidify the existence of congestion in eastern Wake and western Johnston counties.

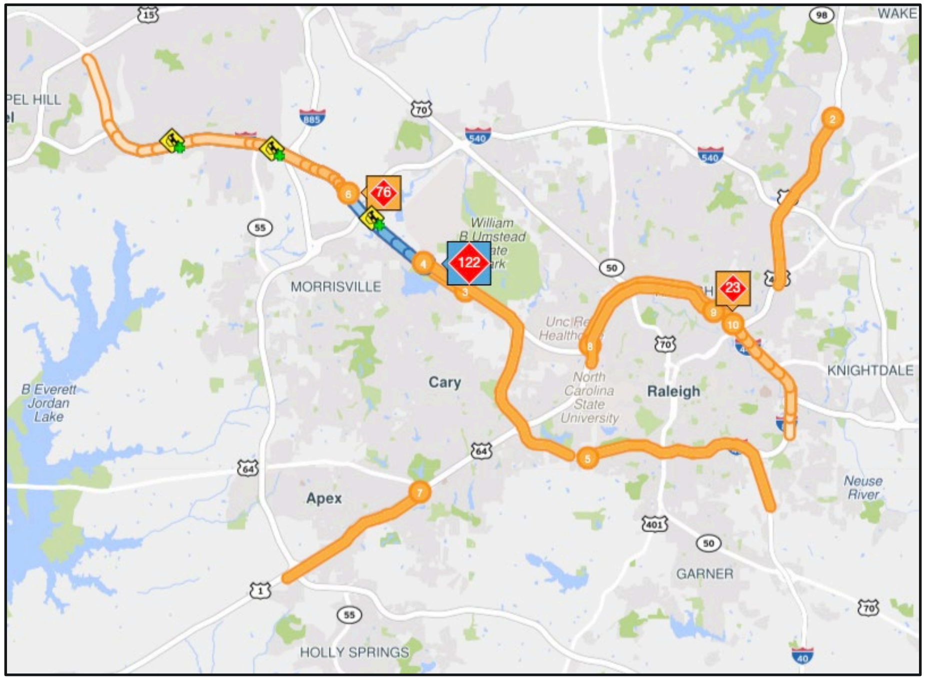

Figure 9: Top 10 Bottlenecks in the Region - Q4 FY 2025

FY 2025 Q4 saw a surge in the amount of total delay. This quarter was marked by bottlenecks along I-40, I-440, and US-1. Evening peak congestion along I-40 in both directions at Aviation Parkway continued to show the impact access to the airport and nearby destinations have on regional congestion – see *Figure 9: Top 10 Bottlenecks in the Region – Q4 FY2025*. During this quarter, the US-1 North at Burlington Road maintained its oversized impact to regional congestion on the transportation network by maintaining long evening durations. This occurred while Beltline bottlenecks at Wake Forest Road and Capital Boulevard entered the top ten, reflecting midday and evening retail and event activity.

Across the six fiscal quarters, I-40's approaches to RTP and RDU consistently dominated the rankings, with Harrison Avenue and Aviation Parkway appearing in nearly every top tier. US-1 North at Burlington Mills Road earned the dubious title of duration champion, peaking in Q2 with record-setting delays, underscoring the need for targeted commuter relief. Outer corridors such as I-540 and US-70 gained prominence over time, signaling growth-driven congestion beyond the core. Seasonal patterns were clear: Q2 (Oct–Dec) marked the highest overall stress, while Q4 (Apr–Jun) showed strong event and airport influences. These trends point to a system increasingly constrained by commuter flows, suburban expansion, and incident sensitivity, requiring both operational strategies and long-term capacity planning.

2.3 Planned Investments to Manage Congestion

The Capital Area MPO plans transportation investments through its Metropolitan Transportation Plan (MTP), which serves as the region's long-range framework for identifying and prioritizing projects needed to meet future mobility, safety, and economic goals. The MTP integrates performance-based planning principles, using data from sources such as the Congestion Management Process' Status of the System Report to identify deficiencies and guide investment decisions. Through this planning process, CAMPO coordinates closely with NCDOT, local governments, and neighboring MPOs to ensure that planned projects address regional needs while remaining fiscally constrained and consistent with state and federal priorities *(CAMPO 2023)*. Notably, all the major bottlenecks identified in the Status of the System report occur on facilities that are part of the National Highway System (NHS) *(NCDOT 2025)*. This underscores the regional and statewide importance of these corridors for mobility and freight movement, as well as demonstrate competitiveness for funding that may not exist on non-NHS facilities.

An analysis of *Table 8: CAMPO Bottleneck and Associated MTP Projects* demonstrates a strong alignment between identified congestion

Bottleneck Location	Associated 2050 MTP IDs
I-40 EAST @ Aviation Pkwy/Exit 285	A640, A641, A64a, F112a, F40
I-40 EAST @ Harrison Ave/Exit 287	A240a, A240b, A562, A640, A641, F112a, F112b, F40
I-40 EAST @ NC-54/Exit 290	A413, A562, A640, A641, F112a, F112b, F40, F41, F81a
I-40 EAST @ Page Rd/Exit 282	*TWTPO Projects
I-40 EAST @ Raleigh Chapel Hill Expy/Exit 289	A562, A640, A641, F112a, F112b, F40, F41, F81a
I-40 EAST @ US-70/Exit 309	A143a1, A300, F14, F3, F41, F44a, F44b, F6
I-40 WEST (CCW) @ Aviation Pkwy/Exit 285	A562, A640, A641, A64a, F112a, F112b, F40, F41, F43b, F81a
I-40 WEST @ Gorman St/Exit 295	F41, F43, F44a, A143a1, F3, F41b, F44b, F44b1, F44b2, F44c, F44d, F45, F46, F6
I-40 WEST @ I-440/US-1/US-64/Exit 293	F10, F41, F43, F43b, F44a, F81a
I-440 EAST @ Wake Forest Rd/Exit 10	A79a, F10, F83
I-440 SOUTH (CCW) @ Wade Ave/Exit 4	A562, A79a, F10, F83, F86, F86a
I-440 WEST @ US-401/US-1/Capital Blvd/Exit 11	F86, F86a
I-540 EAST (CW) @ Six Forks Rd/Exit 11	A680a, F42b, F85, F87, A13, F13
I-540 EAST @ Falls of Neuse Rd/Exit 14	A13c, F42b, F85, F87
US-1 NORTH @ Burlington Mills Rd	A133, F11-1a, F11-1b, F11-1c, F86, F86a
US-1 NORTH @ US-64/Exit 98	A449, F110a, F110b, F110c, F15a, F15a3
US-1 SOUTH @ Perry Creek Rd/Durant Rd	F11-1a, F11-1b, F11-1c, F11-1d, A659
US-1/US-64 WEST @ US-64/Tryon Rd/Exit 98	F10, F110b, F15a, F15a3, F43b
US-70 EAST @ Buffalo Rd	F14, F3, F6
US-70 WEST @ US-70 (Clayton)	F14

Table 3: CAMPO Bottleneck and Associated MTP Projects

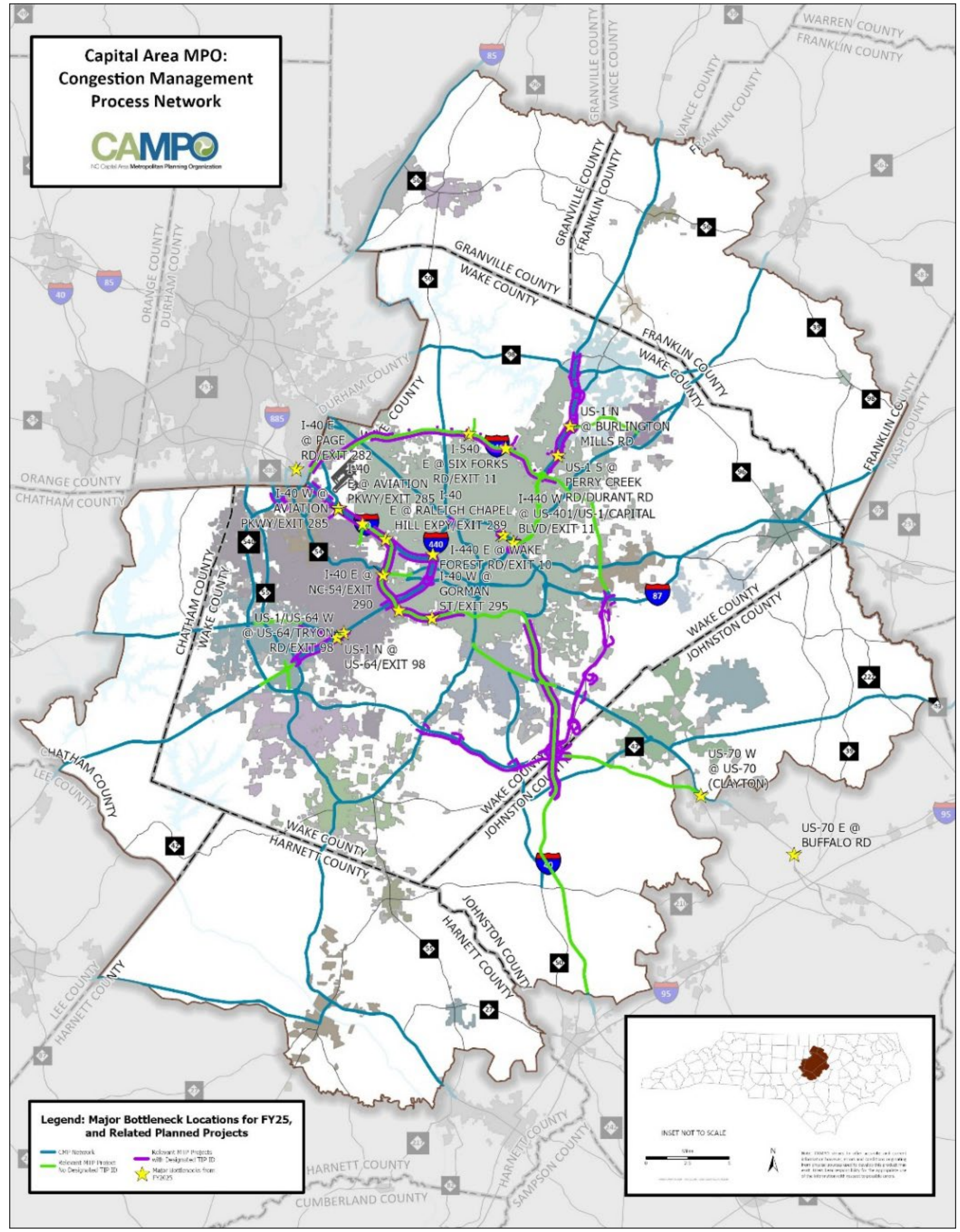

Figure 10: Major Bottleneck Locations for FY25 and Related Planned Projects

locations and programmed or planned MTP projects. Many *bottlenecks* are associated with multiple MTP project IDs, indicating that CAMPO is addressing these constraints through a combination of capacity improvements, interchange upgrades, and operational strategies rather than relying on single, isolated projects. The repeated appearance of projects such as A640, A641, F40, and F41 across several I-40 bottlenecks suggests a corridor-based approach that targets systemic congestion issues. Overall, the table shows that the most significant NHS bottlenecks in the region are well represented in the MTP, reflecting a deliberate effort to align long-range planning investments with documented system performance needs. These investments are also visualized in the following map, *Figure 10: Major Bottleneck Locations for FY25 and Related Planned Projects*. In this map the MTP projects, designated in green, are overlayed in purple by those projects that have been programmed in NCDOT's State Transportation Improvement Program (STIP) and CAMPO's Metropolitan Transportation Improvement Program (MTIP or TIP)[5].

2.4 Possible Causes of Regional Congestion

Across the CAMPO CMP network, congestion in both peak periods is overwhelmingly non-recurrent in nature, but the INRIX data from the RITIS platform's "Causes of Congestion" portal shows the evening peak is more severe in both scale and complexity *(RITIS 2026)*. Morning peak delay totals 1.75 million vehicle-hours at a cost of $52.7 million – see *Figure 11: Primary Drivers of Congestion on the CMP Network (FY 2025, AM Peak) - Total Cost of Congestion & Percent of Total Delay* – while the evening peak more than doubles that burden at 3.52 million vehicle-hours and $106.1 million in economic cost – see *Figure 12: Primary Drivers of Congestion on the CMP Network (FY 2025, PM Peak) - Total Cost of Congestion & Percent of Total Delay*. In both periods, incidents are the single largest driver, but their influence is stronger in the AM (24.8% of all delay) than in the PM (19.2%), reflecting the greater

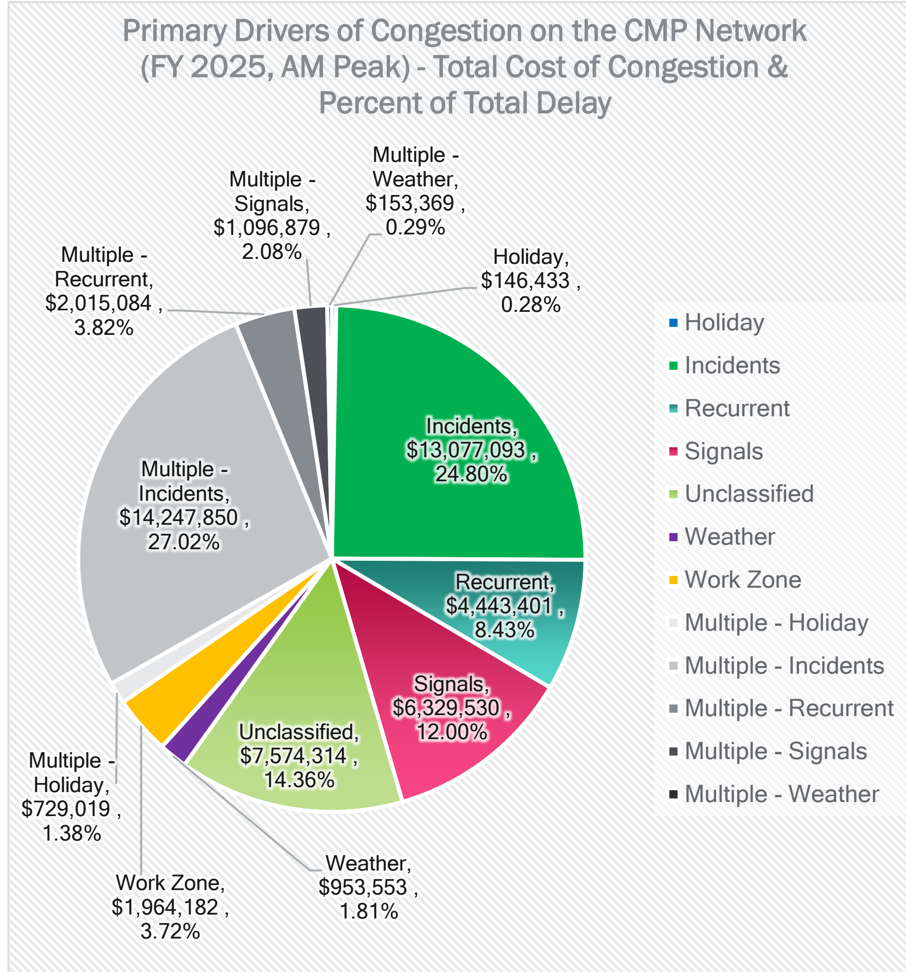

Figure 11: Primary Drivers of Congestion on the CMP Network (FY 2025, AM Peak) - Total Cost of Congestion & Percent of Total Delay

operational fragility of the morning commute when even small disruptions spread quickly through more tightly scheduled travel

[5] A larger version of this map is made available in Appendix C: FY25 Major Bottleneck Maps with Associated Network Analyses.

patterns. However, the evening peak exhibits much higher structural congestion: recurrent delay grows from 8.4% of AM delay to 15.4% in the PM, and signal-related delay remains consistently high (12.0% AM, 11.2% PM), indicating that the PM peak is constrained not just by disruptions but by baseline demand exceeding available capacity across large portions of the CMP network.

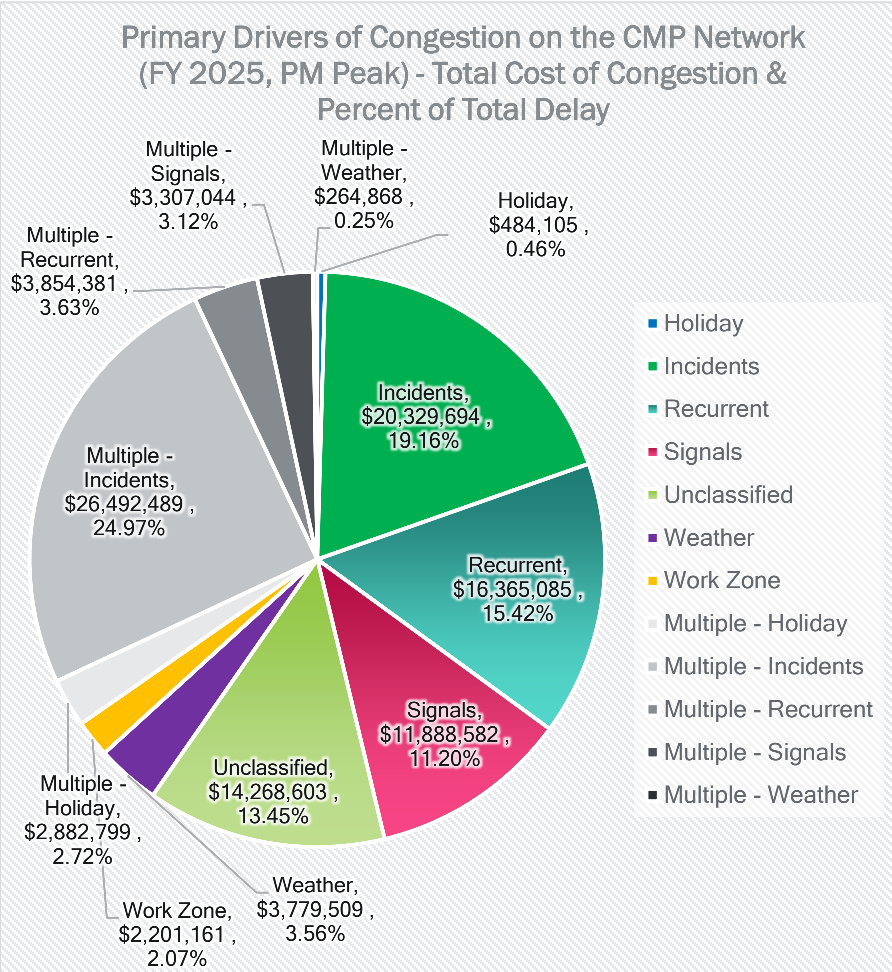

Figure 12: Primary Drivers of Congestion on the CMP Network (FY 2025, PM Peak) - Total Cost of Congestion & Percent of Total Delay

The compounding effect of multiple causes is far more pronounced in the evening. The overall balance between single-factor congestion (incidents, signals, recurrent, etc.) and multi-factor or compounded congestion (combinations such as "Incidents & Weather," "Incidents & Recurrent," and "Signals & Weather") is almost the same between the two peak periods. Where the peaks differ is not in the *quantity* of compounded delay, but in its *composition*. In the AM peak, the multi-factor share is dominated by combinations involving incidents and signals, reflecting how a single crash interacting with peak-period queuing and arterial control can quickly disrupt commuter flows. In the PM peak, however, a much larger fraction of the multi-cause delay involves weather and recurrent congestion layered onto incidents, which aligns with the region's likelihood for afternoon storms in the summer and low light in the winter – all while the PM network is already operating closer to capacity. Furthermore, work zones, while a relatively small standalone factor, amplify delay when paired with incidents and weather, especially in the PM, This is true when background congestion limits the network's ability to absorb lane closures or blocked shoulders. The result is a brittle evening system, where overlapping stressors generate outsized delays relative to their individual shares.

From a congestion management perspective, these patterns imply that CAMPO's most effective near-term leverage lies in operational resilience rather than a focus on capacity expansion. In the AM peak, aggressive incident detection, clearance, and traffic signal coordination can directly address the dominant causes of delay. In the PM peak, however, strategies must also mitigate recurrent and compounding congestion: adaptive signal timing, managed lanes, dynamic shoulder use, work-zone scheduling, and weather-responsive traffic management will all have higher returns because they reduce the network's sensitivity to disruption under saturated conditions. The data clearly show that the evening peak is where congestion is both most costly and most structurally embedded, making it the critical focus for CMP performance management and investment.

2.5 Possible Solutions to Regional Congestion

As the Triangle's economy continues to grow, ensuring that continued growth requires a strengthening of the CMP network's operational resilience. The data shows that most of our region's most impactful congestion is driven by non-recurring events layered onto an increasingly saturated system (RITIS 2026). The following strategies are relatively low-cost compared to major capital projects and align well with CAMPO's CMP emphasis on performance-based, data-driven management (CAMPO 2024). Incident detection and clearance on I-40, I-440, US-1, and I-540 would yield immediate benefits, particularly during the AM peak when even small disruptions tend to cascade quickly. Expanding the region's traffic management toolkit, including increased frequency of coordinated signal timings on major arterials, adaptive signal control in high-growth corridors like US-70 and US-1, and weather-responsive operations during afternoon storm seasons, would help stabilize the PM peak, when recurrent congestion and compounding factors are most severe.

At the same time, the region's long-term congestion challenges require targeted capacity and multimodal investments that match the amount and geography of growth. The repeated appearance of bottlenecks at I-40 interchanges serving RTP and RDU (Harrison Avenue, Aviation Parkway, NC-54, Page Road) indicates the need for interventions like interchange modernization, auxiliary lanes, and managed lane concepts to absorb peak-direction surges in congestion without degrading reliability. Along US-1 and US-70, where suburban and exurban development is driving long-duration PM queues, corridor-wide improvements such as grade-separated interchanges, transit priority improvements, and parallel multimodal networks can help redistribute demand. Many of these investments are already reflected in the MTP project universe as noted in Section 2.3: Planned Investments to Manage Congestion.

Finally, CAMPO can reduce structural congestion by broadening travel choices in the region's fastest-growing commuter sheds. Frequent regional transit linking Raleigh, Cary, RTP, and Wake Forest; safe and continuous bicycle and pedestrian networks; and land-use coordination that supports shorter trips will all help shift peak-period demand away from the most constrained corridors. As the region continues to grow, congestion management will depend on creating a transportation network that can absorb incidents, weather, and daily variability.

Freight Movement in the Capital Area MPO

3.0 Why it's crucial to study the impact of traffic congestion on the freight Industry

In 2018, CAMPO, in partnership with the Triangle West Transportation Planning Organization (TWTPO, previously DCHC MPO) and NCDOT published the Triangle Regional Freight Plan as an implementation element of Connect 2045, CAMPO's MTP (CAMPO 2018). This initial comprehensive freight plan for the region found that, "Industries dependent on freight transportation make a $21 billion contribution to the region's economy, accounting for one-third of its Gross Regional Product and over a quarter of a million jobs in the Triangle Region" (CAMPO; NCDOT; DCHC MPO 2018). Therefore, to ensure the Triangle continues to flourish, it is imperative that any policy addressing regional traffic congestion consider the impacts of congestion on the health and efficiency of the freight industry.

The current state of freight mobility along the CMP Network will be addressed using INRIX data collected from RITIS' Probe Data Analytics (PDA) platform[6]. The data gathered from RITIS PDA come from its "Causes of Congestion" and "Map-21" widgets. Broken up by morning and evening peak travel times, the "Causes of Congestion" data provides insight as to the unique challenges facing the freight industry in our region during the different peak periods of travel. Meanwhile, the data from the Map-21 widget provides geographically specific Truck Travel Time Reliability Index data, which has been mapped, and is available in Appendix B: Truck Travel Time Reliability Index Maps (FY 2024). These maps show where, throughout the week, in CAMPO's interstate network the greatest challenges exist that are impeding efficiencies for the freight and freight reliant industries.

[6] The data gathered from RITIS PDA come from its "Causes of Congestion" and "Map-21" widgets. While the "Causes of Congestion" data pulls commercial freight data for the entire CMP Network, the Map-21 data, is limited to the interstate system within CAMPO planning area.

3.1 How the Causes of CAMPO's Congestion impact Freight Movement

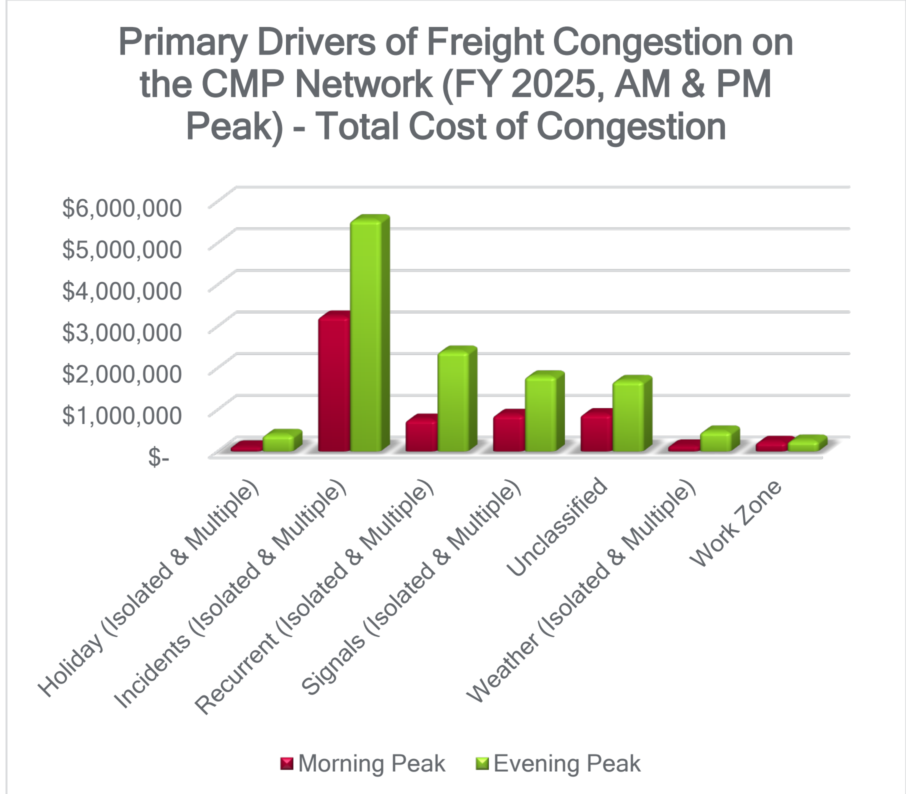

Figure 13: Primary Drivers of Freight Congestion on the CMP Network (FY 2025, AM & PM Peak) - Total Cost of Congestion

The weekday peak-period congestion profile of the CAMPO CMP network presents a structurally challenging operating environment for the region's freight and logistics economy. In the morning peak alone, 1.75 million vehicle-hours of delay generate $6.25 million in commercial vehicle costs, while the evening peak more than doubles that burden to $12.58 million – see *Figure 13: Primary Drivers of Freight Congestion on the CMP Network (FY 2025, AM & PM Peak) - Total Cost of Congestion*. Although trucks account for only about one-eighth of total delay cost in each period, their exposure is not evenly distributed across congestion types. Freight delay is disproportionately concentrated in incident-driven and work-zone-related congestion, rather than in pure recurrent or signal delay[7]. This indicates that the freight system is not primarily constrained by routine peak-hour queuing, but by the reliability of the network when unexpected or disruptive events occur (RITIS 2026).

The morning peak is especially fragile for freight movements. Incidents alone account for 24.8% of all vehicle-hours of delay in the AM peak, generating more than $1.55 million in commercial delay costs in just four hours of operation. When incidents are combined with work zones, signals, or weather, their freight impacts grow further, even though these categories represent relatively small shares of total delay. This reflects a fundamental operating reality for trucks: when a crash or disabled vehicle blocks a lane on a major CMP corridor, there are often few viable diversion routes that can accommodate heavy vehicles, and clearance times are longer. As a result, a single disruption during the tightly scheduled morning delivery window can ripple across supply chains, missed dock appointments, and driver hours-of-service constraints.

In the evening peak, freight faces a different but equally complex challenge: operating in a saturated system. Although the share of delay attributed to incidents falls to 19.2%, the absolute commercial cost of incident-related congestion more than doubles, and it is increasingly compounded by recurrent congestion and weather. Categories such as Incidents & Weather, Incidents & Recurrent, and Incidents & Work Zones together represent a large portion of the PM freight burden, reflecting how trucks are forced to operate in traffic conditions with little residual capacity to absorb disruption. This combination of high baseline demand, afternoon weather exposure, and ongoing construction activity creates a reliability problem that is more damaging to freight than routine queuing alone. For the CAMPO region's logistics, distribution, and construction sectors, these data indicate that improving incident clearance, work-zone management, and weather-responsive operations will yield higher economic returns than strategies that focus solely on expanding capacity for passenger peak-hour demand.

3.2 Where and When the Freight Industry Encounters Issue in Network Reliability

While reading this section, please refer to Appendix B: Truck Travel Time Reliability Index Maps (FY 2024) for maps detailing CAMPO's Interstate segments and their TTTRI values.

The Truck Travel Time Reliability Index (TTTRI) provides an additional lens through which to understand how congestion affects freight mobility across CAMPO's interstate system. As defined by the Federal Highway Administration, TTTRI is calculated by dividing the 95th-percentile truck travel time by the 50th-percentile (median) travel time for the worst-performing time-period on each segment of the National Highway System (Ahanotu, et al. 2023). A TTTRI value of 1.0 indicates perfectly consistent travel times, while higher values reflect increasing variability and unpredictability. CAMPO's adopted target of 1.7 means that truck travel times should not exceed 70 percent above typical conditions during the most unreliable period[8] (CAMPO 2026). When TTTRI approaches or exceeds this threshold, freight carriers must add buffer time, adjust schedules, or risk missed delivery windows—costs that compound across the region's $21-billion freight economy (CAMPO;

[7] Work-zone related congestion appears low in *Figure 7: Primary Drivers of Freight Congestion on the CMP Network (FY 2025, AM & PM Peak) - Total Cost of Congestion* because its impact is captured primarily as a secondary or tertiary cause of congestion

[8] In Connect 2050's Appendix 13: Federal Transportation Performance Measures, CAMPO along with TWTPO, set the Truck Travel Time Reliability Index at 1.7

NCDOT; DCHC MPO 2018).

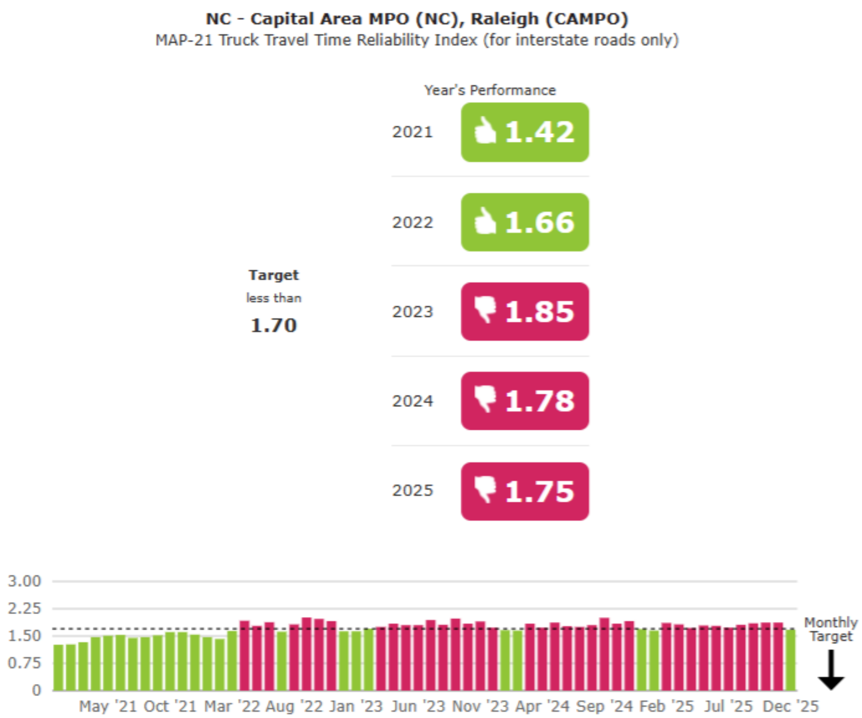

Figure 14: CAMPO's MAP-21 TTTRI

The 2024 TTTRI data shows that reliability challenges are concentrated primarily in the weekday AM and PM peak periods, closely mirroring the congestion dynamics identified in the "Causes of Congestion" analysis. During the morning peak, TTTRI values on key freight corridors such as I-540, I-440, and I-40 frequently rise toward or above the 1.7 target, particularly near major interchanges like US-401, Capital Boulevard, Wade Avenue, and Falls of Neuse Road. These locations correspond directly with the top bottlenecks identified in the above section, where recurring congestion, high crash frequencies, and work-zone activity create persistent operational stress points. For example, bottlenecks on I-40 near Harrison Avenue, Gorman Street, Aviation Parkway, and NC-54 consistently rank among the region's most severe, with long daily durations and high numbers of agency-reported events. These same segments exhibit elevated TTTRI values during the AM peak, underscoring how non-recurring disruptions at known bottleneck locations drive freight unreliability.

In the evening peak, TTTRI patterns reveal a different reliability challenge: the system is saturated, and trucks are operating in conditions with little remaining capacity to absorb disruption. While many segments remain at or below the 1.7 target, a substantial portion of the interstate network exhibits TTTRI values that edge above this threshold, reflecting the compounded effects of recurrent congestion, weather, and ongoing construction activity. This aligns with the PM peak bottleneck profile, where locations such as I-440 at Wade Avenue and I-540 at Six Forks Road show long daily durations and large base impacts. These corridors serve as critical freight gateways to suburban growth areas, distribution centers, and employment hubs. As a result, even moderate increases in PM peak variability can reduce freight productivity, extend cycle times, and increase exposure to hours-of-service constraints.

A longer-term view of TTTRI trends reinforces this peak-period reliability challenge. Monthly systemwide TTTRI values have gradually increased in the years since the COVID-19 pandemic, and during FY25 (July 2024–June 2025) they remained consistently near or above CAMPO's 1.7 target. TTTRI values ranged from 1.65 in January 2025, to 2.0 during September 2024 – see *Figure 14: CAMPO's MAP-21 TTTRI* (RITIS 2026). This pattern shows that even though overnight and weekend conditions generally remain reliable, weekday peak-period volatility is now persistent enough to elevate monthly averages, reflecting the cumulative effect of recurring bottlenecks, incidents, and work-zone activity on freight mobility.

By contrast, overnight and weekend TTTRI values generally remain below CAMPO's 1.7 target, confirming that off-peak operations still offer a meaningful reliability advantage for freight. However, the bottleneck data shows that many of the region's most severe bottlenecks, particularly those on I-40 near RTP and RDU, are driven by incident-heavy corridors with high crash frequencies and recurring work-zone activity. These factors can occasionally elevate TTTRI during off-peak periods, even if most segments remain within target. The combined evidence from TTTRI and bottleneck analysis reinforces a central conclusion: the CAMPO region's freight system is constrained less by all-day congestion than by peak-period volatility at a relatively small number of high-impact bottlenecks. For the region's logistics, distribution, and construction sectors, this means that strategies focused on improving incident clearance, work-zone coordination, and operational performance at these bottleneck locations will yield higher economic returns than approaches that treat congestion as a uniform, all-day phenomenon.

Transit Performance in the Capital Area MPO

4.0 Introduction: The Role of Public Transportation in Managing Traffic Congestion

The extent to which public transit infrastructure measurably impacts regional traffic congestion remains a subject of debate among planners, policymakers, and the public. Critics often point to low regional transit mode shares—just 1% of all trips and 2% of work-based trips, according to CAMPO's 2050 Metropolitan Transportation Plan (Appendix 10)—as evidence that transit investments yield minimal congestion relief (CAMPO 2023). However, this report contends that the true impact of transit is best understood at the corridor level, where transit services directly interact with the most congested segments of the roadway network.

Michael Anderson, in his article Subways, Strikes, and Slowdowns: The Impacts of Public Transit on Traffic Congestion, emphasizes that congestion is not evenly distributed across a metropolitan area, noting that "commuters on different roadways in the same metropolitan area face sharply different levels of congestion during peak hours" (Anderson 2014). This insight is particularly relevant in the CAMPO region, where GoRaleigh Route 1, serving Capital Boulevard (US 1), one of the area's most congested corridors, is also one of the system's most productive routes. Ridership on Route 1 peaks during the same hours that Capital Boulevard experiences its highest congestion levels, illustrating how targeted transit service can provide meaningful traffic congestion relief along high-demand corridors (GoRaleigh 2023).

Furthermore, the American Public Transportation Association (APTA) highlights in its report The Hidden Traffic Safety Solution that public transportation not only reduces congestion but also contributes to safer roadways by lowering crash rates and improving overall traffic flow (Litman 2016). This supports the argument that transit's value extends beyond regional averages and is most effectively measured by its localized impacts on mobility, safety, and corridor-level performance – progress on which is driven by the recent expansion of services and capital investments in the public transportation network in the CAMPO planning area.

This section begins with a brief overview of how the Wake Transit Program began, its local and regional impacts, and the implications of an expanded fixed route and new fixed-guideway networks. It then compares transit performance from FY 2014 and FY 2024, highlighting ridership and other productivity metrics. Lastly, this section presents efforts to better serve our less dense communities with public transit solutions through targeted programs like the Wake Transit Community Funding Area Program and CAMPO's new Mobility Management Program.

4.1 What is the Wake Transit Program?

In November 2016, following the 2014 Status of the System Report, Wake County voters approved a referendum to collect a transit dedicated half-cent sales tax (North Carolina Department of Revenue 2017). This referendum was based upon recommendations from the first iteration of the Wake Transit Plan, the goals of which were to expand and better connect the public transit network throughout Wake County (CAMPO 2016). The Wake Transit Program came into existence upon the signing of the Transit Governance Interlocal Agreement (ILA), and is governed by the ILA's creation, the Transit Planning Advisory Committee (TPAC) (Wake County 2017). TPAC's primary responsibility is to produce the Annual Wake Transit Work Plan, the Wake Transit Program's principal implementation element.

The Annual Wake Transit Work Plan's development process was established to give the undersigned of the Wake Transit Master Participation Agreement an opportunity to participate in the Wake Transit Program while ensuring programmatic control over the funds collected by Wake County and managed by the Tax District Administration (Wake County 2017). The primary local transit agencies

(GoRaleigh, GoCary, GoTriangle, GoWake Access, and NCSU Wolfline) actively participate in the program by comprising a majority of the TPAC, and drawing down funds for planning, capital, and operating projects that comport with the goals and objectives of the program (Wake County 2017).

4.2 The immediate regional impacts of the Wake Transit Program

In August 2025, the tenth Annual Wake Transit Work Plan began its development process. In the years since the program's inception, it has had a generational impact on the development of transit access, service and infrastructure in Wake County. The program's initial service investments dramatically increased transit coverage, by (1) connecting previously unserved areas of Wake County to the region's major job, service, and retail centers; (2) increasing span of service - making transit a viable transportation option to a greater subset of the population; and (3) increasing service capacity to the county's varied Demand-Response services – reaching a growing local mobility challenged population (CAMPO 2016).

After investing in coverage and engaging with public stakeholders to understand current and growing needs, the transit program embarked on expansion of the frequent fixed-route network, development of a new fixed-guideway network of Bus Rapid Transit (BRT) services, and investment in major capital improvements to support the above expanded services. The strategic expansion of the fixed-route frequent network has, (1) increased service reliability to those in Wake County living or working along high-density, high-impact, and transit-oriented corridors, and (2) laid the groundwork for a captive transit market to embrace the new fixed-guideway service mode of BRT (CAMPO 2025).

With a growing population and the expansion of coverage, span and frequency in the fixed-route network, ridership began to increase on the region's transit network. The expansion of service and inclusion of new ridership is captured in the following – *Table 9: Performance Measures for CAMPO's Fixed Route Transit Providers: GoCary, NCSU Wolfline, & GoApex* and *Table 10: Performance Measures for CAMPO's Fixed Route Transit Providers: GoRaleigh & GoTriangle*.

Performance Measures for CAMPO's Fixed Route Transit Providers: GoCary, NCSU Wolfline, & GoApex

	GoCary		NCSU Wolfline		GoApex	
Fixed Route Metrics	**FY14**	**FY24**	**FY14**	**FY24**	**FY23**	**FY24**
Annual Unlinked Trips	301,867 (NTD 2014)	441,708 (NTD 2024)	2,917,399 (NTD 2014)	2,671,487 (NTD 2024)	12,075 (NTD 2023)	16,225 (NTD 2024)
Annual Vehicle Revenue Miles	475,547 (NTD 2014)	679,751 (NTD 2024)	660,997 (NTD 2014)	578,776 (NTD 2024)	64,043 (NTD 2023)	69,276 (NTD 2024)
Annual Vehicle Revenue Hours	32,725 (NTD 2014)	50,742 (NTD 2024)	66,844 (NTD 2014)	66,287 (NTD 2024)	4,481 (NTD 2023)	4,826 (NTD 2024)
System OTP	90% (CAMPO 2014)	92% [9]	79% (CAMPO 2014)	85% [10]	~92%[11]	92% [11]
AVG Fleet Age in Years	4.5 (NTD 2014)	7.4 (NTD 2024)	6.1 (NTD 2014)	6.7 (NTD 2024)	0 (NTD 2023)	0 [12] (NTD 2024)

Table 4: Performance Measures for CAMPO's Fixed Route Transit Providers: GoCary, NCSU Wolfline, & GoApex

[9] A weighted average of OTP data is taken for all GoCary Routes (CAMPO 2025).

[10] OTP for FY24 reported to Evan Koff via email from NCSU Transit Planner, Amanda Simmons via email

[11] This OTP data is analyzed from an internal Community Funding Area Program Progress Report for FY23 and FY24.

[12] The Town of Apex contracts with the Town of Cary to provide the vehicles for the GoApex Route 1, so while the NTD indicates an age of zero, it can be posited that the actual age of vehicles is closer to that of that of the Town of Cary NTD report.

Performance Measures for CAMPO's Fixed Route Transit Providers: GoRaleigh & GoTriangle				
	GoRaleigh		GoTriangle	
Fixed Route Metrics	**FY14**	**FY24**	**FY14**	**FY24**
Annual Unlinked Trips	6,186,694 (NTD 2014)	4,355,570 (NTD 2024)	711,556 (CAMPO 2014)	787,602 (CAMPO 2025)
Annual Vehicle Revenue Miles	2,744,262 (NTD 2014)	3,740,801 (NTD 2024)	1,053,492 (CAMPO 2014)	~1,033,000 [13] (NTD 2024)
Annual Vehicle Revenue Hours	214,735 (NTD 2014)	299,444 (NTD 2024)	49,948 (CAMPO 2014)	52,725 (CAMPO 2025)
System OTP	80% (CAMPO 2014)	~83% [14]	90% (CAMPO 2014)	78% [15]
AVG Fleet Age in Years	8.6 (NTD 2014)	6.6 (NTD 2024)	5.1 (NTD 2014)	10.2 (NTD 2024)

Table 5: Performance Measures for CAMPO's Fixed Route Transit Providers: GoRaleigh & GoTriangle

This table provides a series of performance measures that presents the expansion of coverage (Annual Vehicle Revenue Miles and Annual Vehicle Revenue Hours); reliability (System On Time Performance (OTP) and Average Fleet Age in Years); and how the community has responded (Annual Unlinked Trips) [16].

While the recent investment in transit has been unprecedented in our region since the expansion of the streetcar system in the early 20th century, it has not come without its challenges. During FY19 and FY20, the COVID-19 pandemic completely upended transit service norms and trends, causing a drastic reduction in ridership, a multi-year pause in fare collection, and an everlasting change in travel patterns – shifting from a commuter heavy focus – to more of an all-day approach. These realities explain some of the ridership reduction that is observed between FY 2014 and FY 2024.

4.3 Planning for Fixed Guideway and Enhanced Services

Anderson asserts that some roadway facilities experience particularly extreme congestion during peak travel (Anderson 2014). Fixed guideway transit services can deliver frequency and reliability regardless of peak timing. Therefore, those services that run along or parallel to these facilities have an outsized opportunity to reduce said traffic congestion during peak travel.

CAMPO and the City of Raleigh have successfully leveraged funding from the Wake Transit Program to attract additional state and federal dollars to initiate planning and construction of a comprehensive fixed guideway regional BRT system. The first BRT lines, which are currently in varying stages of project delivery, will serve five major corridors, originating from transit stations in downtown Raleigh - (1) New Bern Avenue towards the Wake Med Hospital, (2) South Wilmington Street towards Garner, (3) Western Boulevard towards downtown Cary, (4) Wake Forest Road

[13] This is an approximation based upon data from the NTD report and the known ratio of Annual Vehicle Revenue Hours in the total GoTriangle network, and the amount for those routes only covering Wake County.

[14] A weighted average of OTP data is taken for all GoRaleigh Routes (CAMPO 2025).

[15] A weighted average of OTP data is taken, using revenue trips as the weight. This is specifically for GoTriangle Routes in FY24 that serve the CAMPO region (CAMPO 2025).

[16] Funding for the Wake Transit Program must supplement existing transit service in Wake County and may not supplant it. Therefore, when the Wake Transit Program reports on its own programmatic performance measures and targets for fixed-route transit (see www.waketransittracker.com) some service routes are not included. As a result, the performance measures captured in Table 9: Performance Measures for CAMPO's Fixed Route Transit Providers: GoCary, NCSU Wolfline, & GoApex and Table 10: Performance Measures for CAMPO's Fixed Route Transit Providers: GoRaleigh & GoTriangle have been selected because they are reported to the Federal Transit Administration's (FTA) National Transit Database (NTD), unless otherwise indicated, and encompass all applicable routes from their respective local transit providers.

towards Midtown/North Hills, and (5) Capital Boulevard towards Triangle Town Center.

Funding has also been secured to plan and construct extensions of the lines serving Cary and Garner. The Cary (or Western Extension) line will run through the Town of Morrisville up to the Regional Transit Center (RTC), while the Garner (or Southern Extension) line will run south along US-70 towards the Town of Clayton. Other possible BRT future corridors included in the recently adopted update to the Wake Transit Plan: I-40 (Downtown Raleigh to RTC) and a North-South corridor in Cary along Harrison Avenue and Kildaire Farm Road (CAMPO 2025).

Equally critical to the success of these service investments is the continued commitment to transit-supportive capital infrastructure. Strategic capital investments ensure that expanded transit services operate efficiently, reliably, and at a scale capable of influencing travel behavior along the region's most congested corridors. Two examples of regionwide capital investments include vehicle acquisition and bus stop improvements. Investments in vehicle acquisition modernize and expand transit fleets, allowing providers to meet growing demand while improving reliability, capacity, and passenger comfort. Similarly, targeted bus stop improvements enhance accessibility, safety, and user experience, reducing barriers to entry for new riders and reinforcing transit as a competitive alternative to single-occupancy vehicle travel. Collectively, these investments strengthen the operational backbone of Wake County's transit network and enable service expansions to translate into measurable congestion mitigation benefits across the CAMPO planning area (CAMPO 2025).

Major regional capital projects further amplify the congestion-reduction potential of the Wake Transit Program by improving system connectivity, operational efficiency, and multimodal integration. Facilities such as GoTriangle's RUS Bus Station, the Town of Cary Multimodal Transit Center, GoTriangle's new Regional Transit Center (RTC), and the GoTriangle Bus Operations and Maintenance Facility serve as critical hubs that support higher service frequencies, seamless transfers, and coordinated regional travel. As the region continues to grow, sustained investment in both transit services and supporting capital infrastructure will remain essential to ensuring that transit can meaningfully absorb travel demand, reduce roadway congestion, and support the long-term mobility goals of the CAMPO planning area (CAMPO 2025).

4.4 The Community Funding Area Program and Regional Microtransit

In addition to funding major improvements for the primary local transit providing agencies, the many smaller local municipalities of Wake County[17] participate in the Wake Transit Program through its subsidiary, the Community Funding Area Program (CFAP). The CFAP is a competitive grant program that provides these jurisdictions with matching funding for planning studies and shovel ready capital and operations projects. One mode of public transport that has been implemented and is directly attributable to the CFAP is microtransit.

Studying the efficacy of microtransit services and their impact to the outlying suburban and exurban communities of Wake County was a major part of developing the recently updated 2035 Wake Transit Plan. There are currently eight jurisdictions in Wake County that have access to a total of six community specific microtransit services. Four of those services – Morrisville Smart Shuttle, GoWake SmartRide, Go Wake Forest, and the Holly Springs Hopper – have been directly funded in part by the CFAP. The remaining microtransit services in the towns of Rolesville and Fuquay-Varina are replacements for underperforming fixed route services and are operated by the City of Raleigh and therefore funded through the larger Wake Transit Program (CAMPO 2025).

[17] Town of Wake Forest, Town of Rolesville, Town of Zebulon, Town of Wendell, Town of Knightdale, Town of Garner, Town of Fuqua-Varina, Town of Holly Springs, Town of Apex, Town of Morrisville, Research Triangle Foundation (Research Triangle Park), and Wake County

4.5 Mobility Management – CAMPO's Rural Mobility Solution

CAMPO's Mobility Management Program was established in 2024 following recommendations from the Locally Coordinated Human Services–Public Transportation Plan and a dedicated implementation study. This program functions as a coordinated regional effort to make transportation options more accessible and user-friendly, especially for seniors, people with disabilities, and low-income residents. One of the program's primary functions is to serve as a "one-stop shop" for transportation information and services, helping riders identify and navigate existing transit and human-service transportation options, addressing barriers that often prevent equitable access to mobility (CAMPO 2026).

CAMPO's mobility manager works collaboratively with local transit providers and human service agencies to reduce service duplication, close gaps, and create tailored solutions that improve efficiency and connections across the region. CAMPO's mobility management efforts contribute to broader regional goals of reducing reliance on single-occupancy vehicle travel and optimizing the overall performance of the transportation network. By improving access to coordinated transit options and streamlining information for populations that may otherwise be underserved by traditional congestion-reduction strategies, the program helps shift demand toward more efficient mobility solutions. Although its primary focus is on accessibility and coordination, the Mobility Management Program aligns with CAMPO's congestion management and transportation demand management frameworks by encouraging the use of shared and alternative transportation services, enhancing operational efficiency, and supporting multimodal travel behavior that can ease peak-period congestion impacts.

Public Health Costs of Traffic Congestion in the CAMPO Planning Region

5.0 Introduction

The ways we choose to design our transportation network has a direct impact on the health, wellbeing, and economic stability of our communities. Increased traffic congestion has been linked to health related impacts such as: deteriorating indoor and outdoor air quality (Frumkin, Frank and Jackson 2004), which can contribute to increased incidents of asthma related hospital visits (Yang 2024); an increase in stress related illness (Frumkin, Frank and Jackson 2004); and an increase in preventable fatalities (Levy, Buonocore and von Stackelberg 2010). The costly impacts of traffic congestion on regional public health not only make living in and traveling through the region less safe, but they also redirect limited public health resources from critical tasks to preventable emergencies.

The impacts of traffic congestion on air quality (its related impact on the prevalence of asthma) and stress deserve their own section in future versions of this report. However, for this year's update of the Status of the System Report, CAMPO will present an update to the 2014 report, which presented the 2010 work of Levy, Buonocore and von Stackelberg. Furthermore, we will present the work CAMPO has accomplished in laying a programmatic foundation to reduce the potential for fatal and serious crashes in its planning area through the development, adoption, and now implementation of the CAMPO, "Blueprint for Safety" (CAMPO 2025).

5.1 An Impact of Vehicle Miles Traveled (VMT) increase on Roadway Fatalities

"The [roadway] death toll has slowly declined from about 50,000 per year [nationally] in the 1960's [to approximately 40,000 per year], thanks to engineering, law enforcement, and public education" (Frumkin, Frank and Jackson 2004). These national trends parallel those experienced in North Carolina – see Figure 15*: North Carolina Statewide Highway deaths per 100,000 population from 1960 to 2024* (NCDMV 2024). While the overall trend is of decreasing deaths over the last 60 years, upon close examination of recent data, we can see that the likelihood of fatalities in our state is once again on the rise. After reaching a low point in 2011 of 12.49 per 100,000 population, fatalities have crept up to 15.68 per 100,000 population in 2024 – this constitutes an average annual growth rate of 1.76%. This period of increasing likelihood of traffic fatalities coincides with the state's explosion of Vehicle Miles Traveled (VMT) that began in 2014 – see *Figure 16: North Carolina Statewide Trends in VMT and Highway Deaths from 2009 to 2024* (NCDOT 2025).

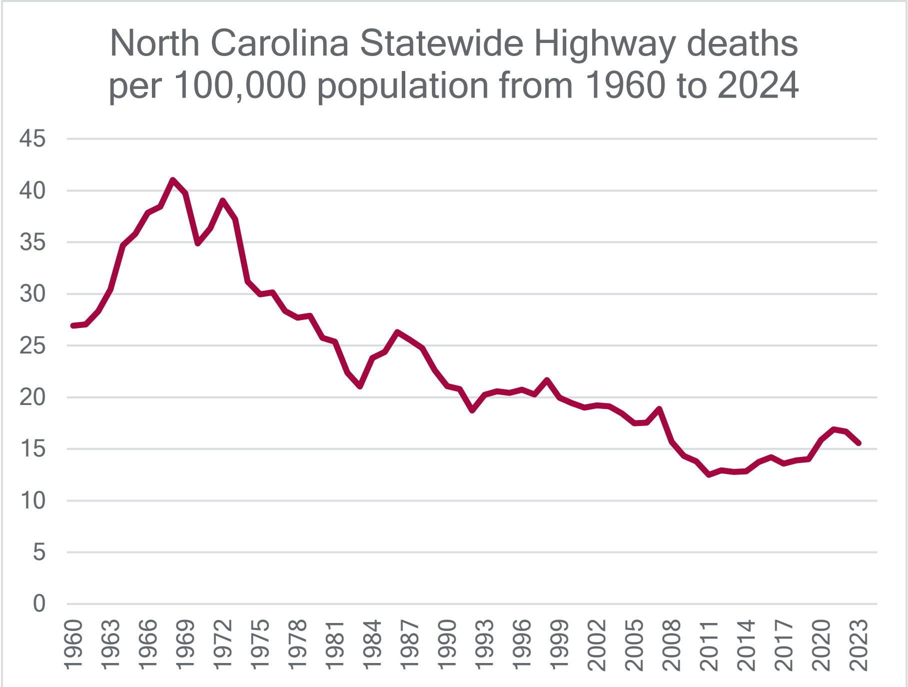

Figure 15: North Carolina Statewide Highway deaths per 100,000 population from 1960 to 2024

Between 2009 and 2013, statewide VMT increased in North Carolina by an average annual growth rate of just 0.62%. This increased dramatically between 2013 and 2017 when the average annual growth rate of VMT jumped to 3.17% - an increase by more than a factor of five.

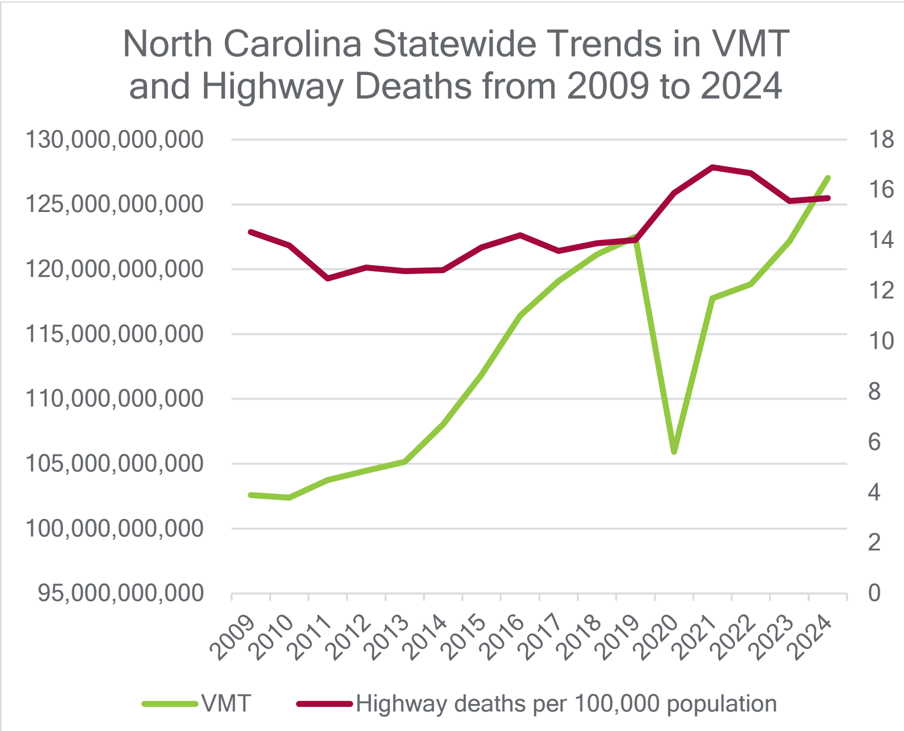

Figure 16: North Carolina Statewide Trends in VMT and Highway Deaths from 2009 to 2024

Since the 2014 Status of the System Report was published, CAMPO has gained more than a decade of additional data that allows us to better understand how travel in the region has changed (CAMPO 2022). When this observed data is compared with the long-range forecasts developed by Levy et al., a clear pattern emerges. Their study projected a 54 percent increase in daily vehicle miles traveled (VMT) in the Raleigh area between 2000 and 2030 (Levy, Buonocore and von Stackelberg 2010). CAMPO's Metropolitan Transportation Plan data show that by 2016, daily VMT in the planning region had already increased by nearly 60 percent compared to early-2000s levels, reaching the study's projected 2030 growth well ahead of schedule – see *Table 6: Observed Increase in Vehicle Miles Traveled (VMT) within CAMPO's Planning Region from the CAMPO MTP Juxtaposed with the Forecast Increase In VMT for Raleigh, NC: 2000-2030* (CAMPO 2022). While national models and regional travel models are not directly comparable, this alignment strengthens the study's core conclusion: rapid population growth and rising travel demand in the Raleigh area are closely tied to increasing congestion and its related impacts.

Observed Increase in Vehicle Miles Traveled (VMT) within CAMPO's Planning Region from the CAMPO MTP Juxtaposed with the Forecast Increase In VMT for Raleigh, NC: 2000-2030 (Levy, Buonocore and von Stackelberg 2010)

MTP	Base Year	Daily AVG VMT (MTP)	Percent Change (MTP Daily AVG VMT)	Percent Change (Daily AVG VMT – Levy et. al)
2030	2002	20,046,452	N/A	
2035	2005	25,012,126	24.77%	11.00%
2040	2010	28,834,792	43.84%	28.00%
2045	2013	28,099,995	40.17%	N/A
2050	2016	31,922,919	59.24%	37.00%
2055 [18]	2020	36,054,920	79.86%	43.00%
2060	2025	TBD	TBD	49.00%
2065	2030	TBD	TBD	54.00%

Table 6: Observed Increase in Vehicle Miles Traveled (VMT) within CAMPO's Planning Region from the CAMPO MTP Juxtaposed with the Forecast Increase In VMT for Raleigh, NC: 2000-2030

[18] The data from the 2055 MTP is still in its draft form and is subject to change until the plan's final adoption

The Levy study also noted that Raleigh's experience differs from many other metropolitan areas because of the combined effects of fast population growth, increasing travel, and local air quality conditions that make emissions from vehicles particularly relevant to public health (Levy, Buonocore and von Stackelberg 2010). CAMPO's recent VMT trends support this finding. As more miles are driven each day, congestion has become more frequent and more widespread, especially during peak travel times and when crashes or incidents occur. Although vehicles today are cleaner than they were in the past, the study warned that emissions reductions can be outweighed in high-growth regions by the sheer increase in total driving. The rapid growth in VMT observed in the CAMPO region suggests that this tipping point is no longer a future concern, but an issue the region is already facing.

These updated findings reinforce the message included in the 2014 Status of the System Report: the impacts of traffic congestion extend beyond lost time and wasted fuel and include meaningful public health consequences. What has changed since the publication of the 2014 report is the strength of the evidence. CAMPO's region is now experiencing levels of travel growth that match or exceed those assumed in long-range national studies, while congestion is lasting longer and affecting more parts of the roadway network. This reality highlights the importance of strategies that reduce congestion and improve system reliability, such as traffic operations, safety investments, transit expansion, and travel demand management. As CAMPO moves forward with implementing the Blueprint for Safety and other regional initiatives, these efforts should also be viewed as actions that support public health by limiting exposure to the congestion-related risks first identified more than a decade ago—and now increasingly visible across the region.

5.2 Overview of CAMPO's Blueprint for Safety and its Role in Congestion Management

The Blueprint for Safety is CAMPO's regional approach to making our roadways safer for everyone who lives, works, or travels in CAMPO's planning area. Adopted by CAMPO's Executive Board in 2025, the Blueprint is a multimodal safety action plan that uses data, community input, and best practices to reduce serious injury and fatal crashes across the region. Its foundation is the belief that traffic deaths and serious injuries are preventable and that a proactive, coordinated approach is key to improving safety for all users of the transportation network (CAMPO 2026).

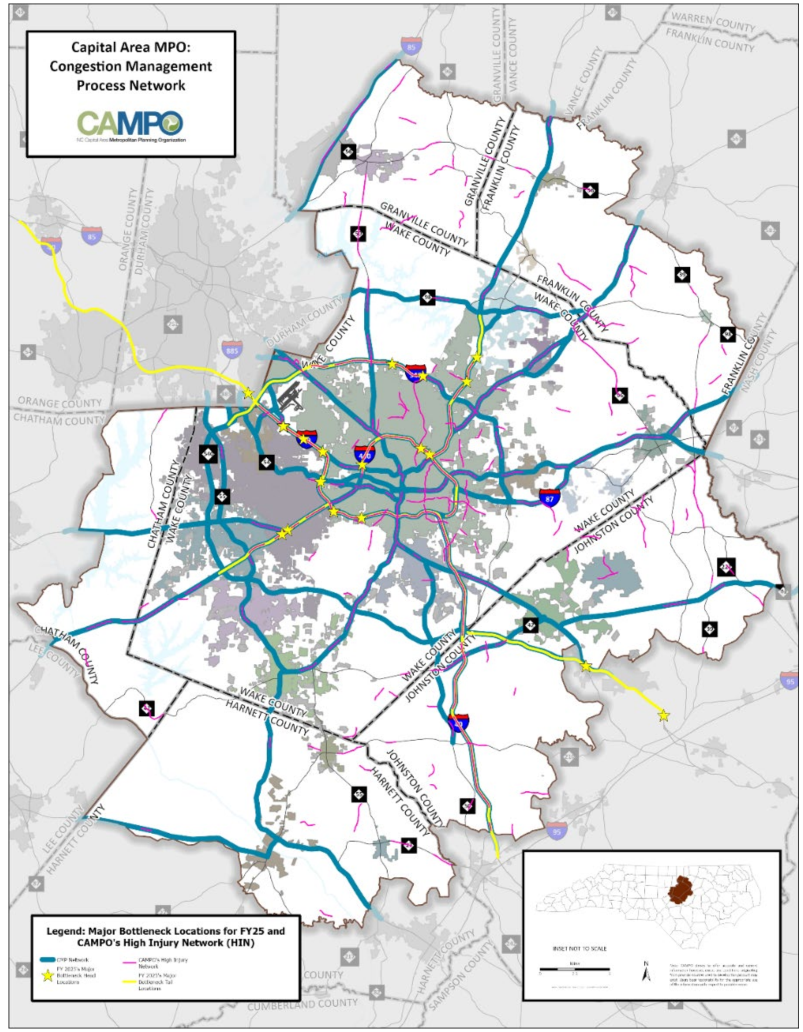

Figure 17: Major Bottleneck Locations for FY25 and CAMPO's High Injury Network

At the heart of the Blueprint is the High Injury Network (HIN), a set of roadway segments and intersections where fatal and serious injury crashes are most frequent. The HIN focuses attention and resources where they can have the greatest impact, rather than spreading efforts evenly across all roads. In the CAMPO region, this network is highly concentrated: although it represents only a small portion of the total roadway mileage, it captures a disproportionately large share of serious crashes. *Figure 17: Major Bottleneck Locations for FY25 and CAMPO's High Injury Network* shows the overlap between the region's most impactful bottlenecks and the Blueprint's HIN, illustrating how close safety and congestion are linked. [19] In fact, 22% of the entire High Injury Network falls within the right-of-way of the region's most persistent and severe traffic bottlenecks. This shows that places with the worst congestion are also places where people are most likely to be hurt in a crash.

The Blueprint's accomplishments to date reflect a growing understanding that congestion management and safety improvements go hand in hand. By identifying high-risk locations through data analysis, CAMPO is prioritizing enhanced countermeasures that support smoother traffic flow, reduced conflict points, and a decrease in the severity of crashes. These enhancements include improved signal timing, turn lanes, pedestrian crossings, better lighting, and redesigned intersections, all of which can help reduce reckless maneuvers, sudden braking, and other conditions that contribute to both congestion and serious crashes. The Blueprint also provides tools for local governments and agencies to pursue funding, implement projects, and track progress over time. Public engagement and stakeholder input have helped refine these priorities to reflect neighborhood and community needs (CAMPO 2025).

Viewed through the lens of congestion management, the Blueprint for Safety does more than make our streets safer: it supports a transportation system that moves people more reliably and reduces the kinds of traffic conditions that contribute to both crashes and harmful emissions. Reducing serious injury and fatal crashes in areas prone to congestion helps improve overall traffic flow, cut down on incident-related delays, and strengthen public confidence in the transportation system. As CAMPO continues to implement the Blueprint alongside its long-range planning efforts, these safety-focused strategies will remain a central part of how the region addresses congestion's growing challenges.

[19] *Figure 17: Major Bottleneck Locations for FY25 and CAMPO's High Injury Network* is available at higher resolution in Appendix C: FY25 Major Bottleneck Maps with Associated Network Analyses.

Looking Towards Adoption of Destination 2055 (MTP)

6.0 What is next for the Congestion Management Process and future Status of the System Reports

CAMPO's Congestion Management Process (CMP) was last updated in October 2024 to reflect the policies laid out in the MPO's 2050 Metropolitan Transportation Plan (MTP). As CAMPO moves to adopt its latest MTP in early 2026, CAMPO staff will begin the process of updating the CMP to reflect any new policies, recommendations, and data presented by Destination 2055. Likewise, the Status of the System Report will be updated – on an annual basis – to not only reflect the new guidance from Destination 2055, but to include all available updated data from FY 2026 and beyond.

Finally, as part of the Status of the System FY 2025 Report, Appendix A catalogues the most impactful bottlenecks in the region from FY 2024 Q3 through FY 2025 Q4. Moving forward, on a quarterly basis, CAMPO's governing bodies will be presented with up-to-date bottleneck data from the current previous fiscal quarter. This will allow members of the governing boards to incorporate this additional up-to-date information into their decision-making processes for any related items.

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APPENDIX A:
Quarterly Bottleneck Reports (FY24 Q3 – FY25 Q4)

Congestion Management Process – Status of the System Report

Report Legend

Incident/Event Icons

In most visualizations these icons are used to represent each type of traffic event:

Vehicle Related
- Car Fire
- Disabled Vehicle
- Major Accident
- Minor Accident

Emergency Related
- Hazardous Material
- Medical Emergency
- Police Activity

Congestion Sources
- Closure
- Congestion
- Dangerous Slowdowns
- Draw Bridge Opening
- Delay
- Emergency
- Other
- Incident
- Roadwork
- Signal Malfunction
- Water-Main Break

Weather
- Fire
- Flooding
- Foggy Condtions
- Tornado
- Weather
- Windy Conditions

Obstruction
- Animal Struck
- Debris
- Fallen Rocks
- Fallen Tree
- Overgrown Plants

Event Icons
- Special Event
- Sports Event

Waze Events
- All Waze-reported events will have this icon on the top left.

However, in certain visualizations the icons have been simplified down to a single shape and color to reduce clutter and confusion. These minimalist icons represent the following event types:

- Severe events and incidents (i.e. emergency roadwork, medical emergencies, and injuries)
- Roadwork
- All other events and incidents

Time Spiral: Maximum Queue Length in Miles

0 Miles to 2 Miles

2 Miles to 5 Miles

5 Miles to 8 Miles

Greater Than 8 Miles

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RITIS Performance Report

Top 10
Bottleneck Analysis Report

Congestion Management Process – Status of the System Report

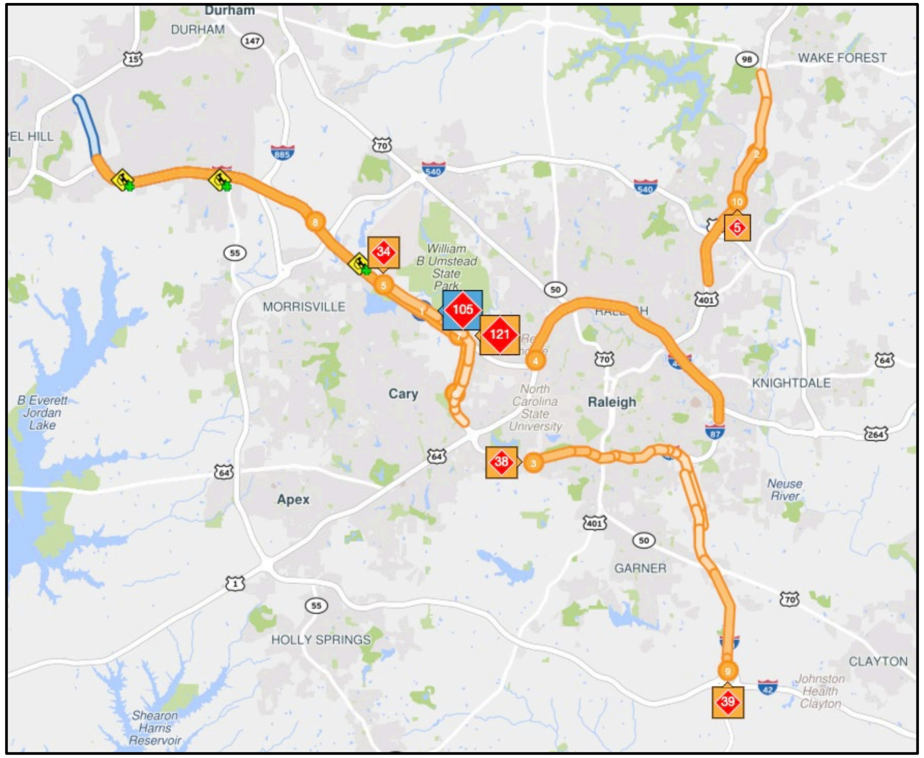
FY 2024 Q3

Top 10 Bottlenecks in the Region Q3 FY2024

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-Reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	I-40 EAST @ HARRISON AVE/EXIT 287	--	3.59	44m	105	13,034	28,699,727	A240a, A240b, A562, A640, A641, F112a, F112b, F40
2	US-1 NORTH @ BURLINGTON MILLS RD	--	2.62	1h 52m	10	23,351	18,292,828	A133, F11-1a, F11-1b, F11-1c, F86
3	I-40 WEST @ GORMAN ST/EXIT 295	--	3.27	43m	38	12,415	17,204,311	F41, F43
4	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	--	1.26	1h 45m	51	11,234	14,858,772	A562, A79a, F10, F83, F86, F86a
5	I-40 WEST @ AVIATION PKWY/EXIT 285	--	3.16	22m	34	5,937	14,834,127	A562, A640, A641, A64a, F112a, F112b, F40, F41, F43b, F81a
6	I-40 EAST @ NC-54/EXIT 290	--	3.34	49m	131	10,585	13,790,158	A413, A562, A640, A641, F112a, F112b, F40, F41, F81a
7	I-40 EAST @ RALEIGH CHAPEL HILL EXPY/EXIT 289	--	4.1	15m	121	5,086	13,131,956	A562, A640, A641, F112b, F40, F41, F81a
8	I-40 EAST @ PAGE RD/EXIT 282	--	2.93	29m	4	6,977	11,881,601	*TWTPO Projects
9	I-40 EAST @ US-70/EXIT 309	--	2.75	1h 02m	39	13,599	10,716,768	A143a1, F3, F41, F44a, F44b, F6
10	US-1 SOUTH @ PERRY CREEK RD/DURANT RD	--	3.11	55m	5	13,460	9,842,208	F11-1a, F11-1b, F11-1c, F11-1d

CW = Clockwise CCW = Counterclockwise

Red #s = highest value for that metric



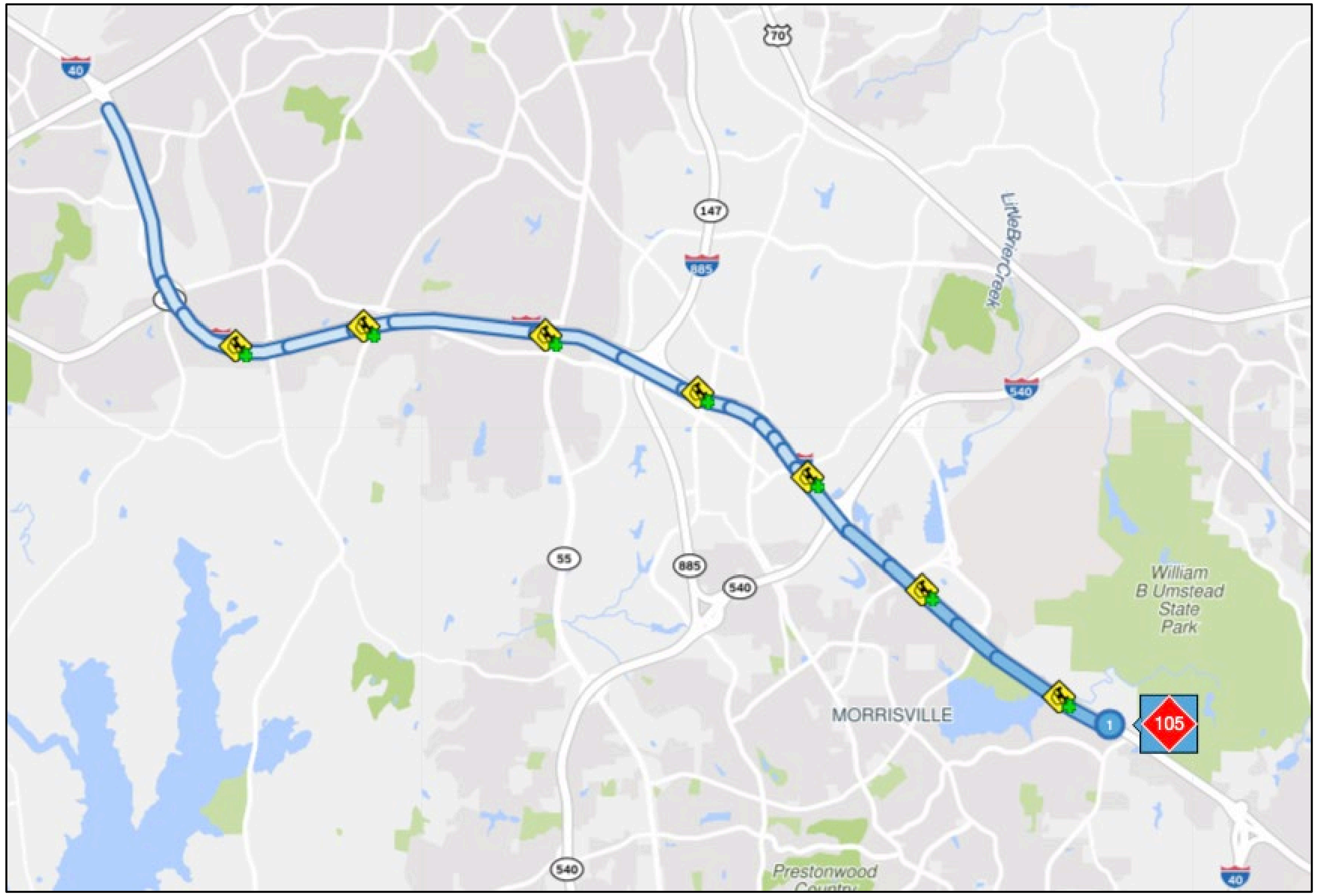
*Bottlenecks are ranked by **Total Delay** – Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

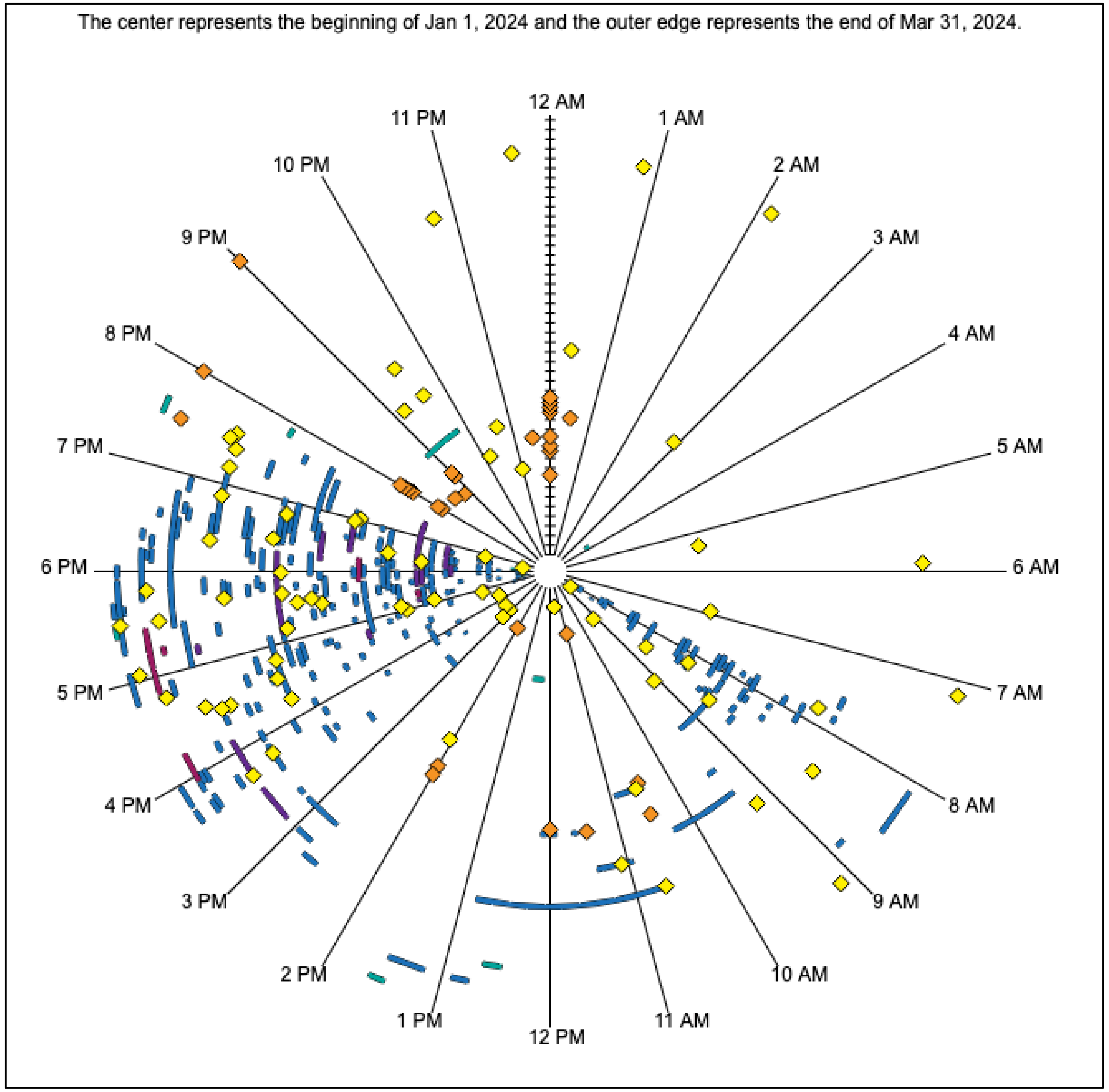
NC Capital Area Metropolitan Planning Organization

RITIS Performance Report

#1 Bottleneck: I-40 EAST @ HARRISON AVE/EXIT 287

Q3 FY2024





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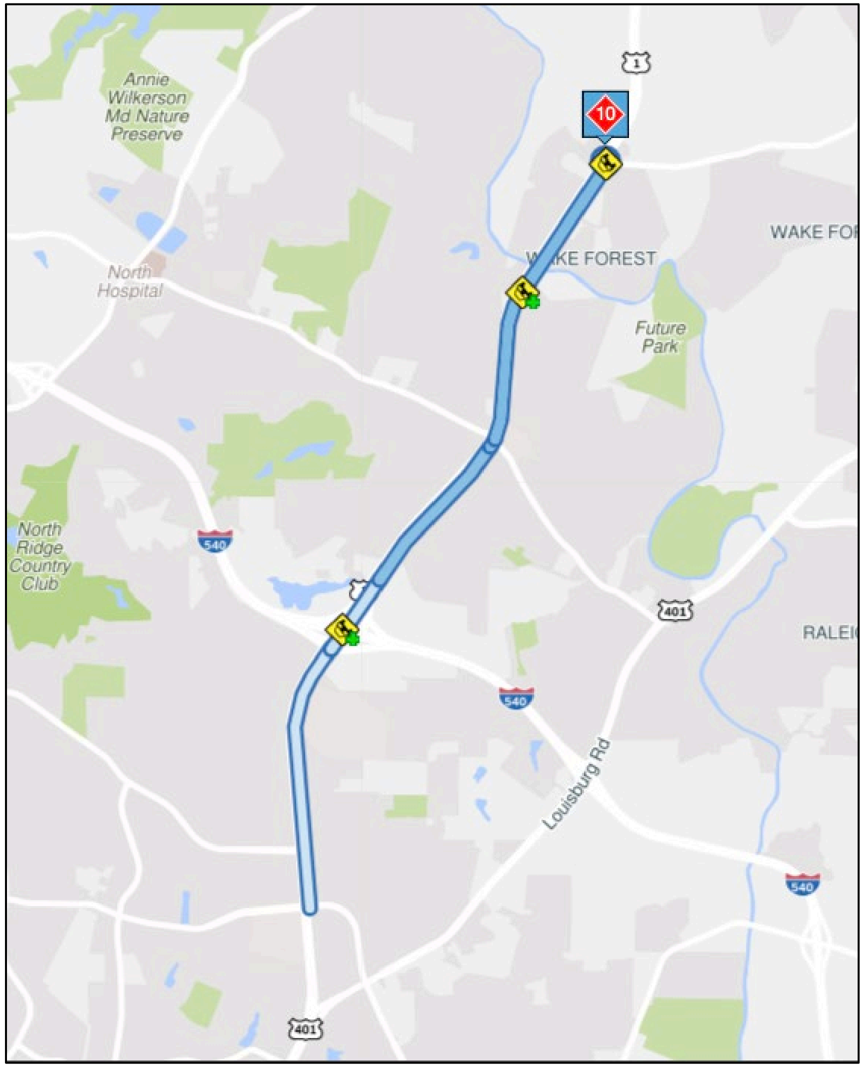
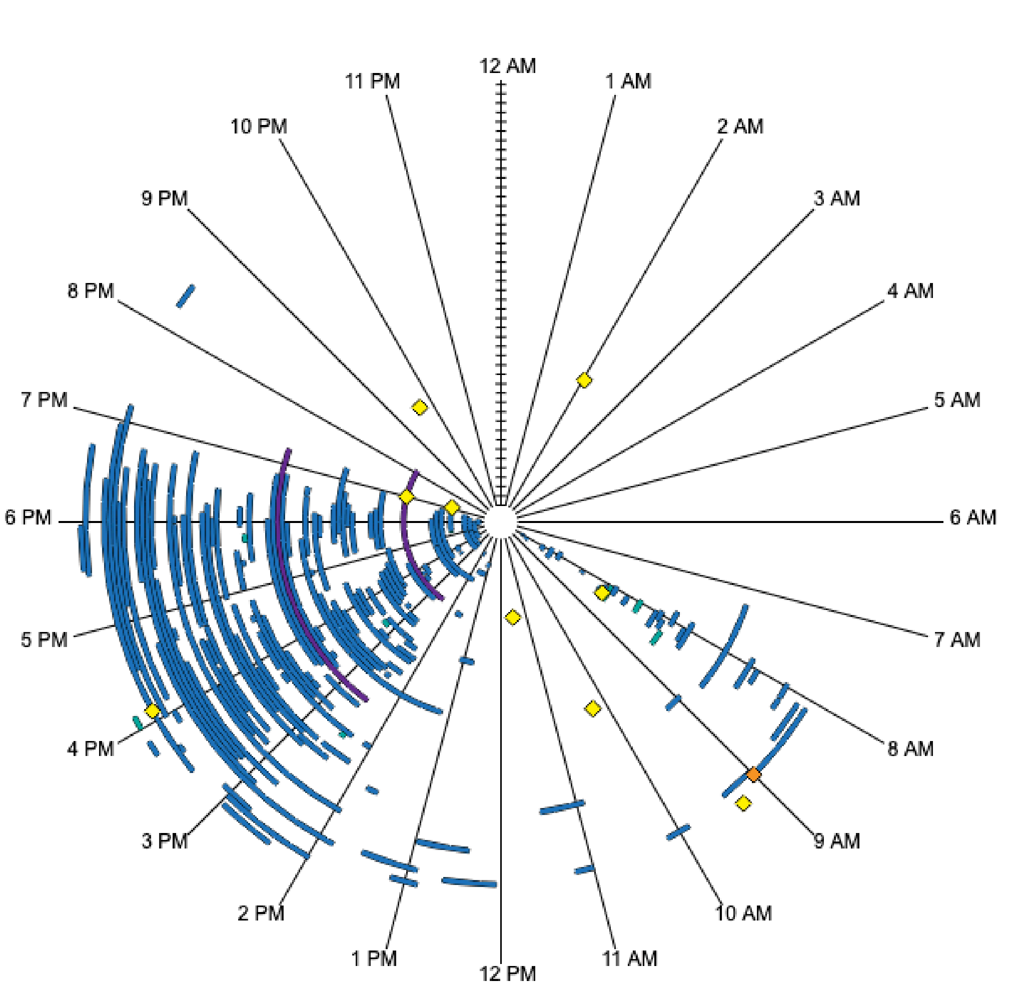
#2 Bottleneck: US-1 NORTH @ BURLINGTON MILLS RD

Q3 FY2024



The center represents the beginning of Jan 1, 2024 and the outer edge represents the end of Mar 31, 2024.



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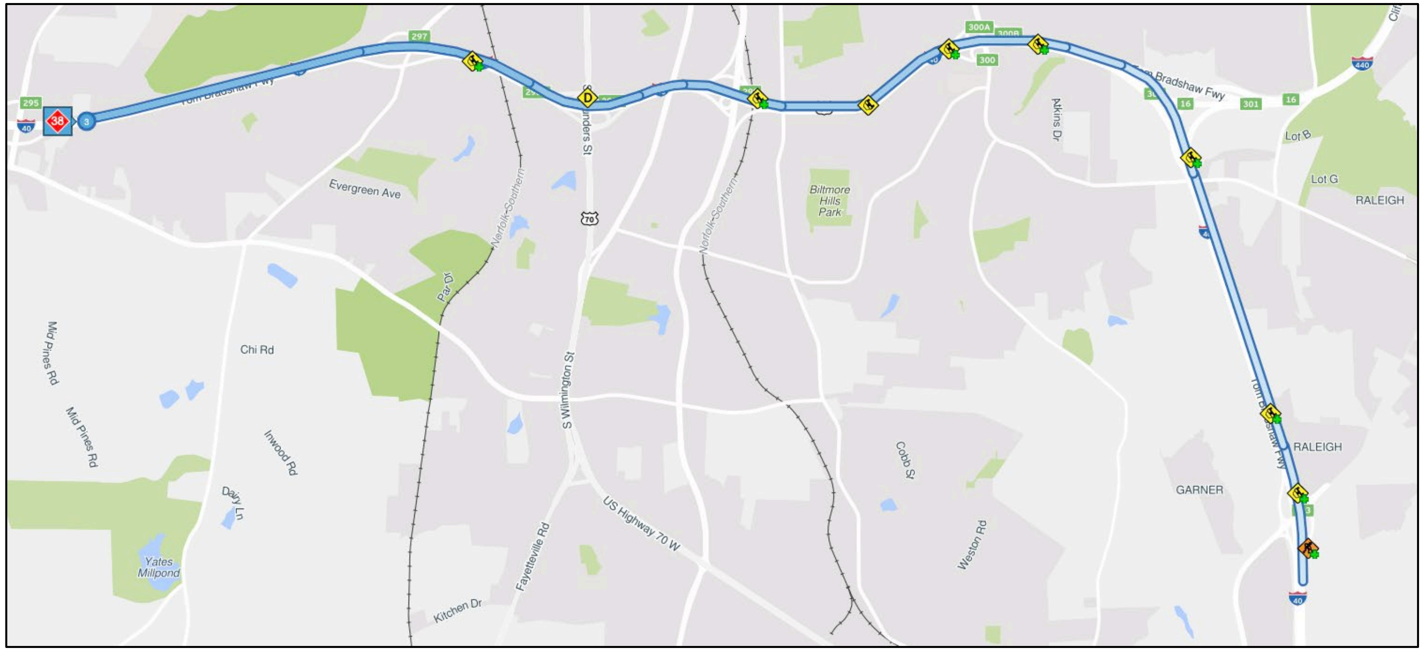
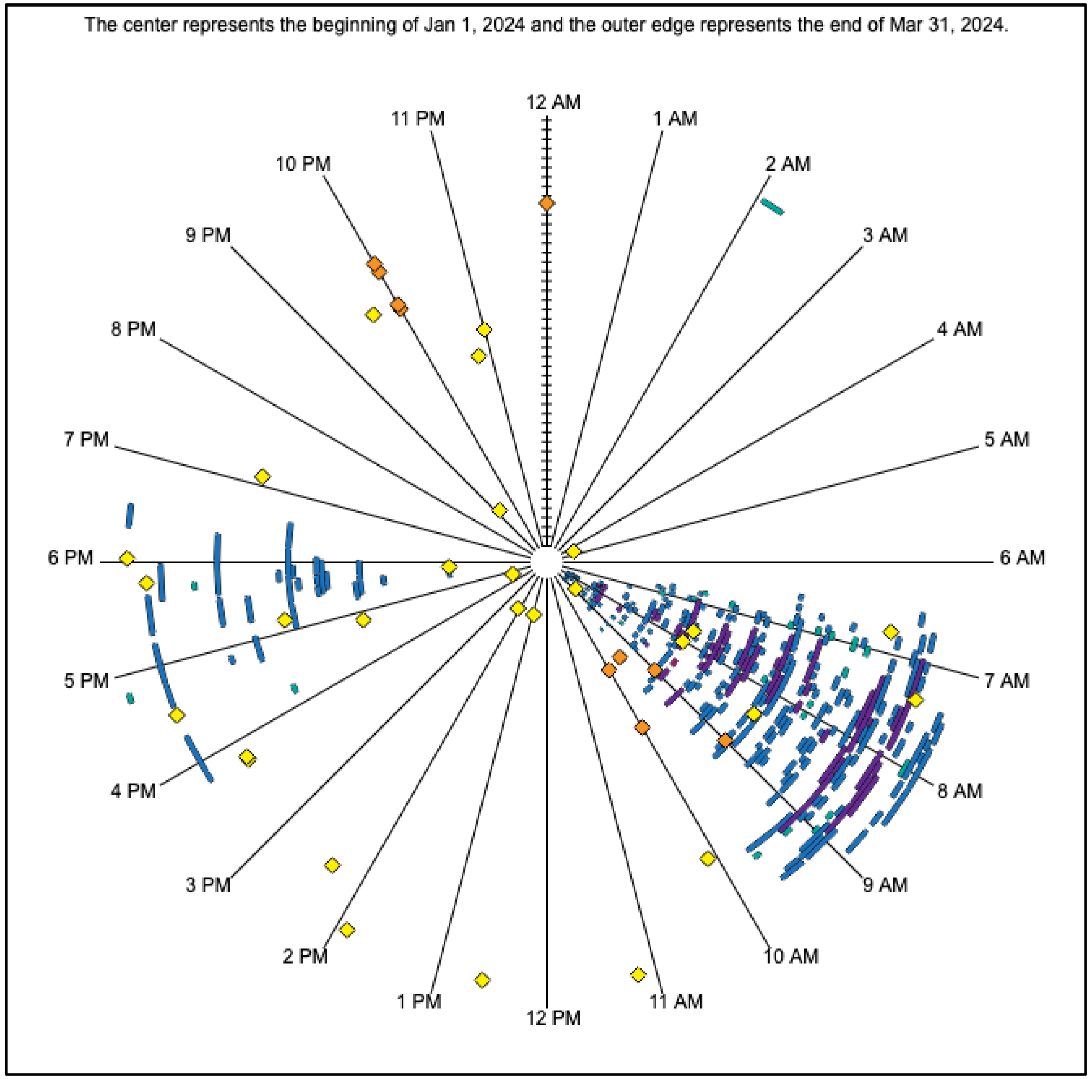
#3 Bottleneck: I-40 WEST @ GORMAN ST/EXIT 295

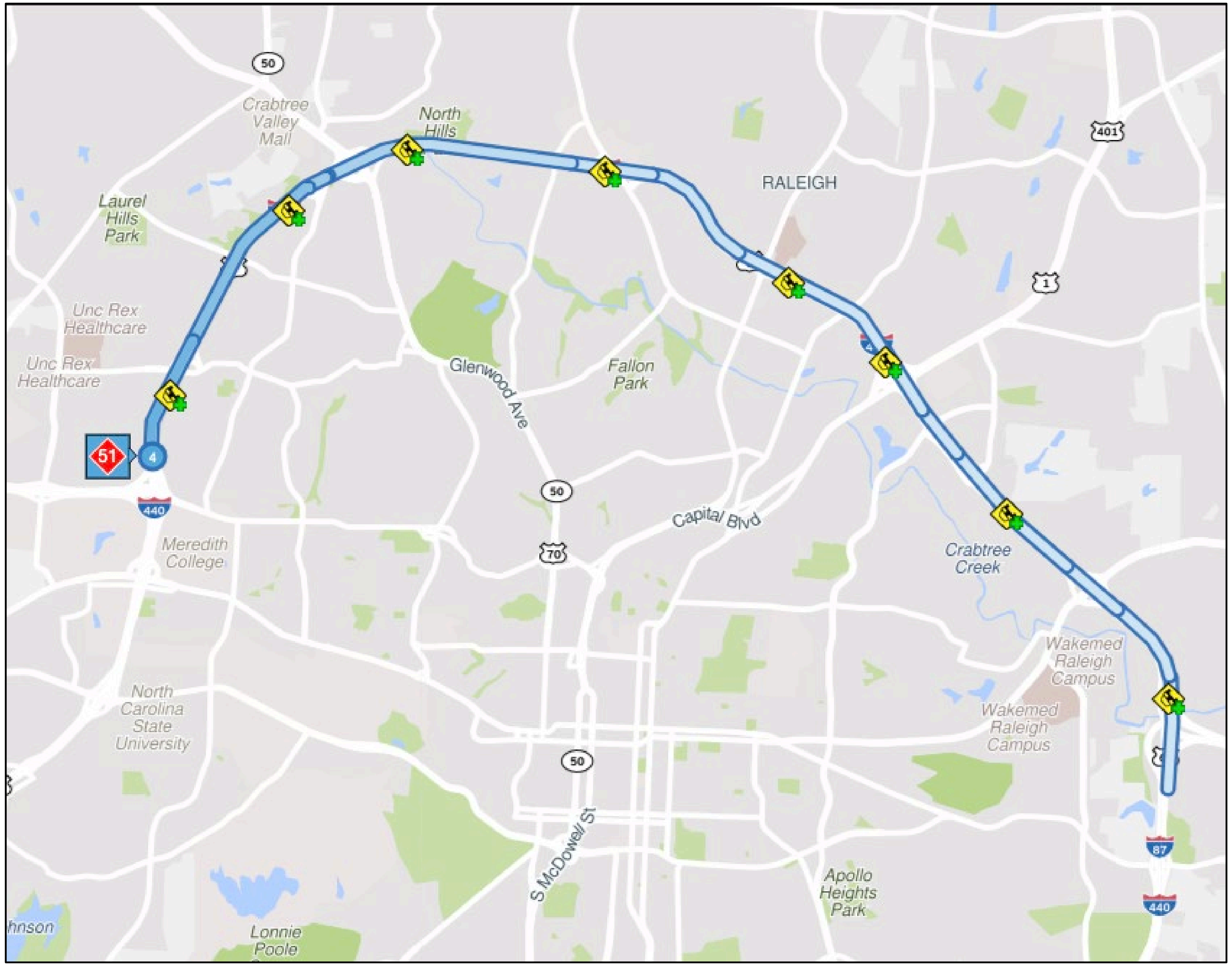
Q3 FY2024

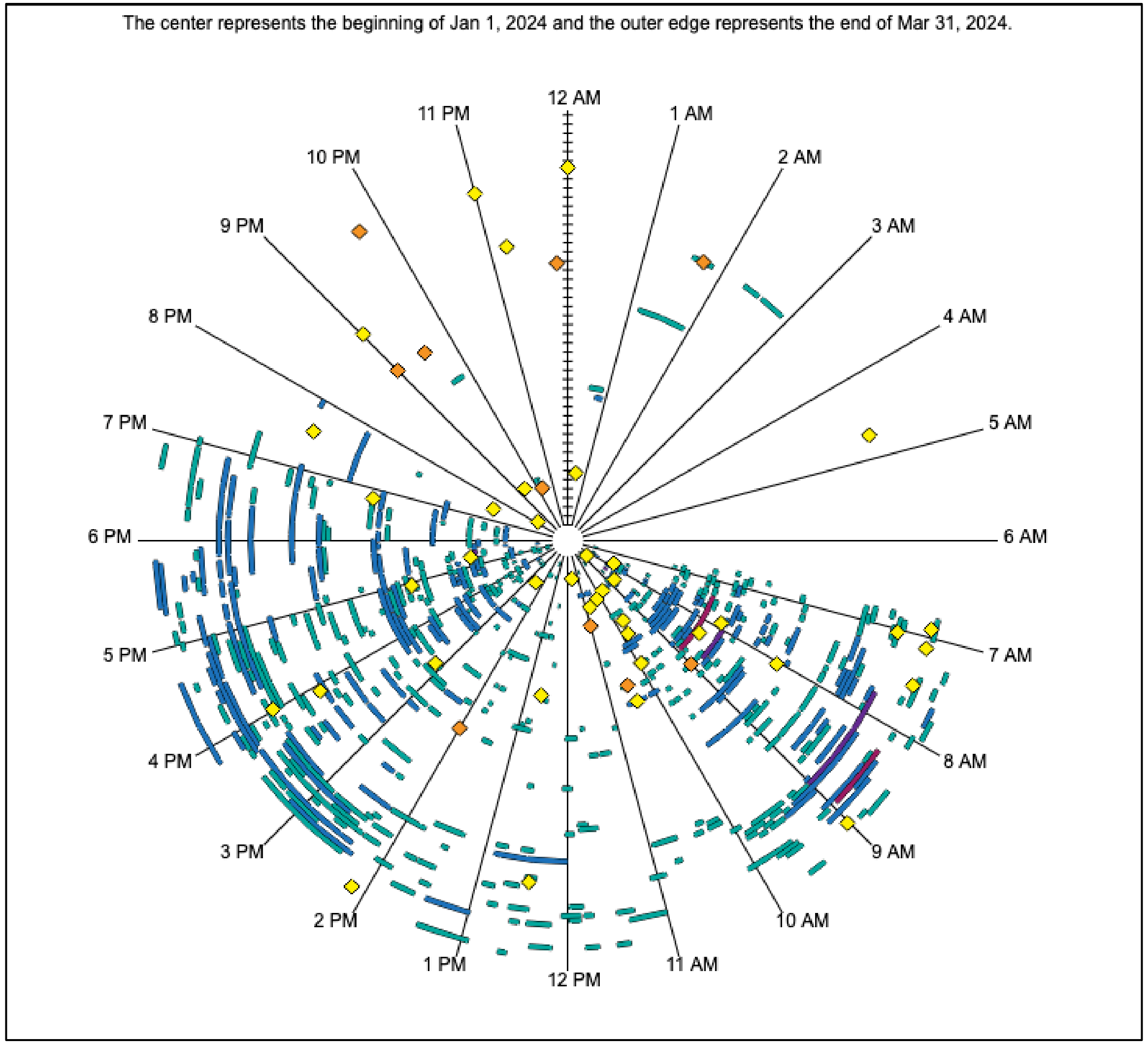




#4 Bottleneck: I-440 S (CCW) @ WADE AVE/EXIT 4

Q3 FY2024

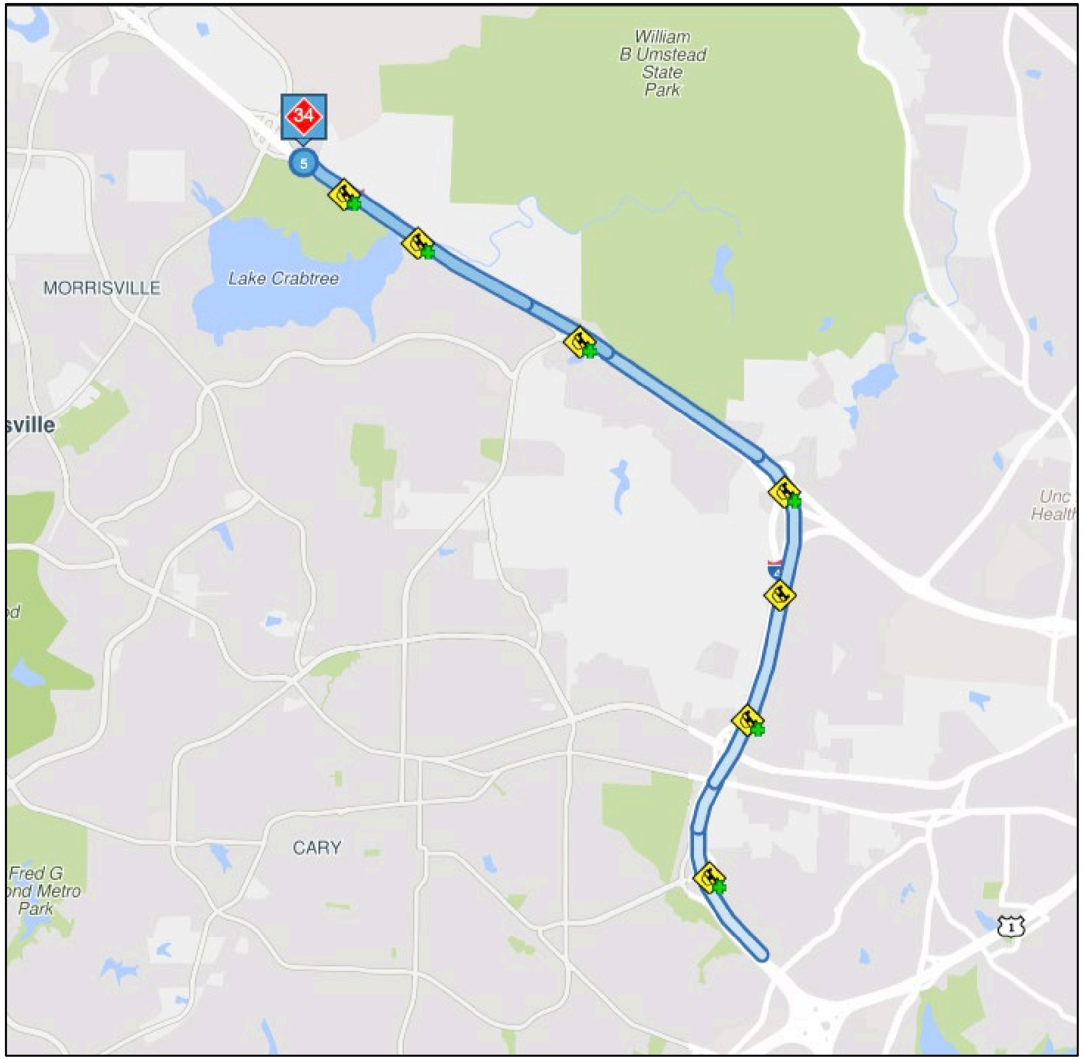


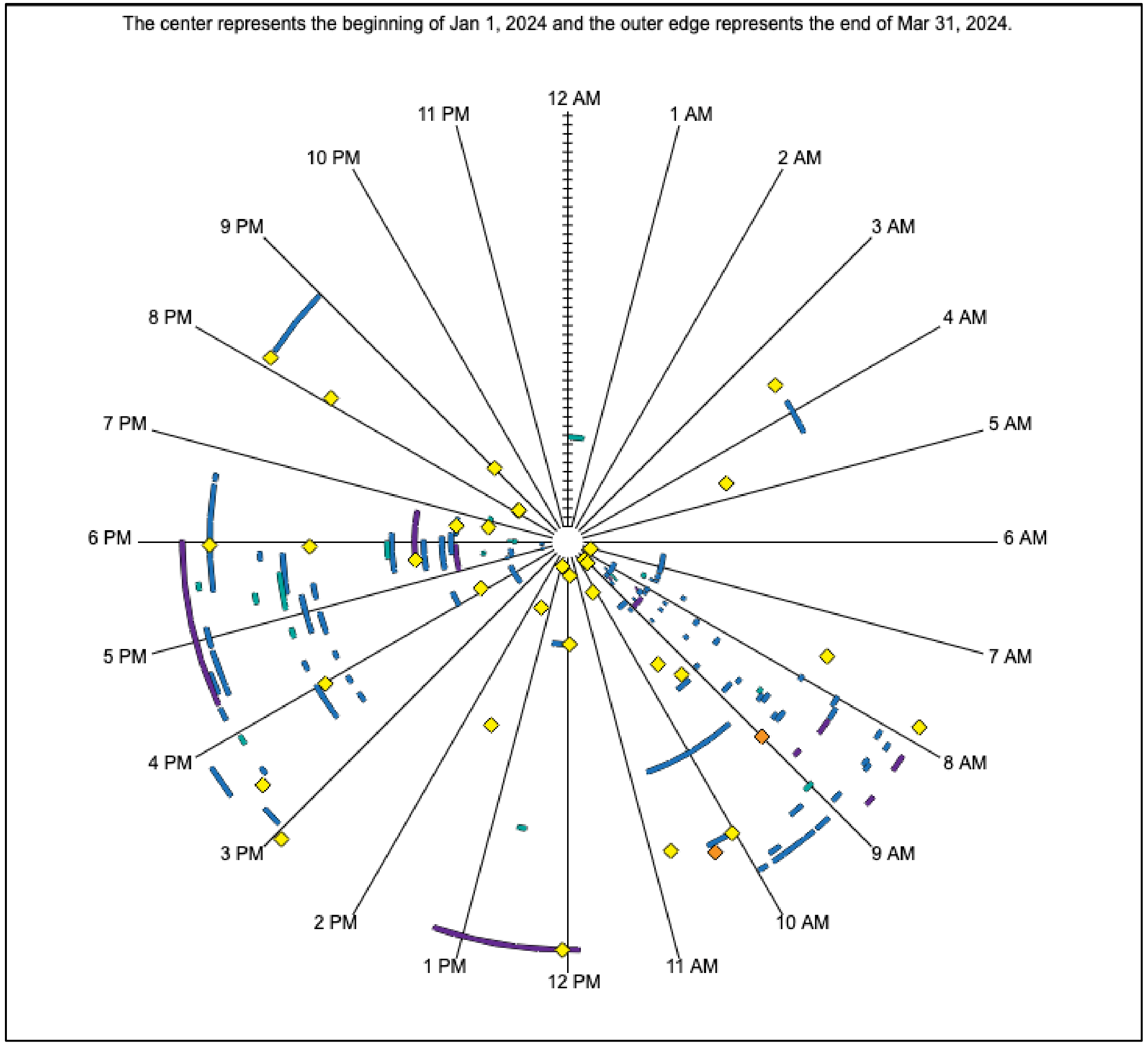


NC Capital Area Metropolitan Planning Organization

#5 Bottleneck: I-40 WEST (CCW) @ AVIATION PKWY/EXIT 285

Q3 FY2024

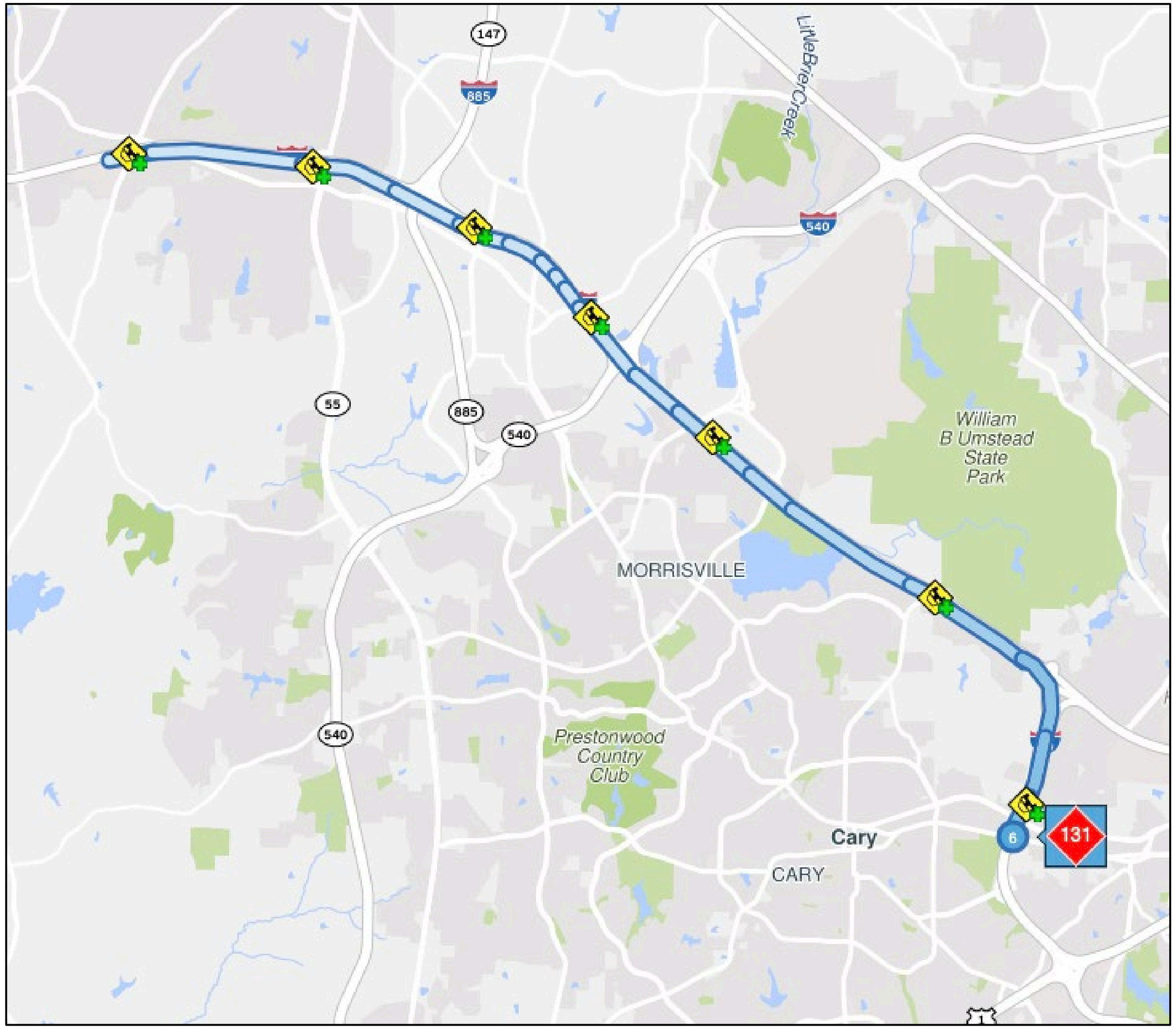


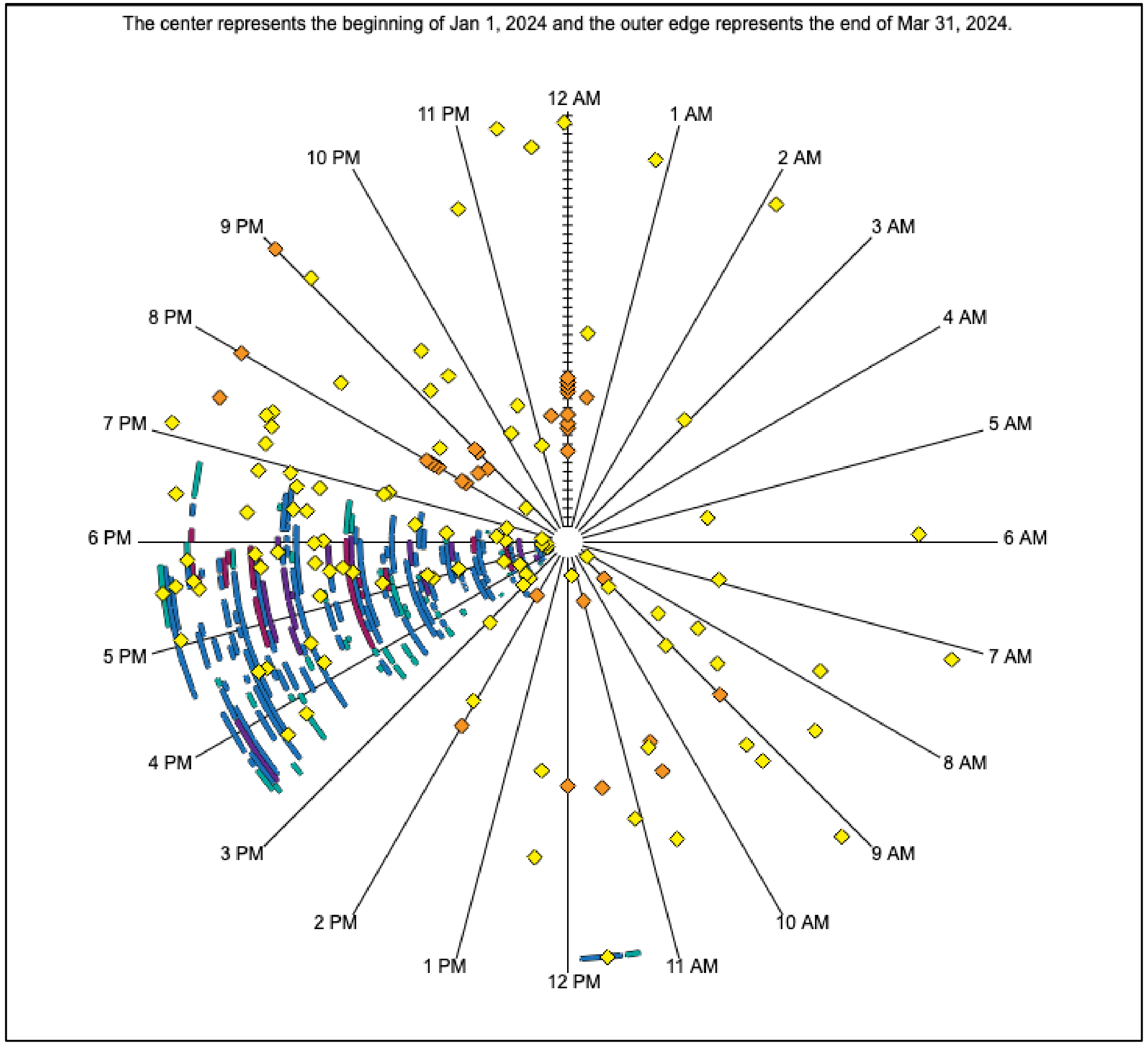


NC Capital Area Metropolitan Planning Organization

#6 Bottleneck: I-40 EAST @ NC-54/EXIT 290

Q3 FY2024

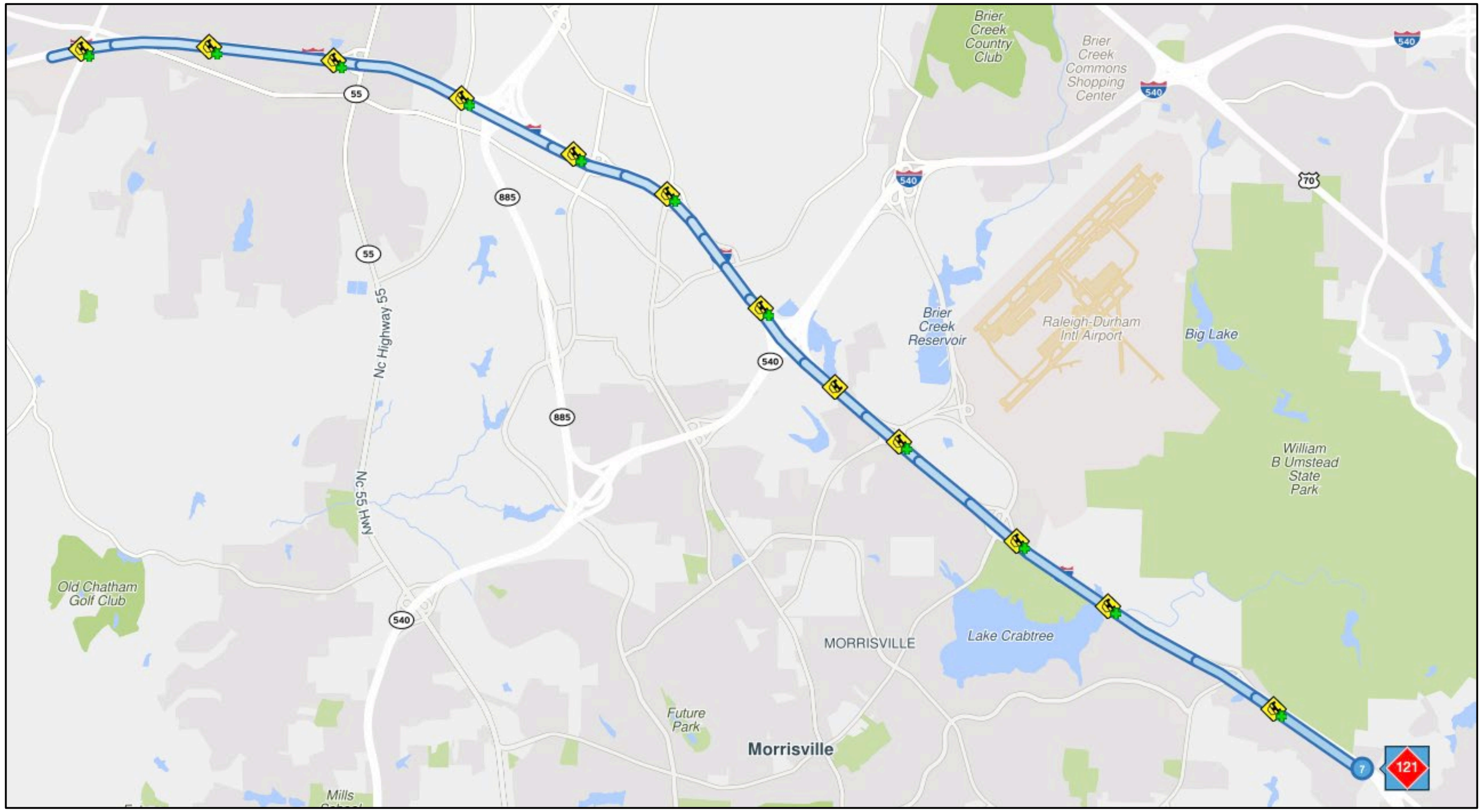


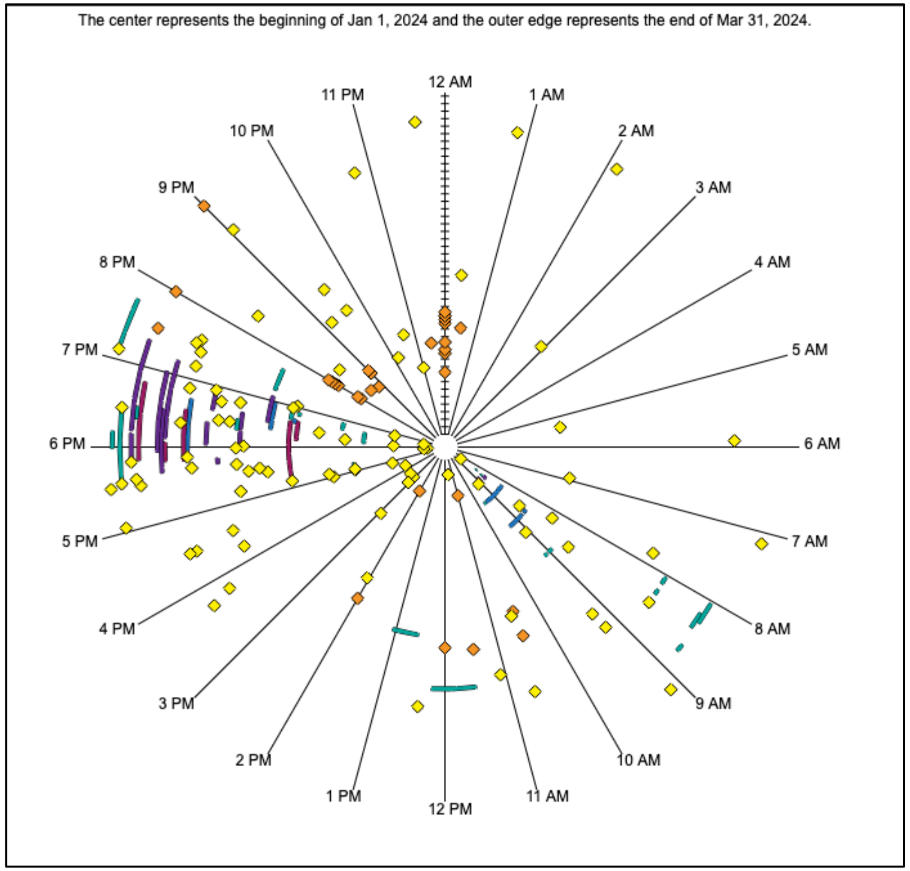


NC Capital Area Metropolitan Planning Organization

#7 Bottleneck: I-40 EAST @ RALEIGH CHAPEL HILL EXPY/EXIT 289

Q3 FY2024





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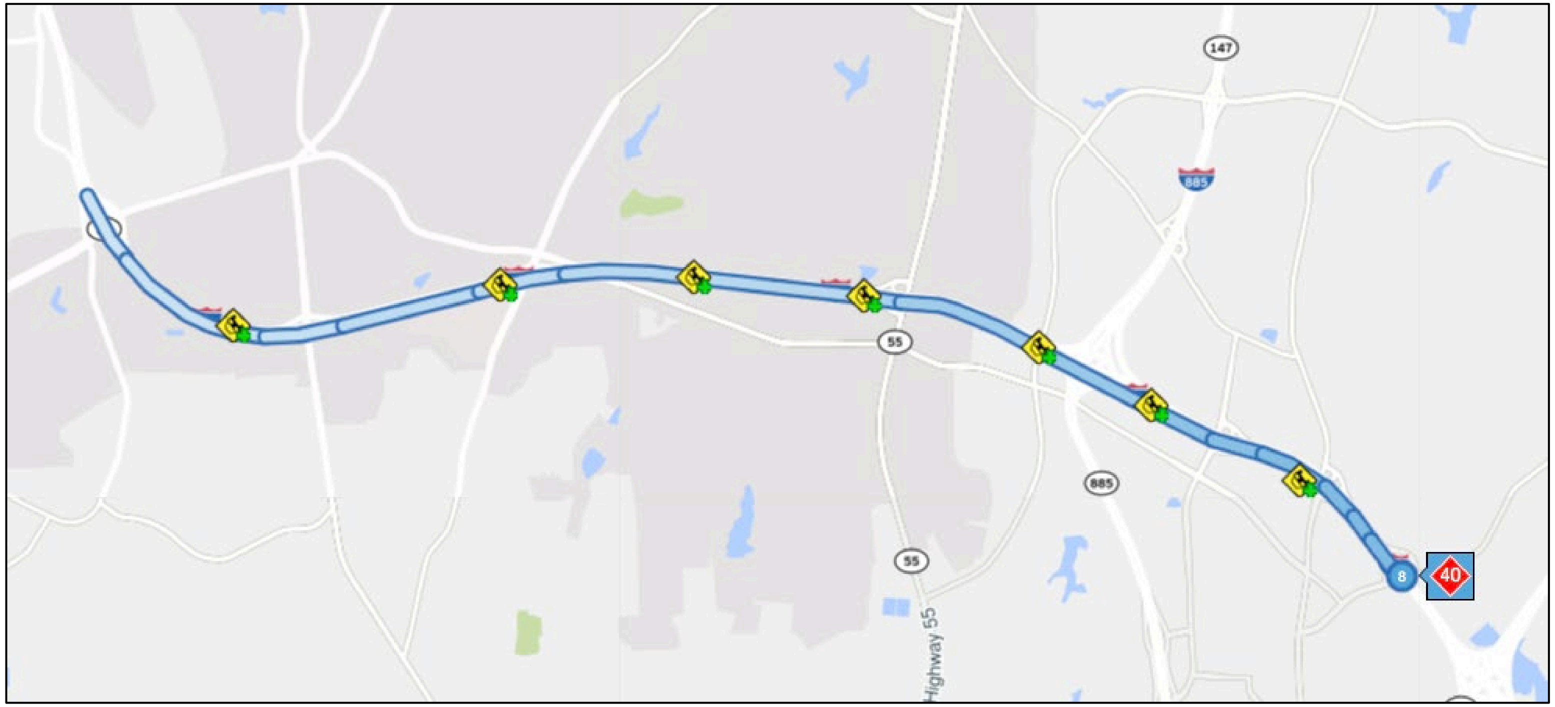
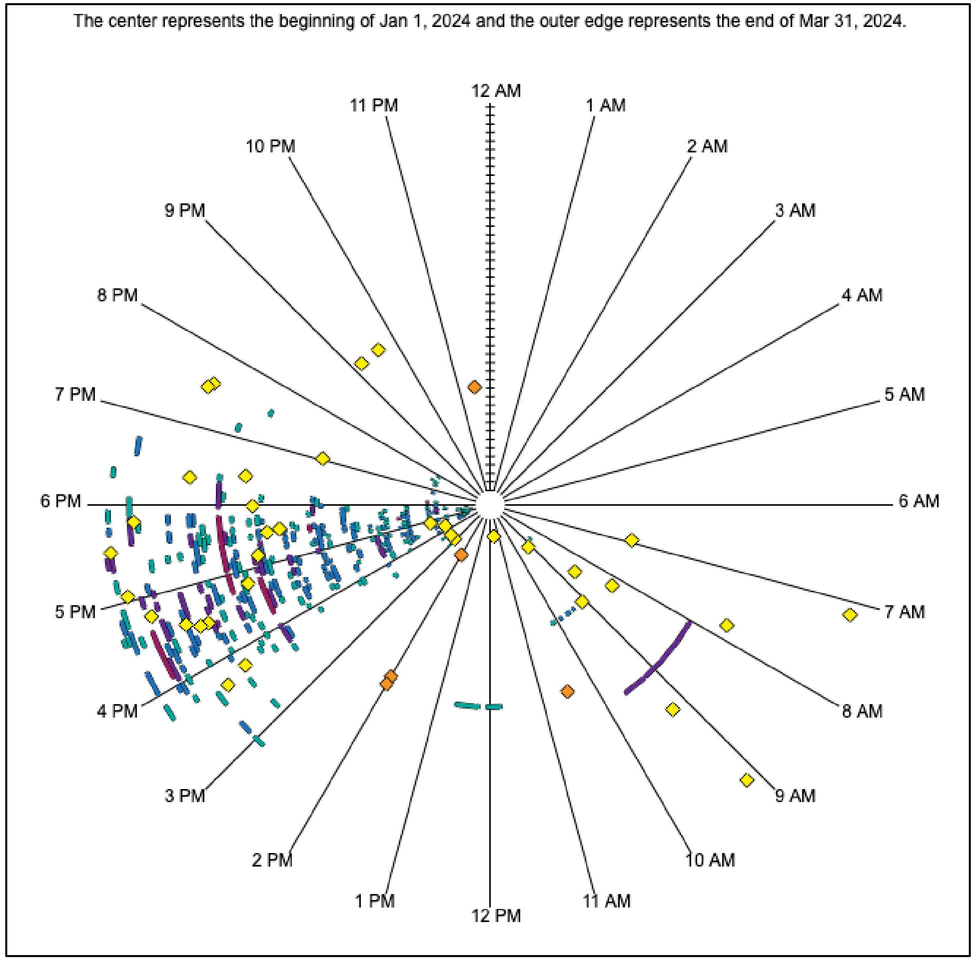
#8 Bottleneck: I-40 EAST @ PAGE RD/EXIT 282

Q3 FY2024





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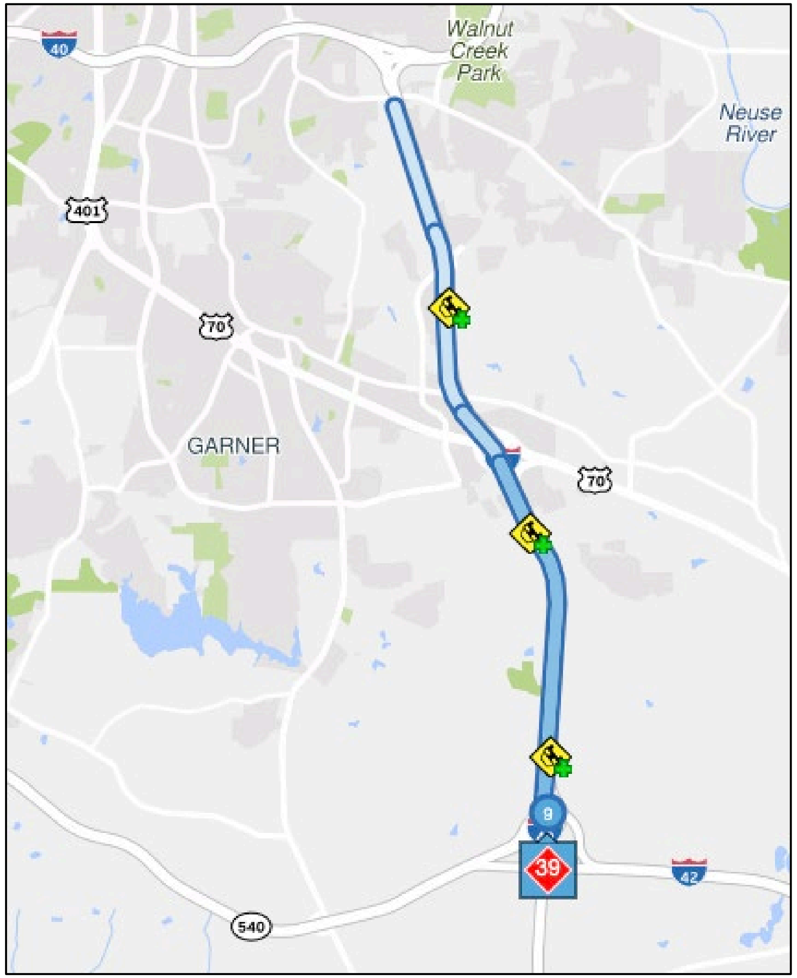
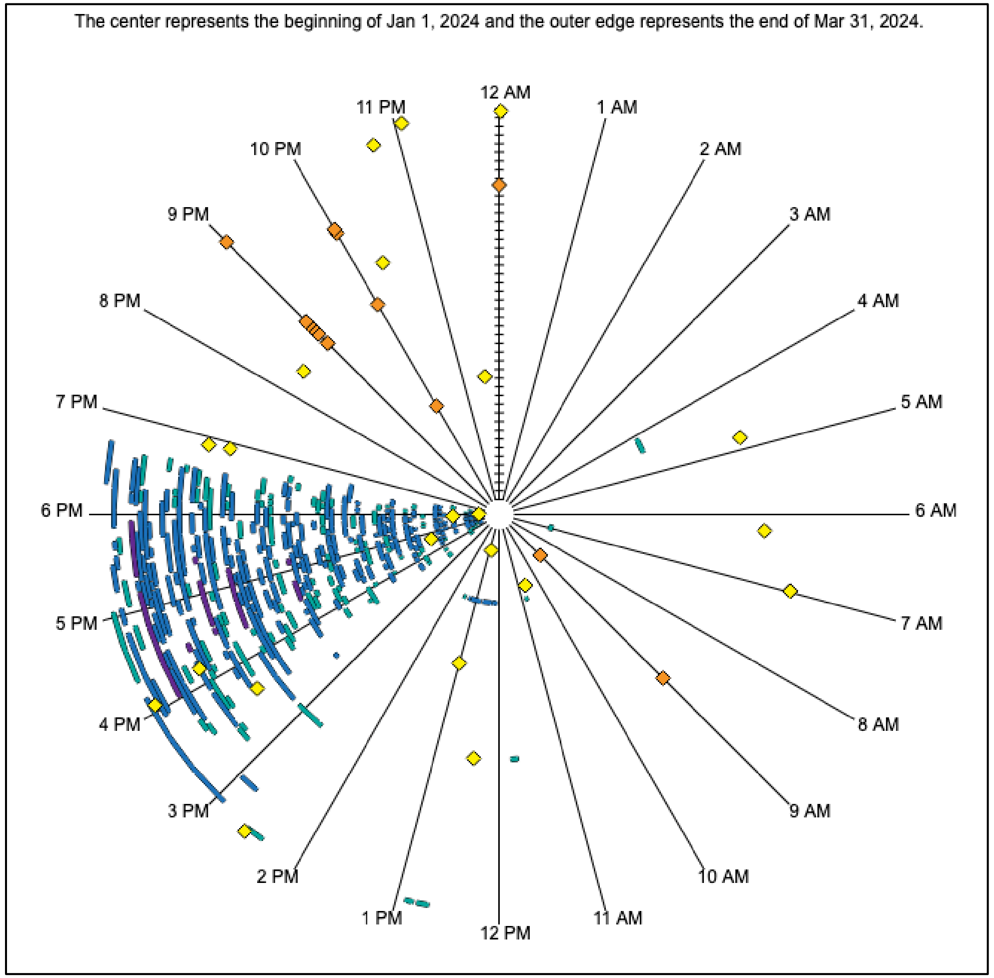
#9 Bottleneck: I-40 EAST @ US-70/EXIT 309

Q3 FY2024





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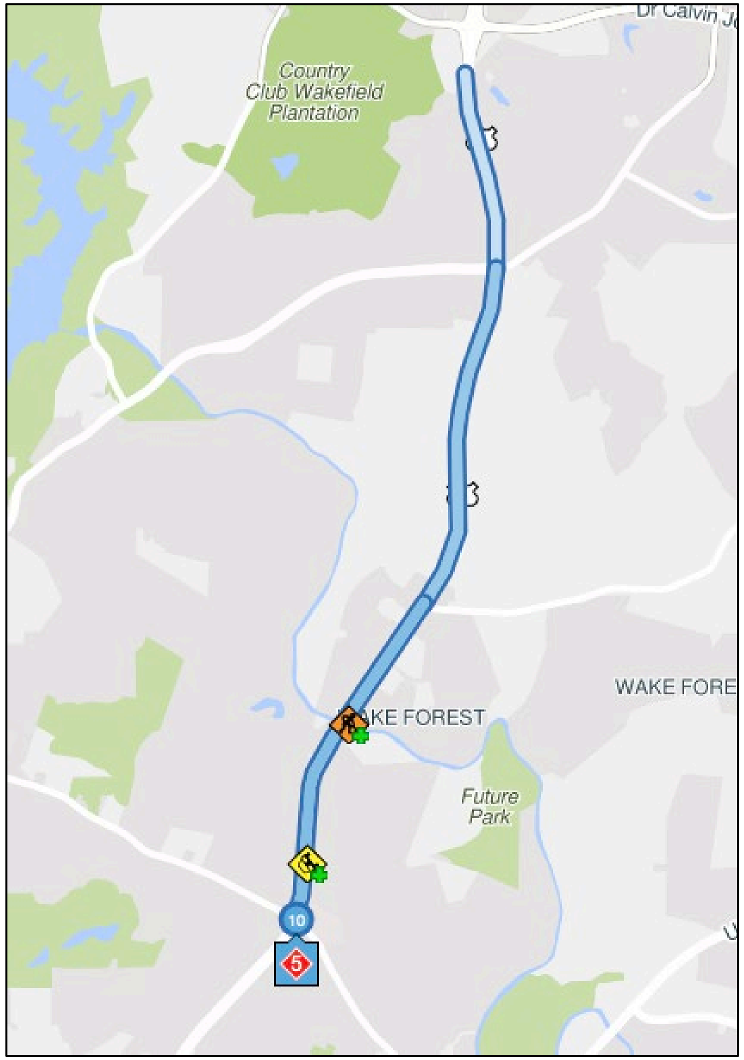
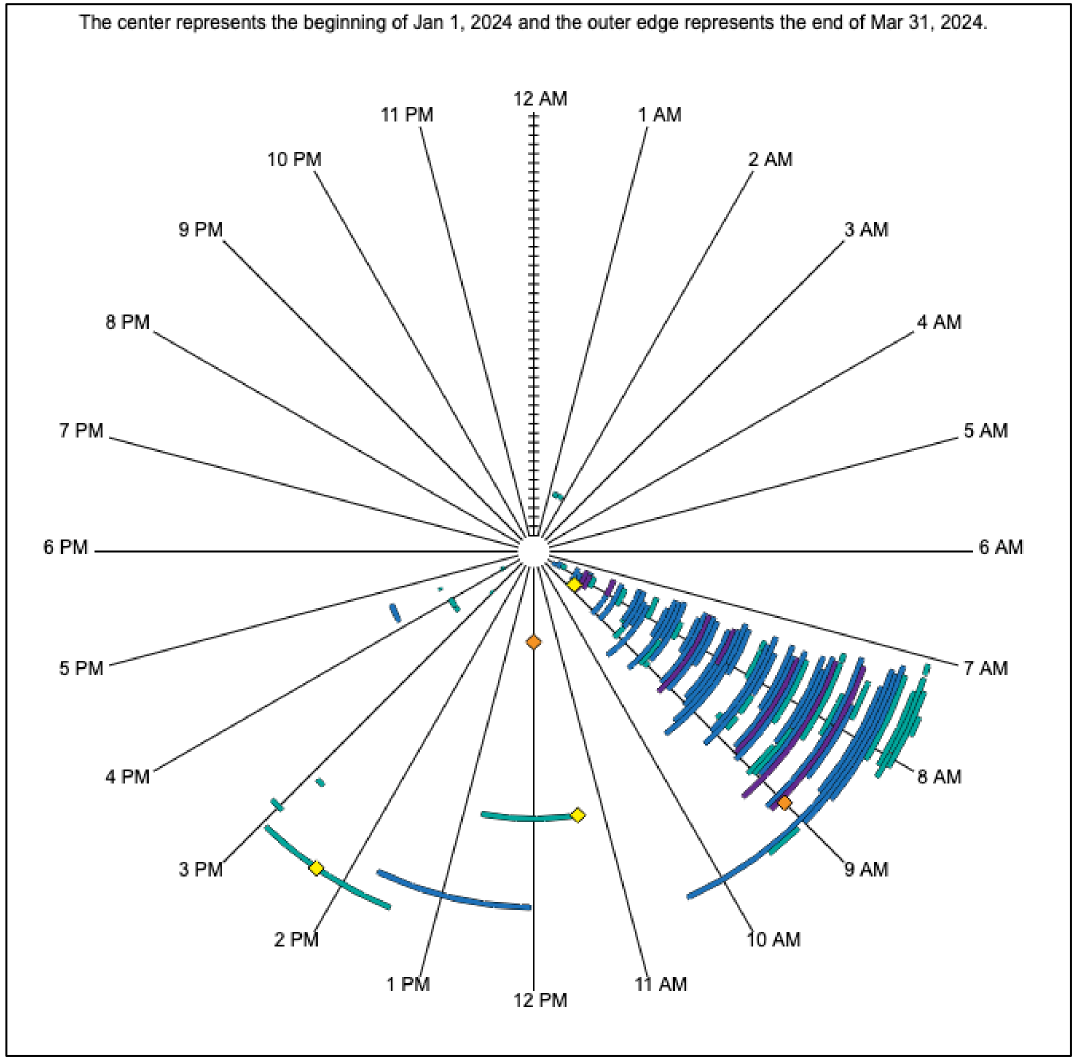
#10 Bottleneck: US-1 SOUTH @ PERRY CREEK RD/DURANT RD

Q3 FY2024





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RITIS Performance Report

Top 10

Bottleneck Analysis Report

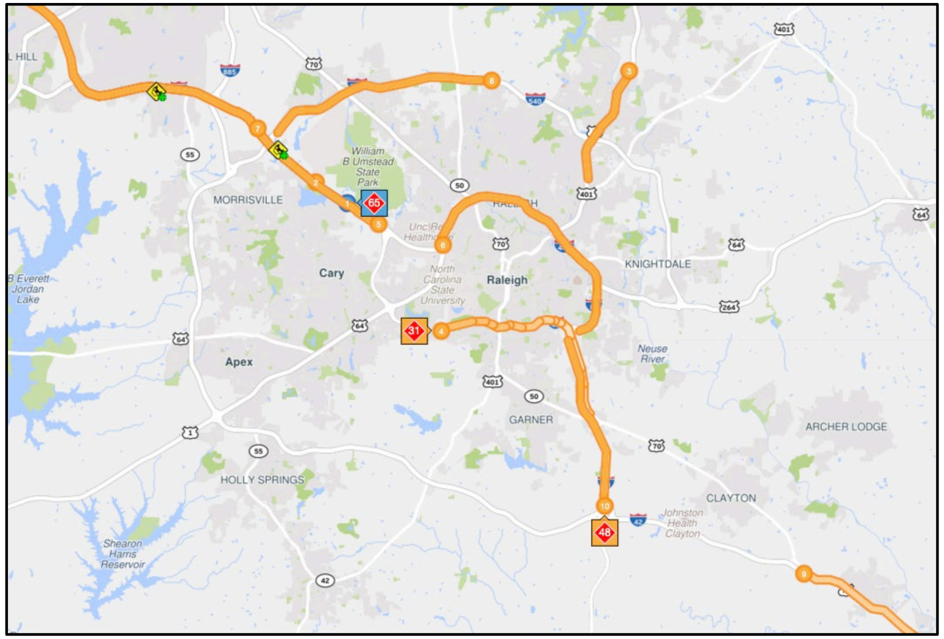
Congestion Management Process – Status of the System Report

FY 2024 Q4

Top 10 Bottlenecks in the Region Q4 FY2024

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	I-40 EAST @ HARRISON AVE/EXIT 287	1	4.09	46m	65	16,062	**35,361,329**	A240a, A240b, A562, A640, A641, F112a, F112b, F40
2	I-40 EAST @ AVIATION PKWY/EXIT 285	237	2.53	1h 15m	60	14,595	32,811,395	A640, A641, A64a, F112a, F40
3	US-1 NORTH @ BURLINGTON MILLS RD	2	2.43	**2h 45m**	7	32,740	26,215,826	A133, F11-1a. F11-1b, F11-1c, F86
4	I-40 WEST @ GORMAN ST/EXIT 295	3	3.6	53m	31	16,779	25,280,030	F41, F43, F44a
5	I-40 EAST @ RALEIGH CHAPEL HILL EXPY/EXIT 289	7	3.92	15m	61	5,235	23,929,960	A562, A640, A641, F112a, F112b, F40, F41, F81a
6	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	4	1.37	2h 25m	60	16,516	22,914,036	A562, A79a, F10, F83, F86a
7	I-40 EAST @ PAGE RD/EXIT 282	8	3.49	40m	**67**	10,729	18,381,795	*TWTPO Projects
8	I-540 EAST (CW) @ SIX FORKS RD/EXIT 11	140	5.52	32m	18	16,276	17,832,528	A680a, F42b, F85, F87
9	US-70 WEST @ US-70 (CLAYTON)	151	**6.59**	1h 43m	6	**62,268**	15,291,499	F14
10	I-40 EAST @ US-70/EXIT 309	9	3	1h 03m	48	15,742	14,662,683	A143a1, A300, F14, F3, F41, F44a, F44b, F6

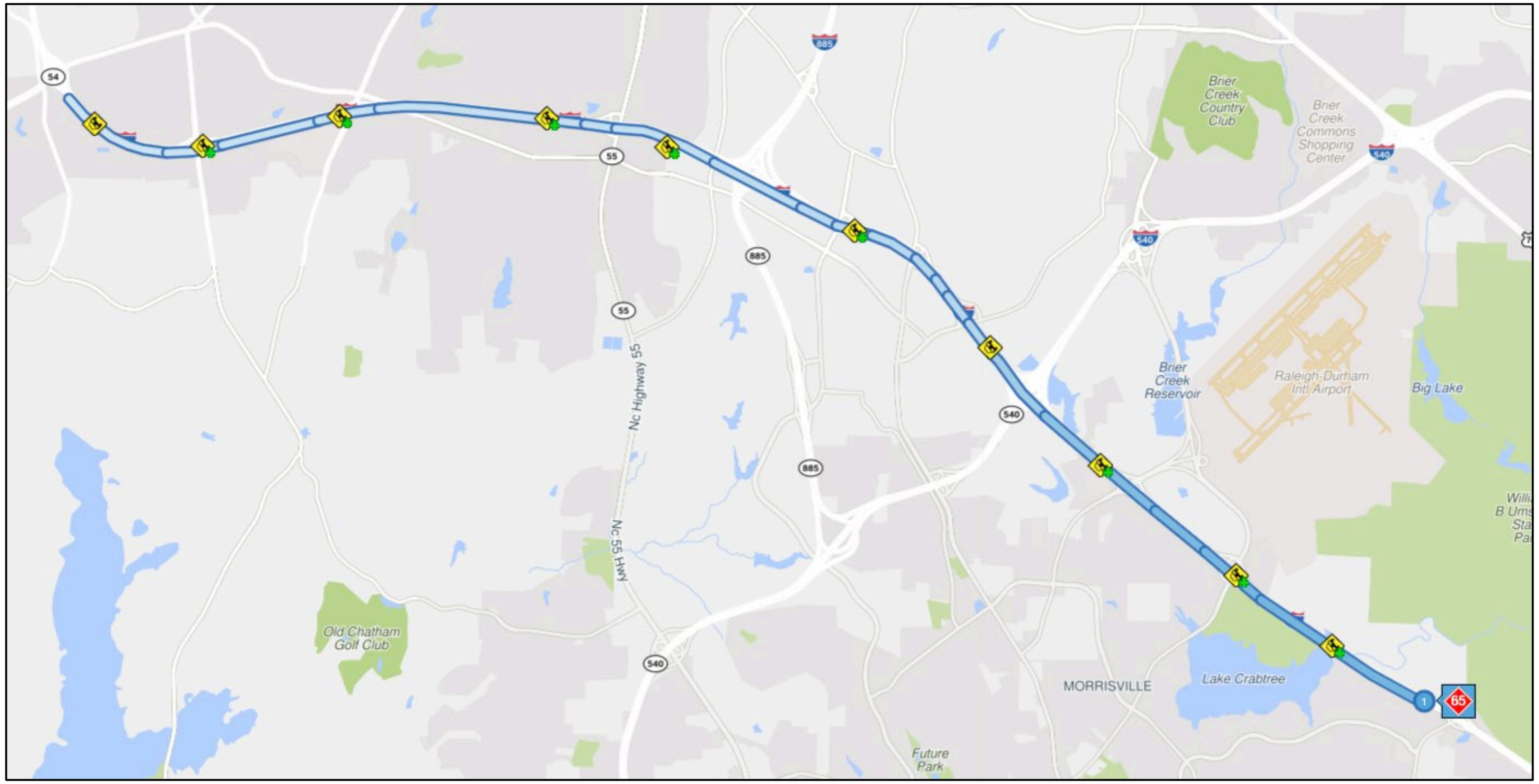
CW = Clockwise CCW = Counterclockwise **Red #s** = highest value for that metric



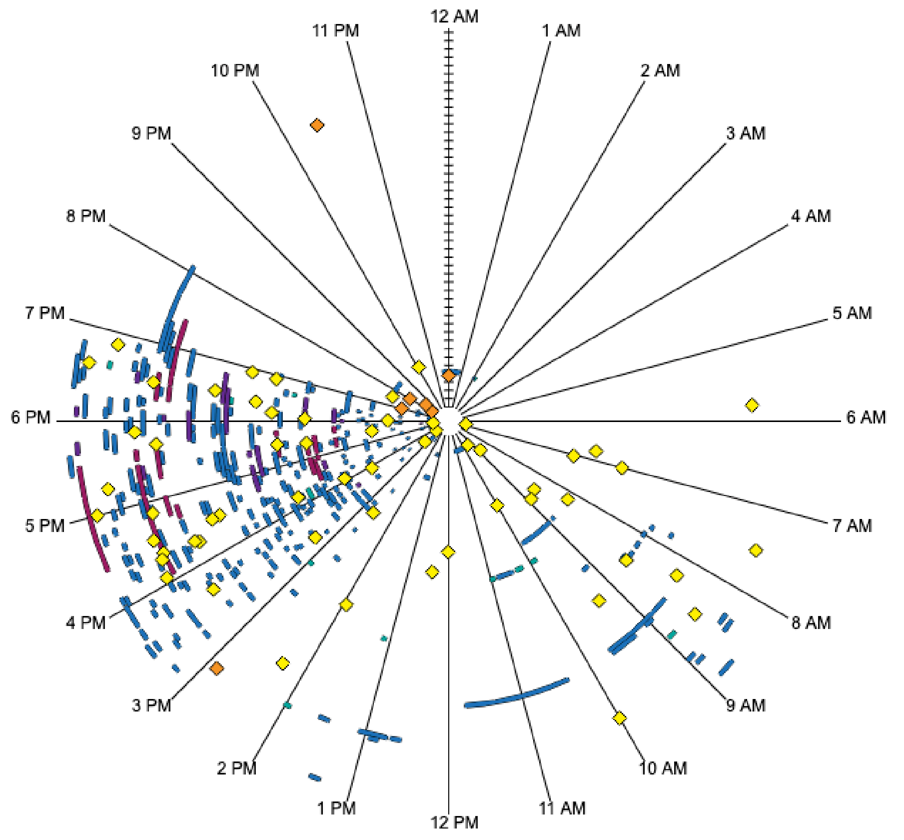
*Bottlenecks are ranked by **Total Delay –** Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

#1 Bottleneck: I-40 EAST @ HARRISON AVE/EXIT 287

Q4 FY2024



The center represents the beginning of Apr 1, 2024 and the outer edge represents the end of Jun 30, 2024.



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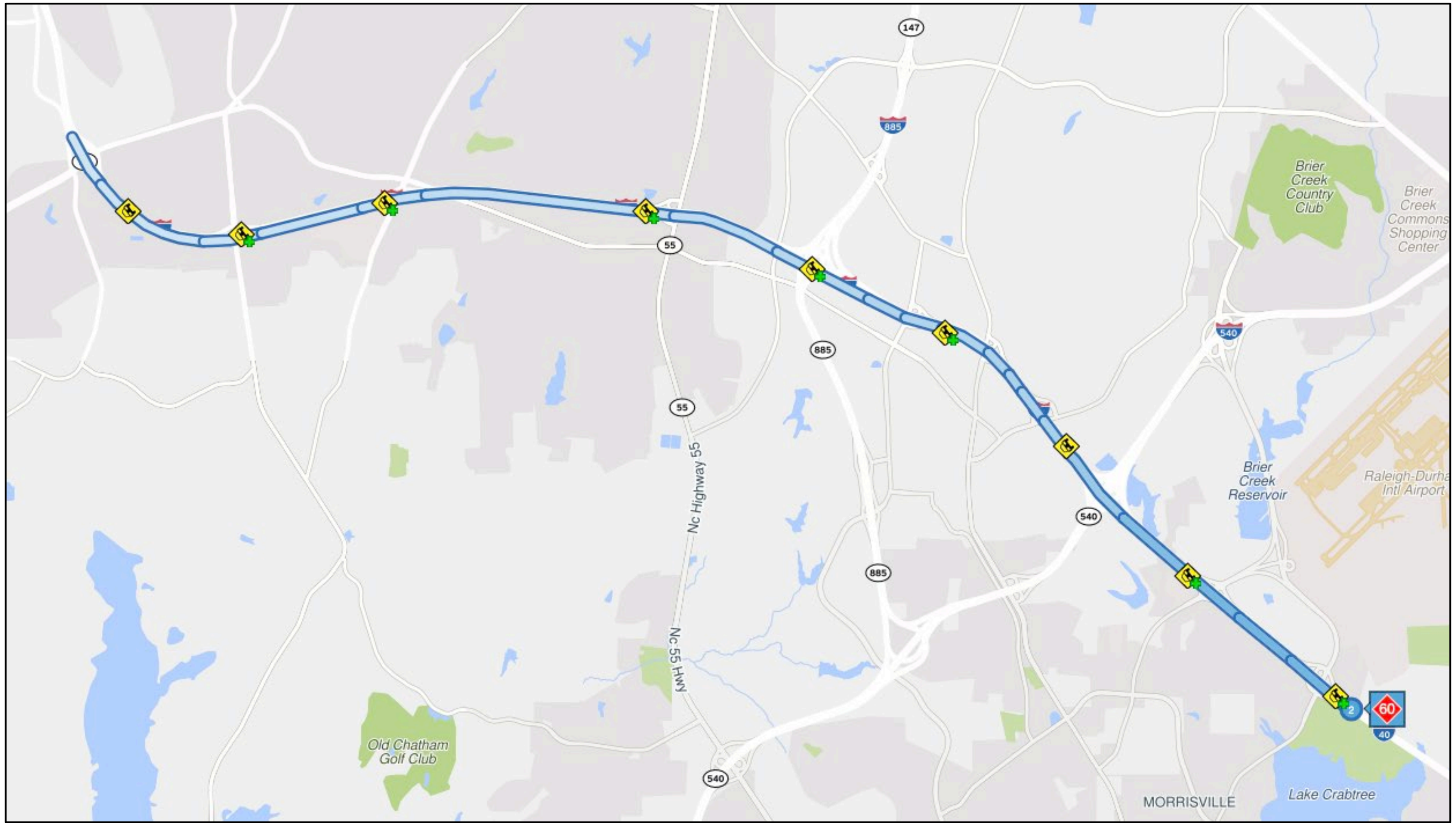
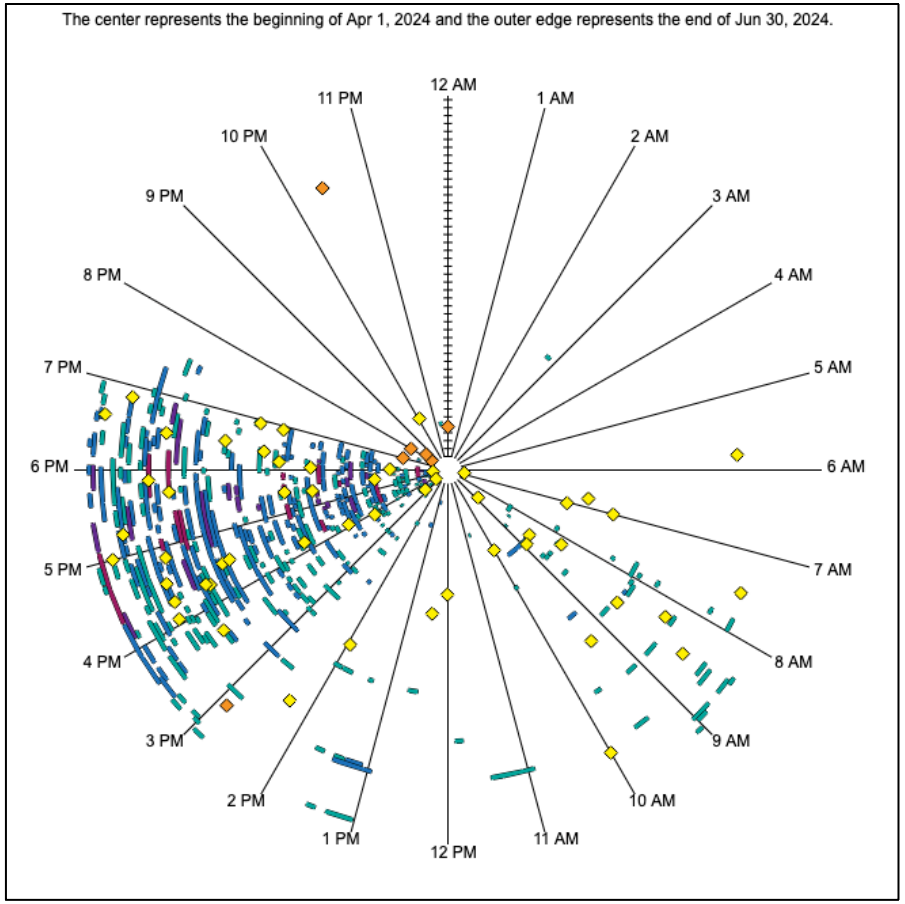
#2 Bottleneck: I-40 EAST @ AVIATION PKWY/EXIT 285

Q4 FY2024





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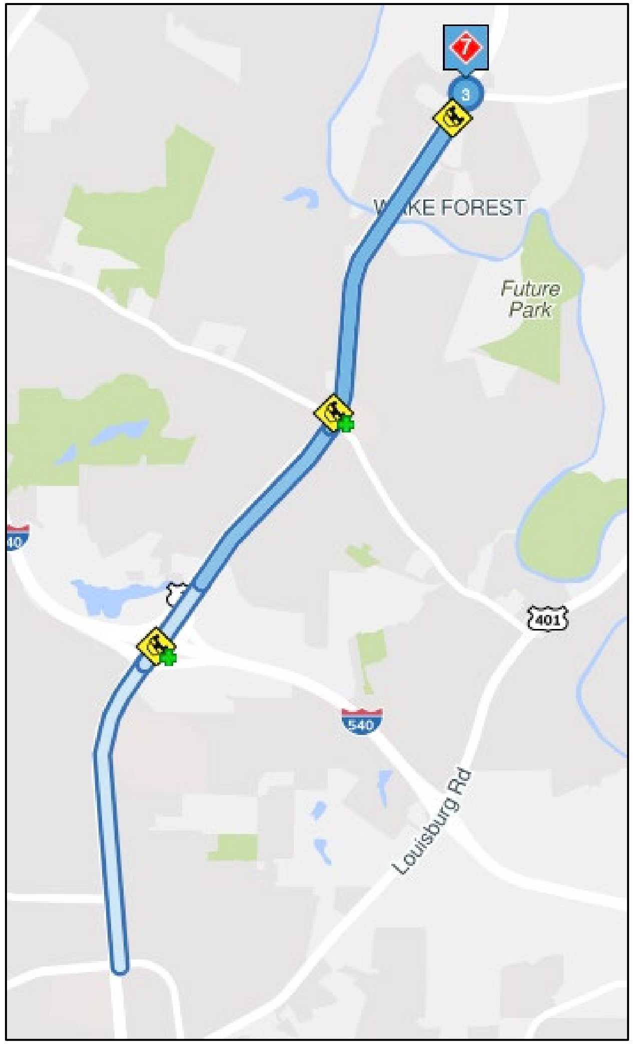
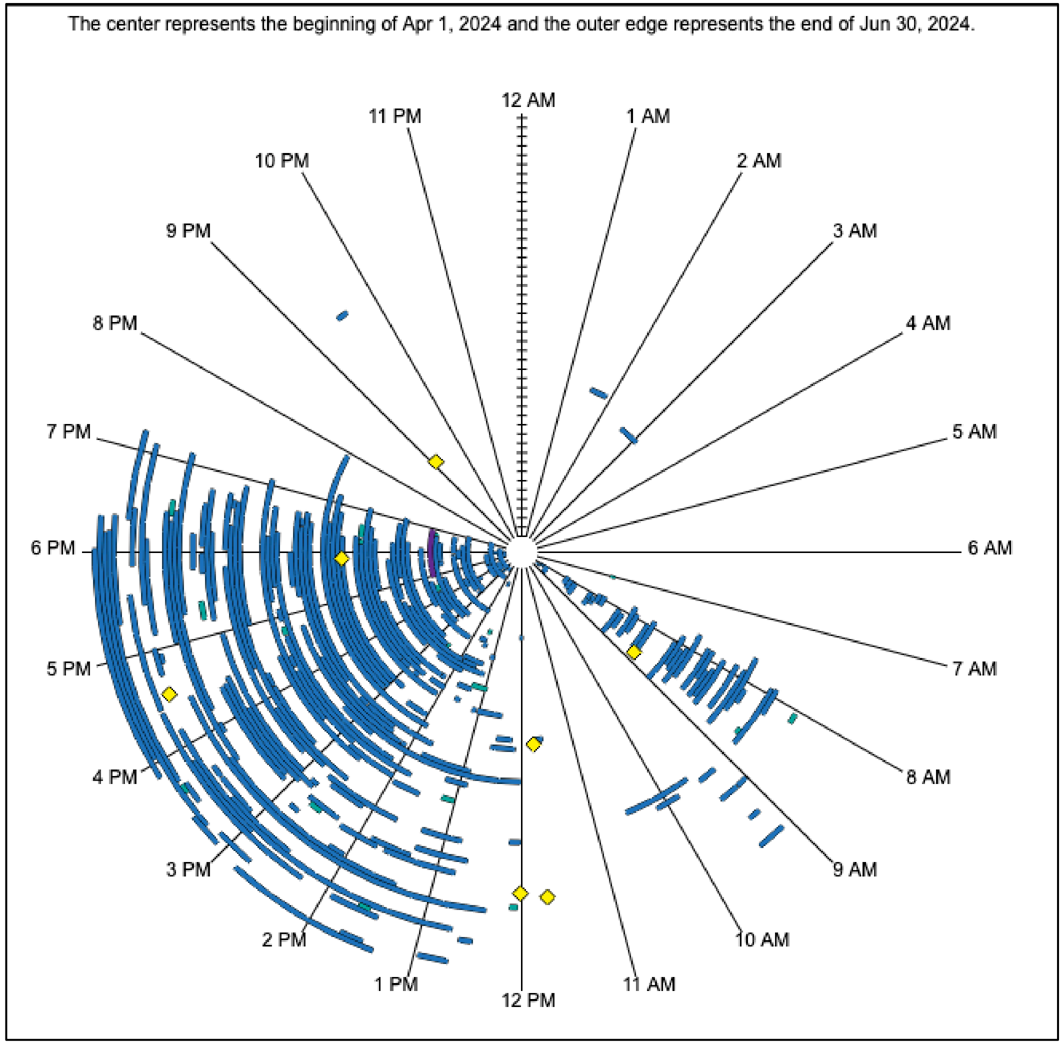
#3 Bottleneck: US-1 NORTH @ BURLINGTON MILLS RD

Q4 FY2024





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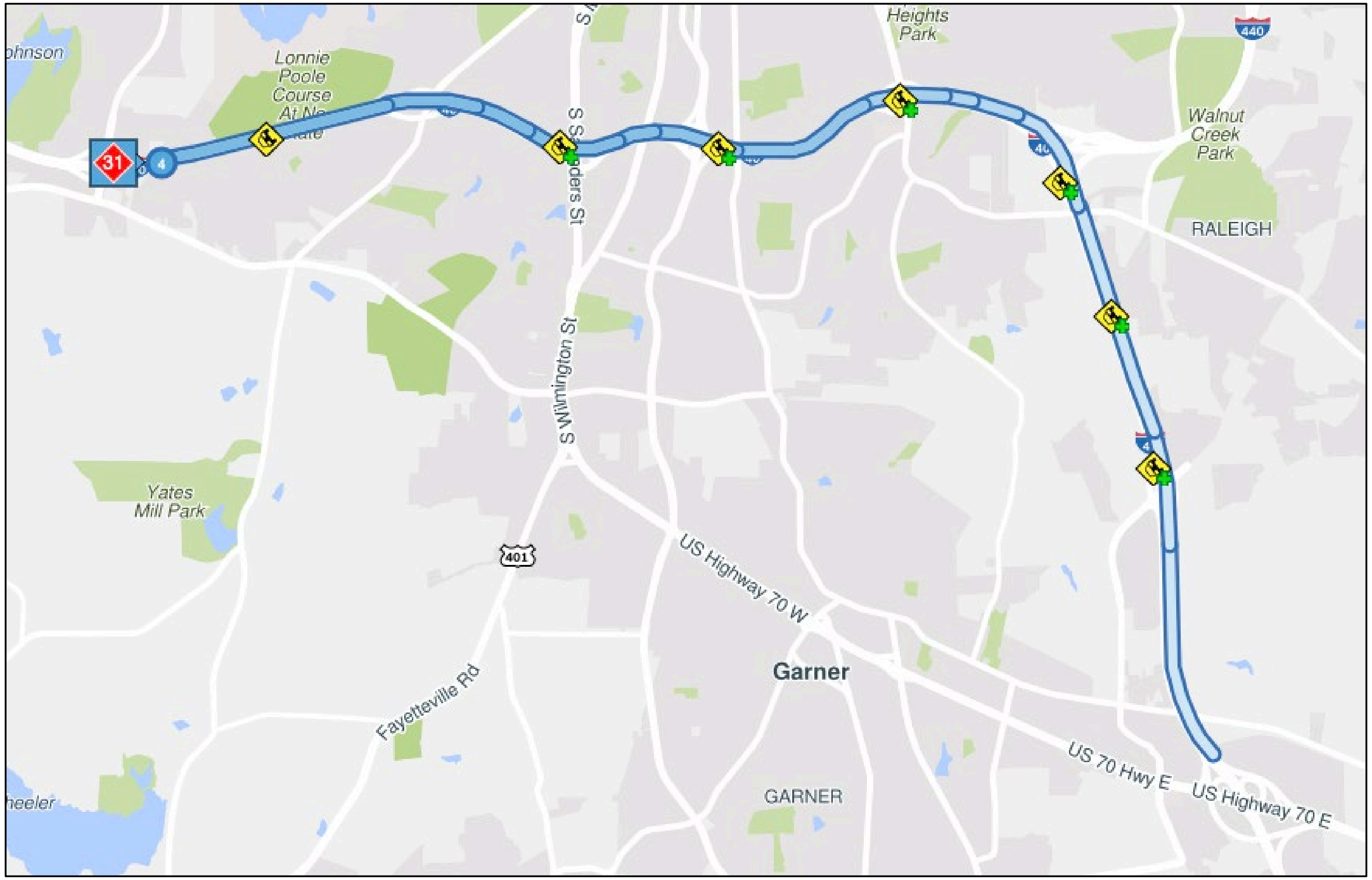
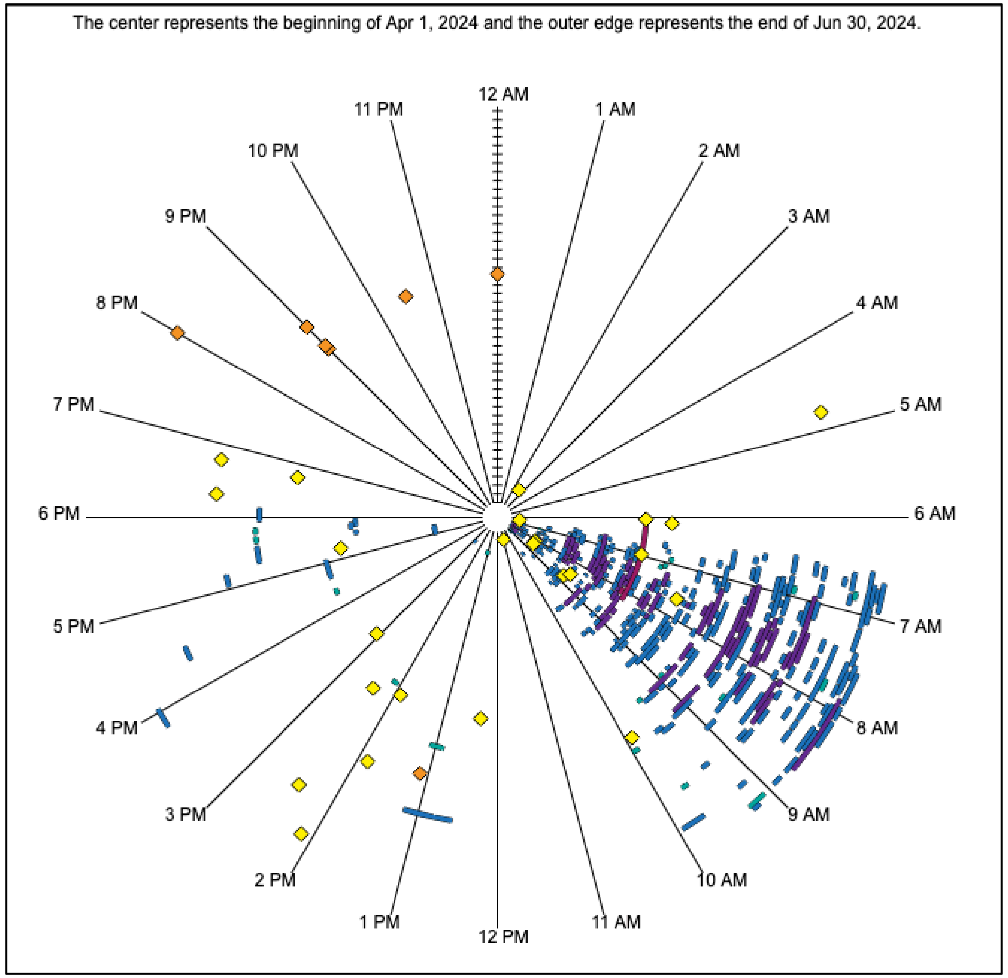
#4 Bottleneck: I-40 WEST @ GORMAN ST/EXIT 295

Q4 FY2024

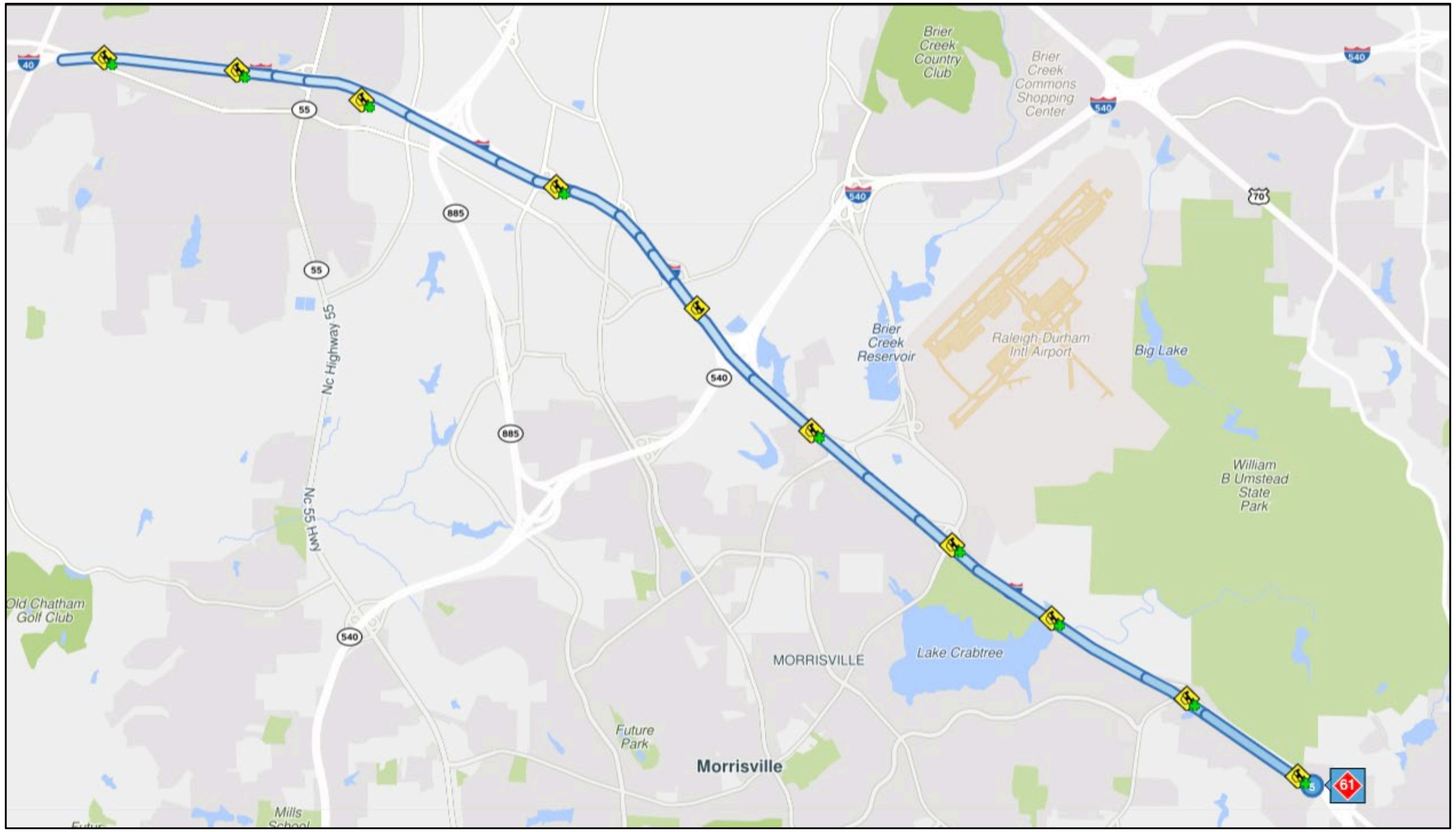


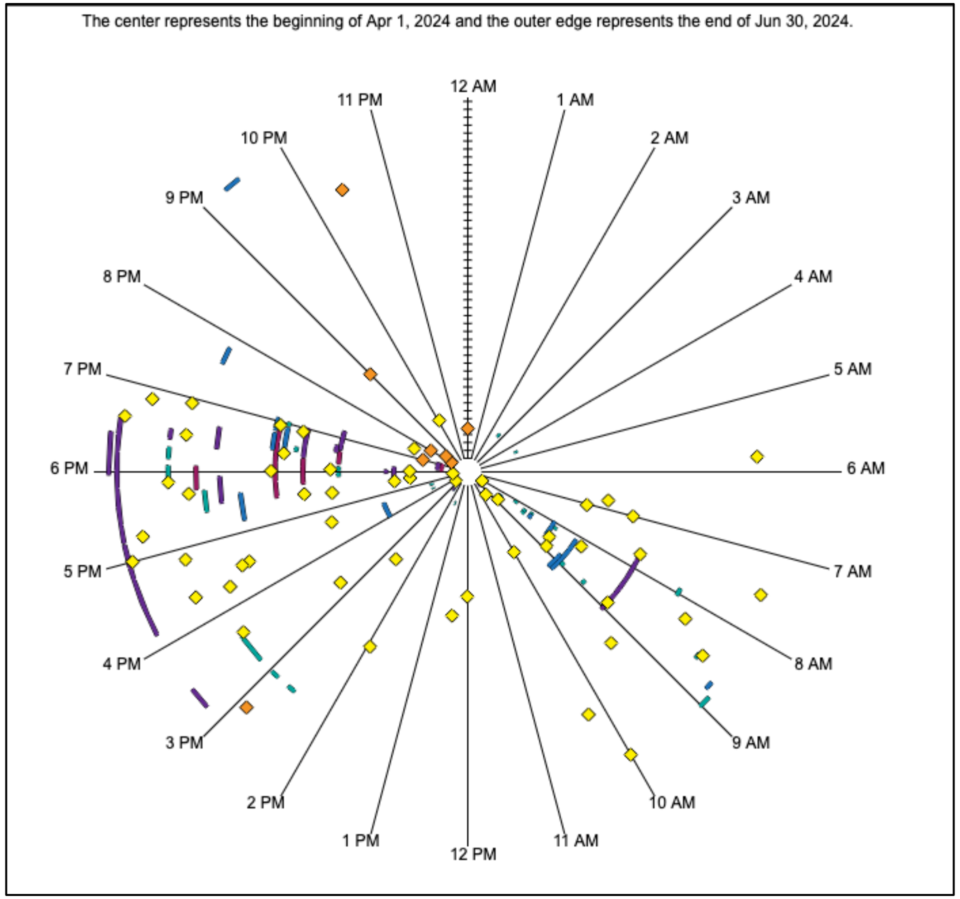


NC Capital Area Metropolitan Planning Organization

#5 Bottleneck: I-40 EAST @ RALEIGH CHAPEL HILL EXPY/EXIT 289

Q4 FY2024





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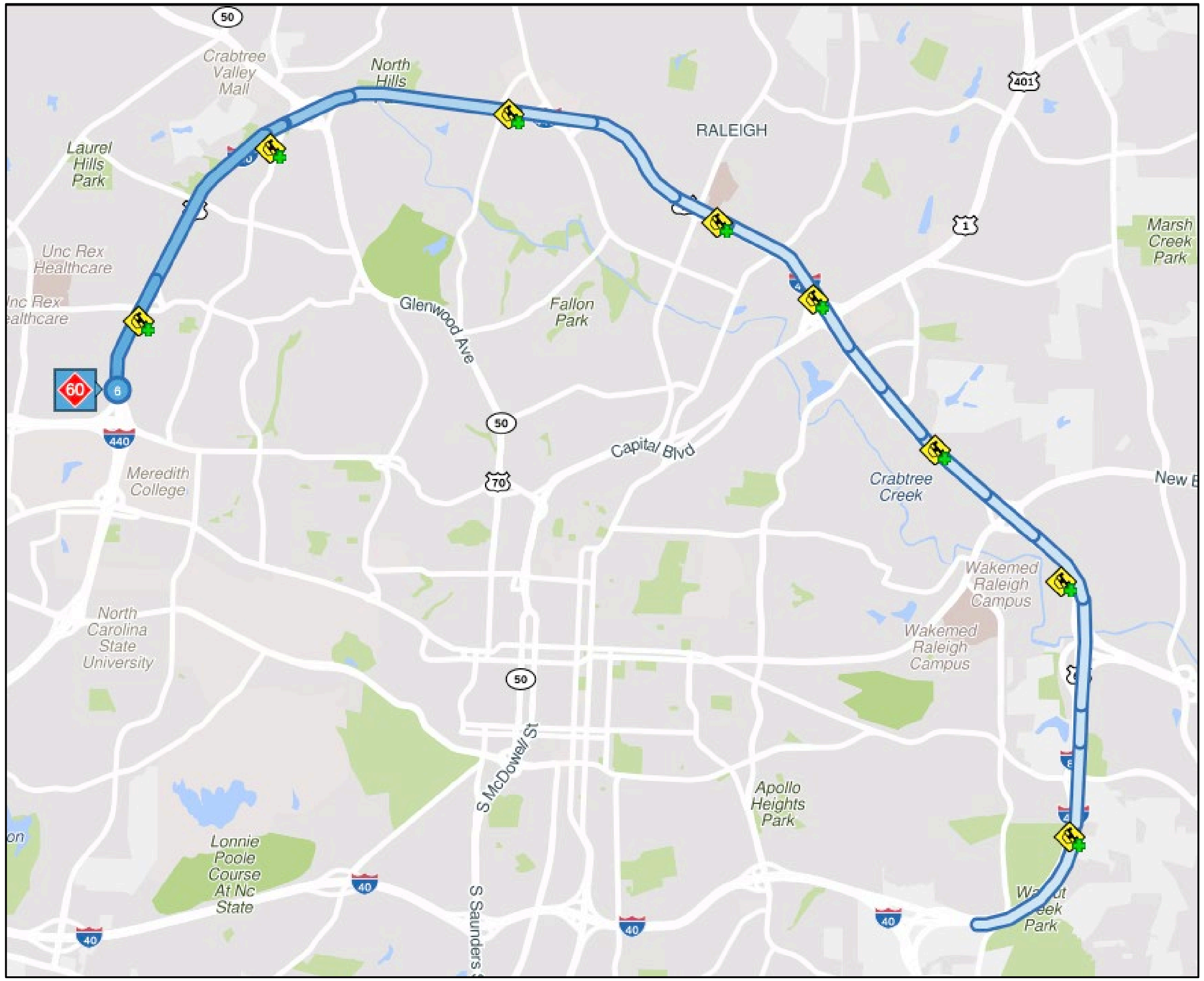
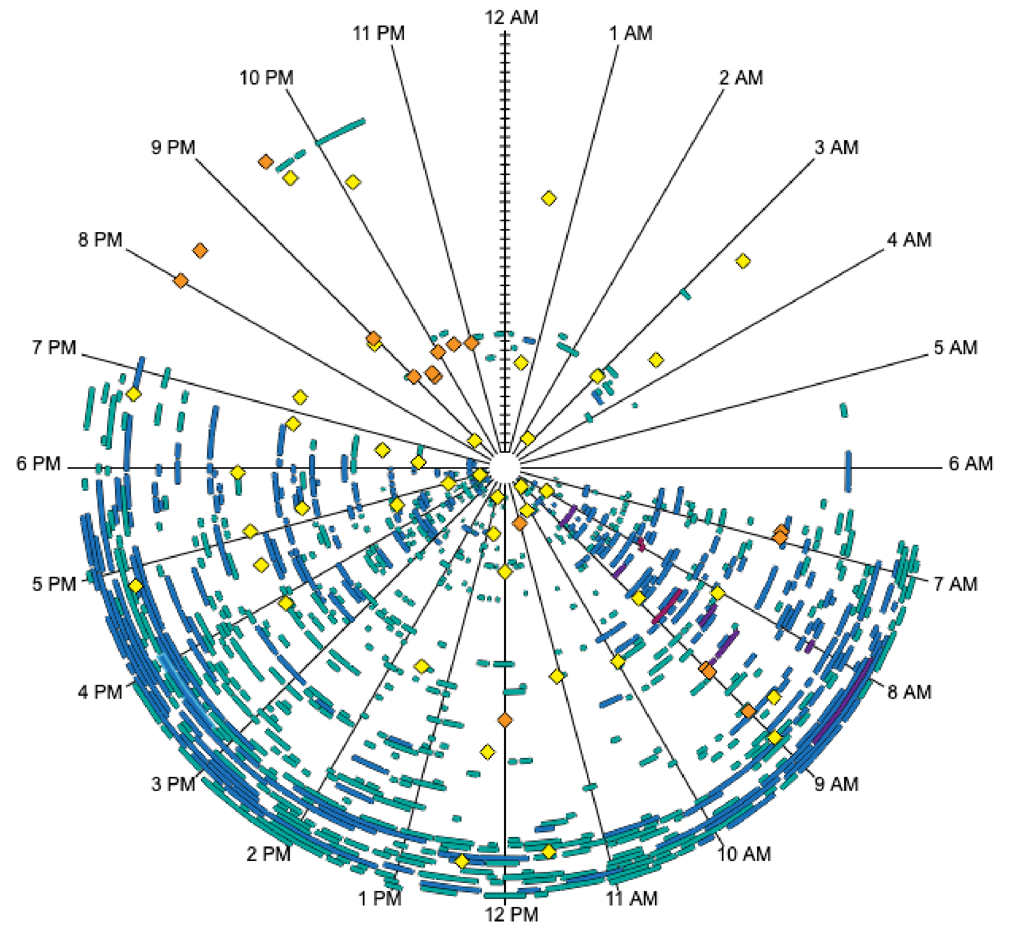
#6 Bottleneck: I-440 SOUTH (CCW) @ WADE AVE/EXIT 4

Q4 FY2024



The center represents the beginning of Apr 1, 2024 and the outer edge represents the end of Jun 30, 2024.



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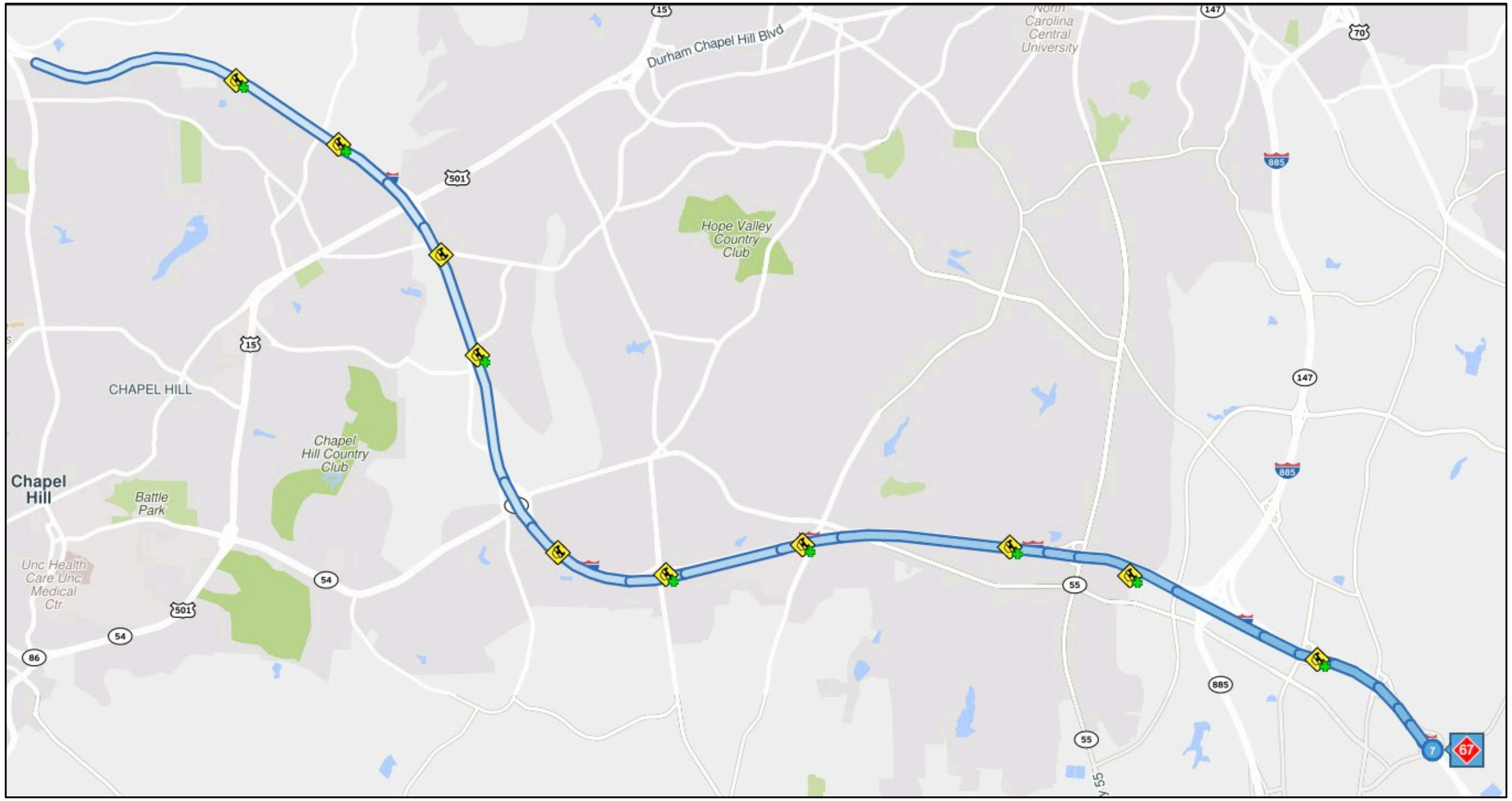
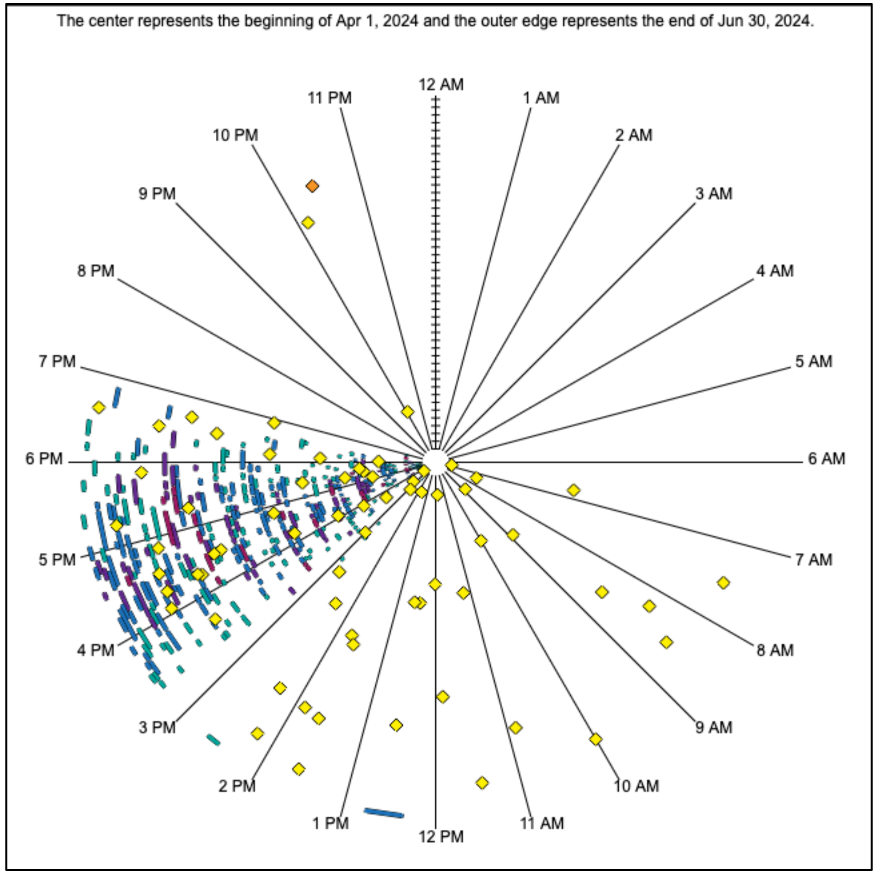
#7 Bottleneck: I-40 EAST @ PAGE RD/EXIT 282

Q4 FY2024





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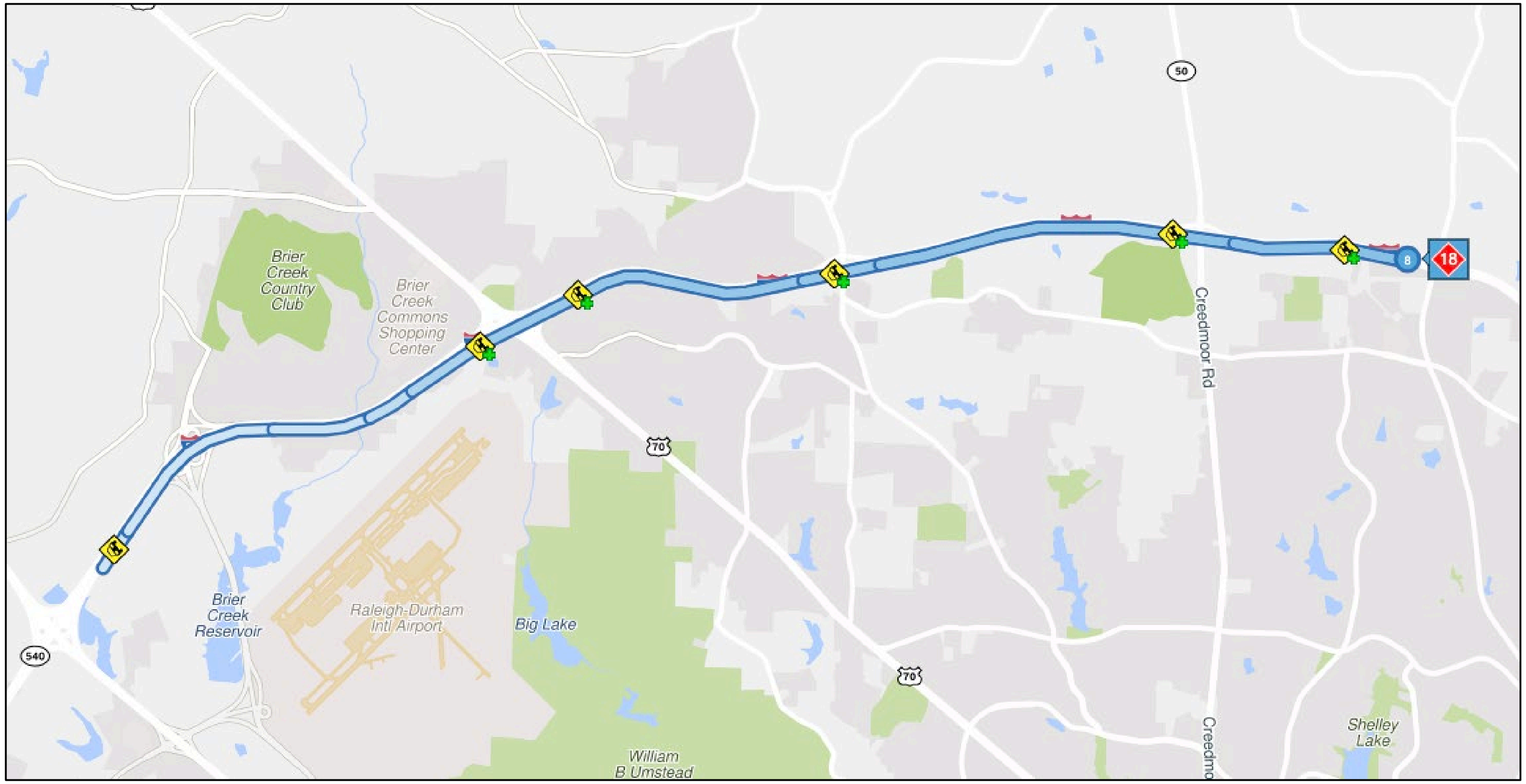
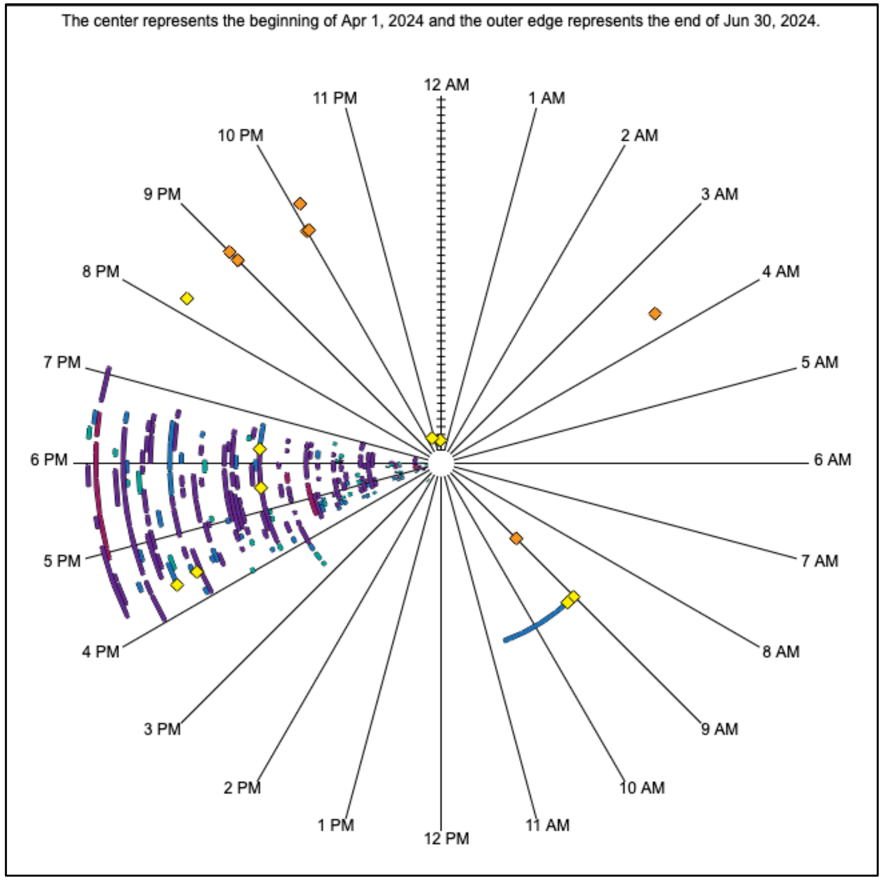
#8 Bottleneck: I-540 EAST (CW) @ SIX FORKS RD/EXIT 11

Q4 FY2024





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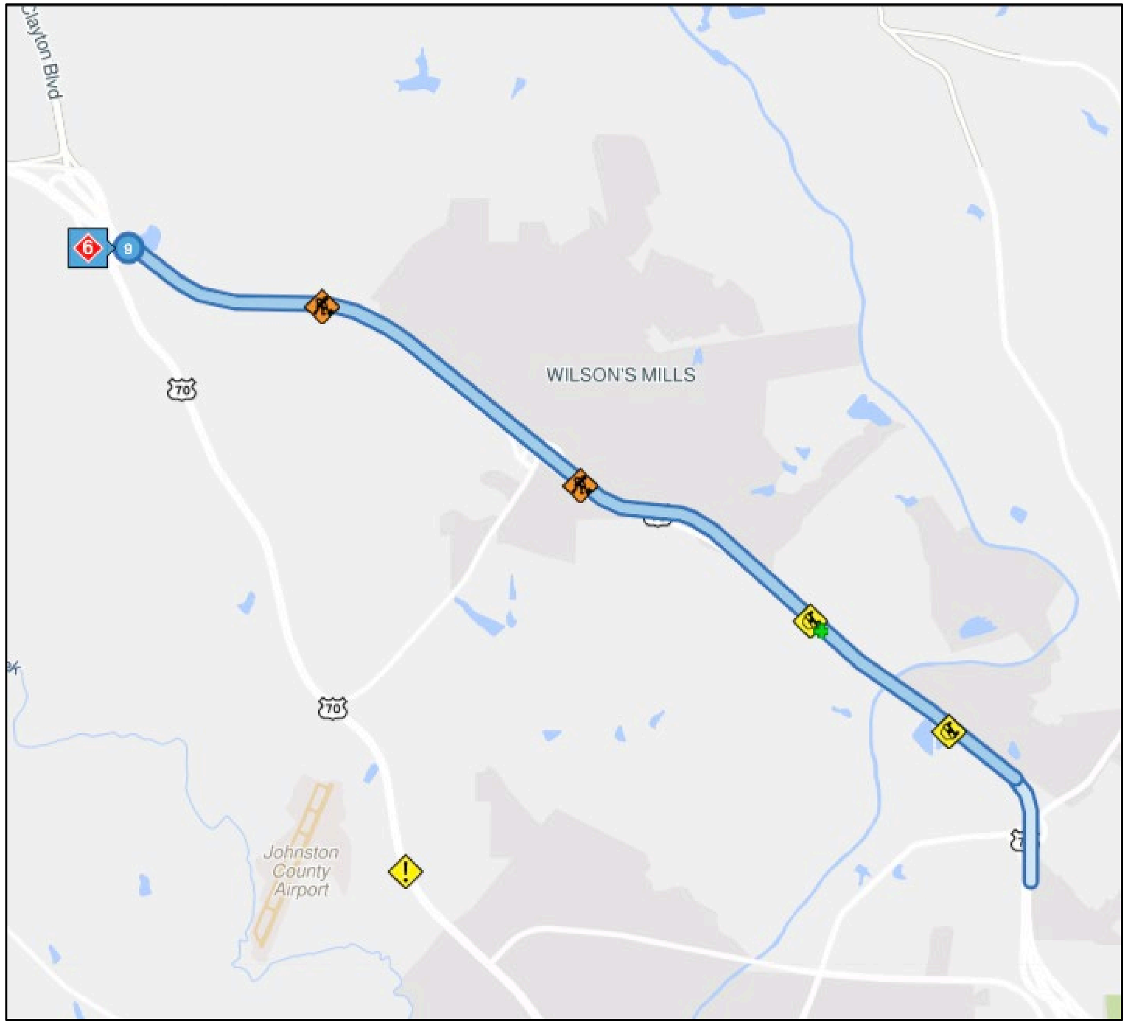
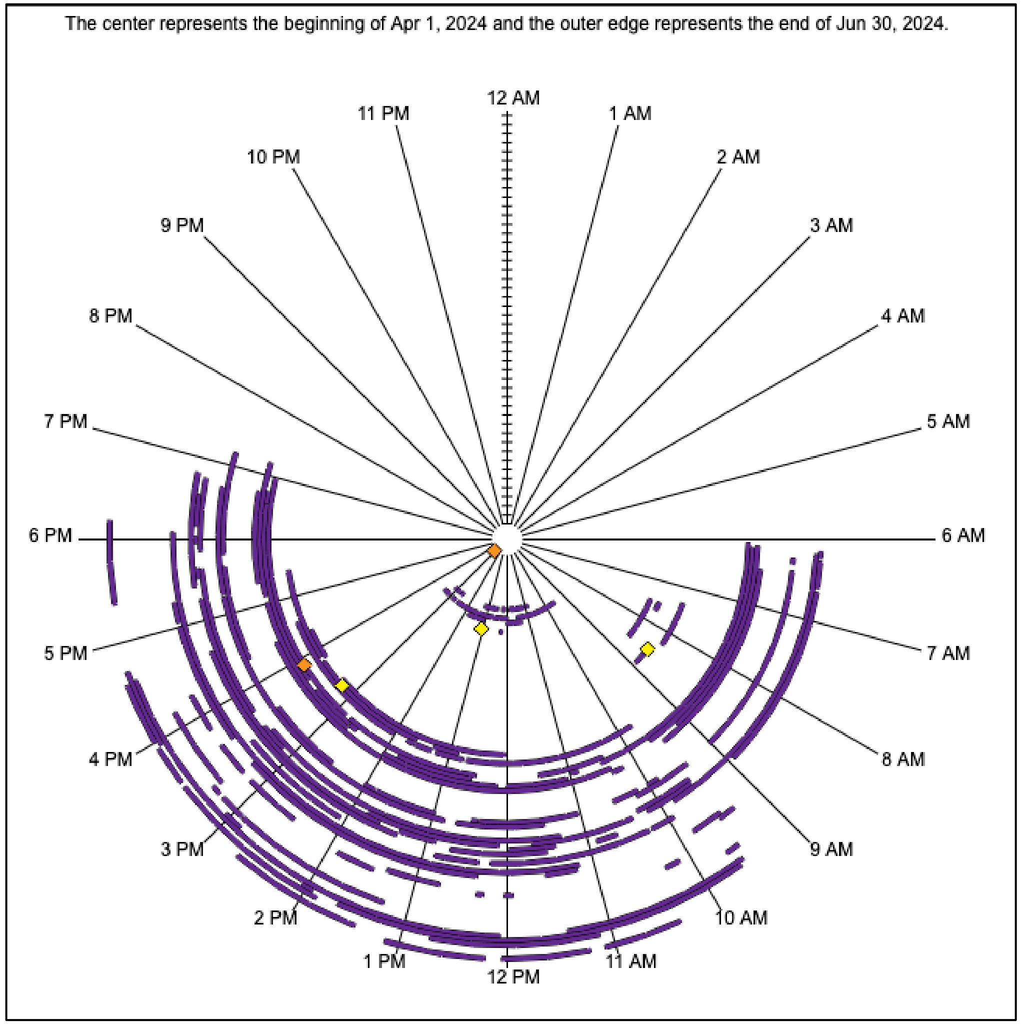
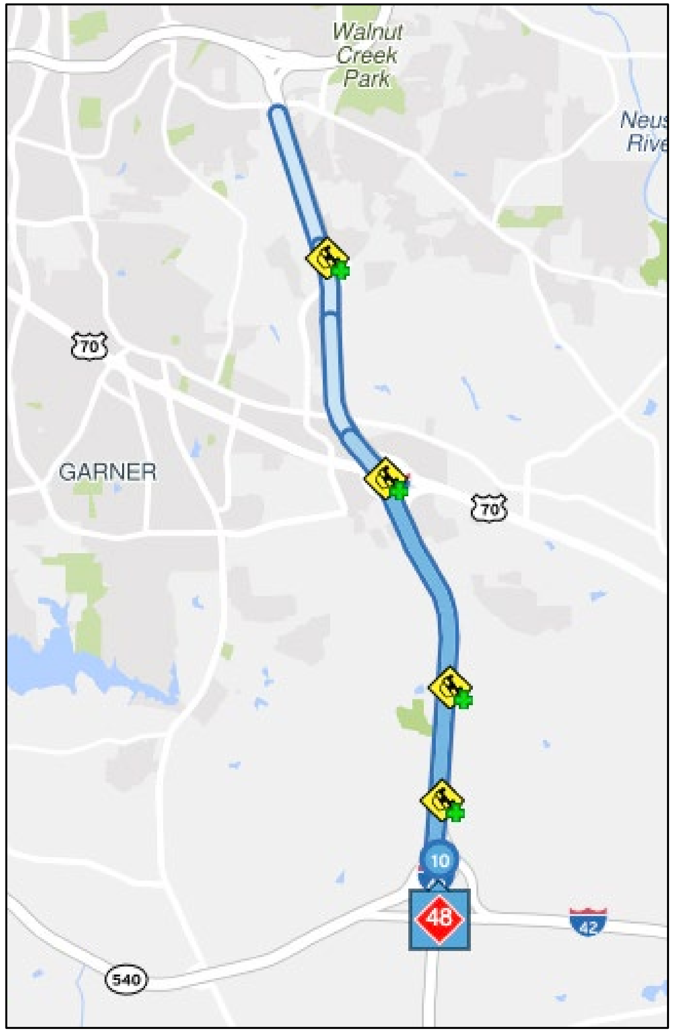
#9 Bottleneck: US-70 W @ US-70 (CLAYTON)

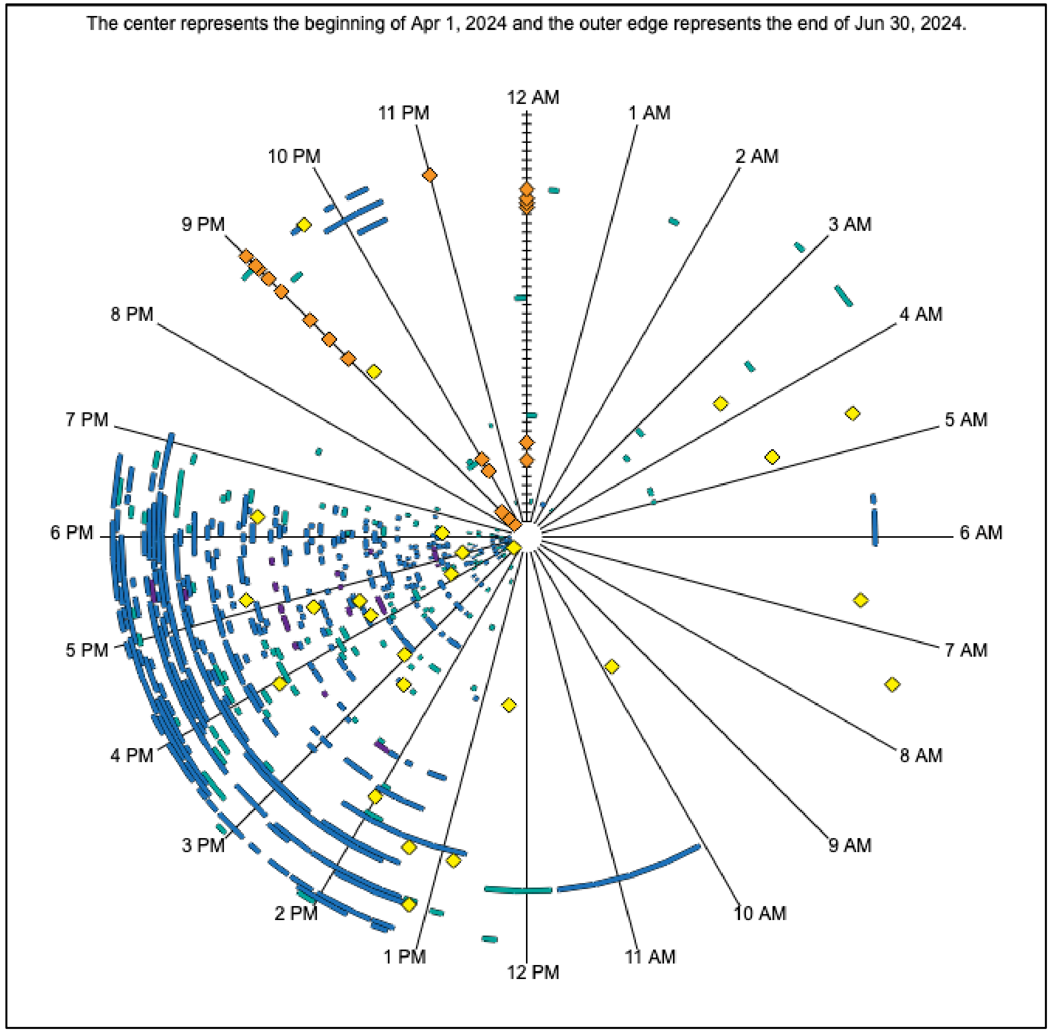
Q4 FY2024





#10 Bottleneck: I-40 E @ US-70/EXIT 309 **Q4 FY2024**





NC Capital Area Metropolitan Planning Organization

RITIS Performance Report

Top 10

Bottleneck Analysis Report

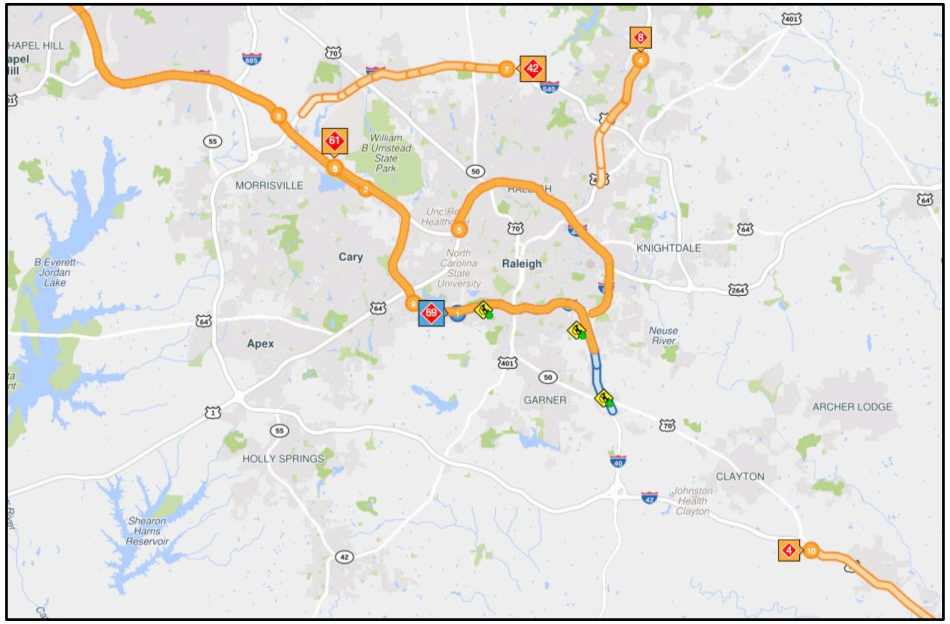
Congestion Management Process – Status of the System Report

FY 2025 Q1

Top 10 Bottlenecks in the Region Q1 FY2025

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	I-40 WEST @ GORMAN ST/EXIT 295	4	3.61	54m	68	17,216	**31,268,076**	F41, F43, F44a
2	I-40 EAST @ HARRISON AVE/EXIT 287	**1**	3.97	42m	**124**	13,694	28,154,400	A240a, A240b, A562, A640, A641, F112a, F112b, F40
3	I-40 EAST @ AVIATION PKWY/EXIT 285	2	2.37	1h 04m	82	1,163	26,330,208	A640, A641, A64a, F112a, F40
4	US-1 NORTH @ BURLINGTON MILLS RD	3	2.49	**2h 22m**	7	28,519	24,033,651	A133, F11-1a, F11-1b, F11-1c, F86
5	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	6	1.67	1h 53m	97	14,817	21,399,195	A562, A79a, F10, F83, F86a
6	I-40 WEST @ AVIATION PKWY/EXIT 285	11	3.23	37m	61	10,210	19,121,361	A562, A640, A64a. F112a, F112b, F40,F41, F43, F43b, F81
7	I-540 EAST (CW) @ SIX FORKS RD/EXIT 11	8	5.27	31m	41	14,036	16,817,924	A680a, F42b, F85, F87
8	I-40 EAST @ PAGE RD/EXIT 282	7	3.41	33m	60	9,553	16,698,341	*TWTPO Projects
9	I-40 WEST @ I-440/US-1/US-64/EXIT 293	51	3.65	34m	65	8,801	14,878,405	F10, F41, F43, F43b, F44a, F81a
10	US-70 WEST @ US-70 (CLAYTON)	9	**6.58**	1h 24m	4	**51,232**	13,923,537	F14

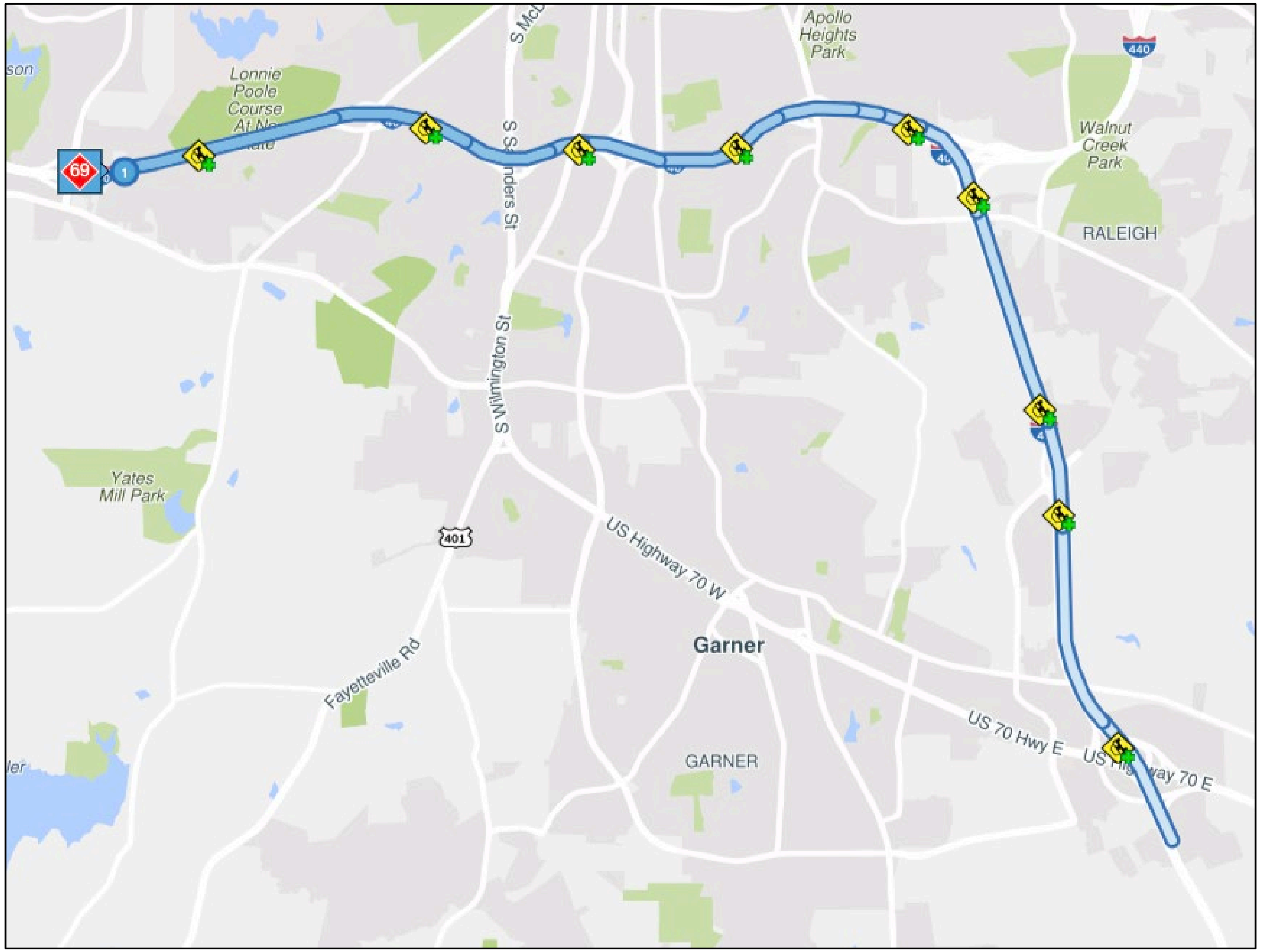
CW = Clockwise   CCW = Counterclockwise   **Red #s** = highest value for that metric

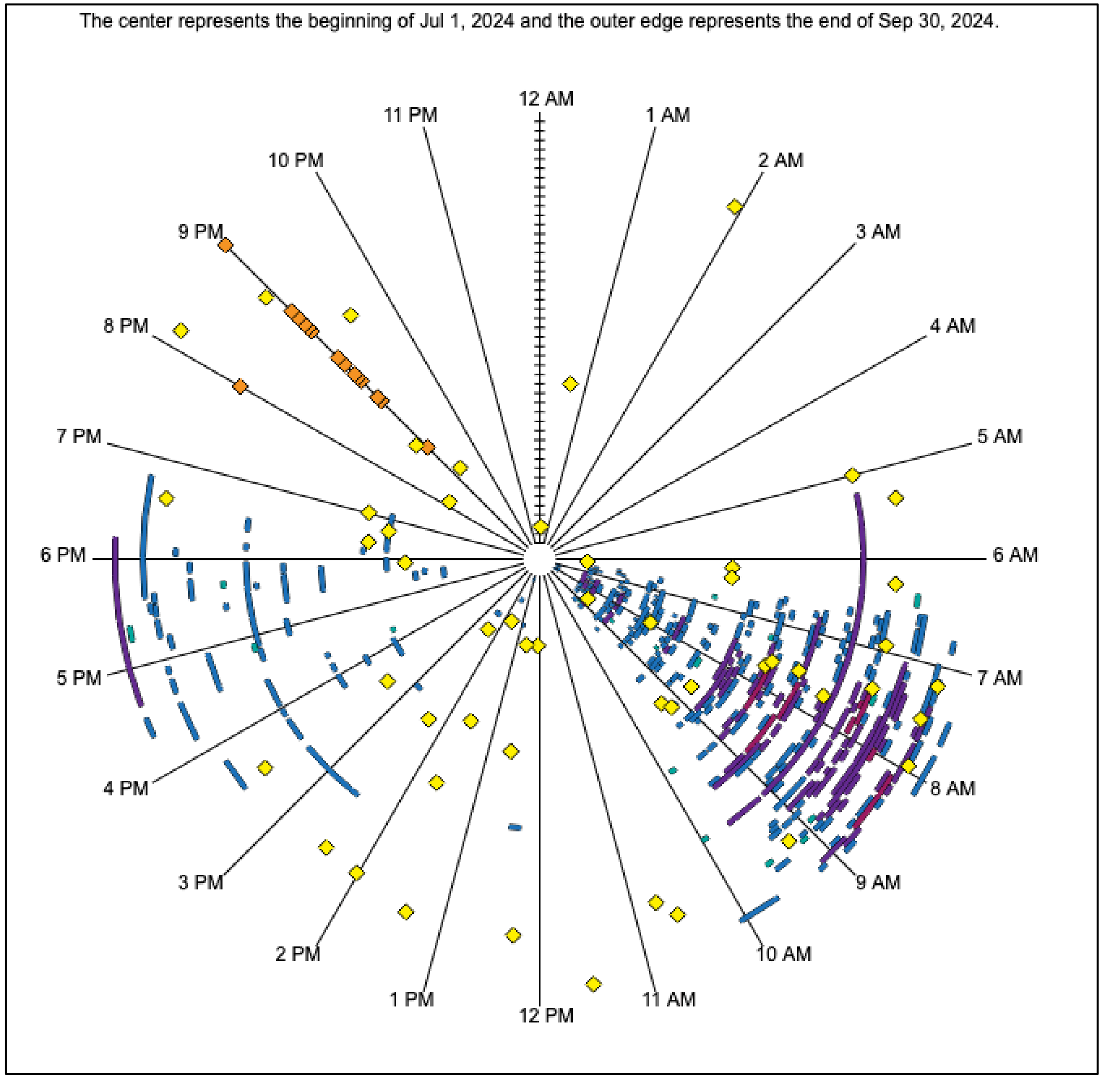


*Bottlenecks are ranked by **Total Delay –** Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

#1 Bottleneck: I-40 W @ GORMAN ST/EXIT 295

Q1 FY2025





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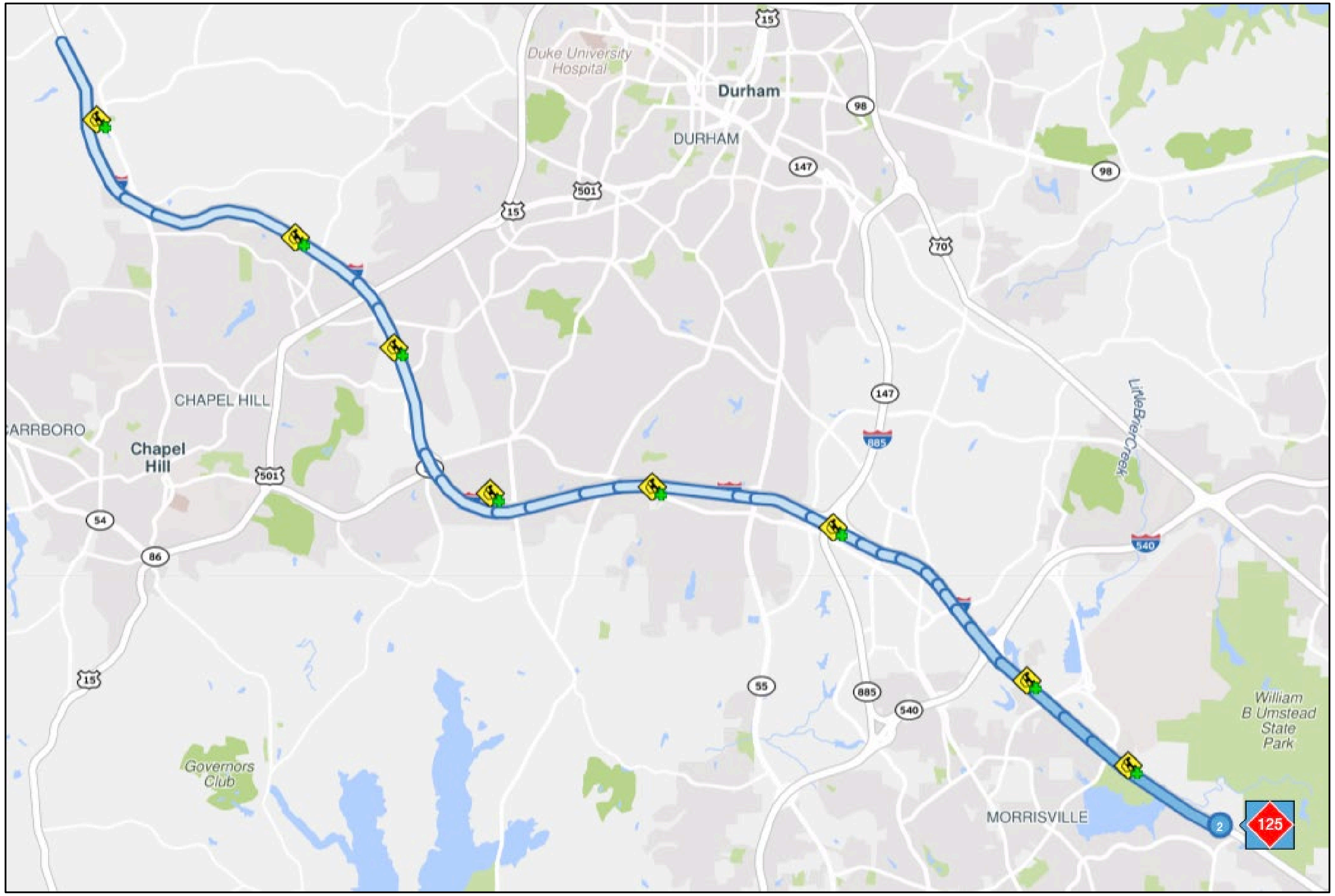
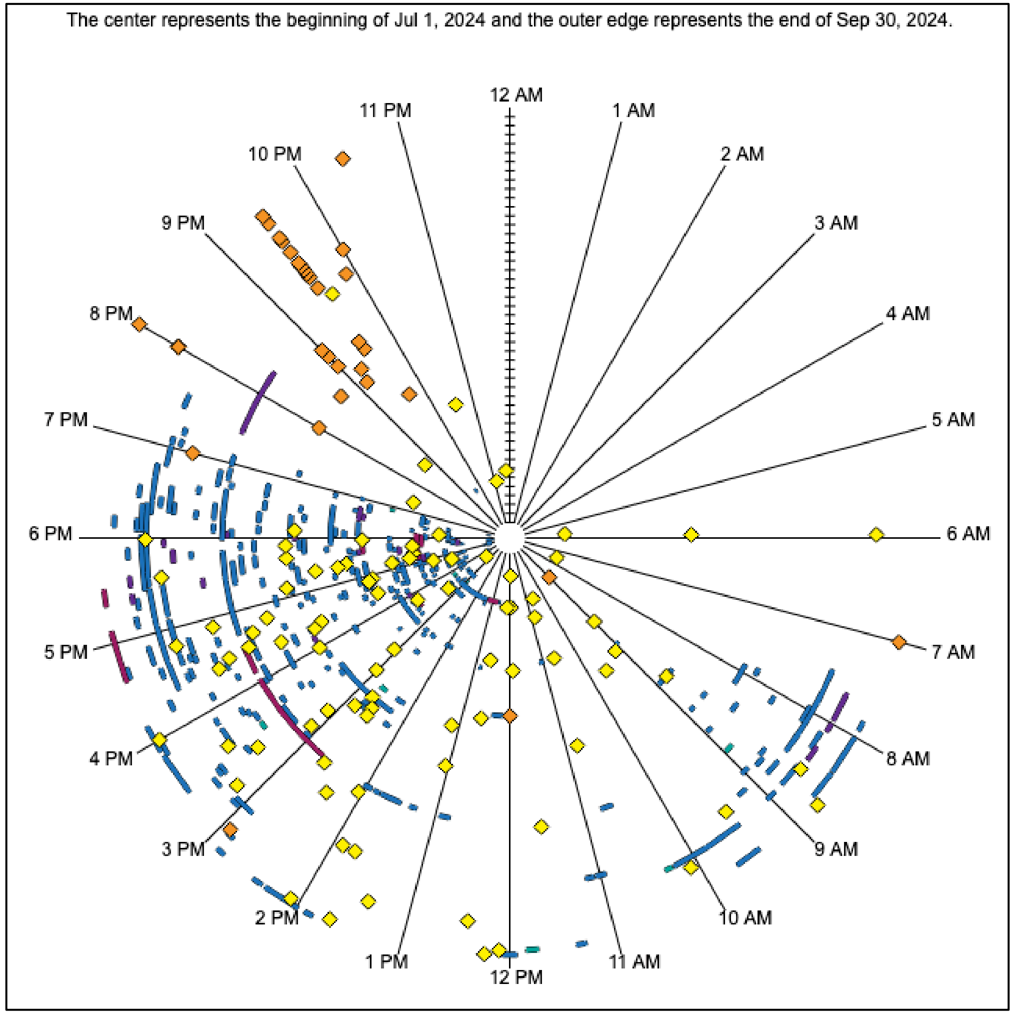
#2 Bottleneck: I-40 E @ HARRISON AVE/EXIT 287

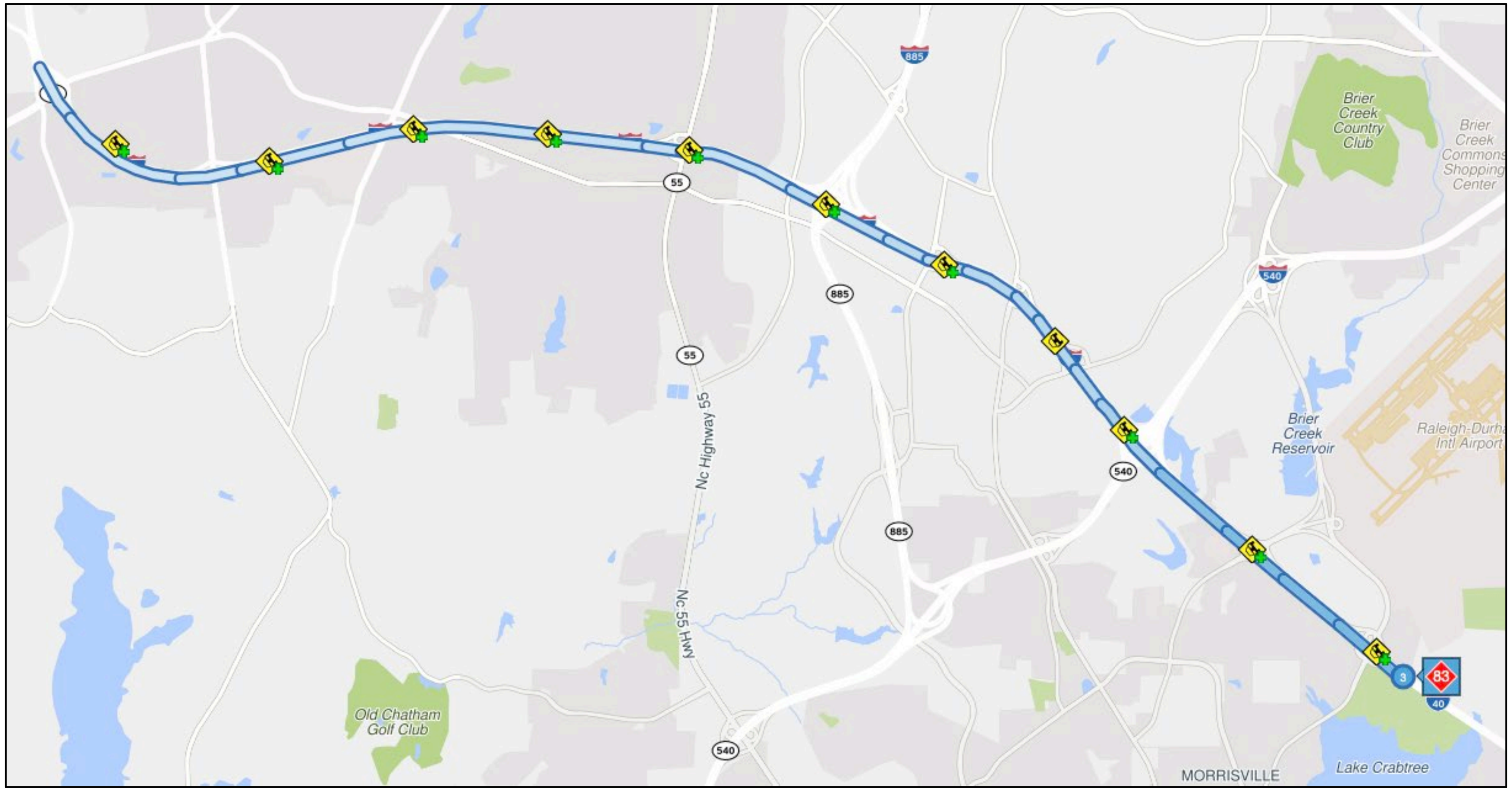
Q1 FY2025

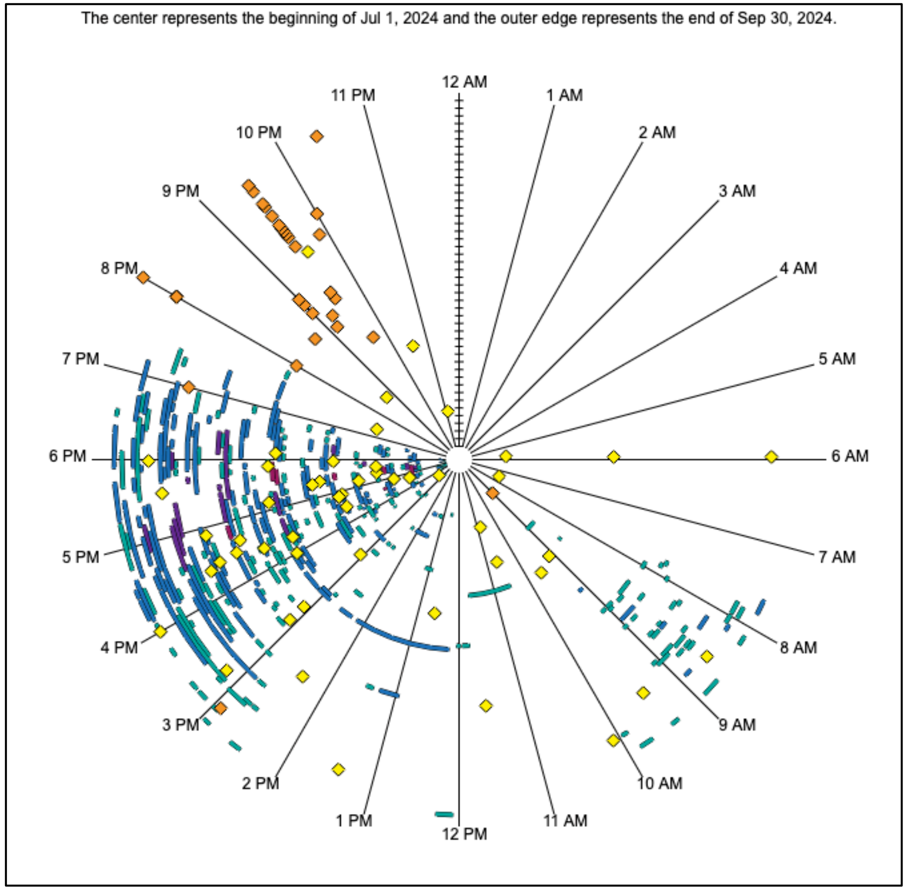




#3 Bottleneck: I-40 E @ AVIATION PKWY/EXIT 285

Q1 FY2025





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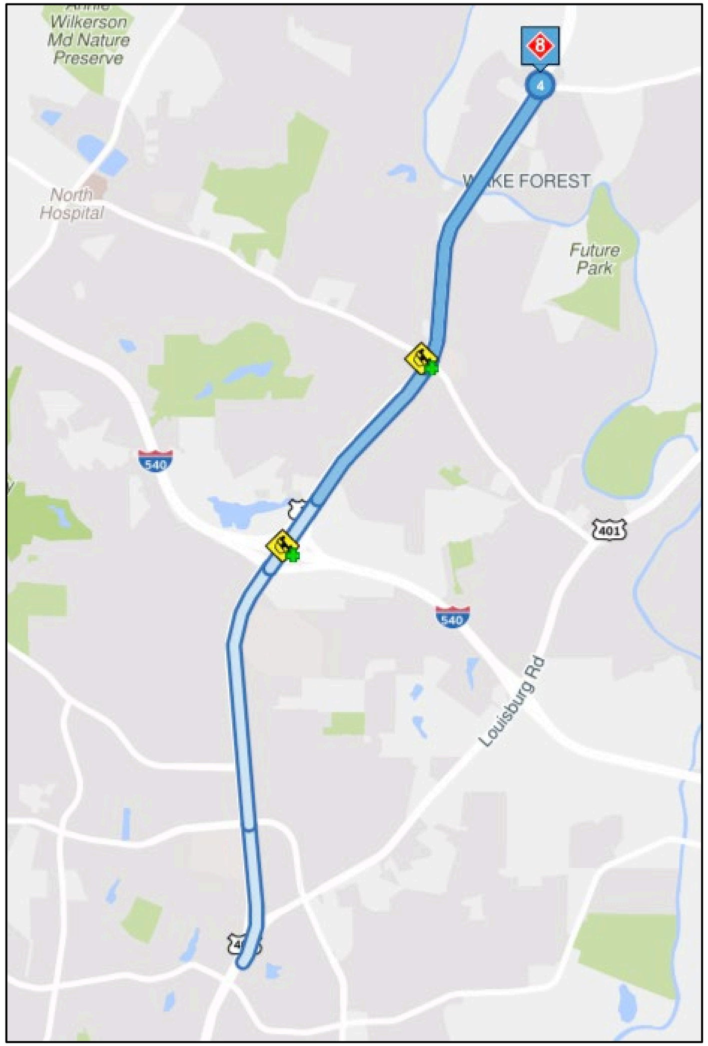
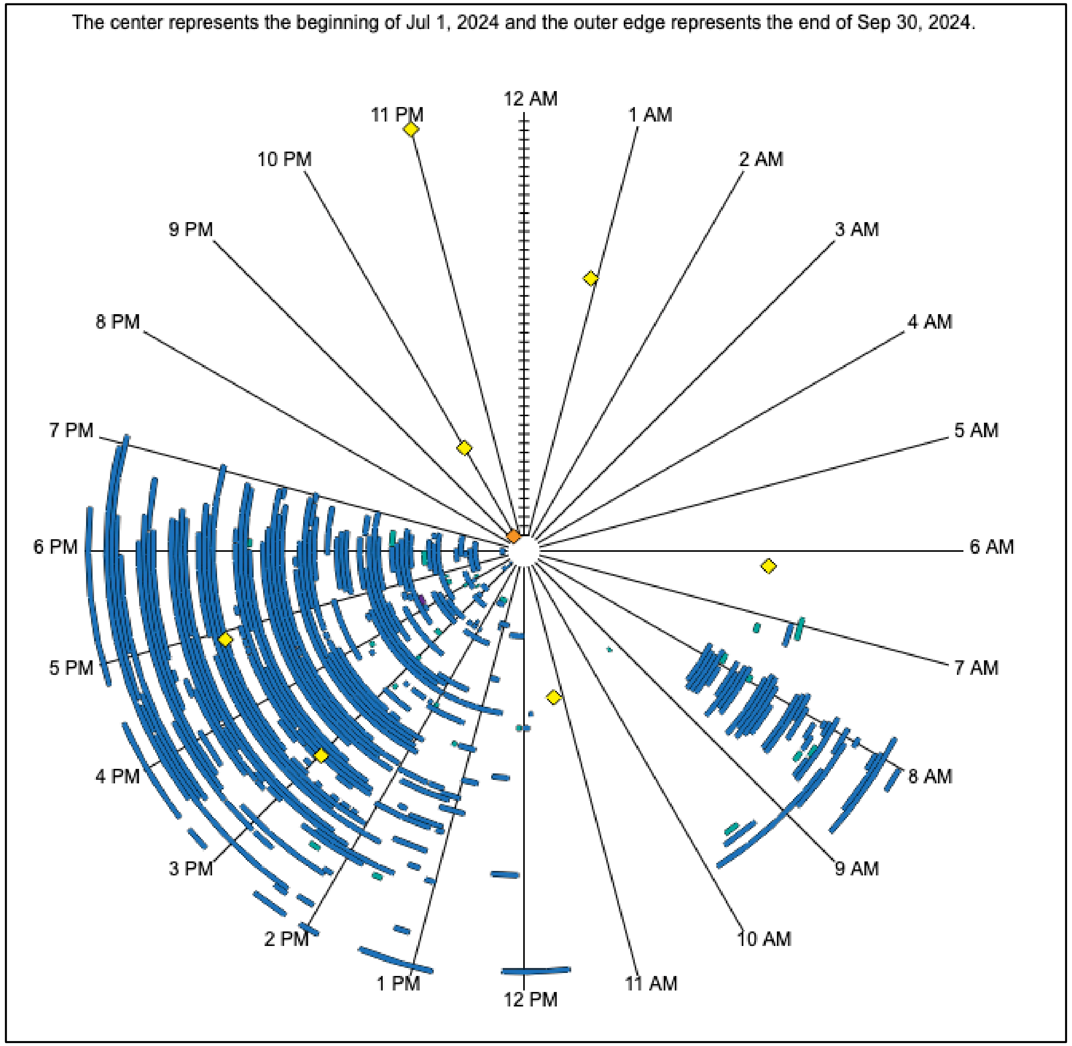
#4 Bottleneck: US-1 N @ BURLINGTON MILLS RD

Q1 FY2025





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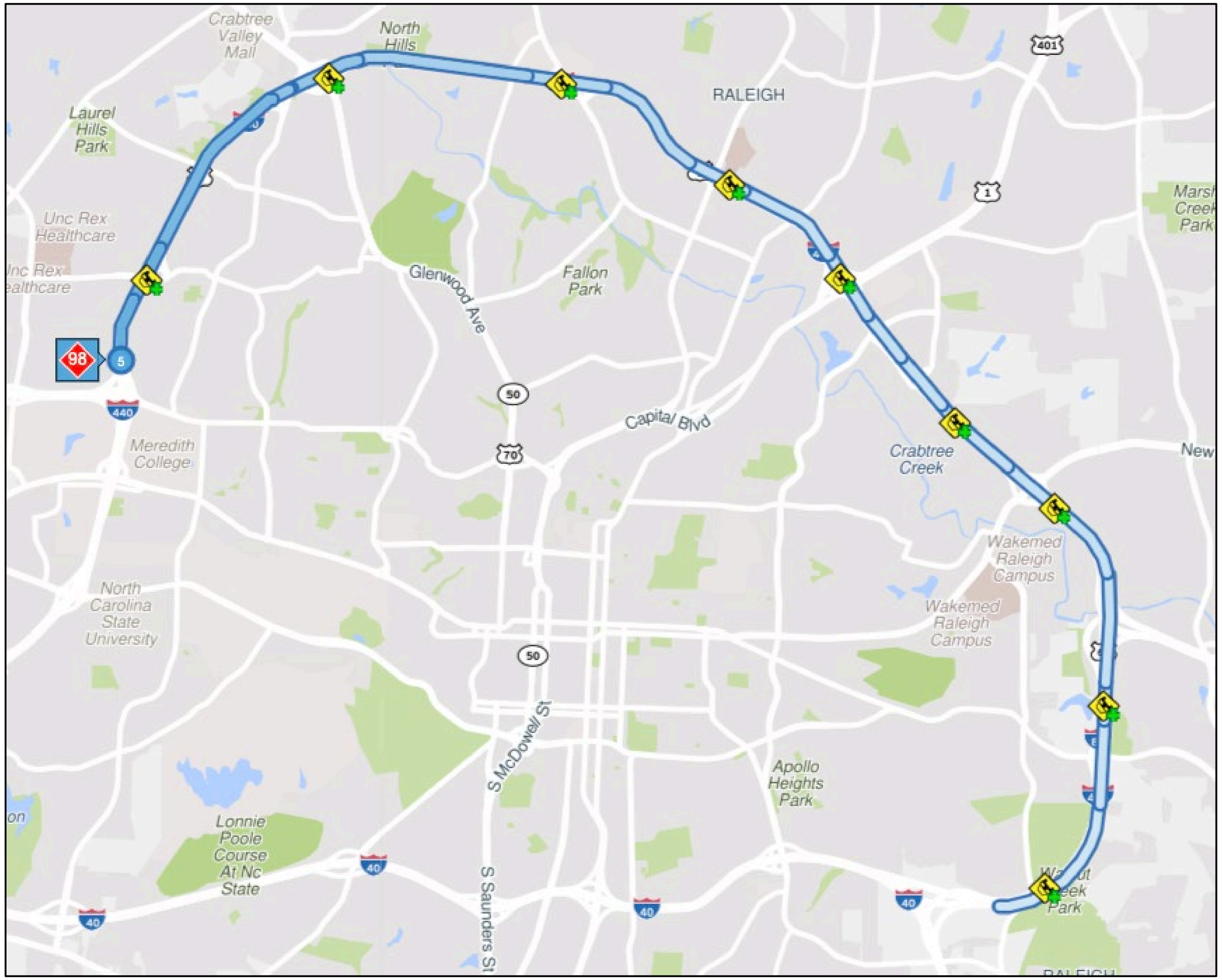
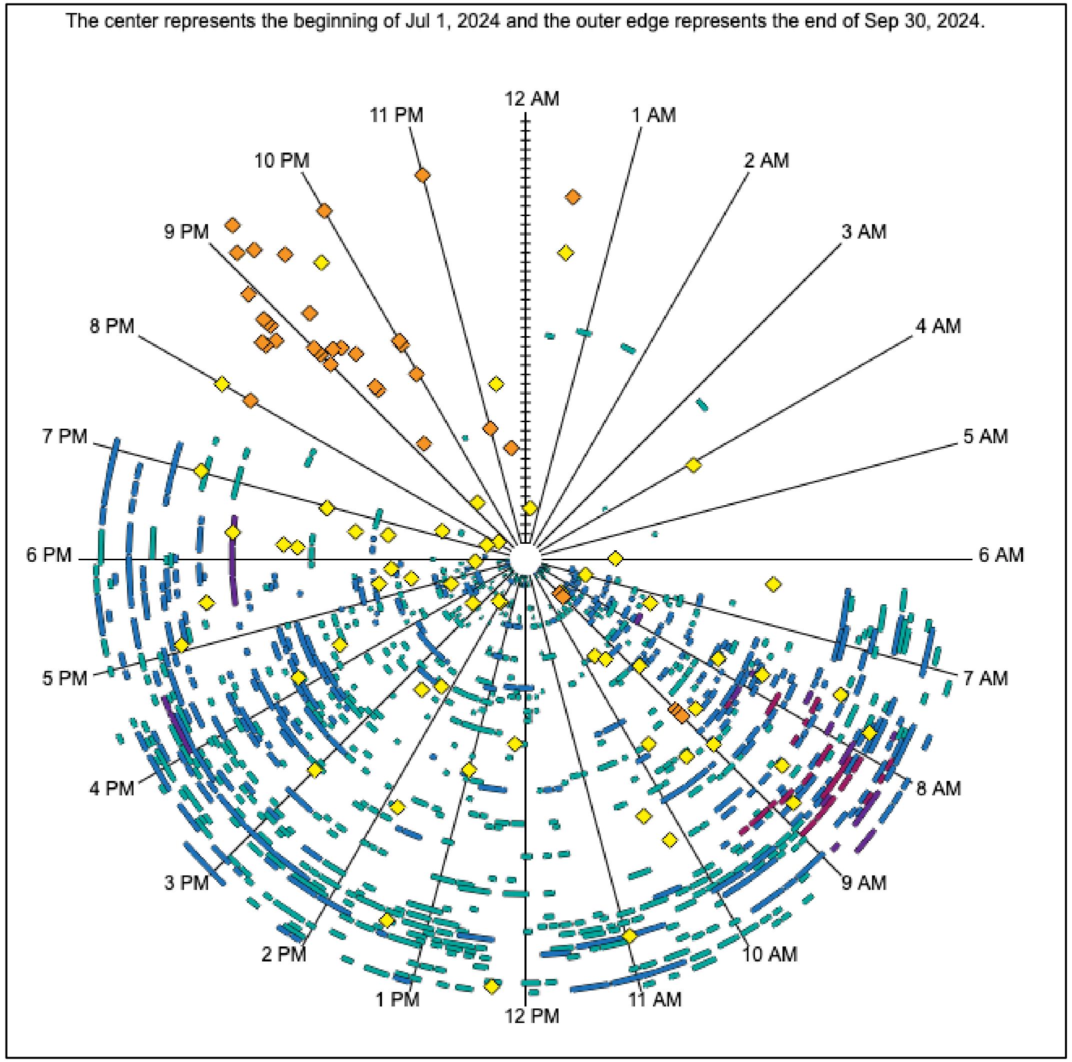
#5 Bottleneck: I-440 S (CCW) @ WADE AVE/EXIT 4

Q1 FY2025





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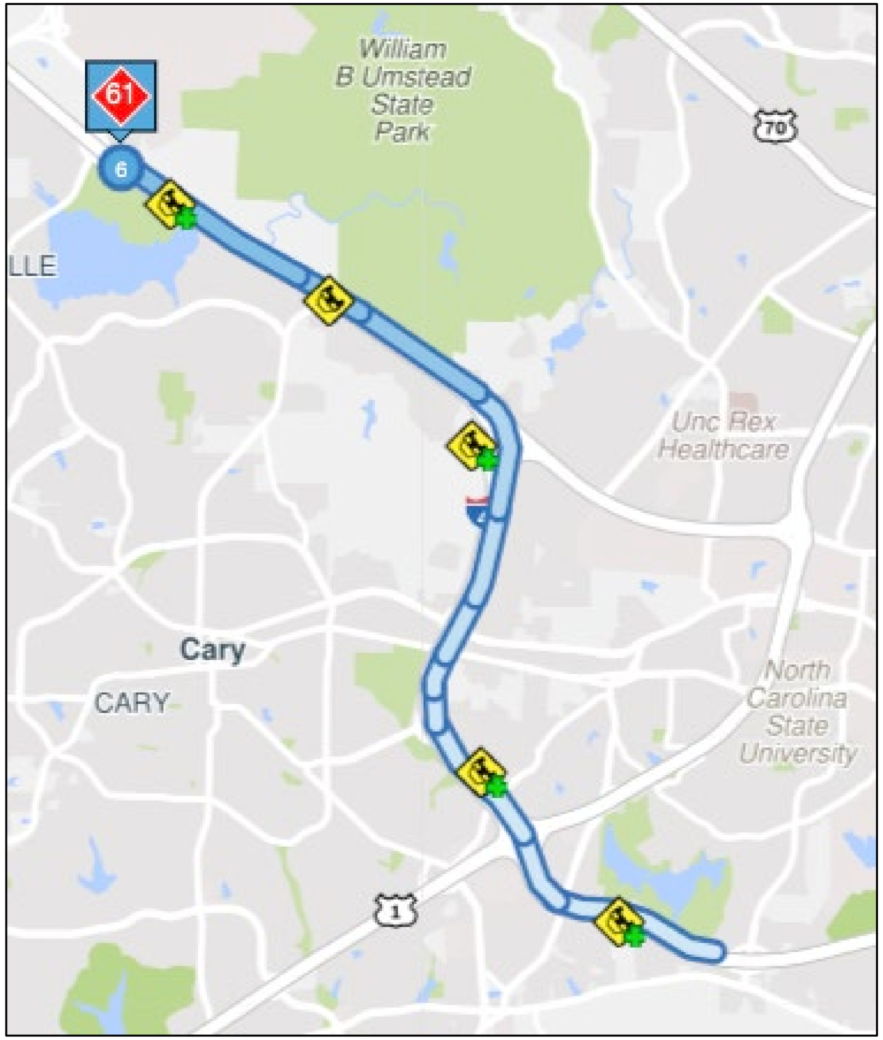
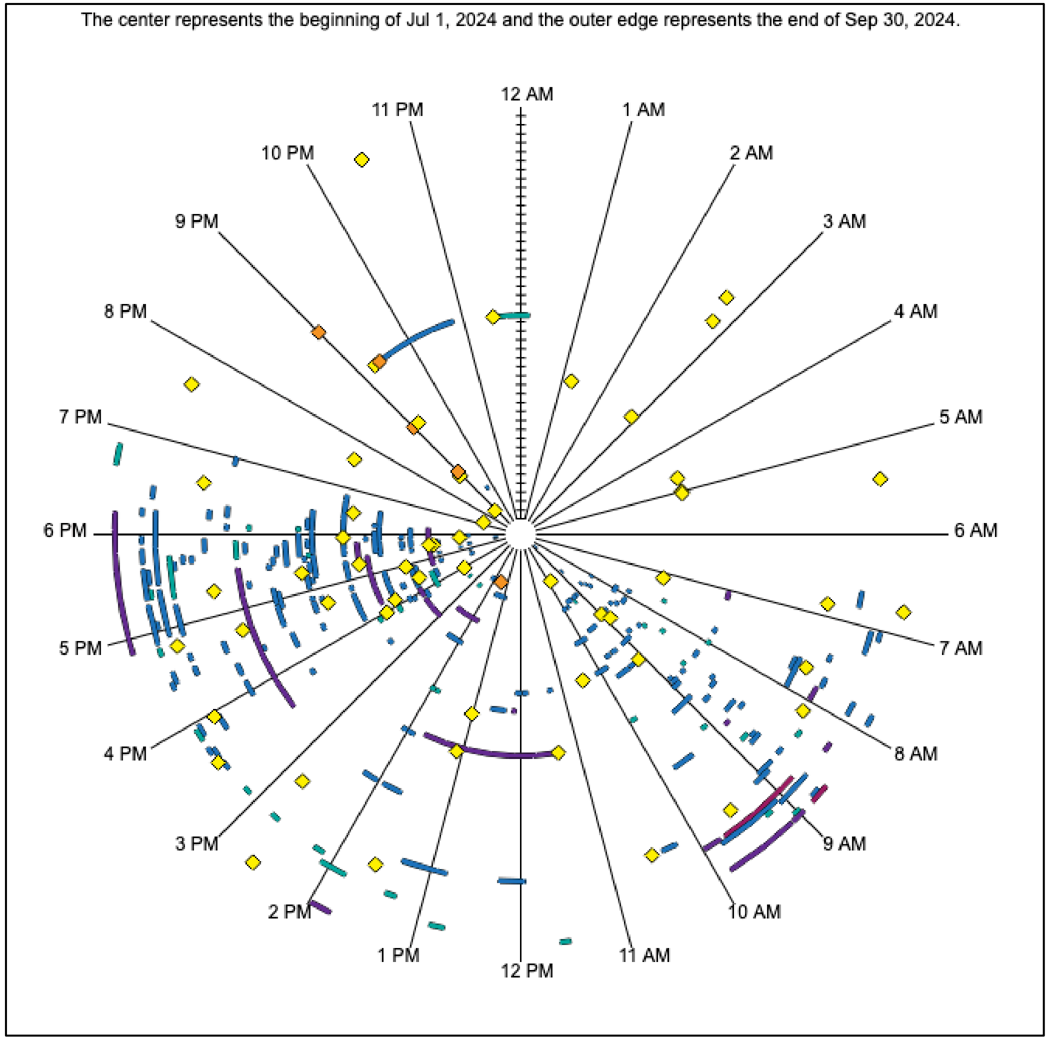
#6 Bottleneck: I-40 W @ AVIATION PKWY/EXIT 285

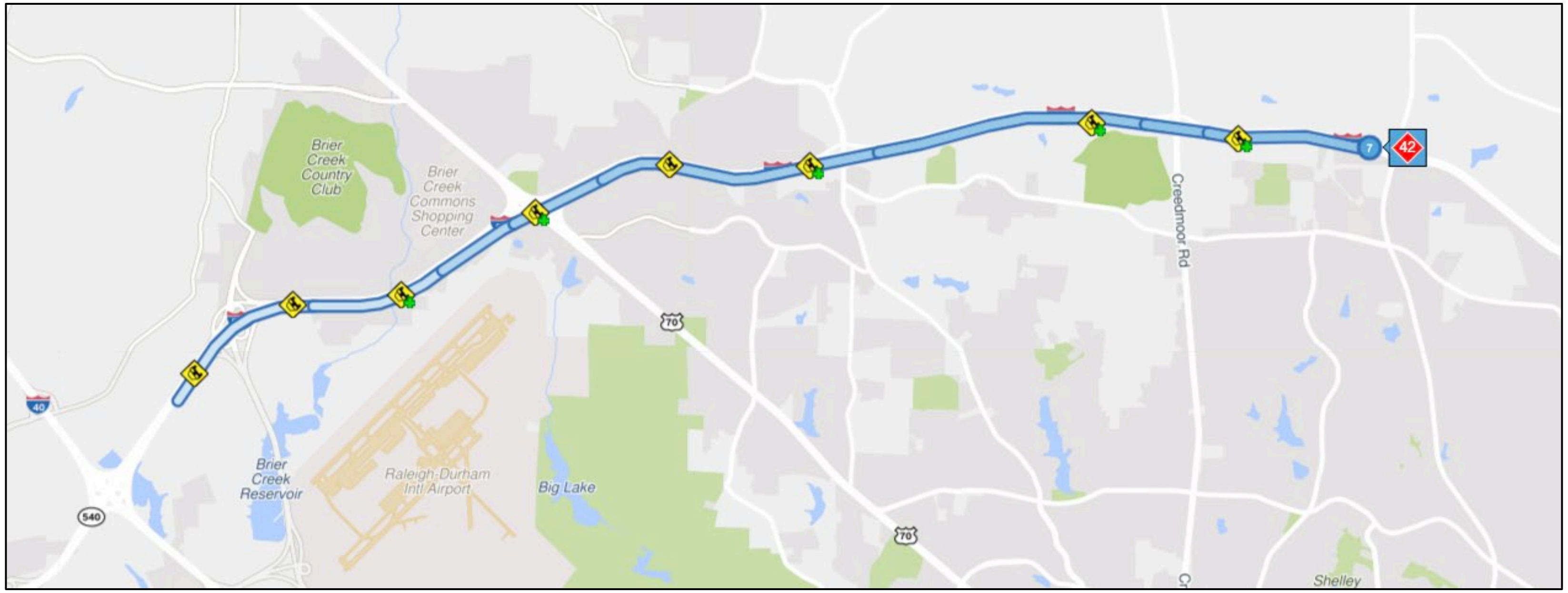
Q1 FY2025

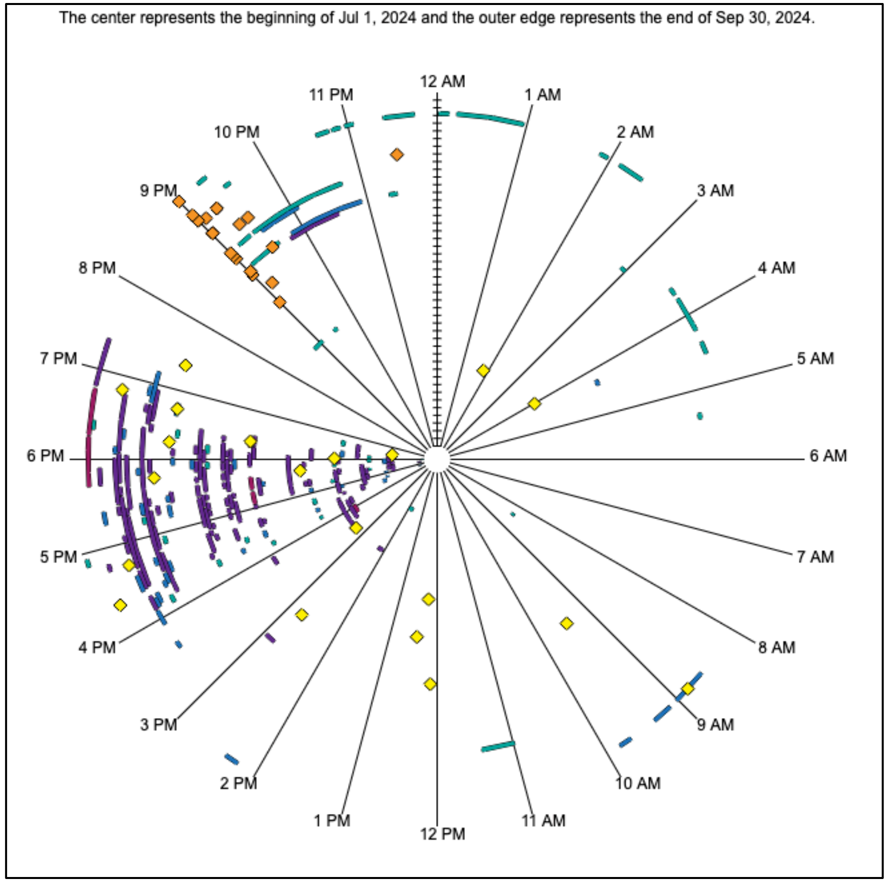




#7 Bottleneck: I-540 E (CW) @ SIX FORKS RD/EXIT 11

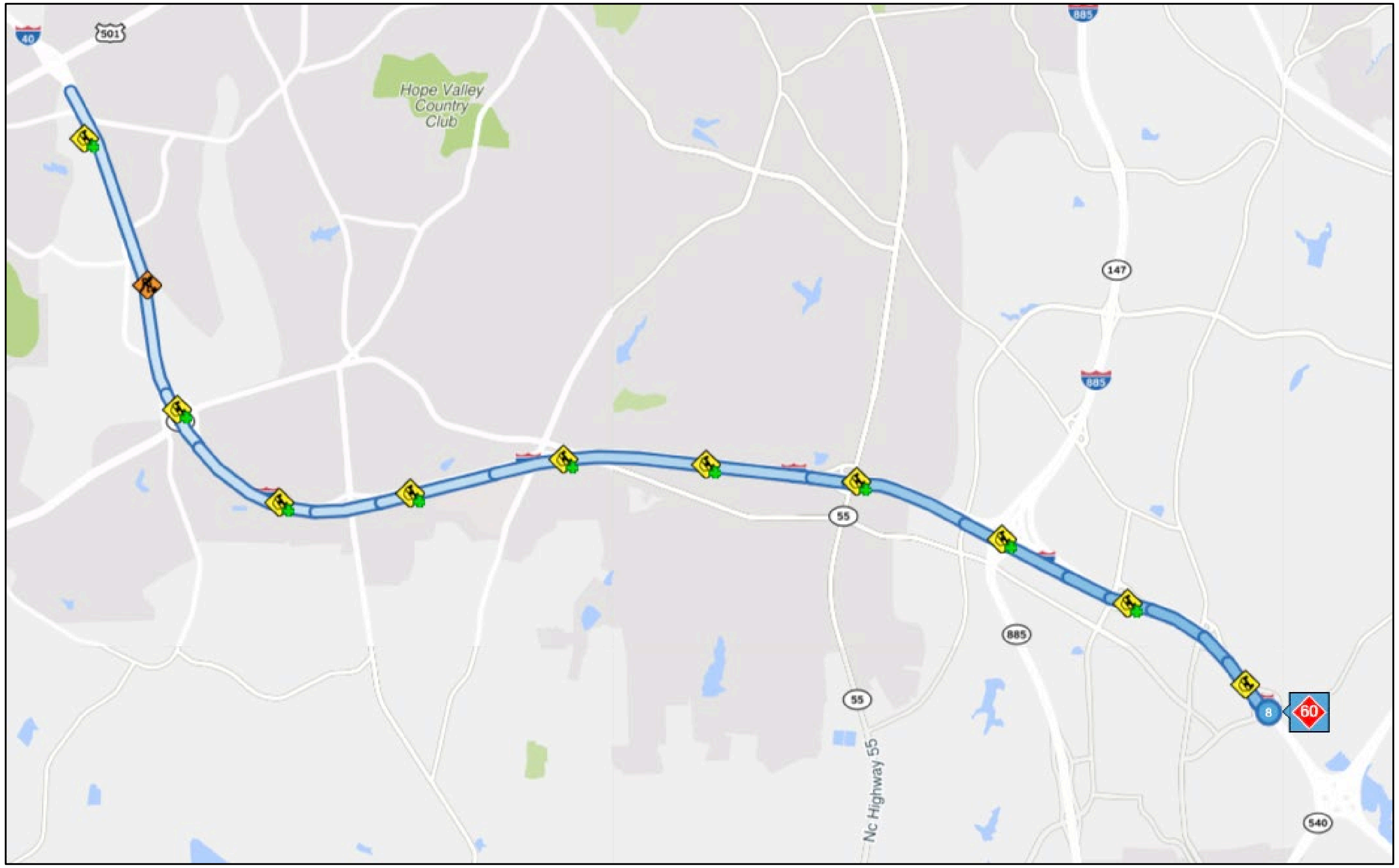
Q1 FY2025

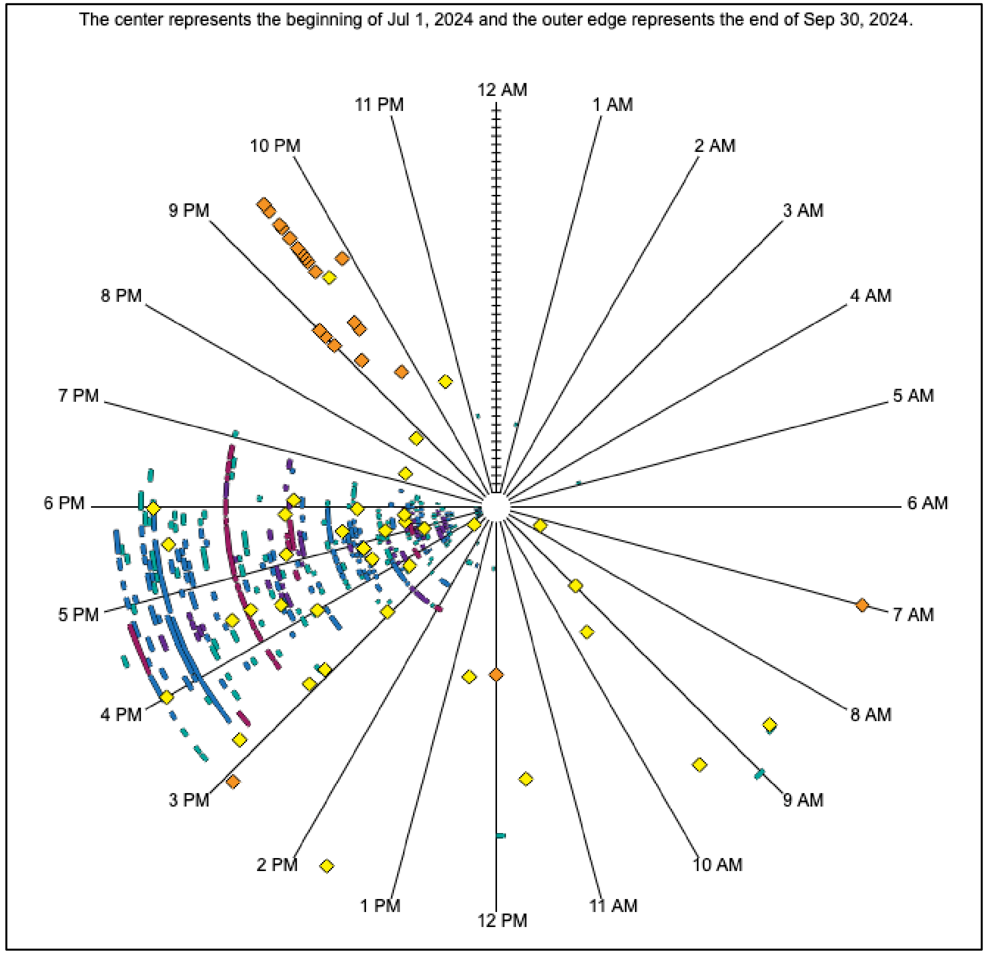




#8 Bottleneck: I-40 E @ PAGE RD/EXIT 282

Q1 FY2025





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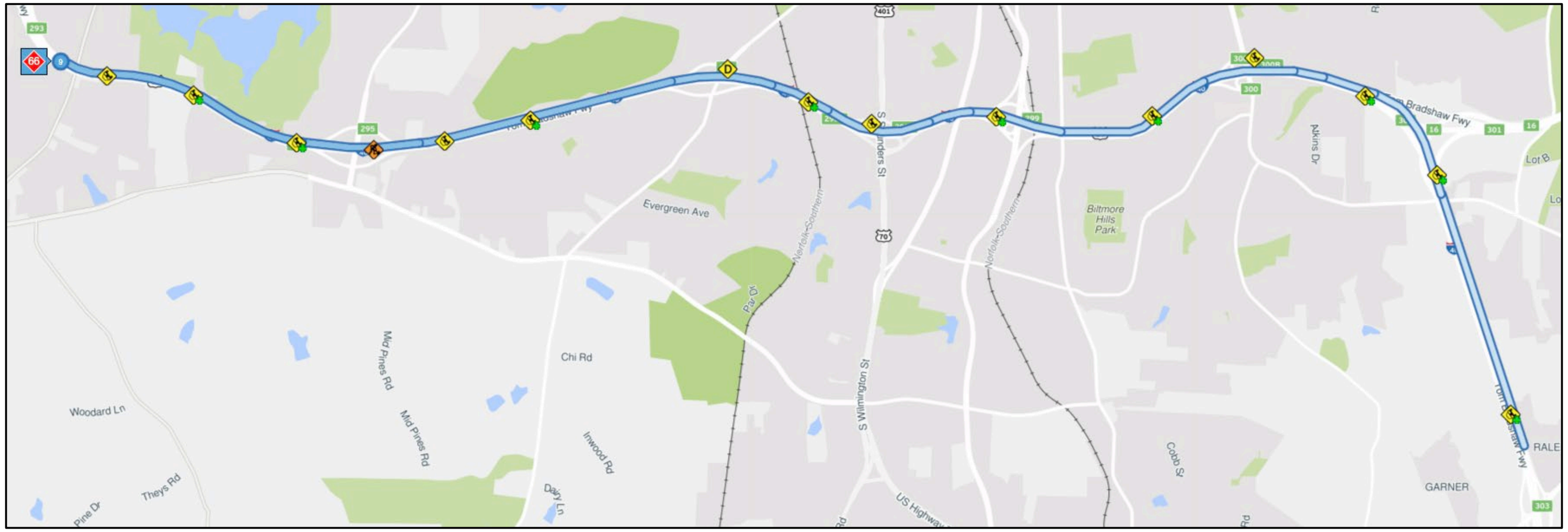
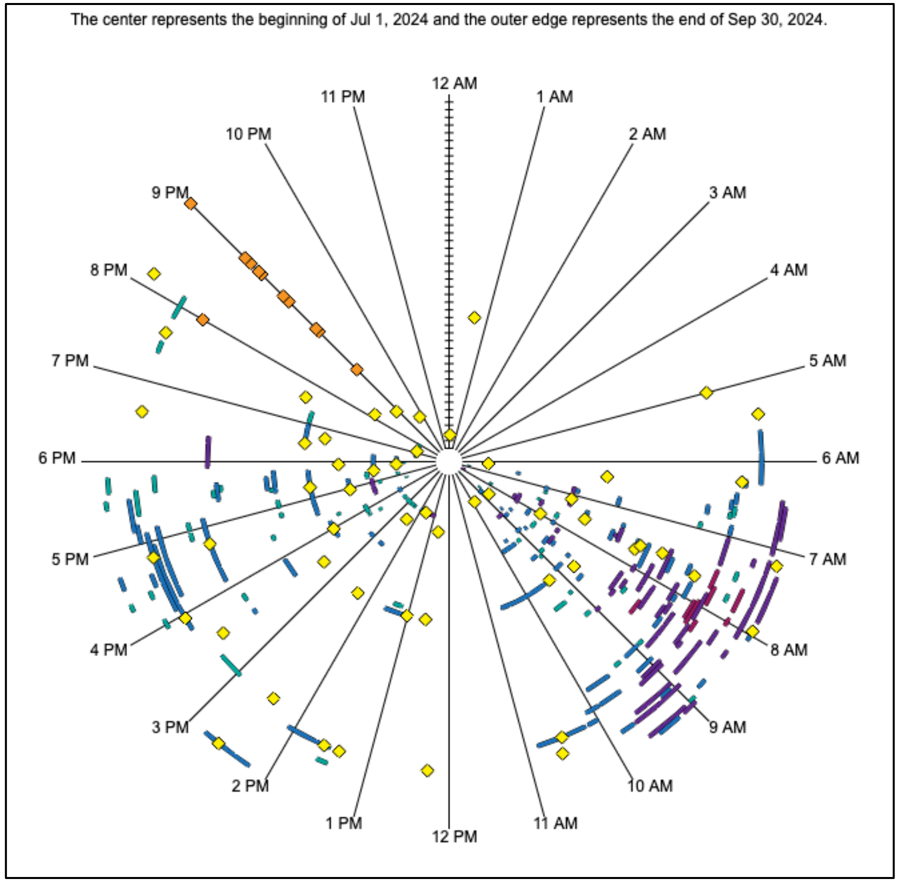
NC Capital Area Metropolitan Planning Organization

#9 Bottleneck: I-40 W @ I-440/US-1/US-64/EXIT 293

Q1 FY2025

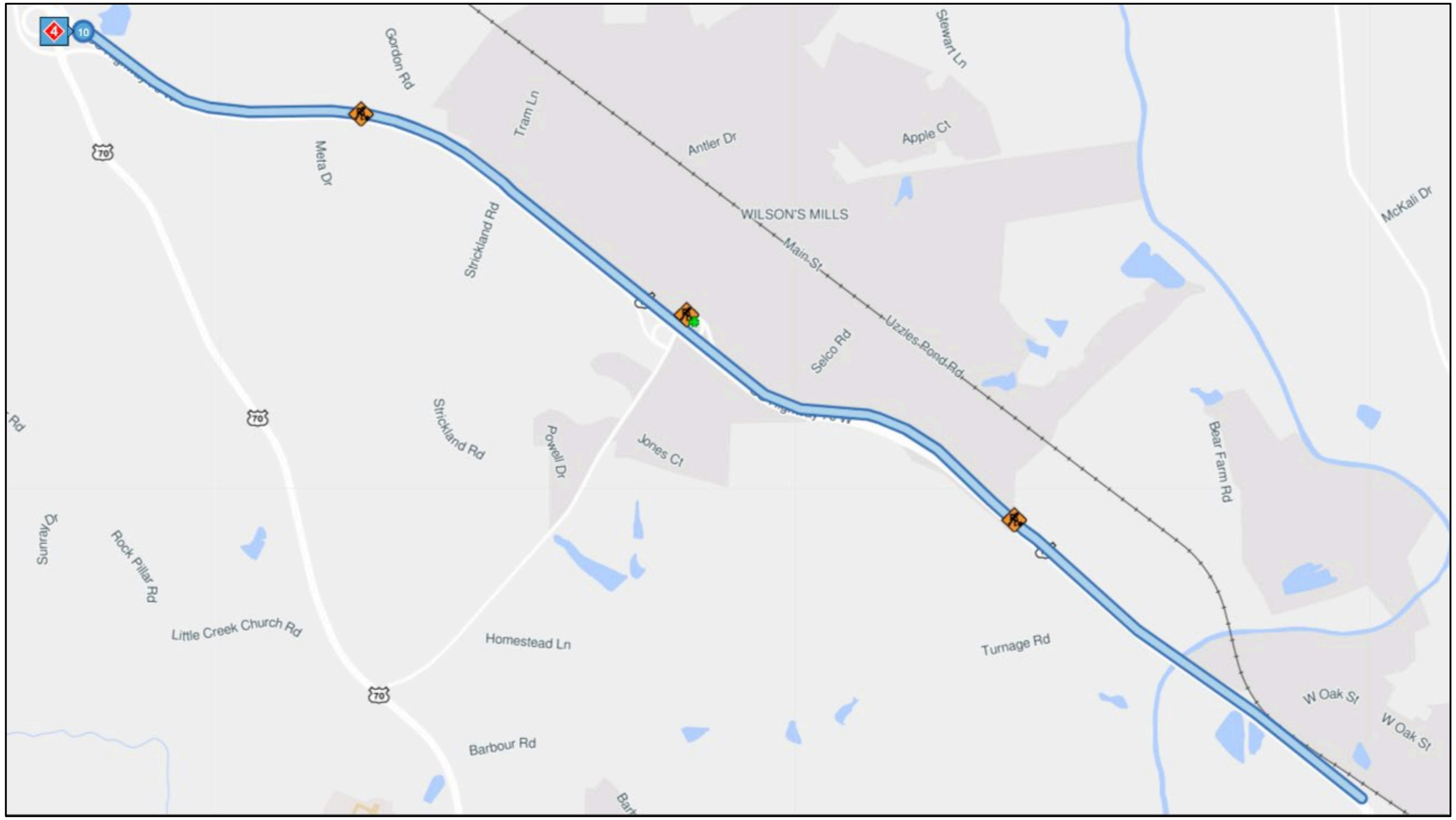


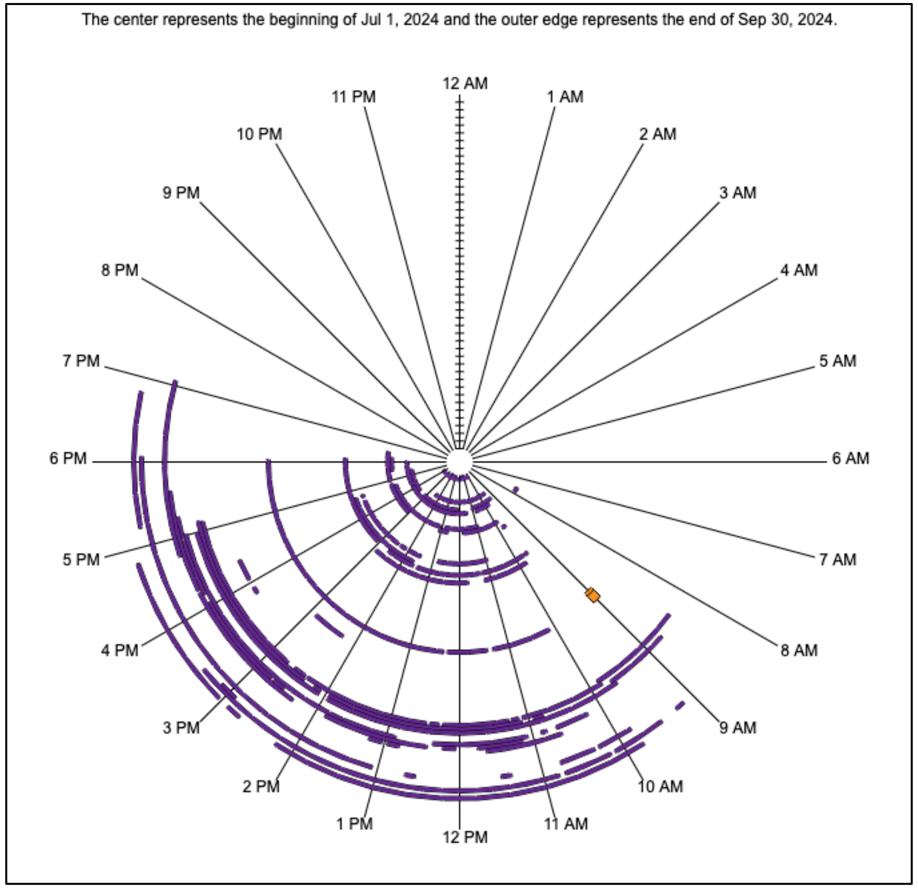


NC Capital Area Metropolitan Planning Organization

#10 Bottleneck: US-70 W @ US-70 (CLAYTON)

Q1 FY2025





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RITIS Performance Report

Top 10

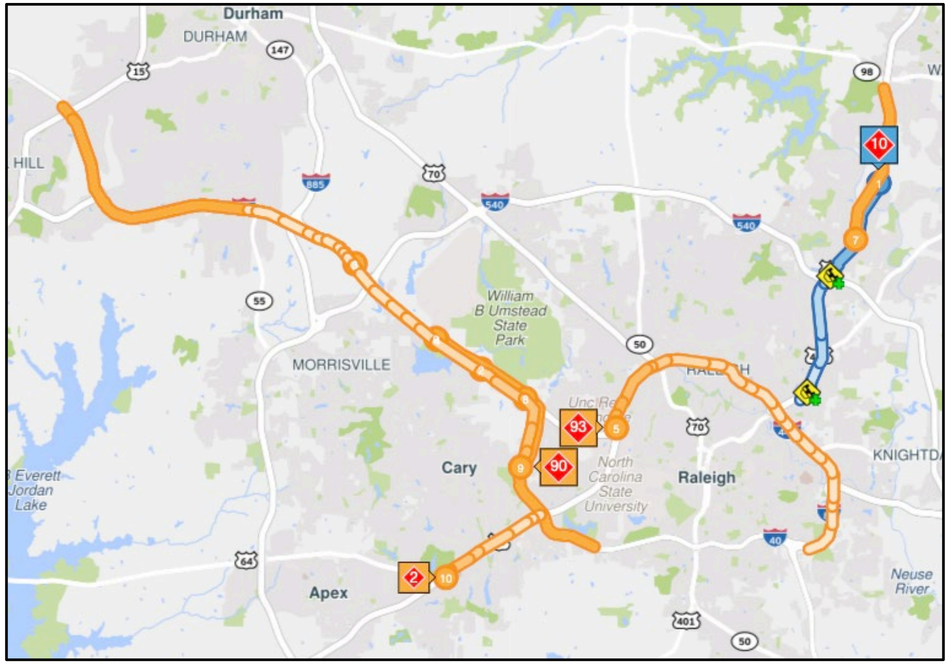
Bottleneck Analysis Report

Congestion Management Process – Status of the System Report

FY 2025 Q2

Top 10 Bottlenecks in the Region Q2 FY2025

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	US-1 NORTH @ BURLINGTON MILLS RD	4	2.86	**3h 10m**	10	**44,956**	**45,739,390**	A133, F11-1a, F11-1b, F11-1c, F86, F86a
2	I-40 EAST @ HARRISON AVE/EXIT 287	**2**	3.72	50m	97	16,268	41,076,655	A240a, A240b, A562, A640, F112a, F40
3	I-40 EAST @ PAGE RD/EXIT 282	8	3.41	38m	57	10,311	21,253,307	*TWTPO Projects
4	I-40 EAST @ AVIATION PKWY/EXIT 285	3	2.05	56m	88	9,332	19,924,743	A640, A641, A64a, F112a, F40
5	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	5	1.57	1h 40m	93	13,357	19,335,926	A562, A79a, F10, F83, F86a
6	I-40 WEST @ AVIATION PKWY/EXIT 285	6	3.33	30m	41	20,669	17,856,827	A562, A640, A641, A64a, F112a, F112b, F40, F41, F43, F43b, F81a
7	US-1 SOUTH @ PERRY CREEK RD/DURANT RD	15	3.17	1h 12m	1	9,088	17,574,465	A659, F11-1a, F11-1b, F11-1c, F11-1d
8	I-40 EAST @ RALEIGH CHAPEL HILL EXPY/EXIT 289	13	**4.08**	21m	**106**	6,655	17,209,825	A562, A640, F112b, F40, F41, F81a
9	I-40 EAST @ NC-54/EXIT 290	22	2.91	54m	90	11,579	15,803,382	A413, A562, F112a, F112b, F40, F41, F81a
10	US-1 SOUTH/US-64 WEST @ US-64/TRYON RD/EXIT 98	21	1.13	60m	2	6,201	10,280,786	F10, F110b, F15a, F15a3, F43b



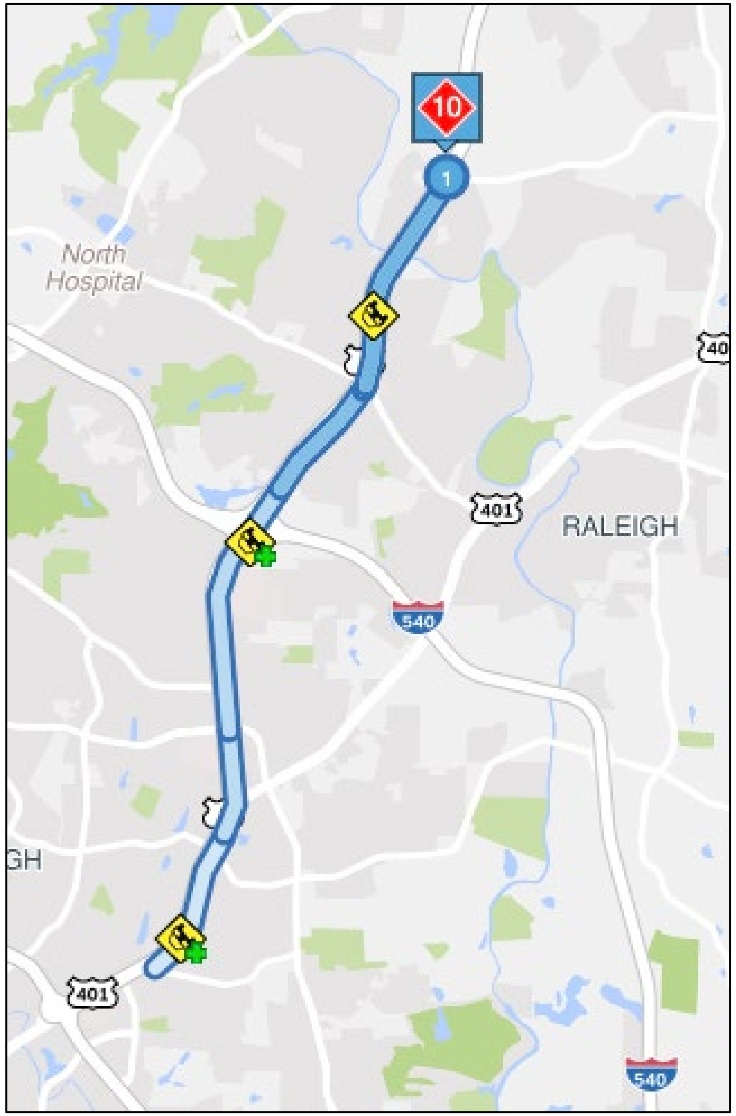
*Bottlenecks are ranked by **Total Delay** – Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

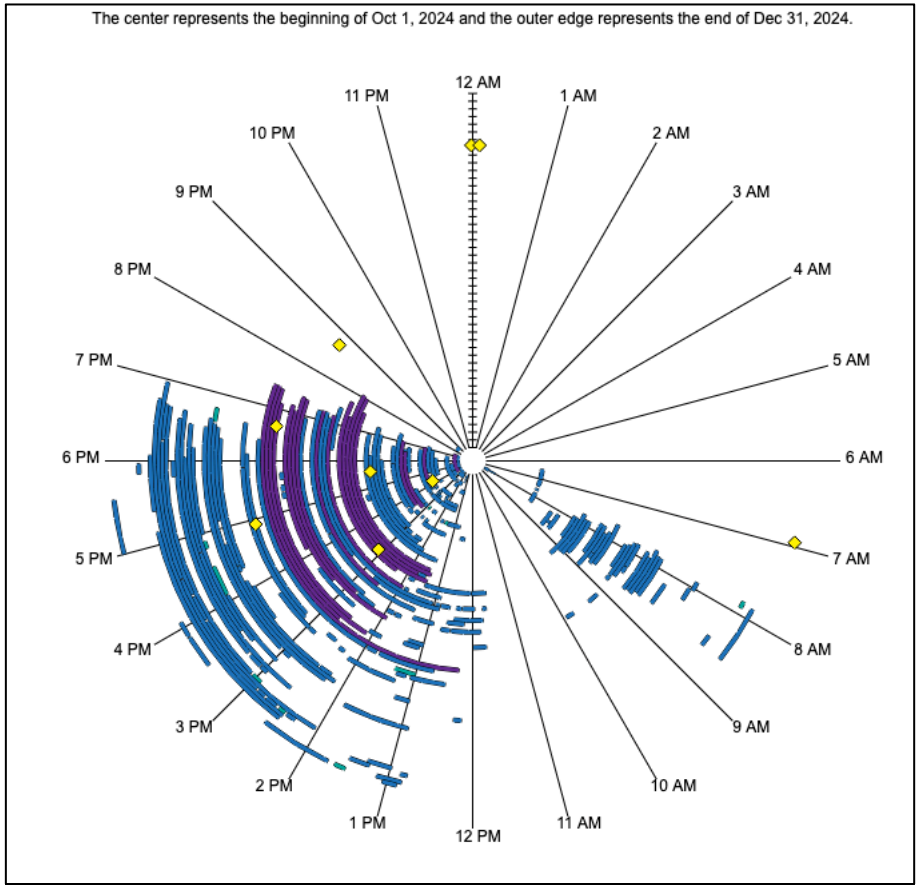
CW = Clockwise CCW = Counterclockwise

Red #s = highest value for that metric

#1 Bottleneck: US-1 N @ BURLINGTON MILLS RD

Q2 FY2025





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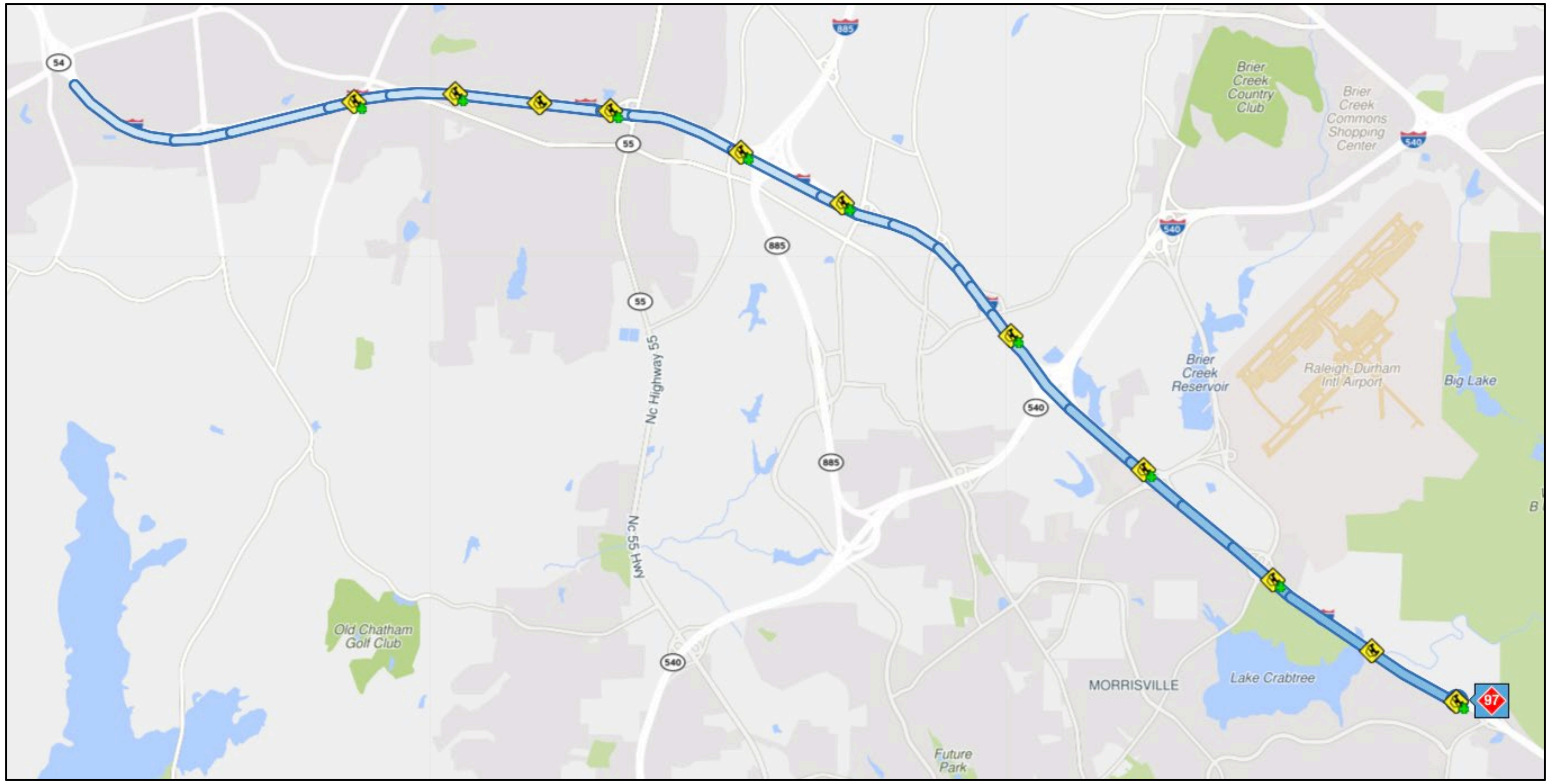
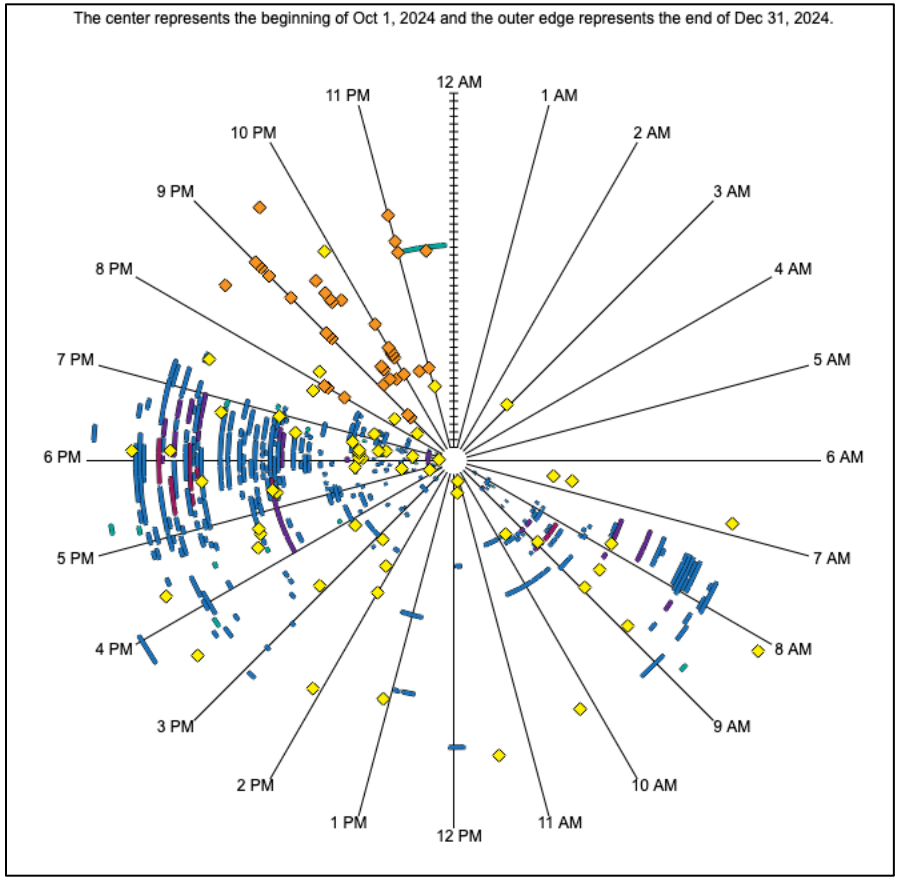
#2 Bottleneck: I-40 E @ HARRISON AVE/EXIT 287

Q2 FY2025





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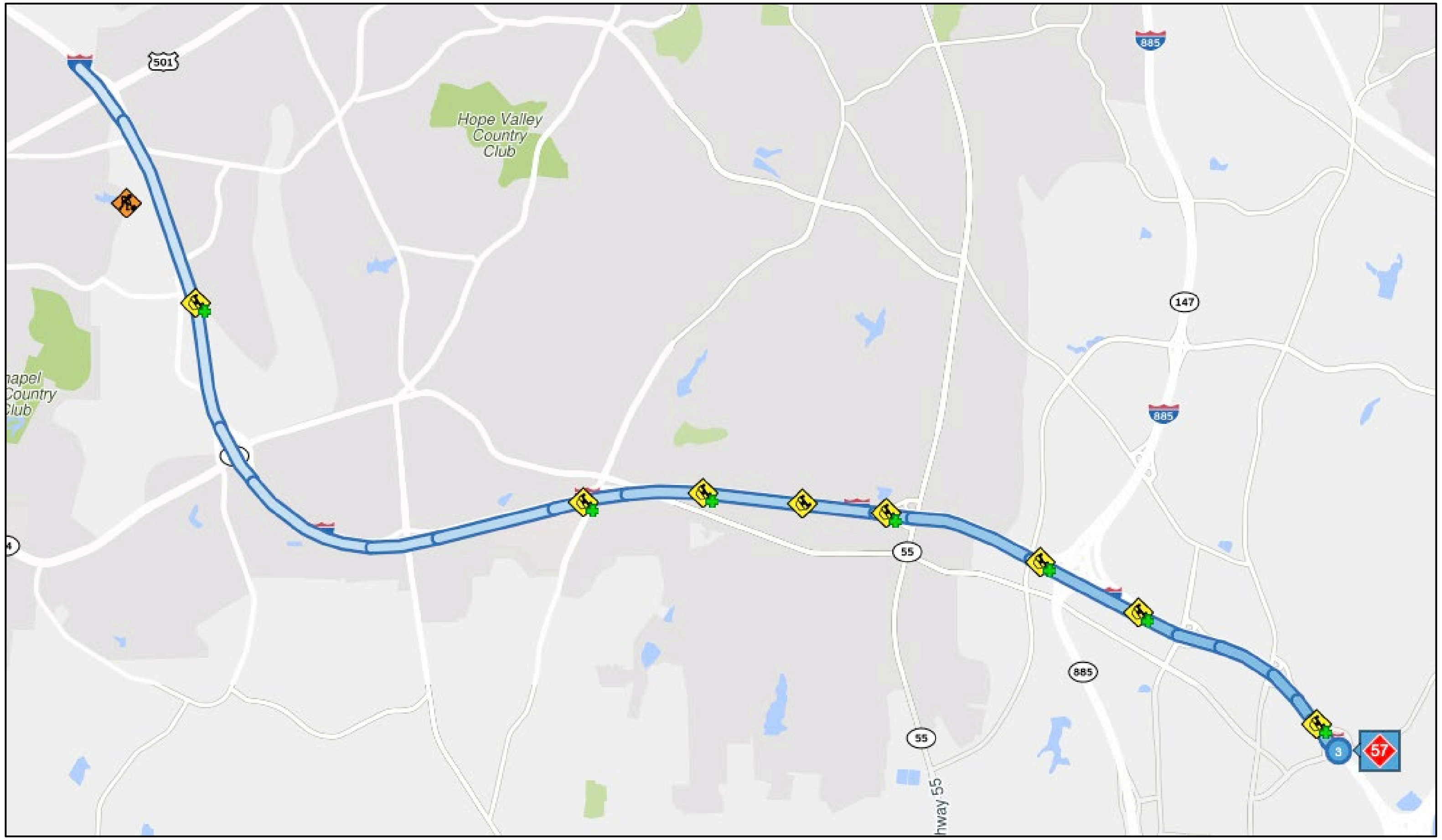
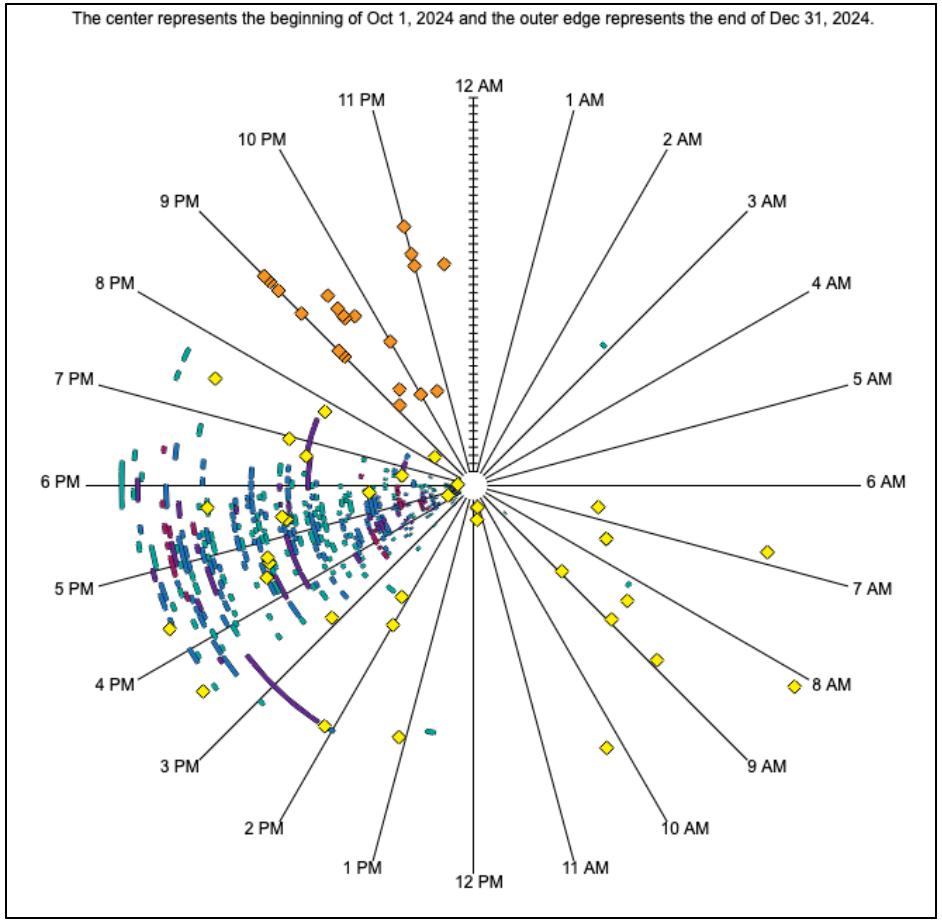
#3 Bottleneck: I-40 E @ PAGE RD/EXIT 282

Q2 FY2025





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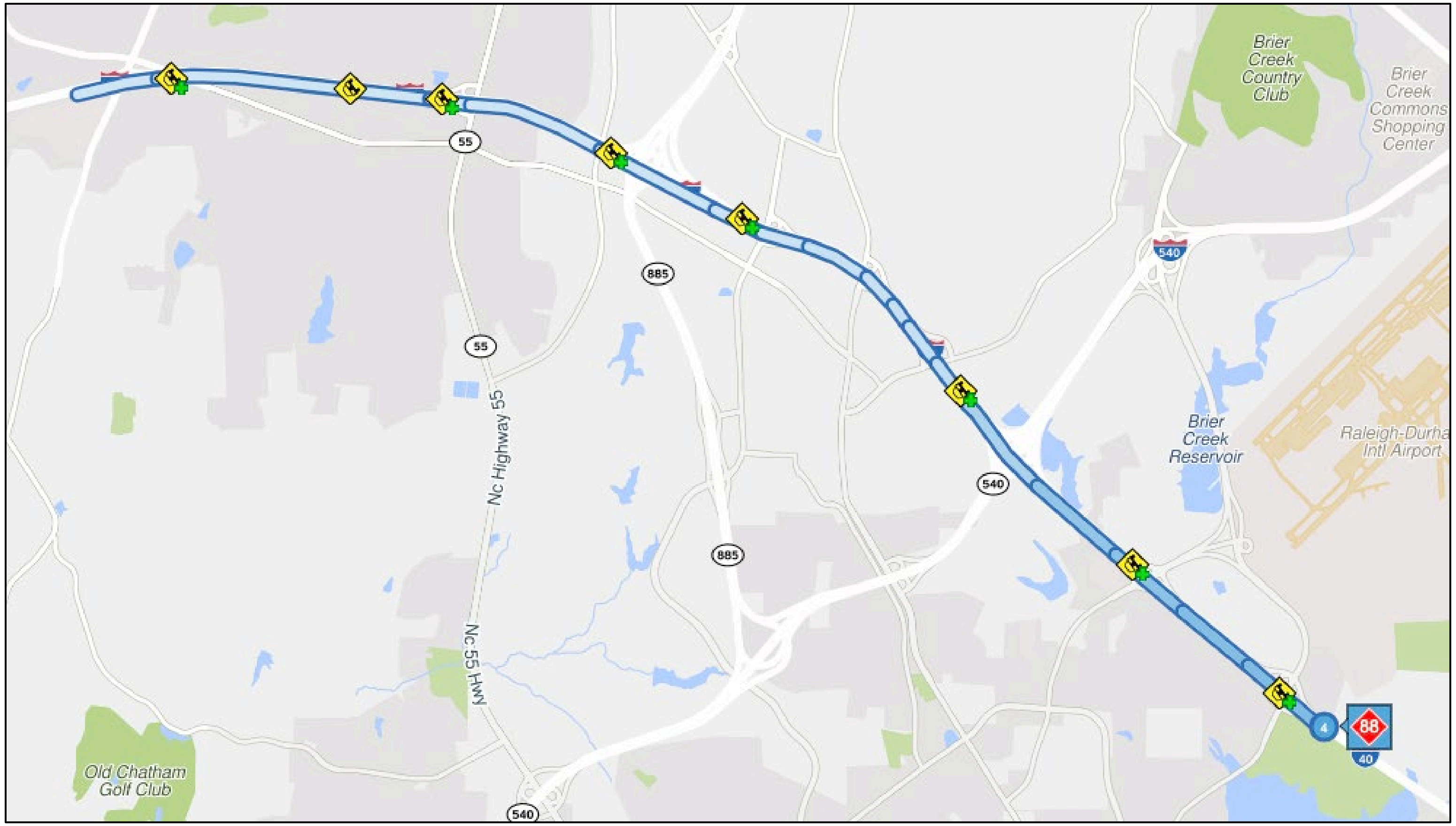
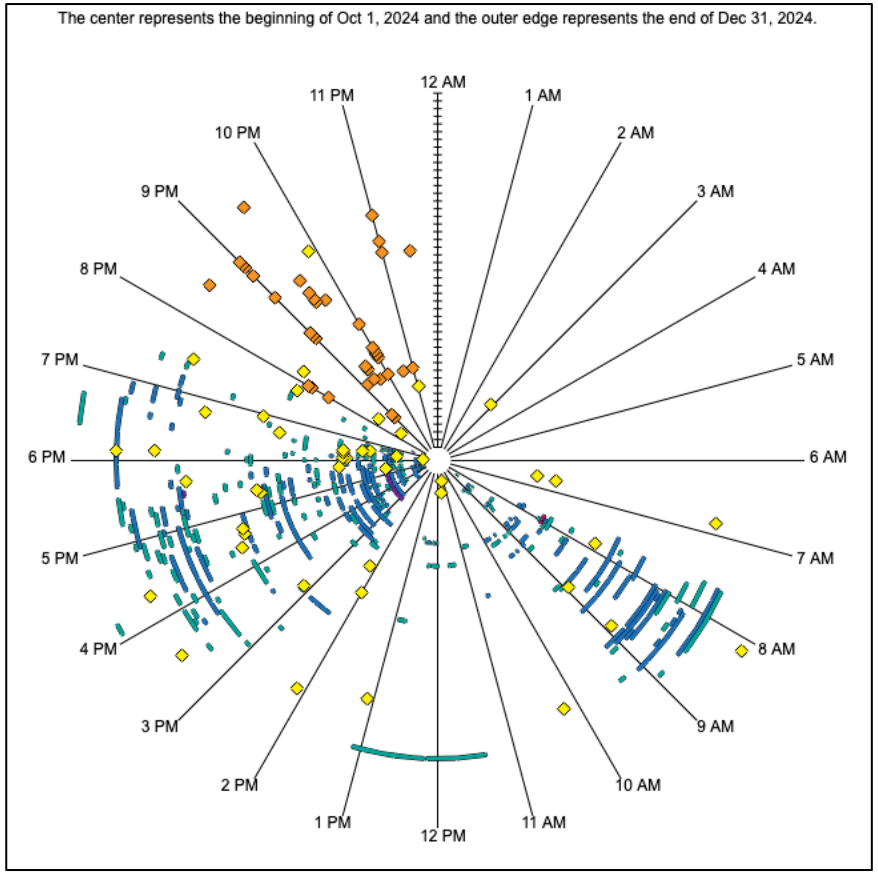
#4 Bottleneck: I-40 E @ AVIATION PKWY/EXIT 285

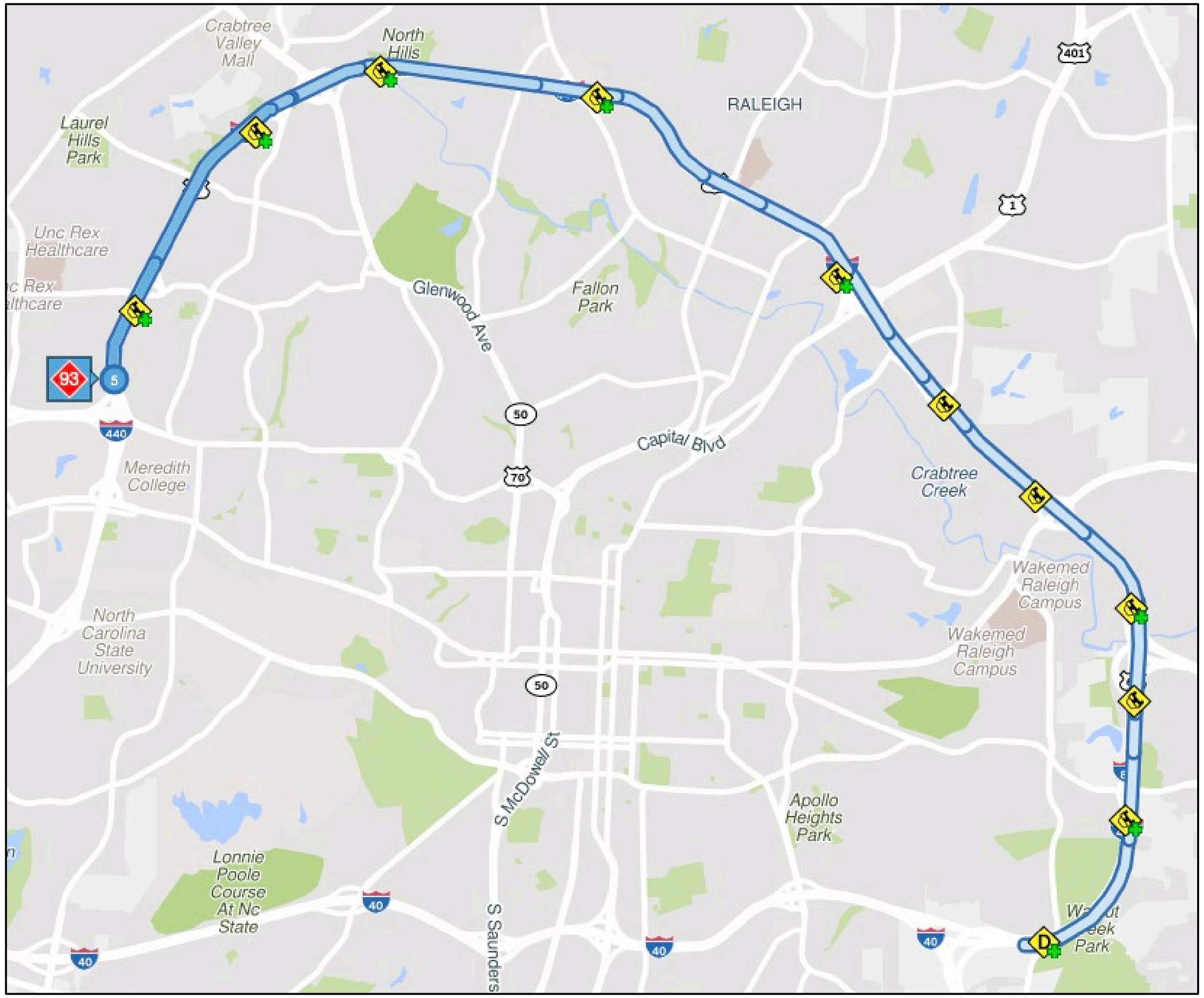
Q2 FY2025

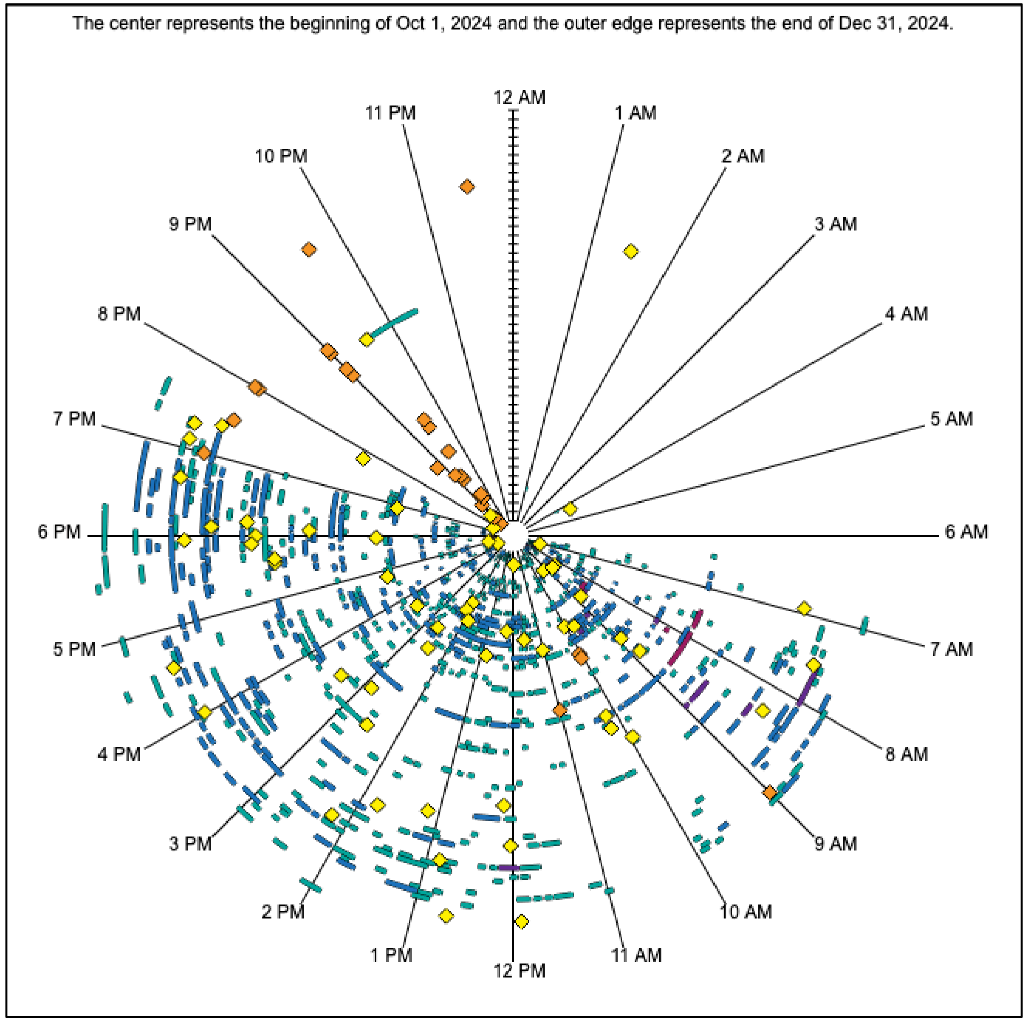




#5 Bottleneck: I-440 S (CCW) @ WADE AVE/EXIT 4

Q2 FY2025





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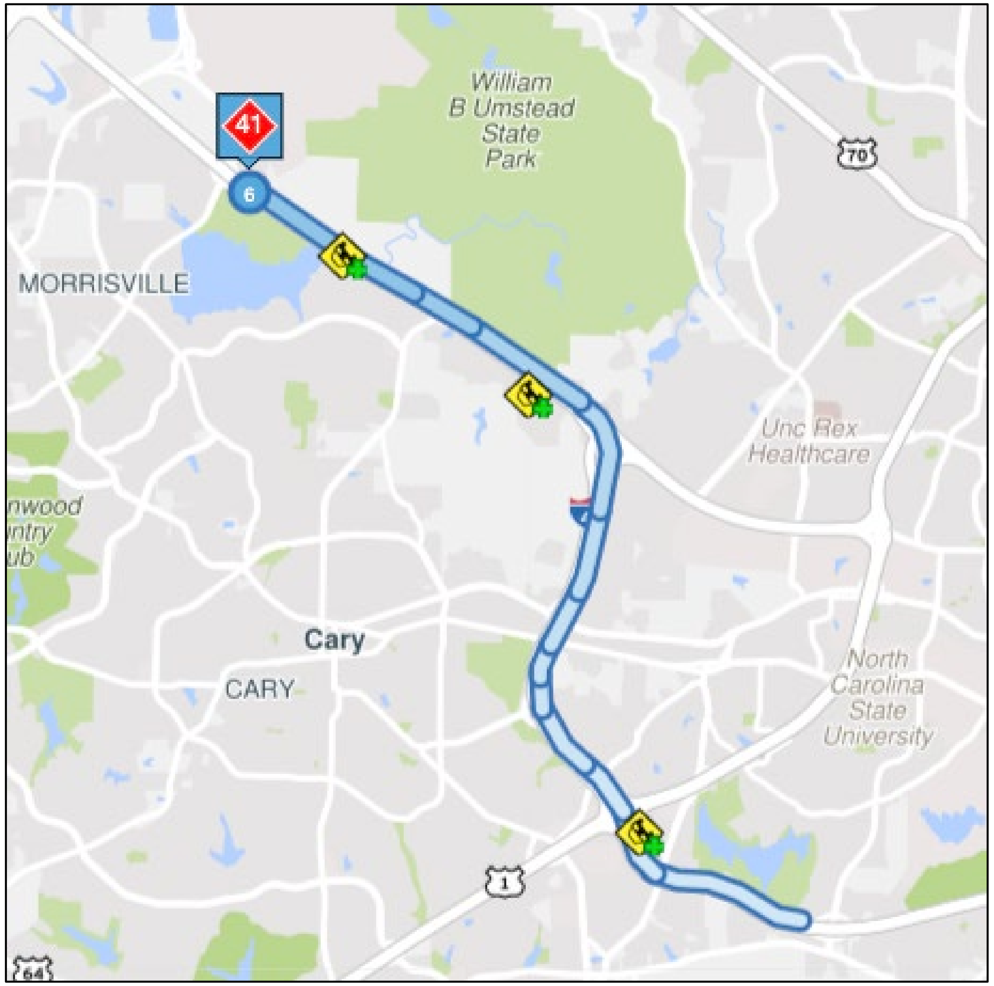
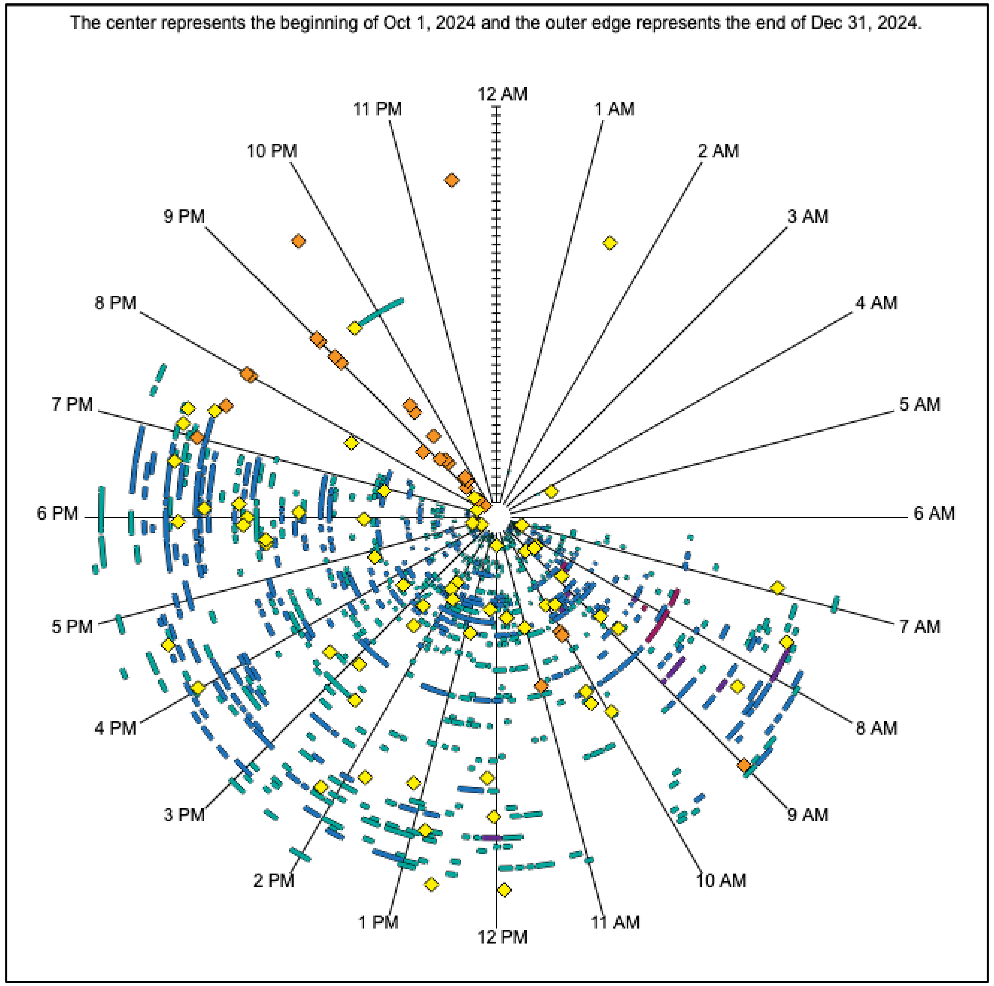
#6 Bottleneck: I-40 W @ AVIATION PKWY/EXIT 285

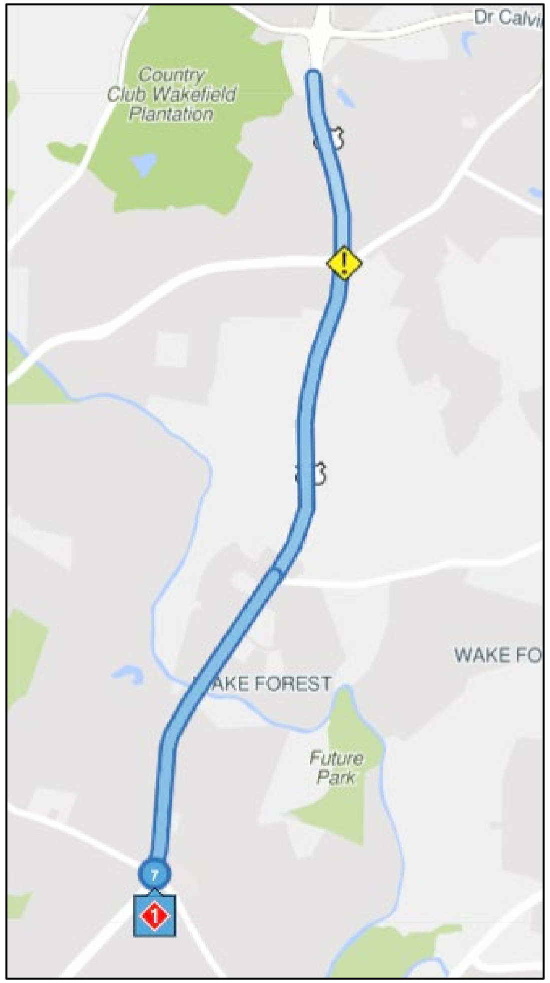
Q2 FY2025

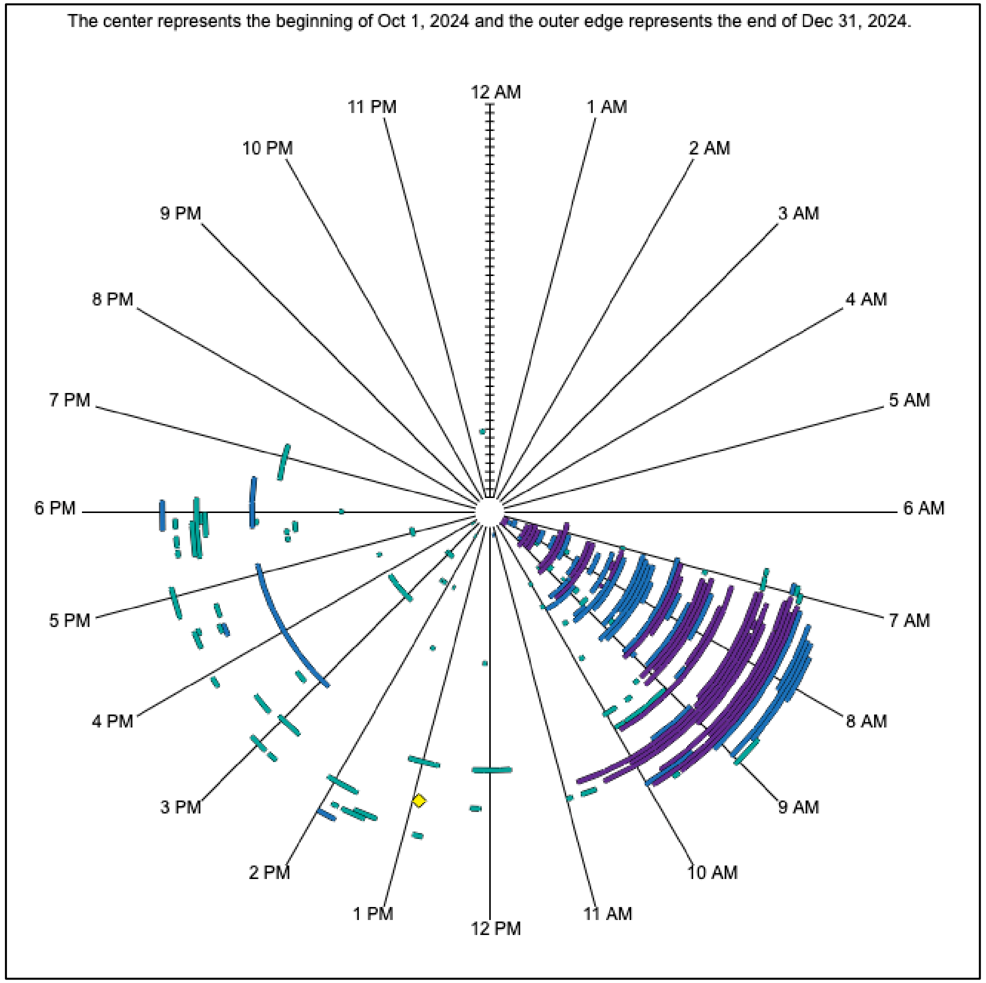




#7 Bottleneck: US-1 S @ PERRY CREEK RD/DURANT RD

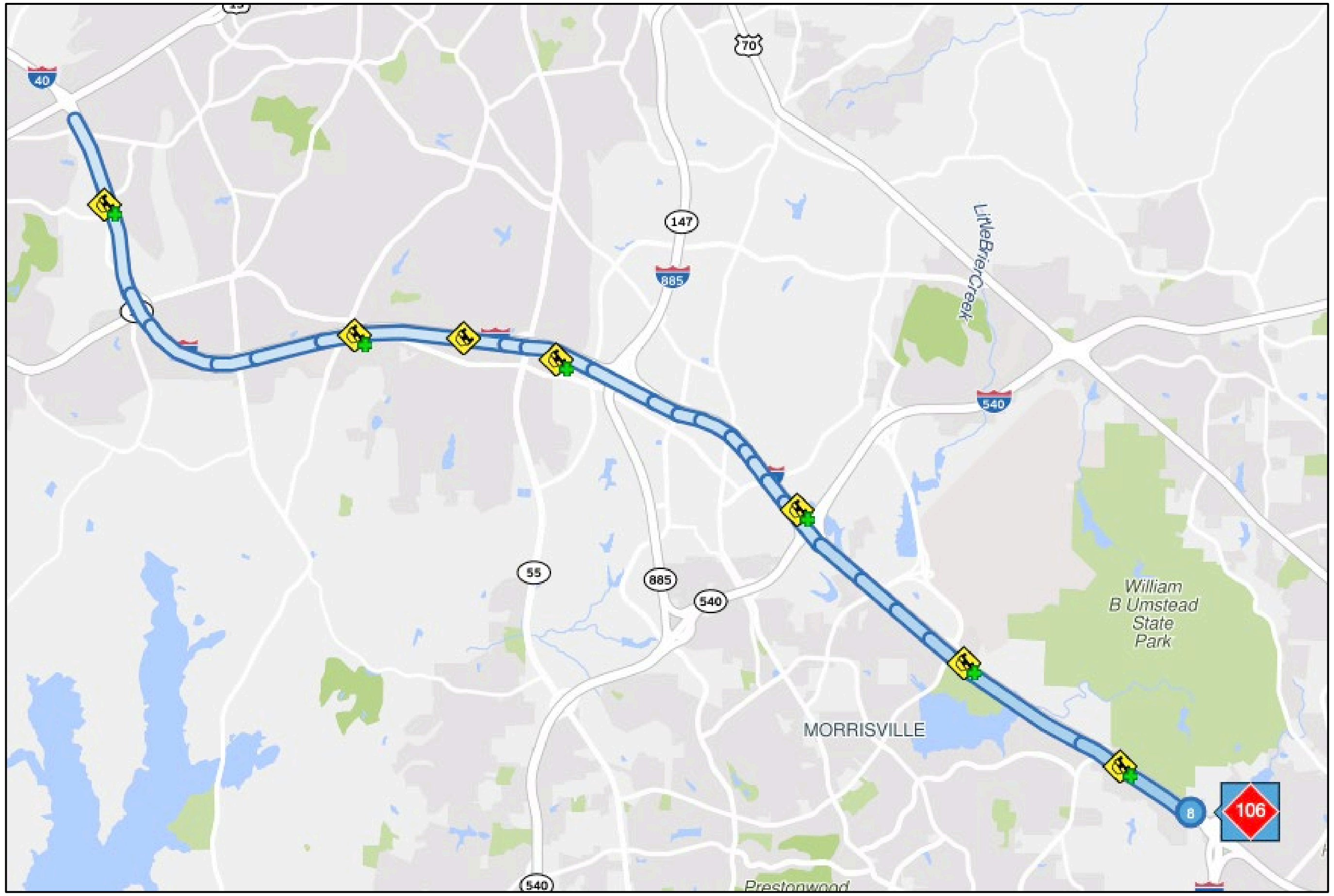
Q2 FY2025

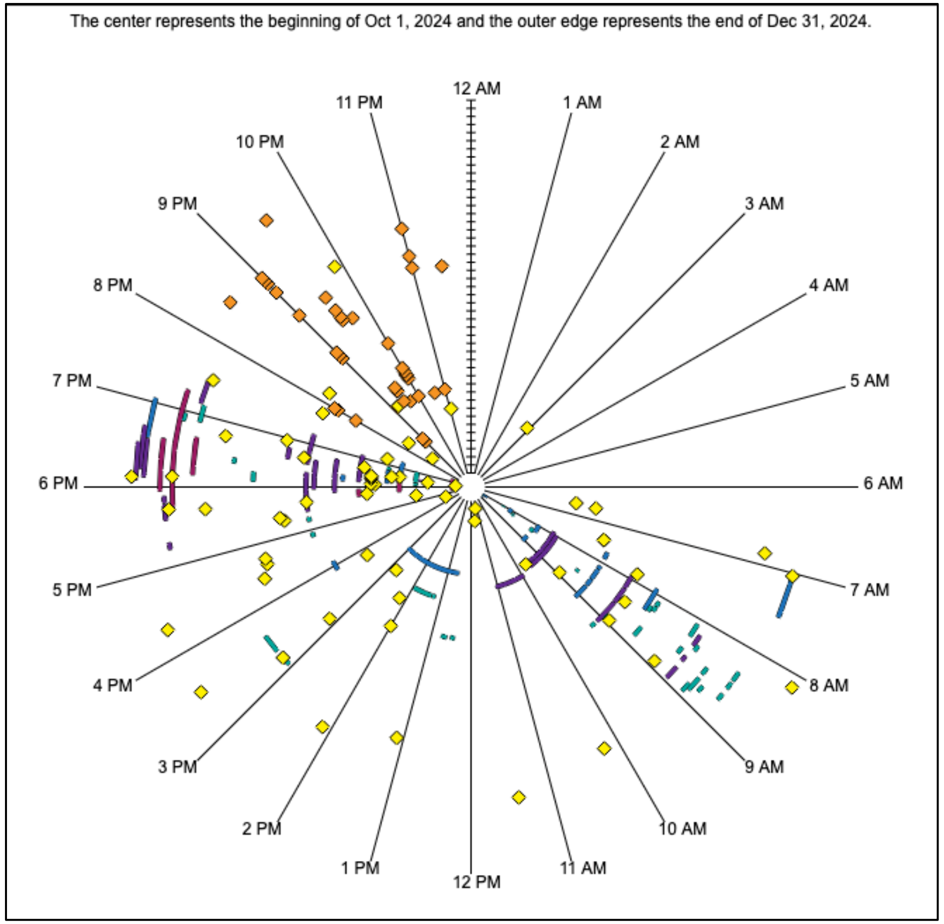




#8 Bottleneck: I-40 E @ RALEIGH CHAPEL HILL EXPY/EXIT 289

Q2 FY2025





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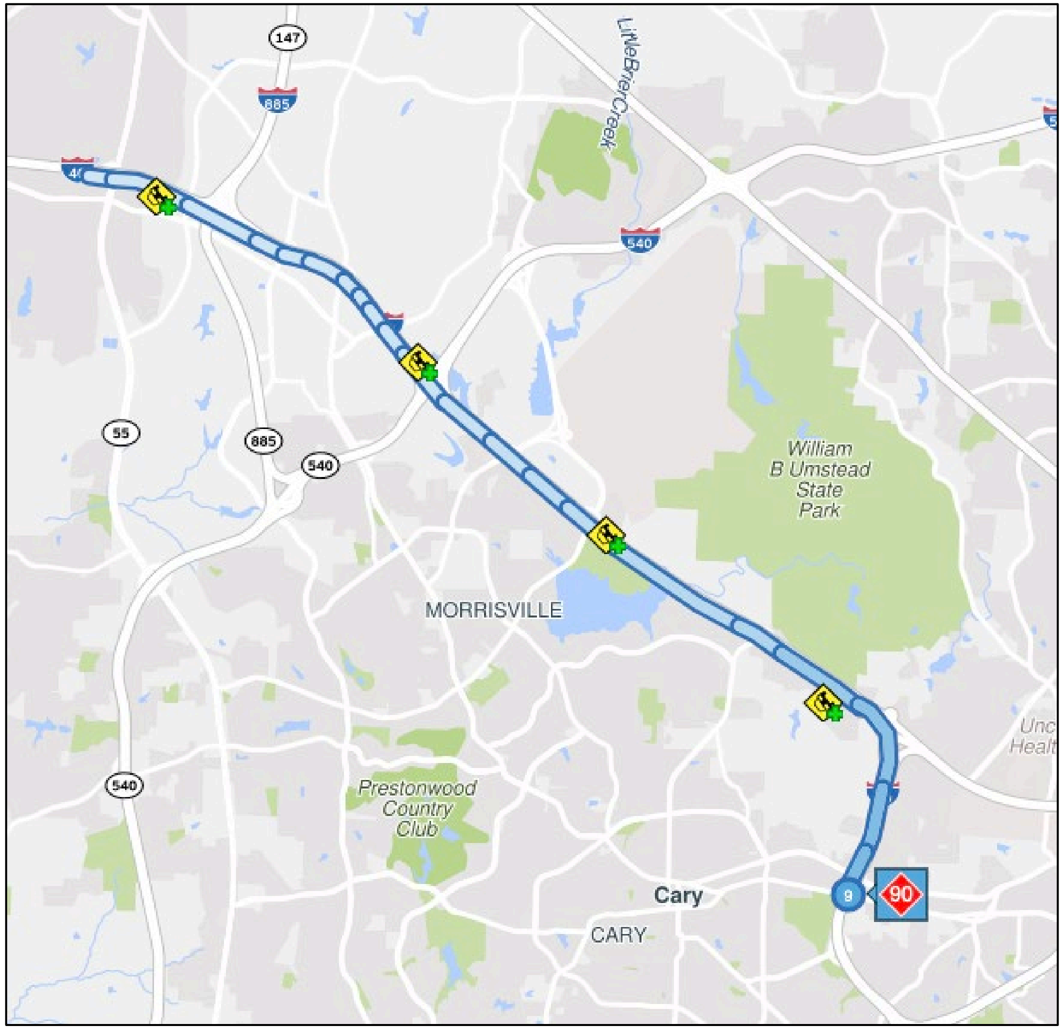
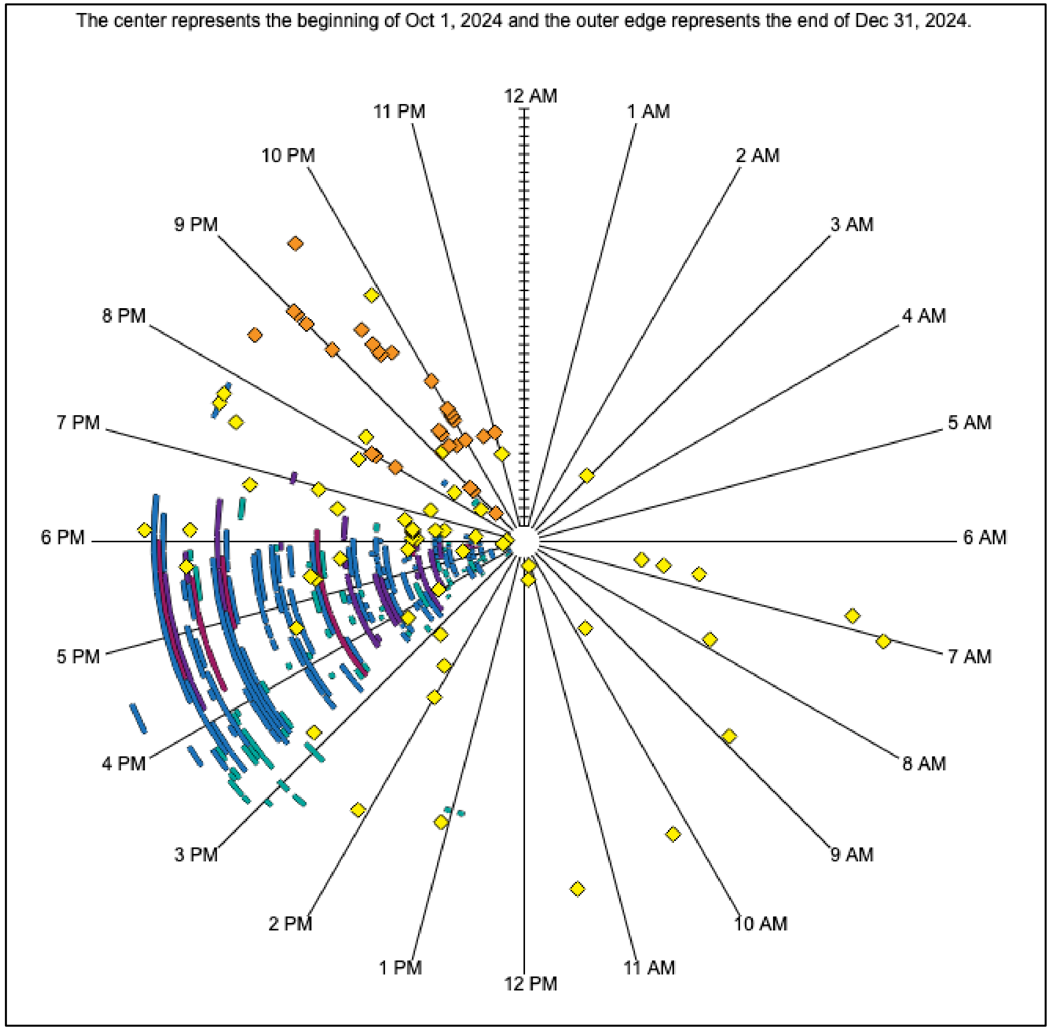
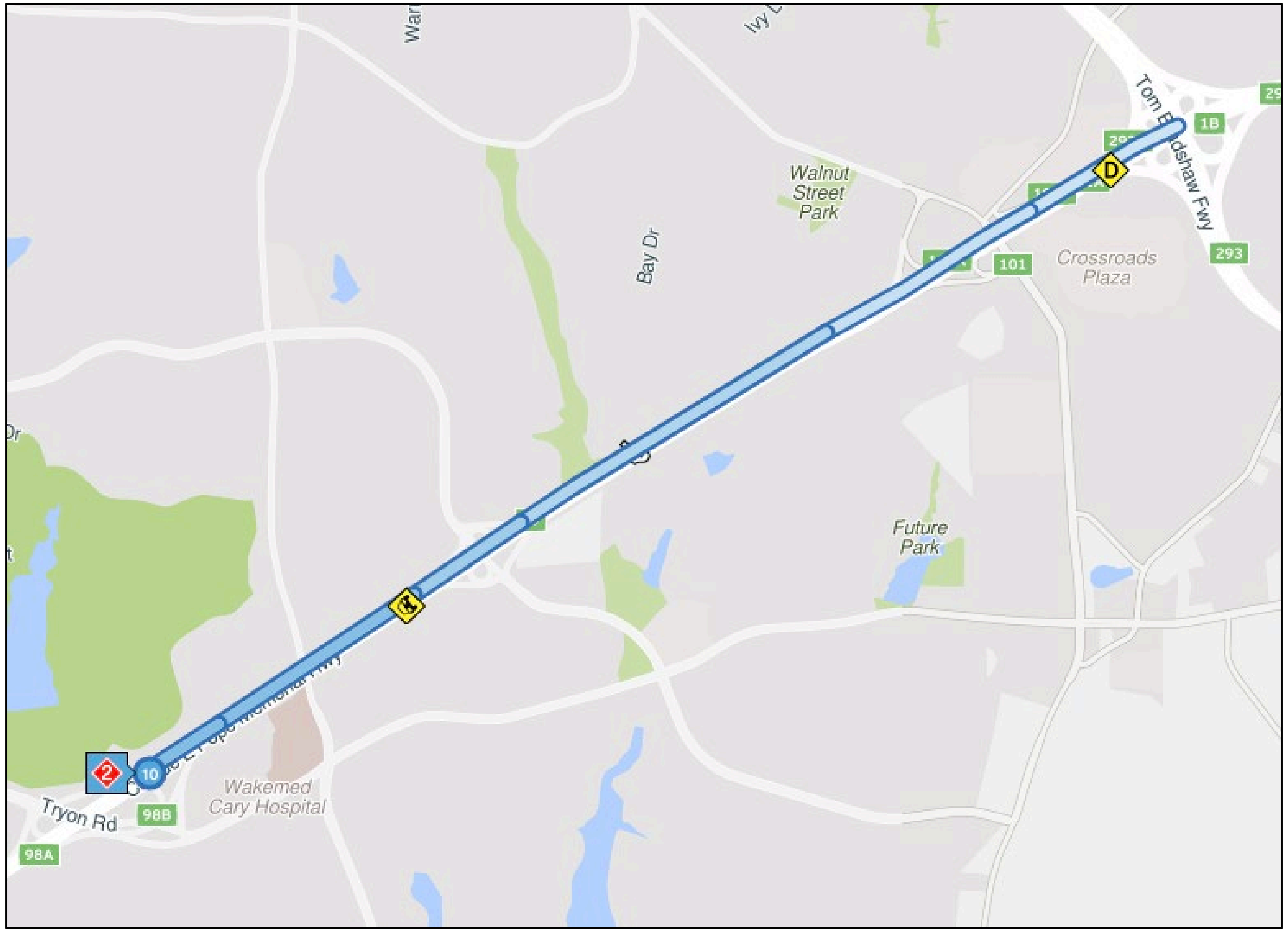
#9 Bottleneck: I-40 E @ NC-54/EXIT 290 Q2 FY2025

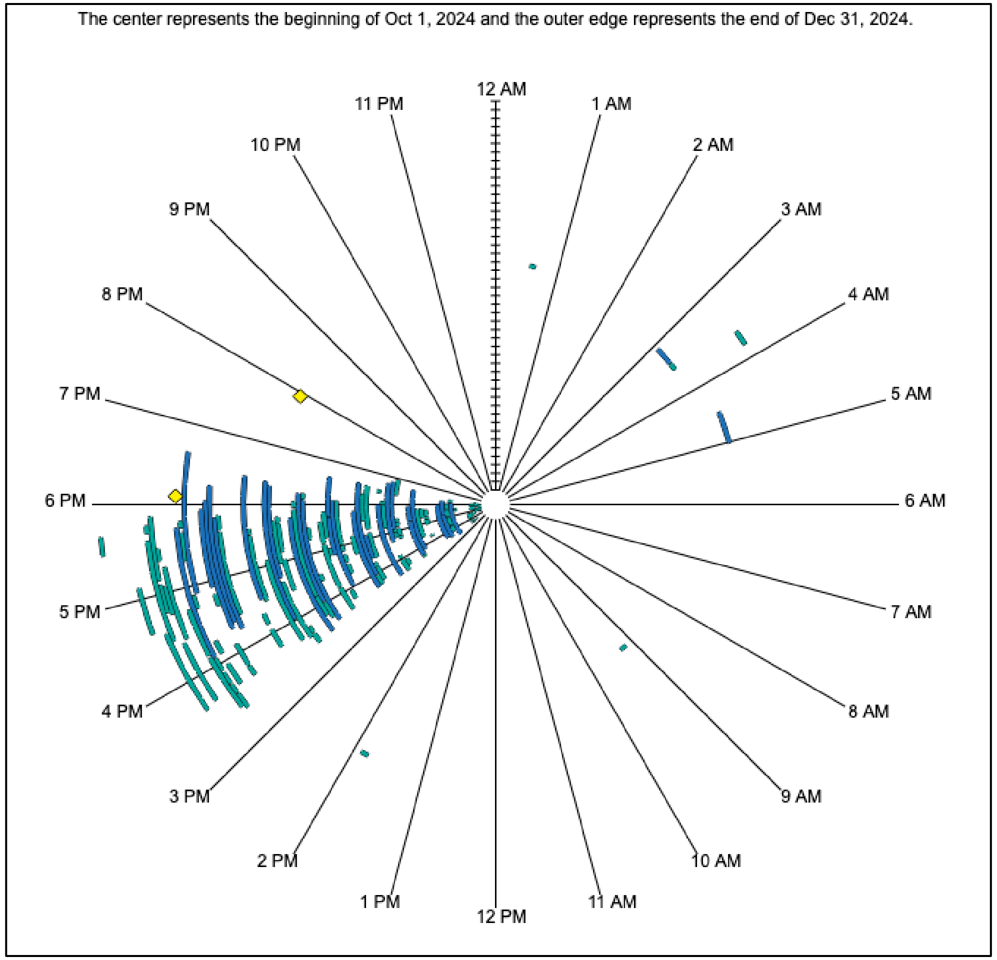




#10 Bottleneck: US-1/US-64 W @ US-64/TRYON RD/EXIT 98

Q2 FY2025





NC Capital Area Metropolitan Planning Organization

RITIS Performance Report

Top 10
Bottleneck Analysis Report

Congestion Management Process – Status of the System Report

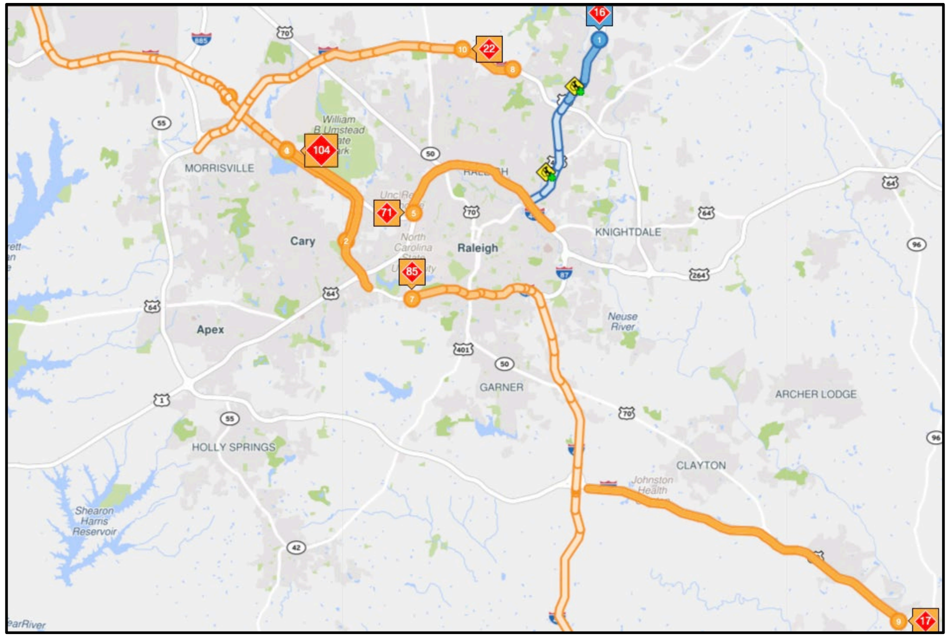
FY 2025 Q3

Top 10 Bottlenecks in the Region

Q3 FY2025

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	US-1 NORTH @ BURLINGTON MILLS RD	1	2.49	2h 12m	16	27,300	23,086,731	A133, F11-1a, F11-1b, F11-1c, F86, F86a
2	I-40 EAST @ NC-54/EXIT 290	9	3	1h 1m	62	12,986	17,761,203	A413, A562, A640, F112a, F112b, F40, F41, F81a
3	I-40 EAST @ AVIATION PKWY/EXIT 285	4	2.25	46m	104	7,830	15,852,405	A640, A641, A64a, F112a, F40
4	I-40 WEST @ AVIATION PKWY/EXIT 285	6	3.35	24m	36	6,914	15,036,208	A562, A640, A64a, F112a, F112b, F40, F41, F43, F43b, F81a
5	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	5	1.48	1h 33m	71	11,000	14,755,001	A562, A79a, F10, F83, F86a
6	I-40 EAST @ PAGE RD/EXIT 282	3	3.65	31m	72	7,819	12,413,082	*TWTPO Projects
7	I-40 WEST @ GORMAN ST/EXIT 295	159	3.54	36m	83	9,410	11,920,942	A143a1, F3, F41, F41b, F43, F44a, F44b, F44b1, F44b2, F44c, F44d, F45, F46, F6
8	I-540 EAST (CW) @ FALLS OF NEUSE RD/EXIT 14	16	6.75	17m	29	8,261	9,162,577	A13c, F42b, F85, F87
9	US-70 EAST @ BUFFALO RD	28	8.62	37m	17	24,115	8,156,266	F14, F3, F6
10	I-540 EAST (CW) @ SIX FORKS RD/EXIT 11	45	5.85	16m	22	7,691	7,769,916	A680a, F13, F42b, F85, F87

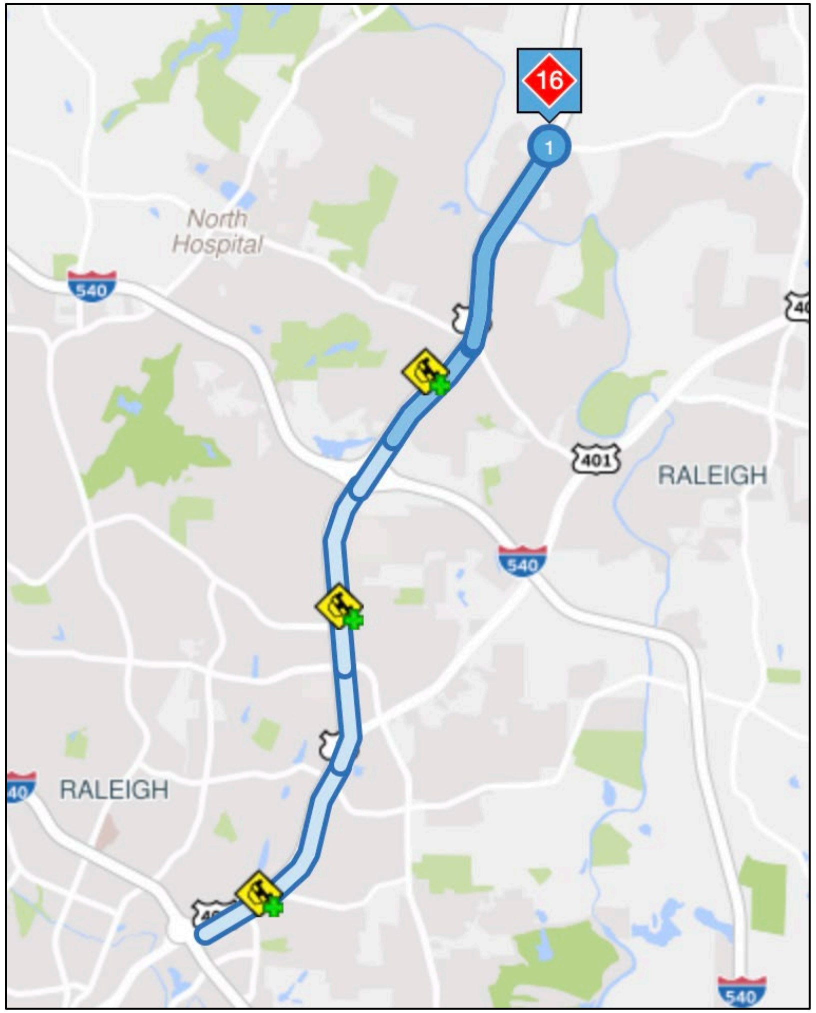
CW = Clockwise   CCW = Counterclockwise   **Red #s** = highest value for that metric

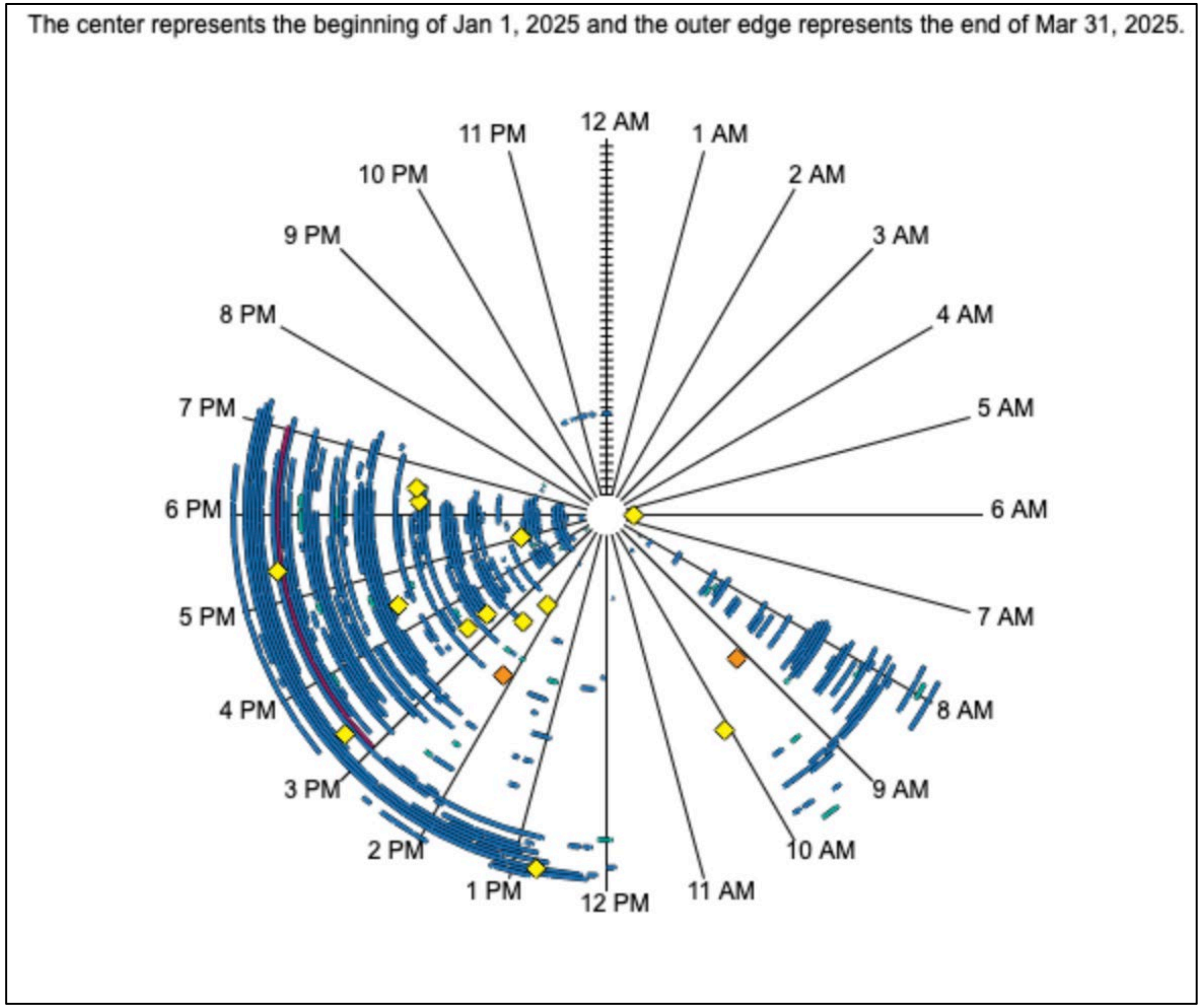


*Bottlenecks are ranked by **Total Delay –** Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

#1 Bottleneck: US-1 N @ BURLINGTON MILLS RD

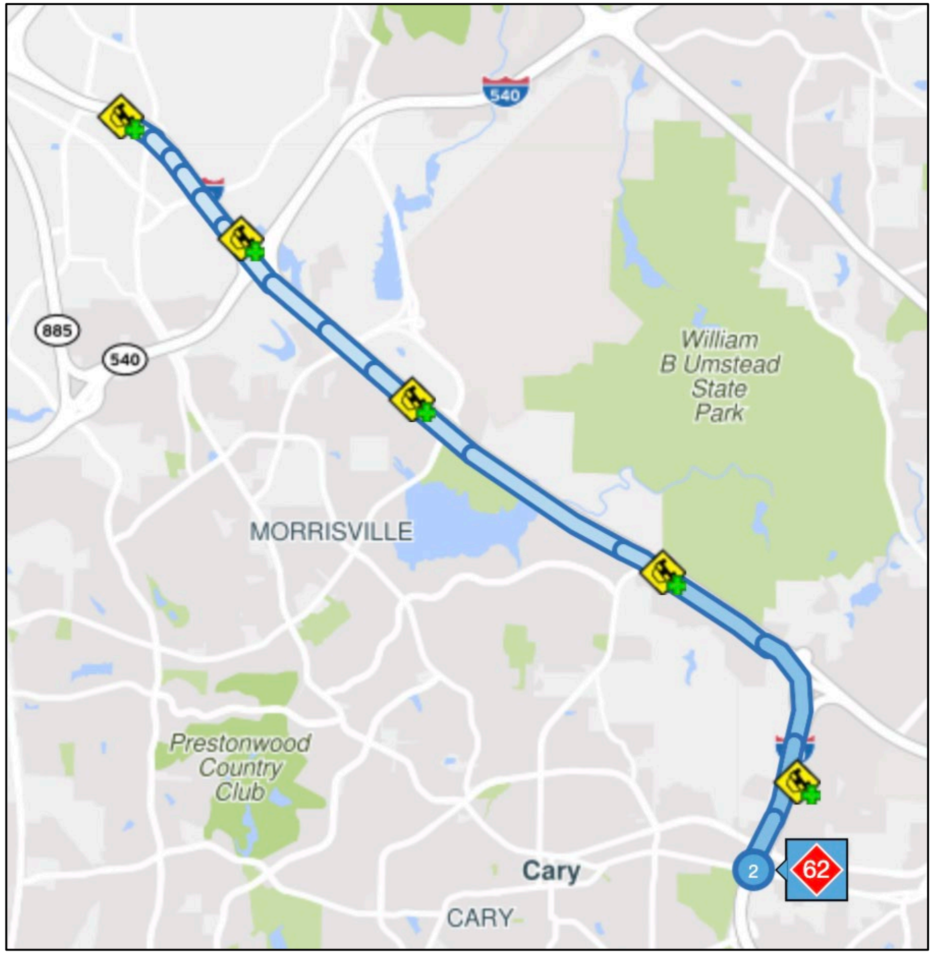
Q3 FY2025

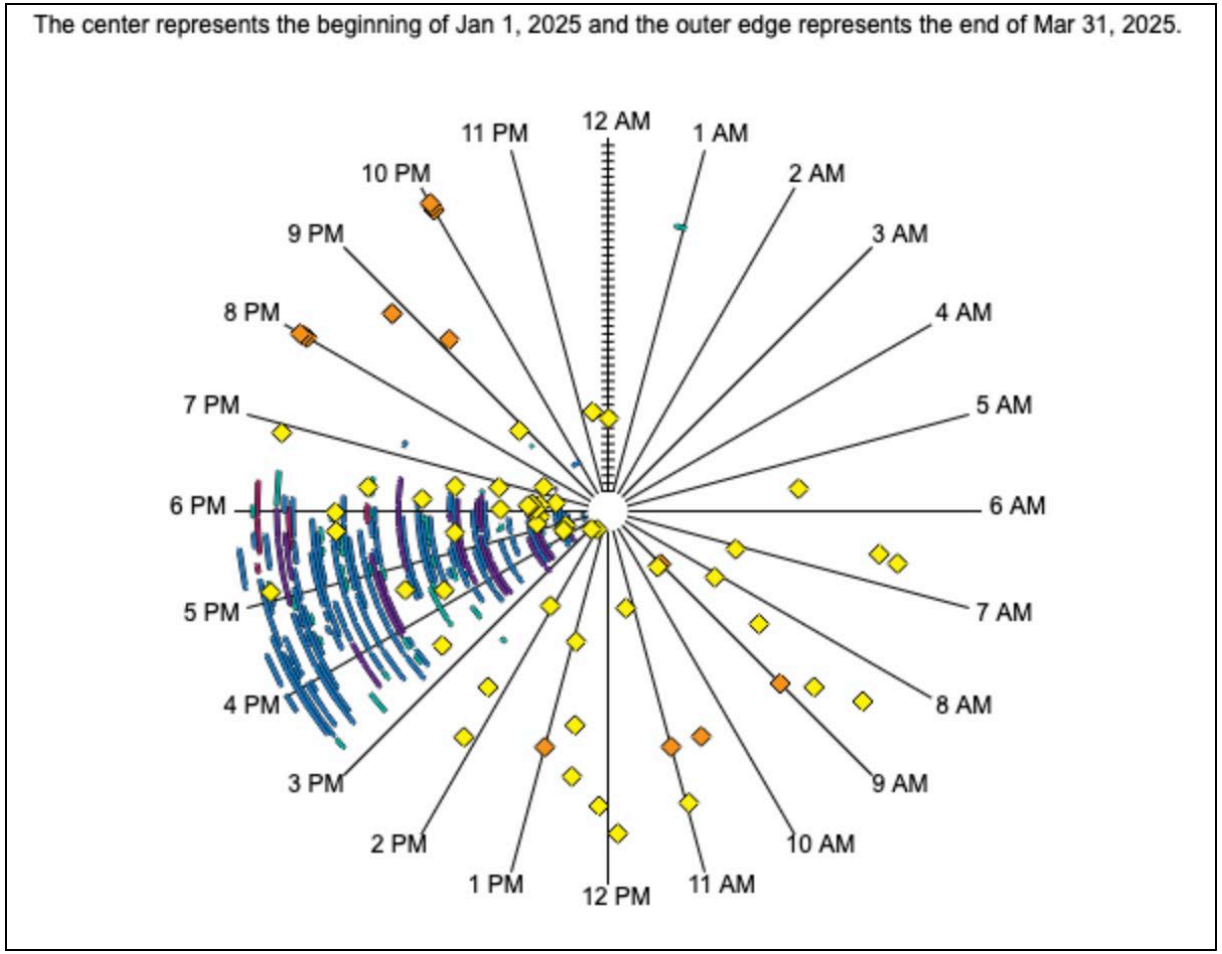




#2 Bottleneck: I-40 E @ NC-54/EXIT 290

Q3 FY2025





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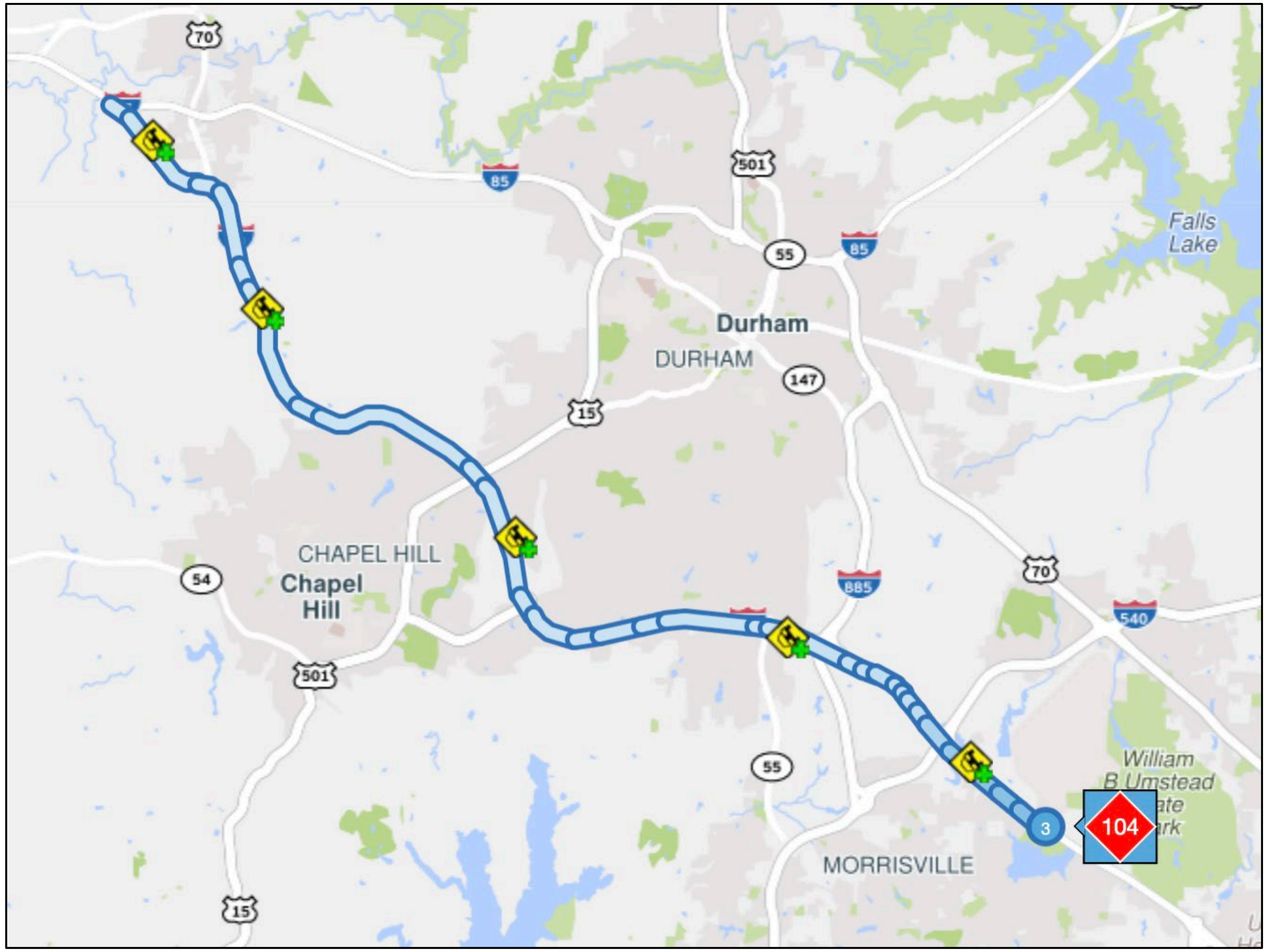
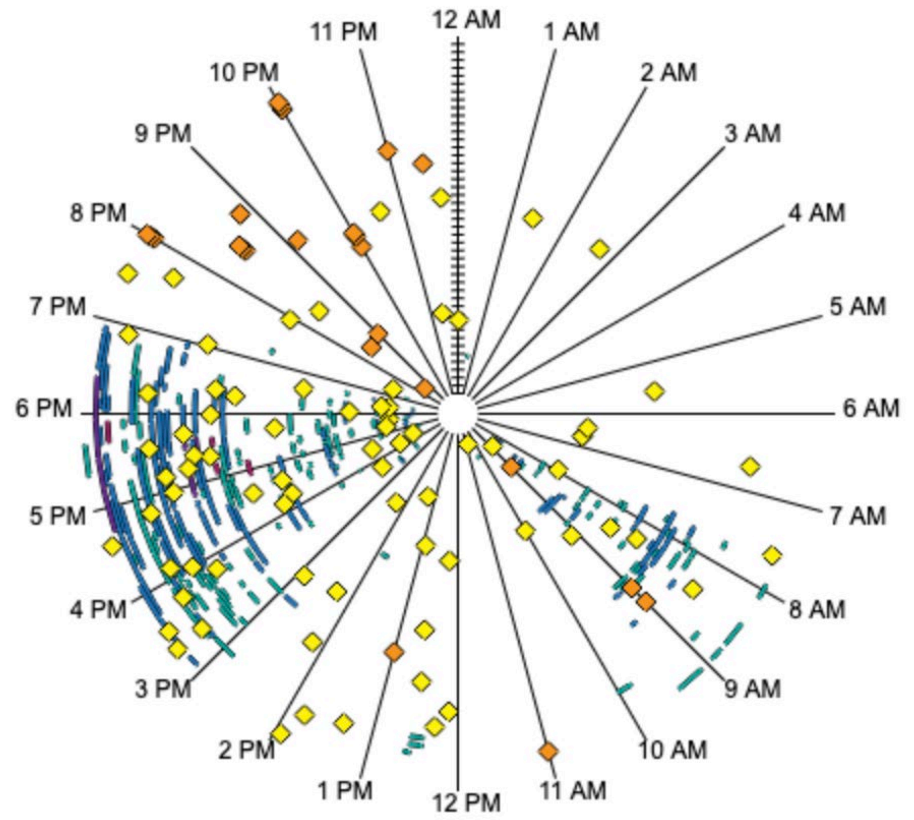
#3 Bottleneck: I-40 E @ AVIATION PKWY/EXIT 285

Q3 FY2025



The center represents the beginning of Jan 1, 2025 and the outer edge represents the end of Mar 31, 2025.



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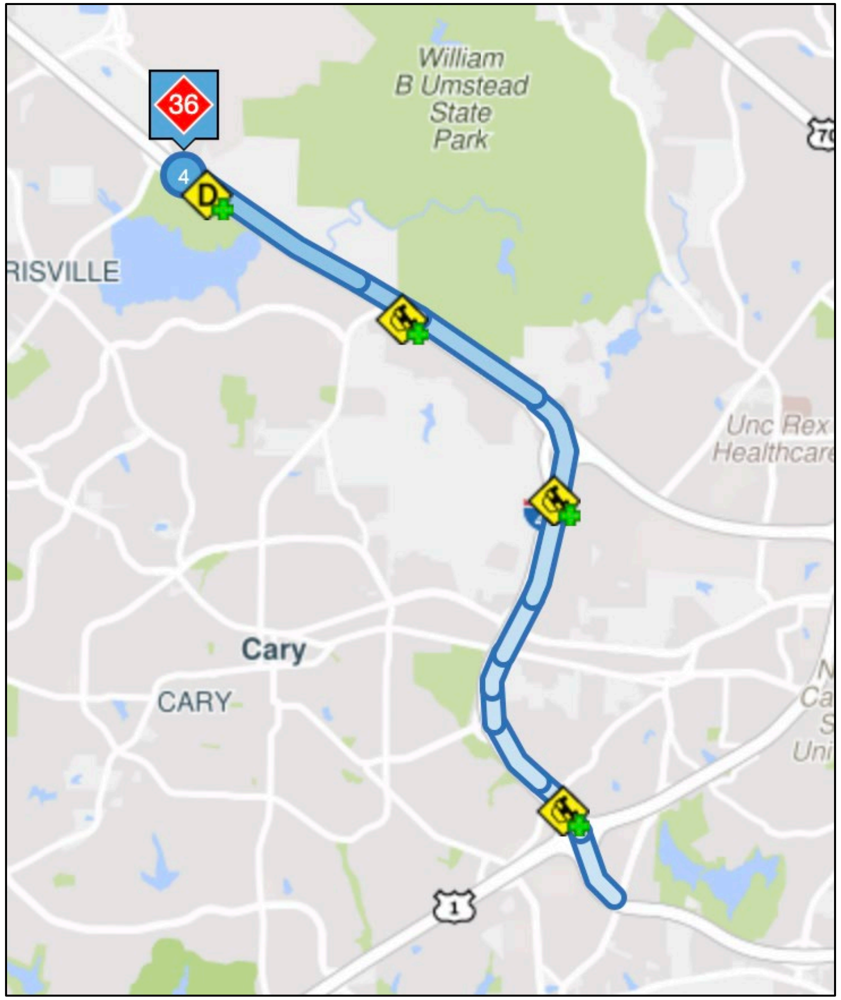
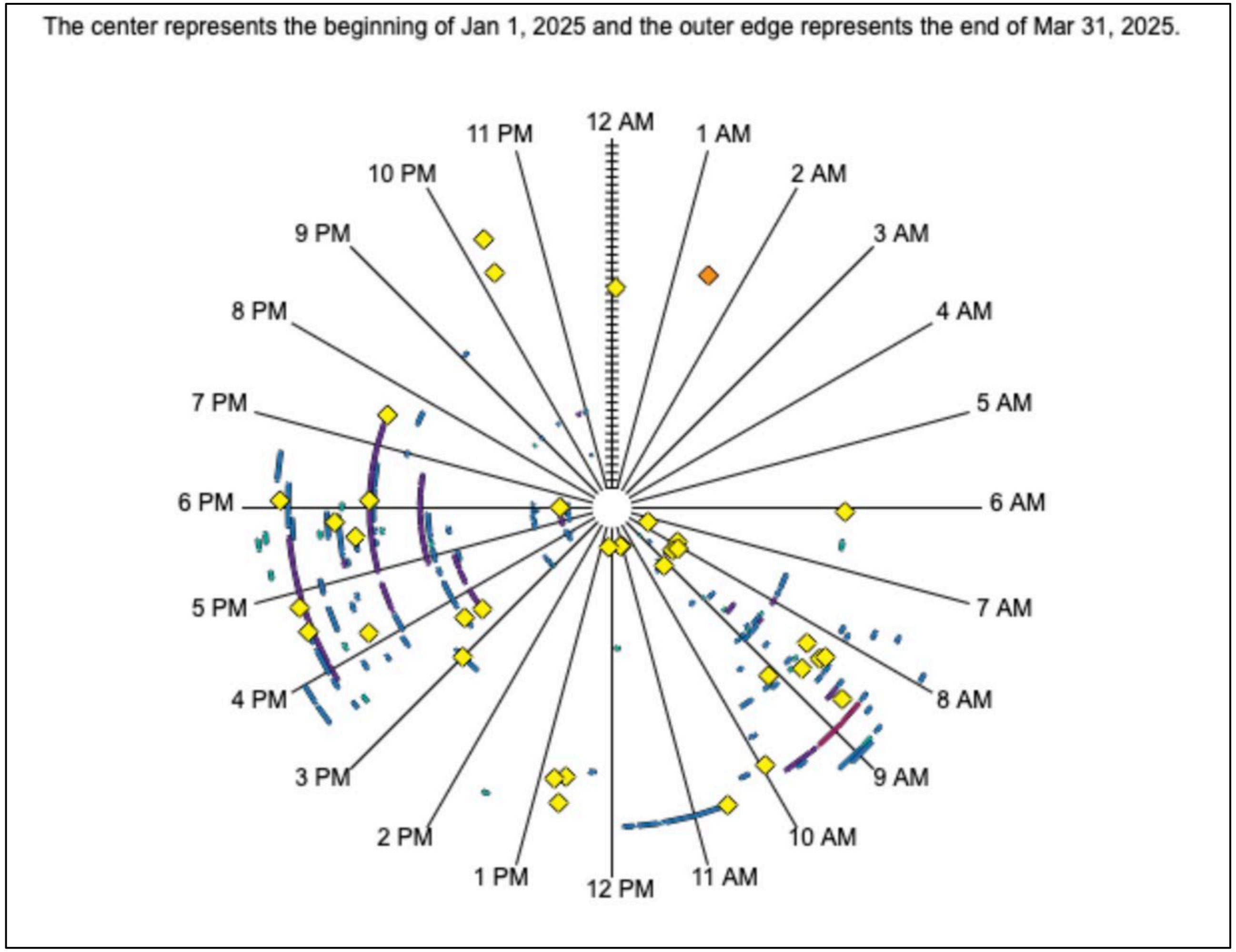
#4 Bottleneck: I-40 W @ AVIATION PKWY/EXIT 285

Q3 FY2025

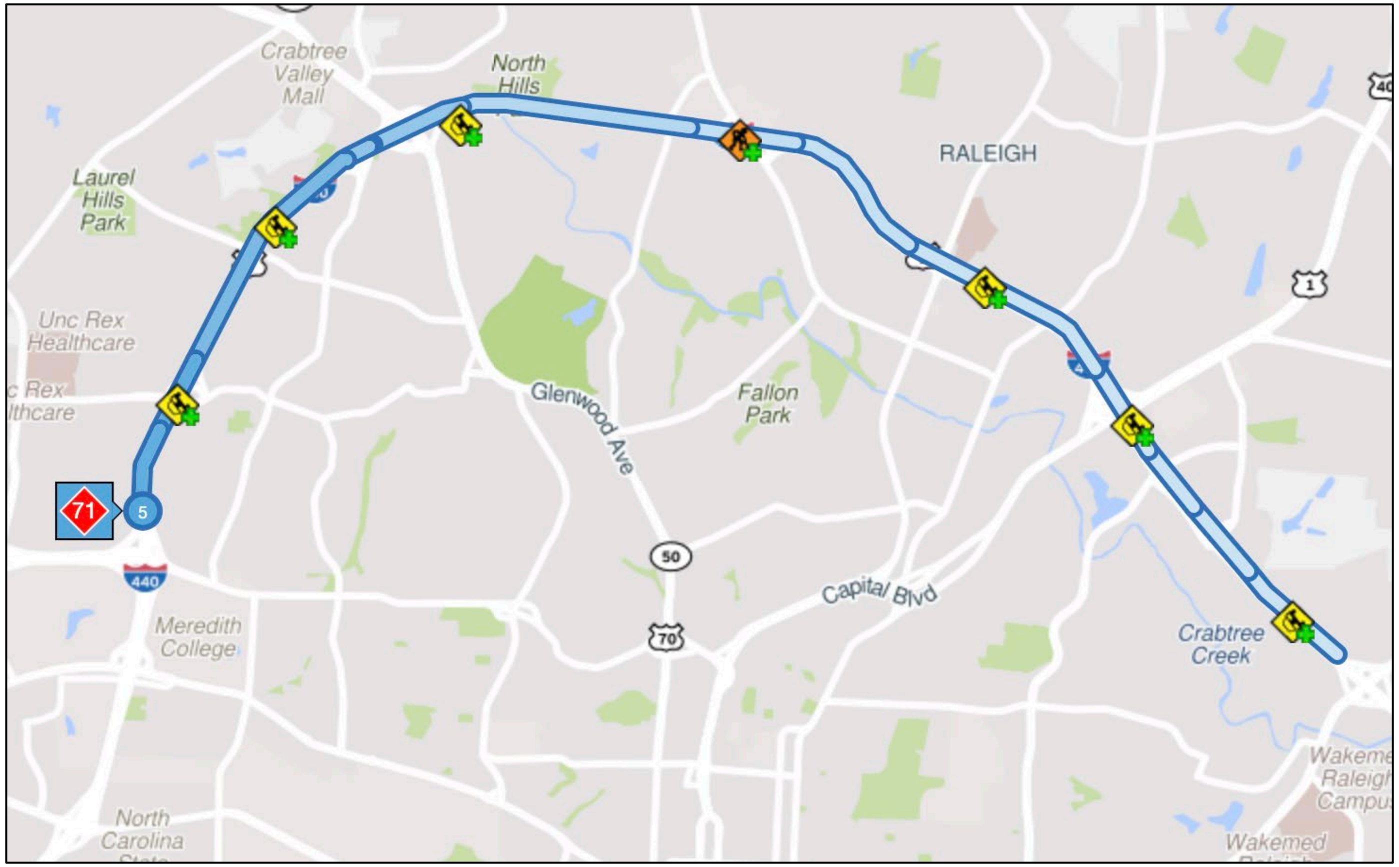


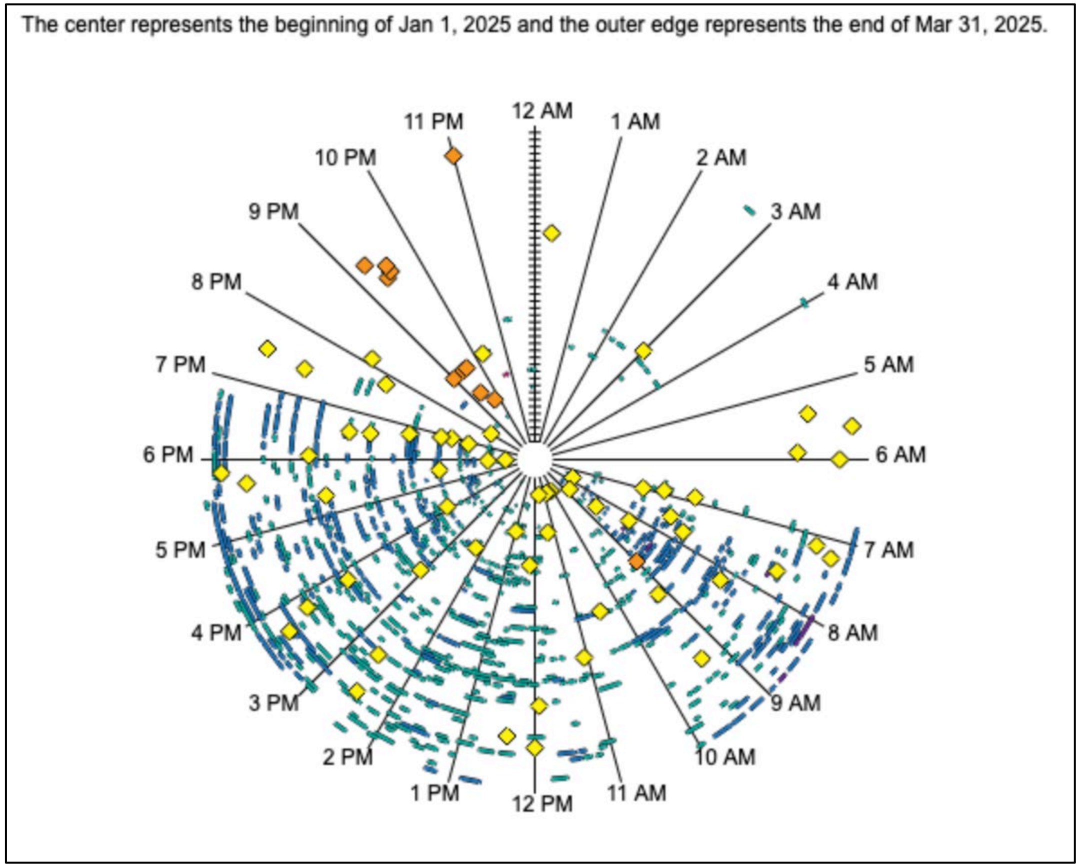


NC Capital Area Metropolitan Planning Organization

#5 Bottleneck: I-440 S (CCW) @ WADE AVE/EXIT 4

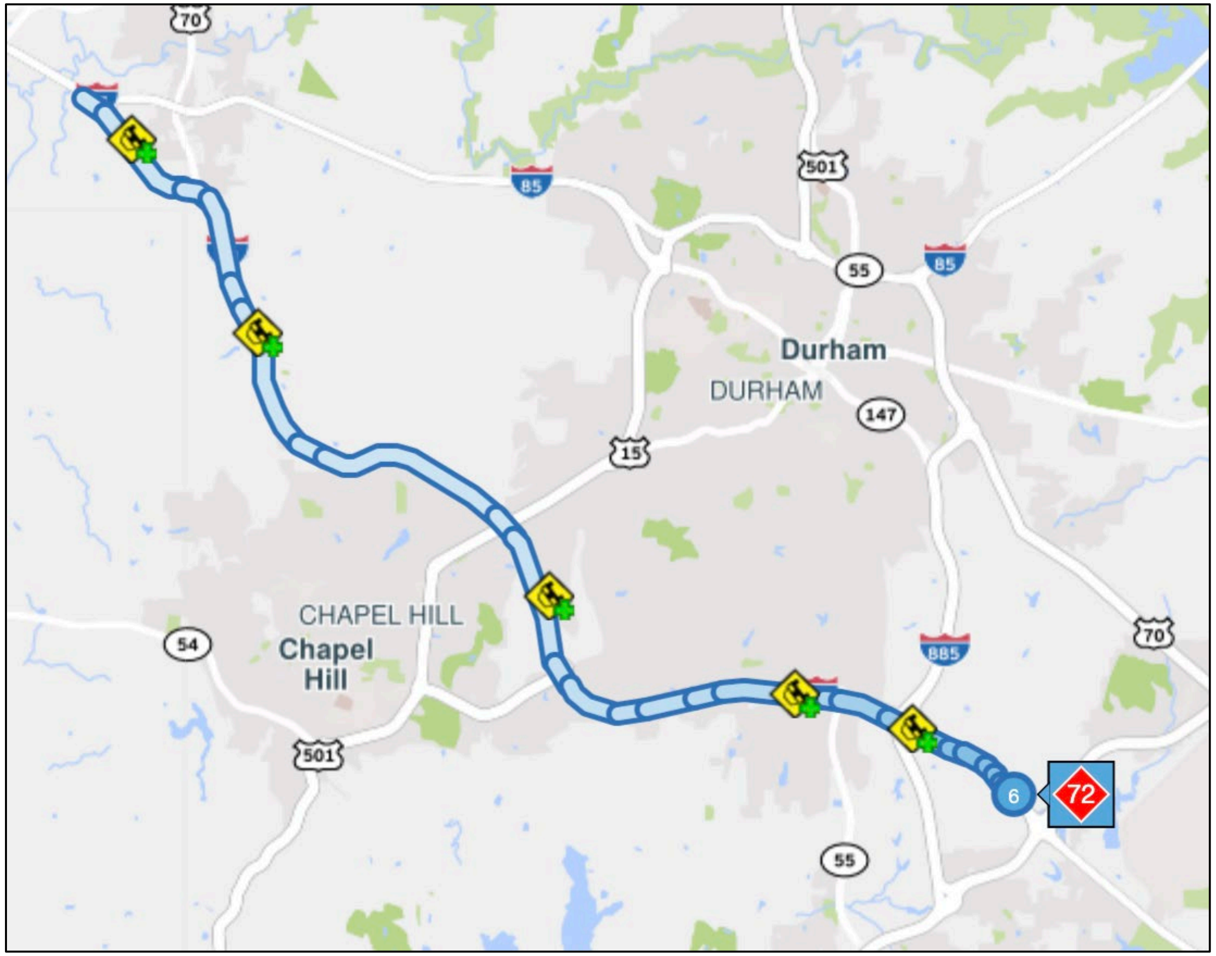
Q3 FY2025

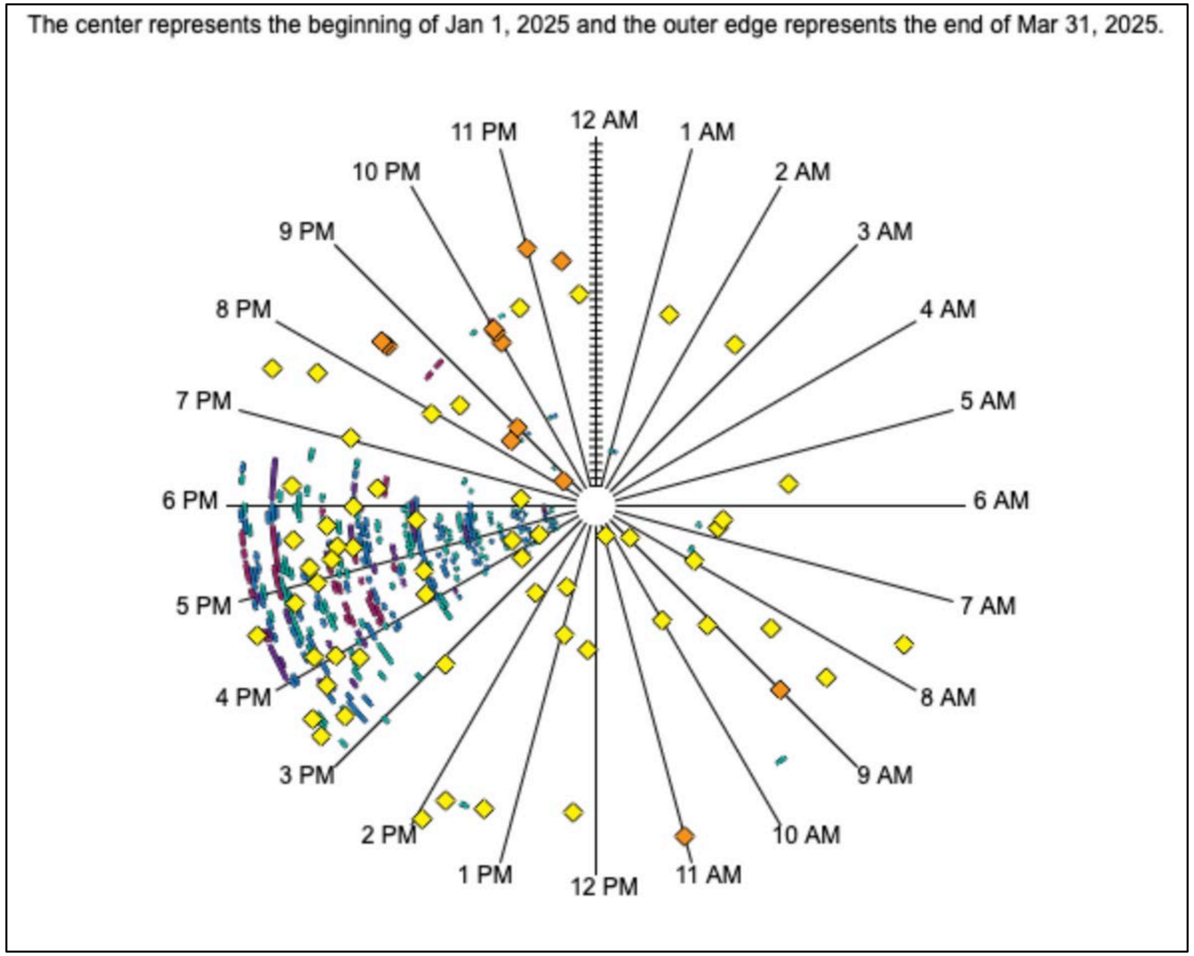




#6 Bottleneck: I-40 E @ PAGE RD/EXIT 282

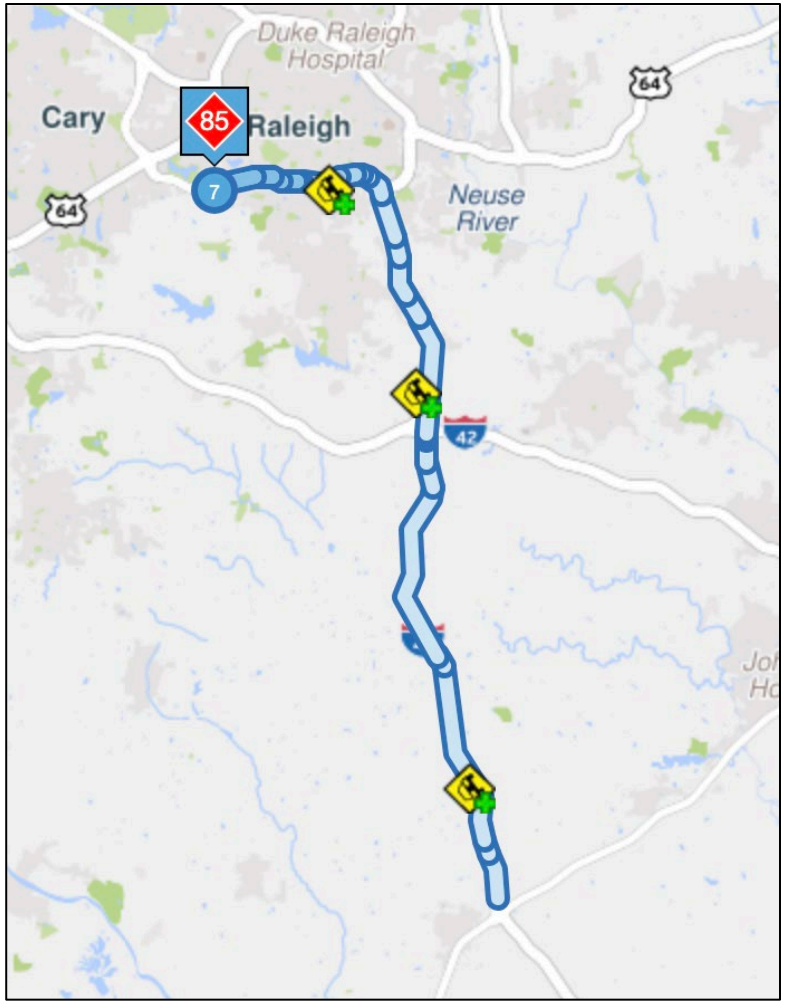
Q3 FY2025

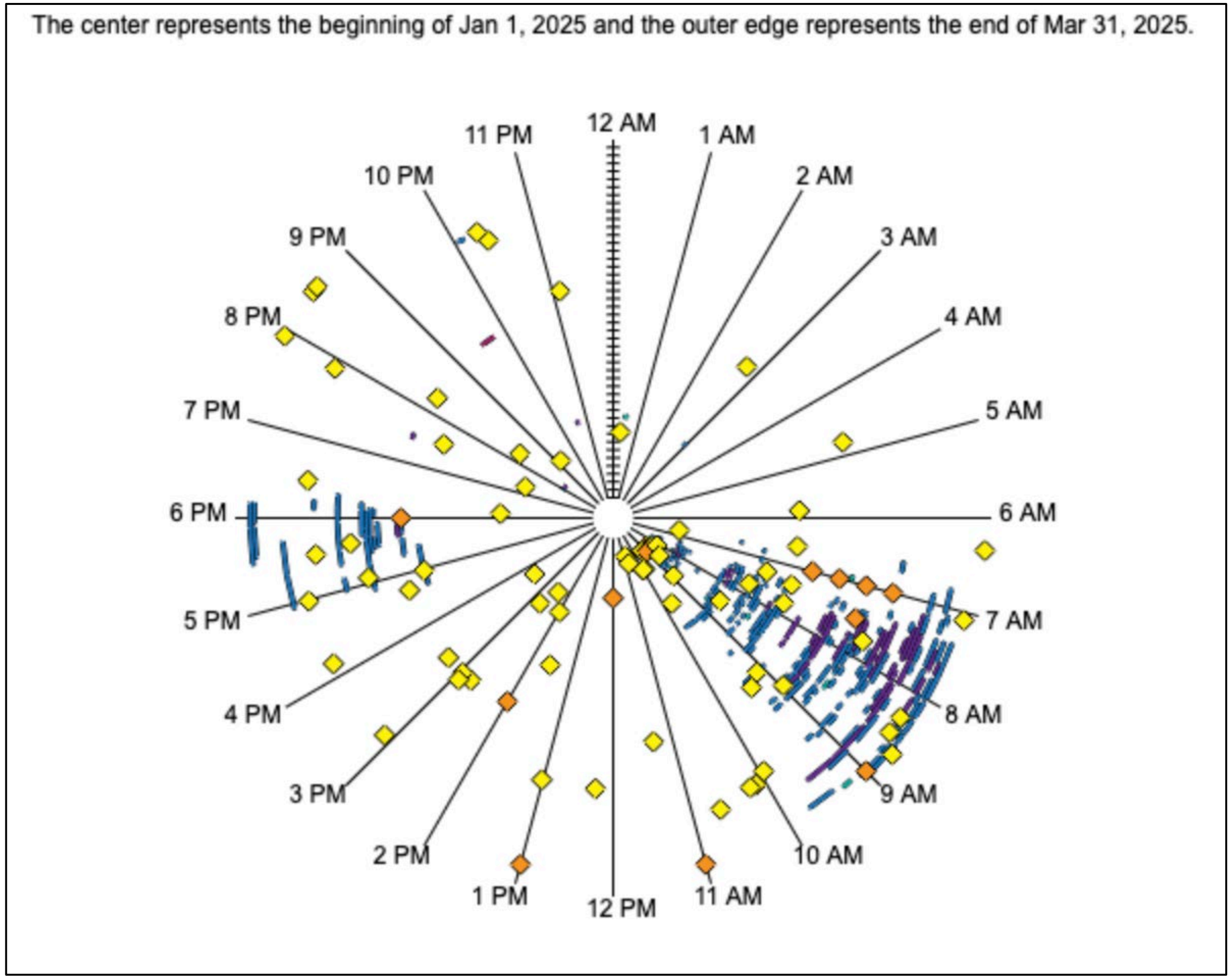




#7 Bottleneck: I-40 W @ GORMAN ST/EXIT 295

Q3 FY2025





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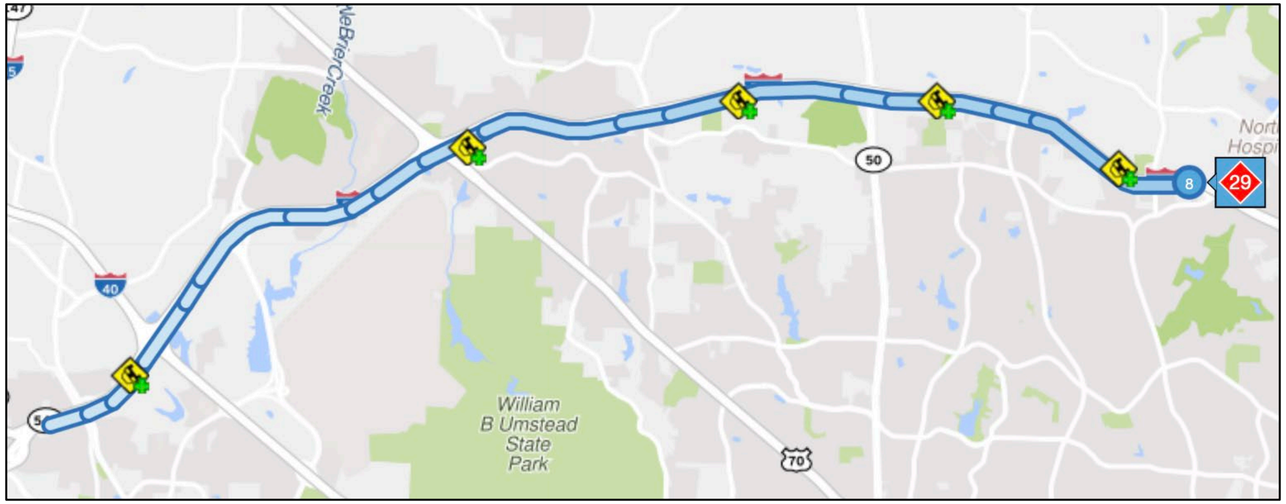
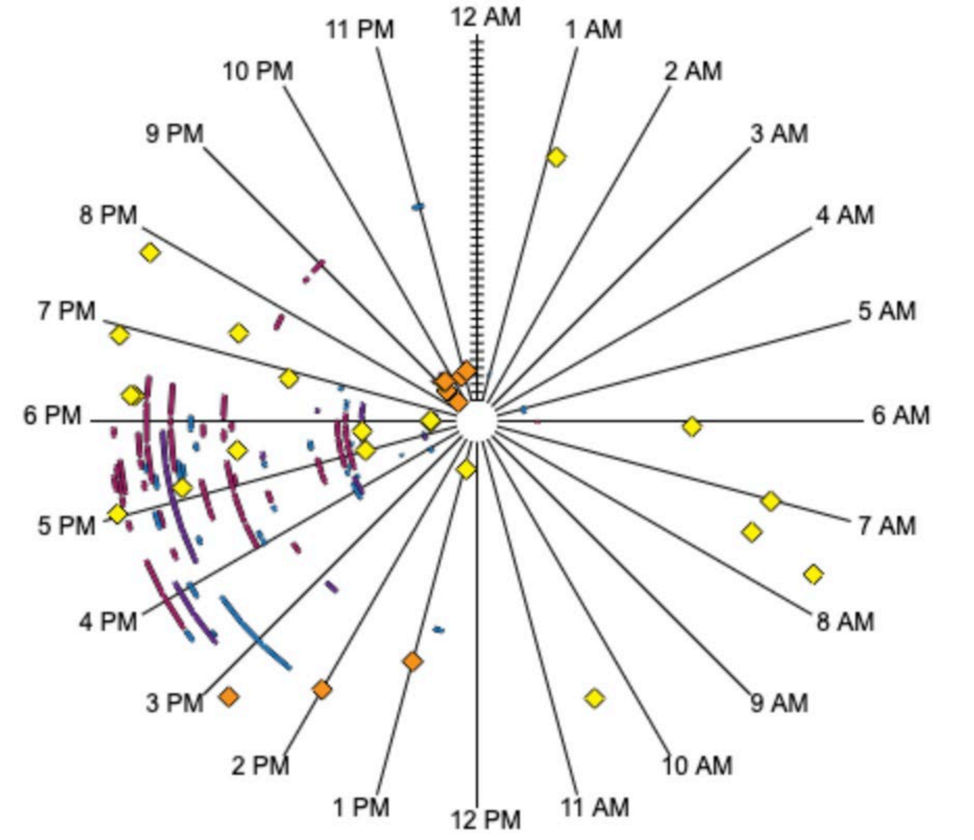
#8 Bottleneck: I-540 E (CW) @ FALLS OF NEUSE RD/EXIT 14

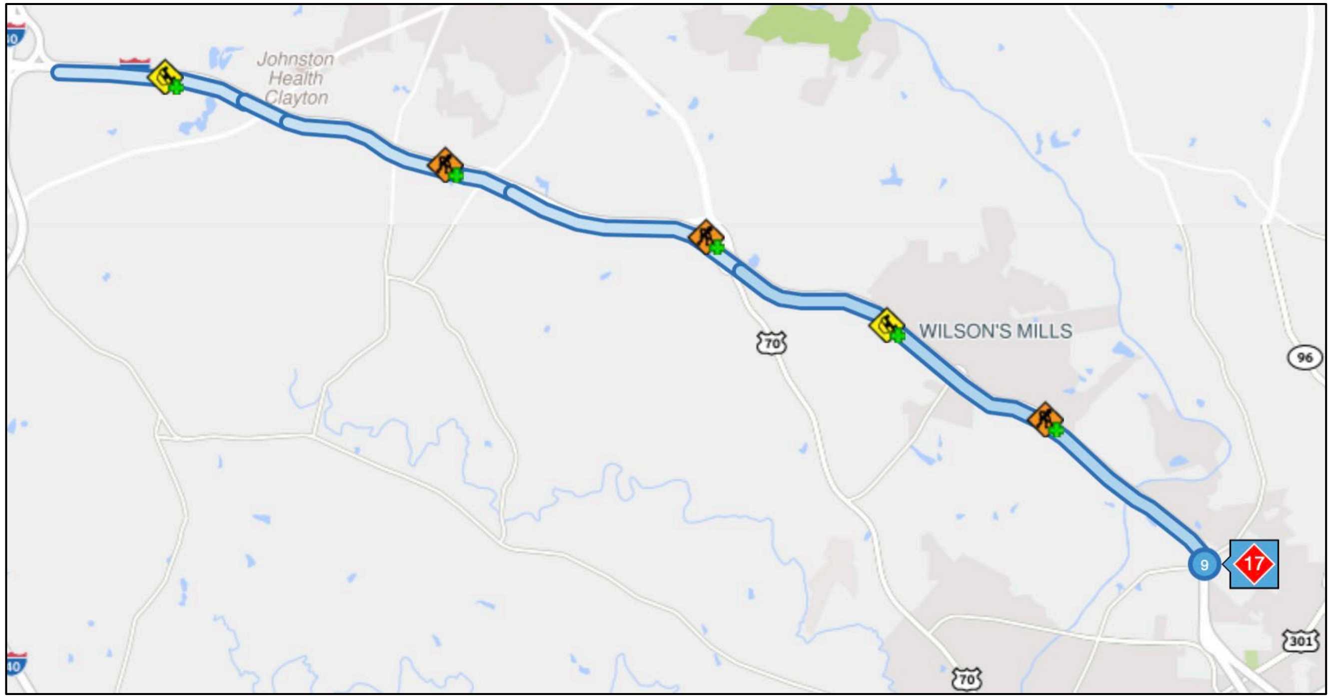
Q3 FY2025

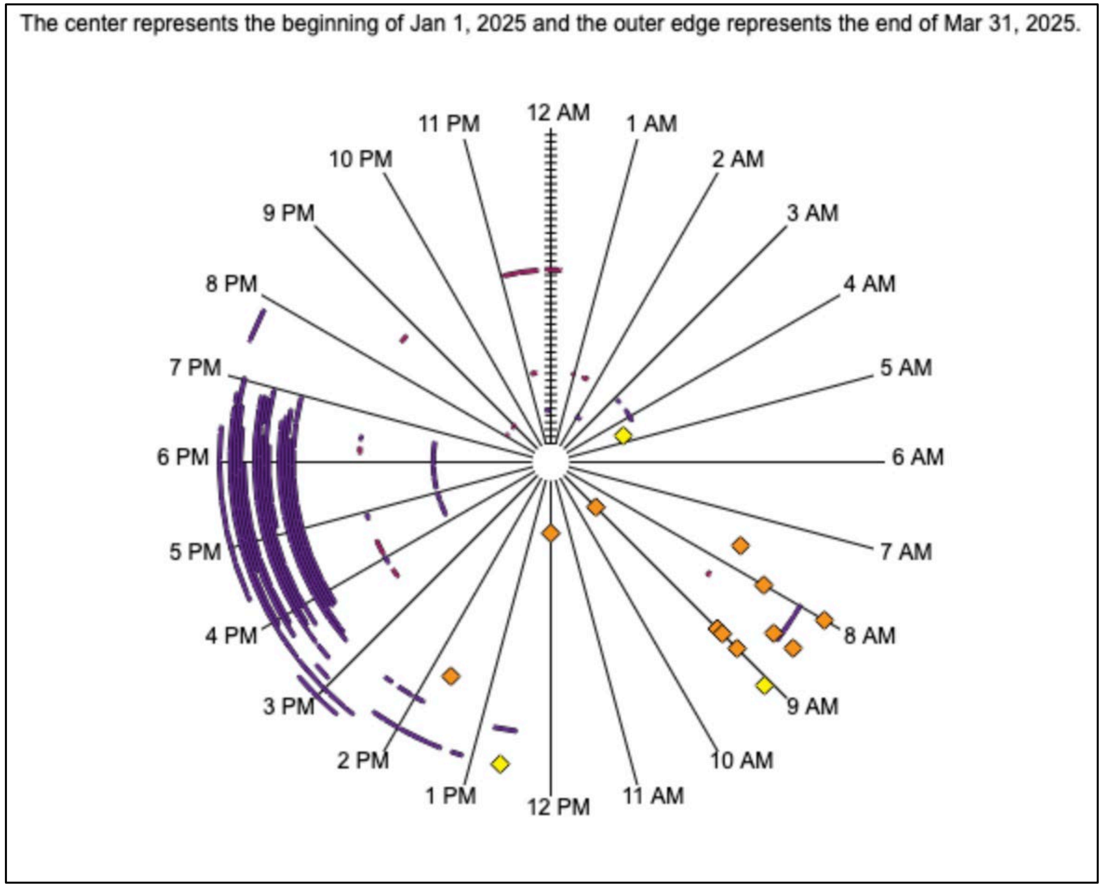


The center represents the beginning of Jan 1, 2025 and the outer edge represents the end of Mar 31, 2025.



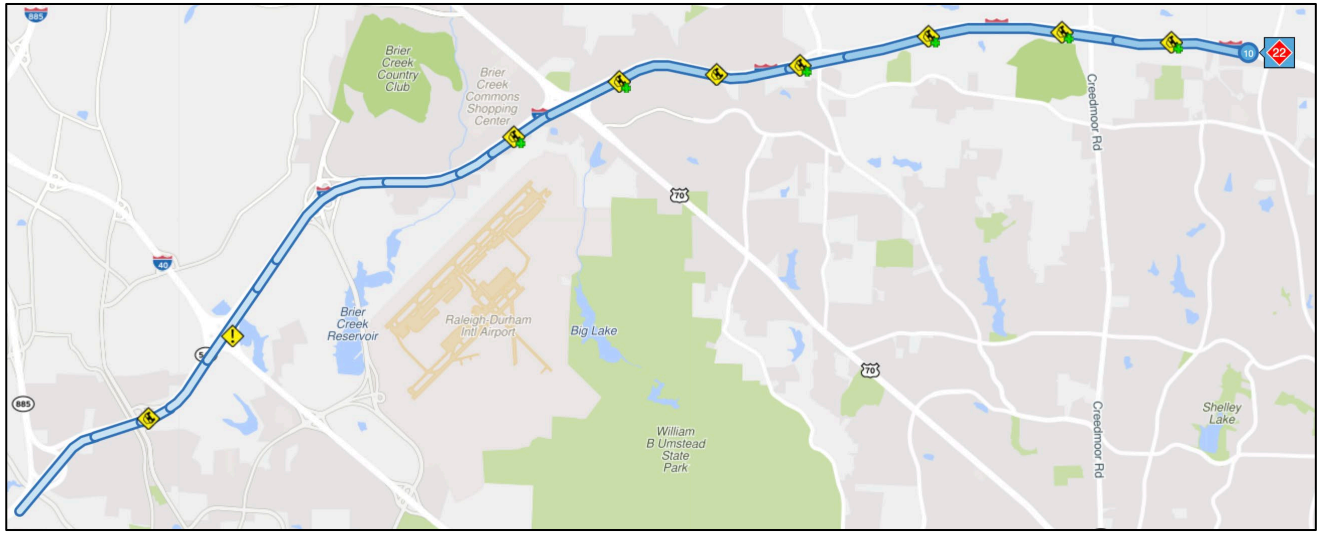
#9 Bottleneck: US-70 E @ BUFFALO RD Q3 FY2025

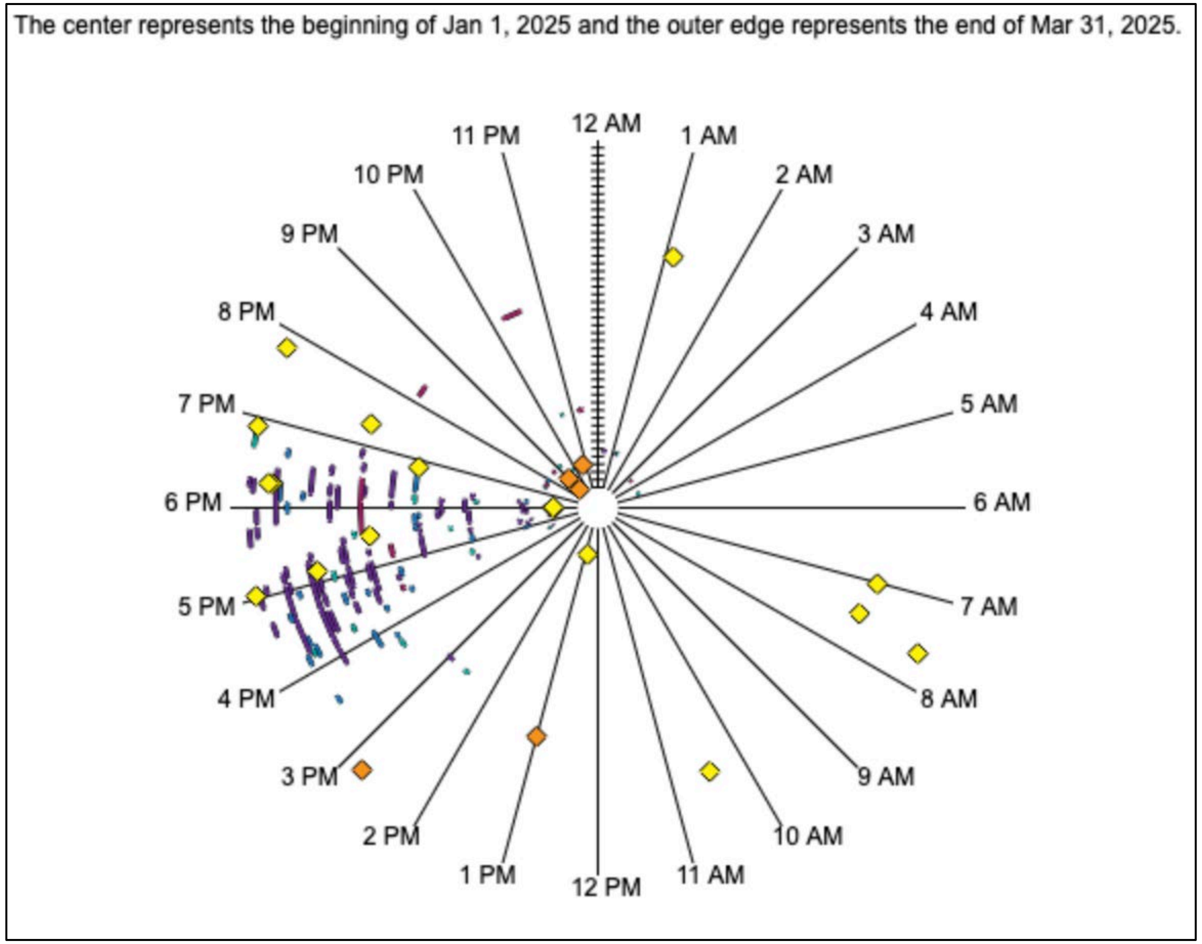




#10 Bottleneck: I-540 E (CW) @ SIX FORKS RD/EXIT 11

Q3 FY2025





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RITIS Performance Report

Top 10
Bottleneck Analysis Report

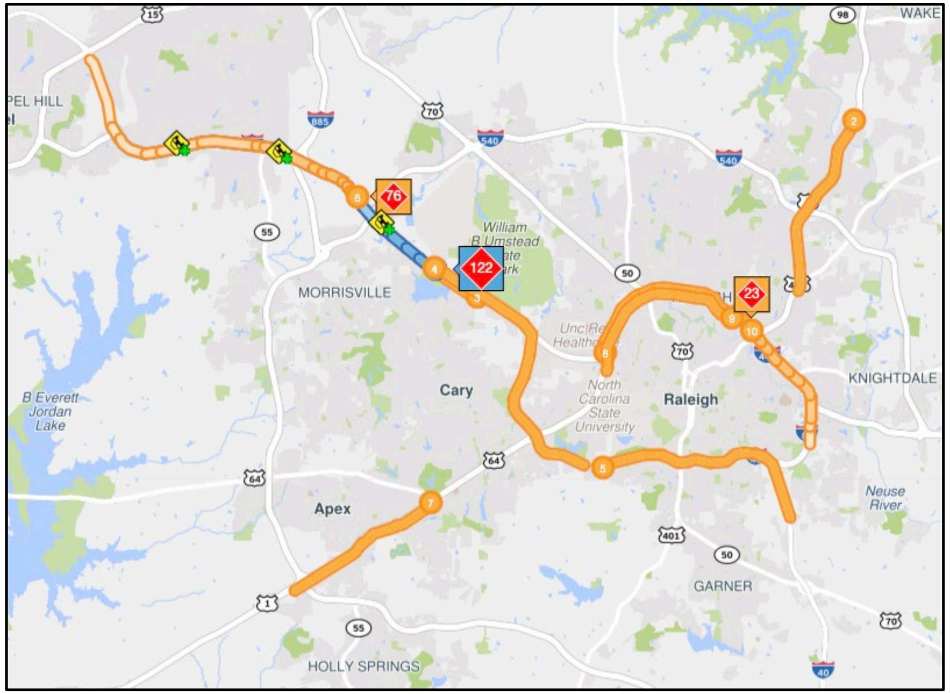
Congestion Management Process – Status of the System Report

FY 2025 Q4

Top 10 Bottlenecks in the Region Q4 FY2025

Rank	Location	Previous Quarter Ranking	Avg. Max. Length (mi)	Avg. Daily Duration	Agency-reported Events	Base Impact	Total Delay	Related CAMPO MTP IDs
1	I-40 EAST @ AVIATION PKWY/EXIT 285	3	2.22	1 h 17 m	**121**	13,958	**31,780,470**	A640, A64a, F112a, F40
2	US-1 NORTH @ BURLINGTON MILLS RD	**1**	2.45	**2 h 54 m**	13	**34,850**	30,528,372	A133, F11-1a, F11-1b, F11-1c, F86
3	I-40 EAST @ HARRISON AVE/EXIT 287	150	**3.63**	42 m	112	13,016	26,233,184	A240a, A240b, A562, A640, A641, F112a, F112b, F40
4	I-40 WEST @ AVIATION PKWY/EXIT 285	4	3.47	41 m	60	12,203	24,374,466	A562, A640, A64a, F112a, F112b, F40, F41, F43b, F81a
5	I-40 WEST @ GORMAN ST/EXIT 295	7	3.33	42 m	42	11,973	16,052,055	F41, F43, F44a
6	I-40 EAST @ PAGE RD/EXIT 282	6	3.49	33 m	76	8,718	15,860,952	*TWTPO Projects
7	US-1 NORTH @ US-64/EXIT 98	88	2.79	46 m	29	11,970	15,045,767	A449, F110a, F110b, F110c, F15a, F15a3
8	I-440 SOUTH (CCW) @ WADE AVE/EXIT 4	5	1.42	1 h 22 m	86	9,441	13,856,921	A562, A79a, F10, F83, F86a
9	I-440 EAST (CW) @ WAKE FOREST RD/EXIT 10	40	2.22	46 m	60	6,650	11,376,908	A79a, F10, F83
10	I-440 WEST (CCW) @ US-401/US-1/CAPITAL BLVD/EXIT 11	73	2.84	29 m	23	6,991	11,072,837	F86, F86a

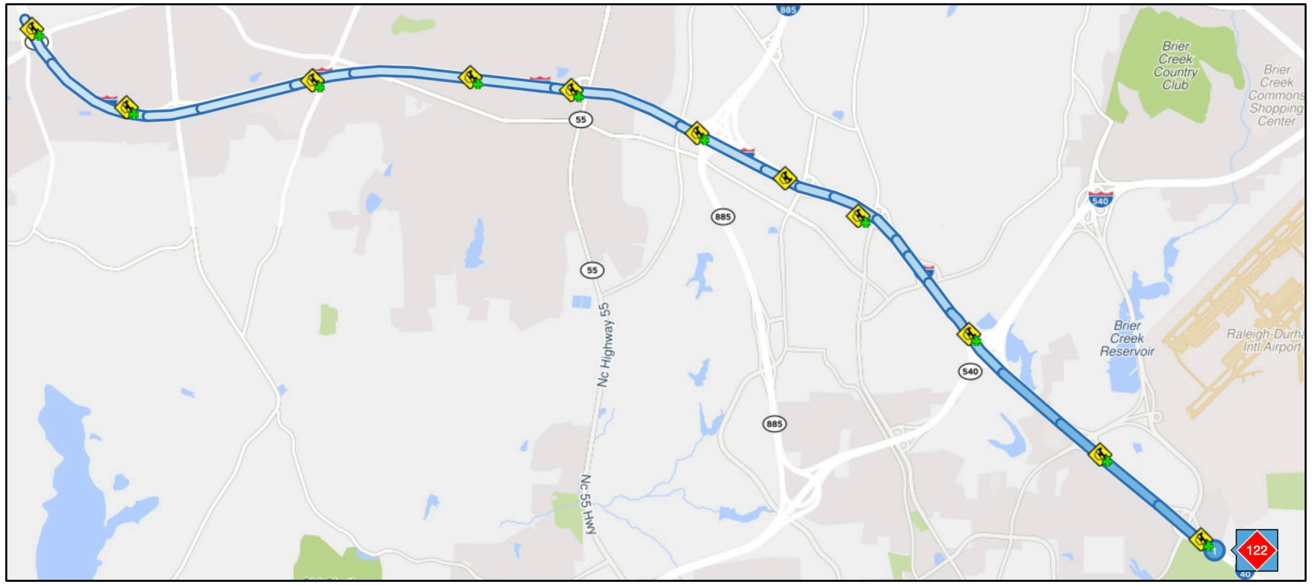
CW = Clockwise CCW = Counterclockwise **Red #s** = highest value for that metric

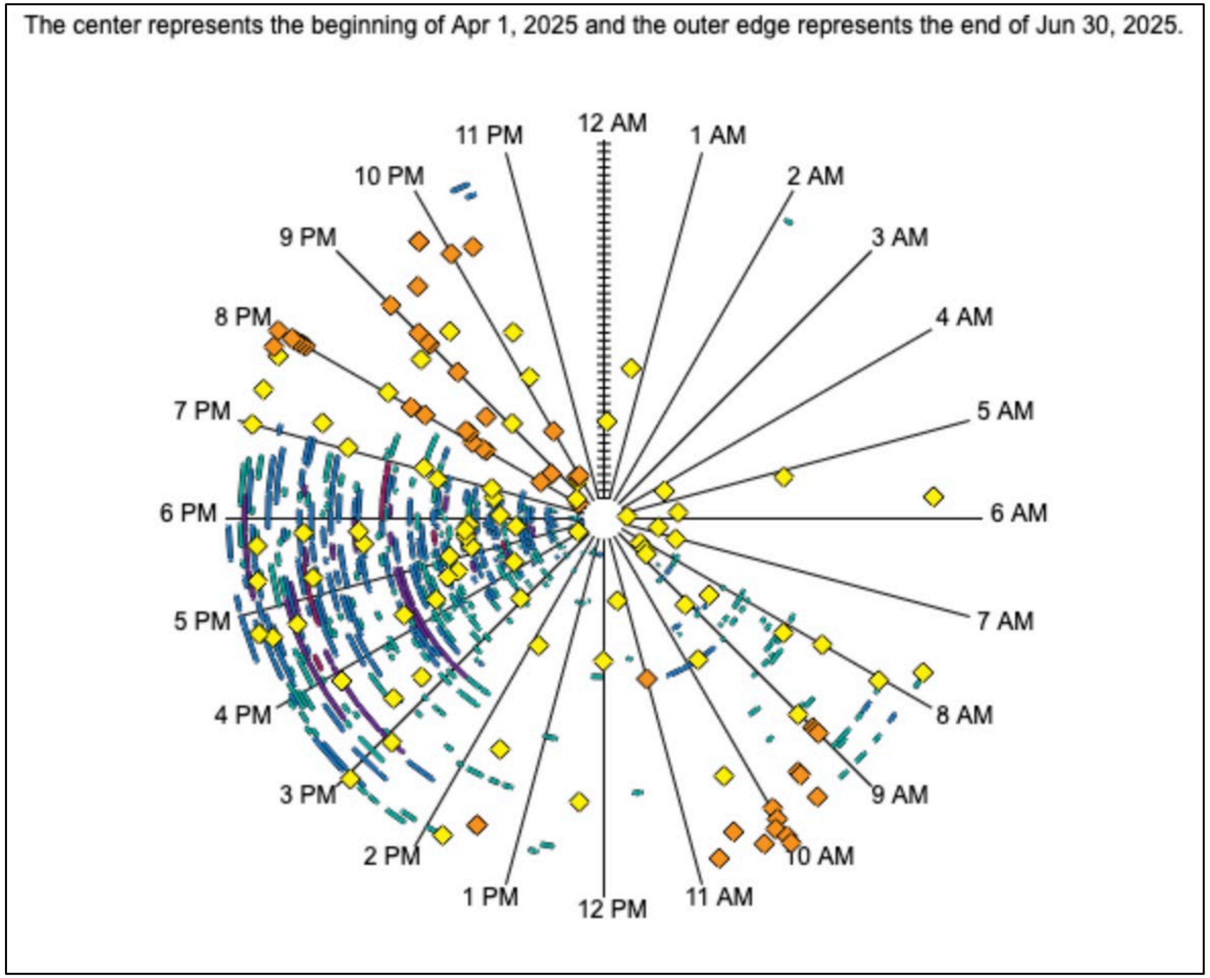


*Bottlenecks are ranked by **Total Delay** – Base impact weighted by the difference between free-flow travel time and observed travel time multiplied by the average daily volume (AADT), adjusted by a day-of-the-week factor. This metric should be used to rank and compare the estimated total delay from all vehicles within the bottleneck.*

#1 Bottleneck: I-40 E @ AVIATION PKWY/EXIT 285

Q4 FY2025





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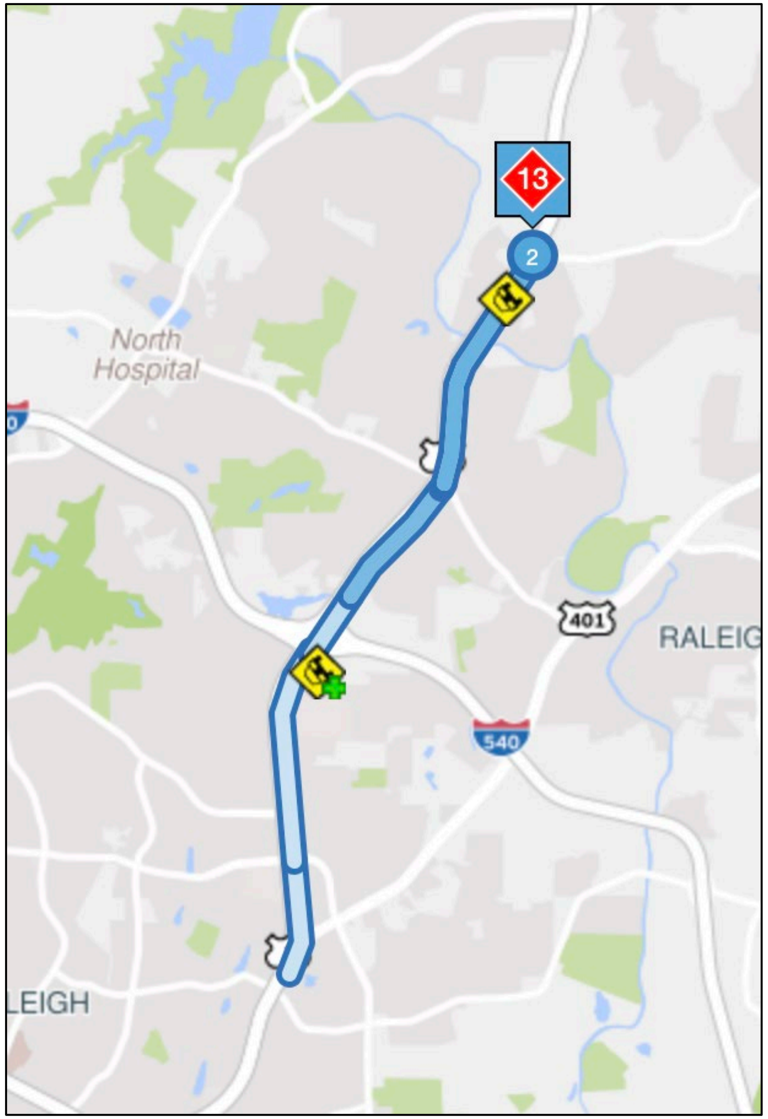
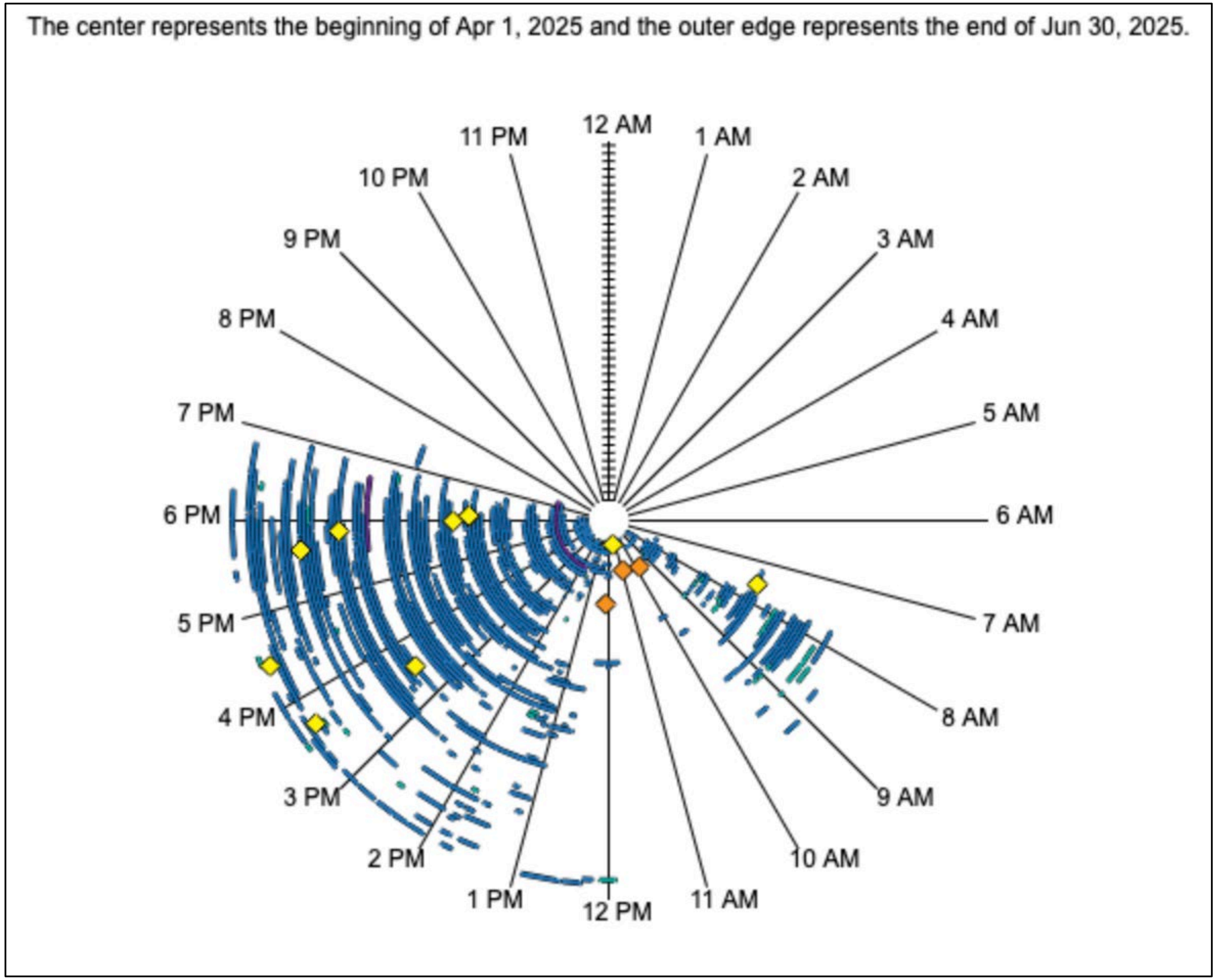
#2 Bottleneck: US-1 N @ BURLINGTON MILLS RD

Q4 FY2025





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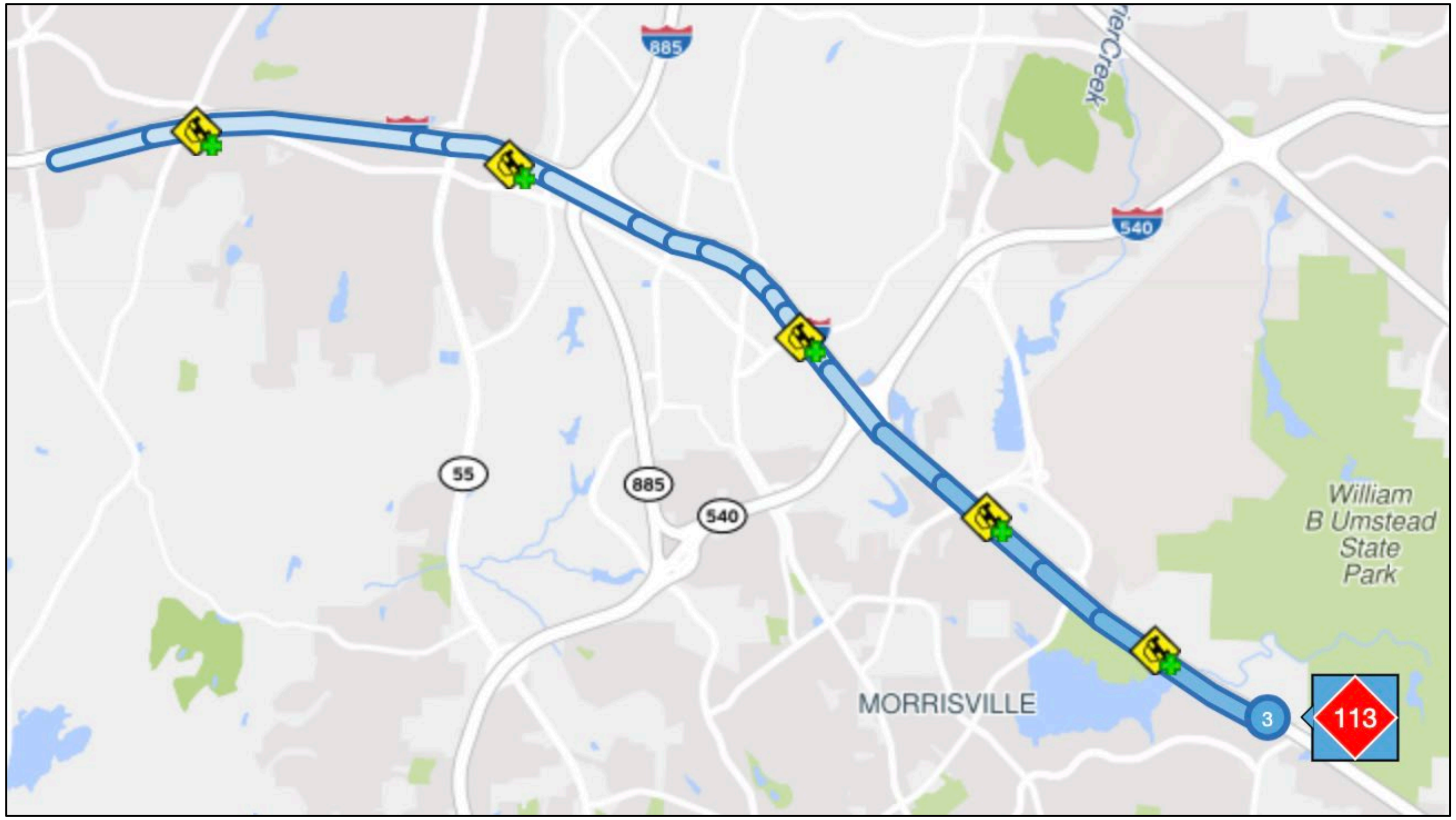
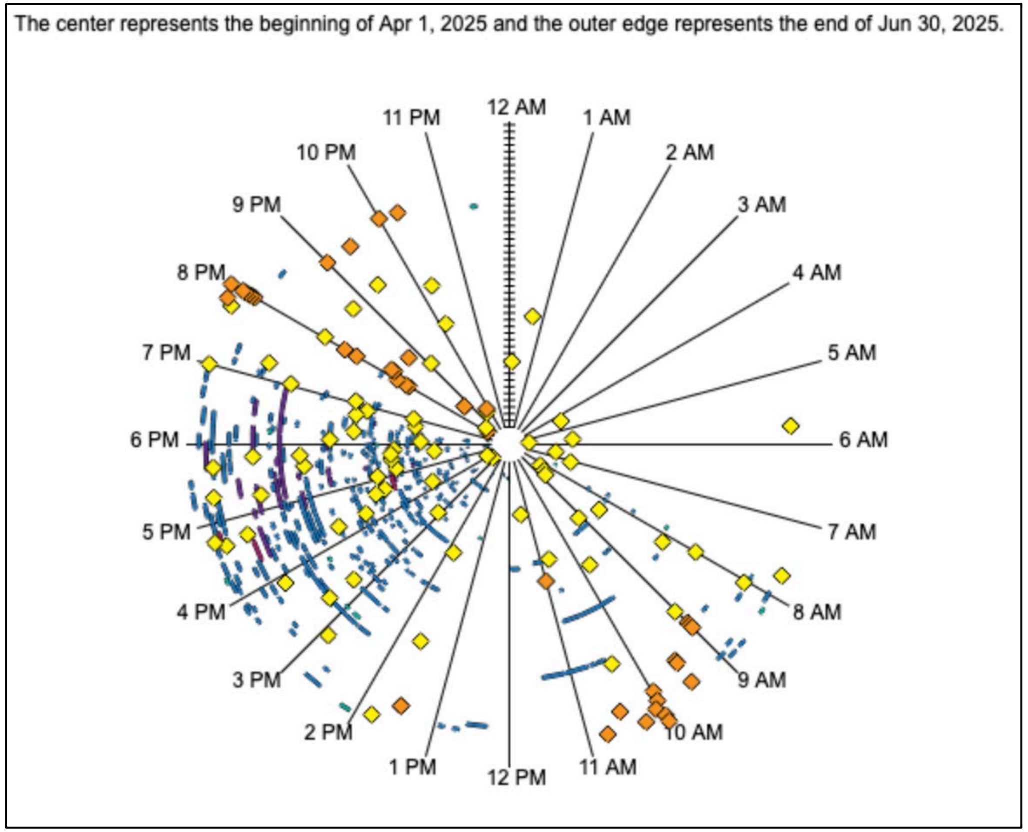
#3 Bottleneck: I-40 E @ HARRISON AVE/EXIT 287

Q4 FY2025





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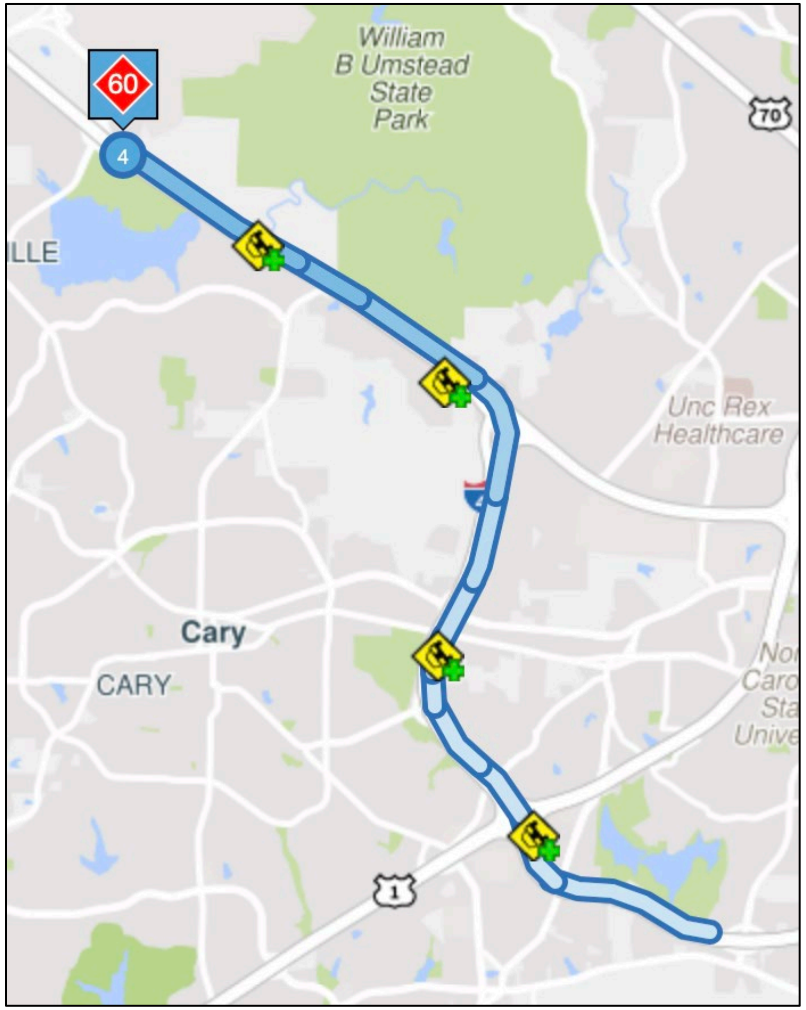
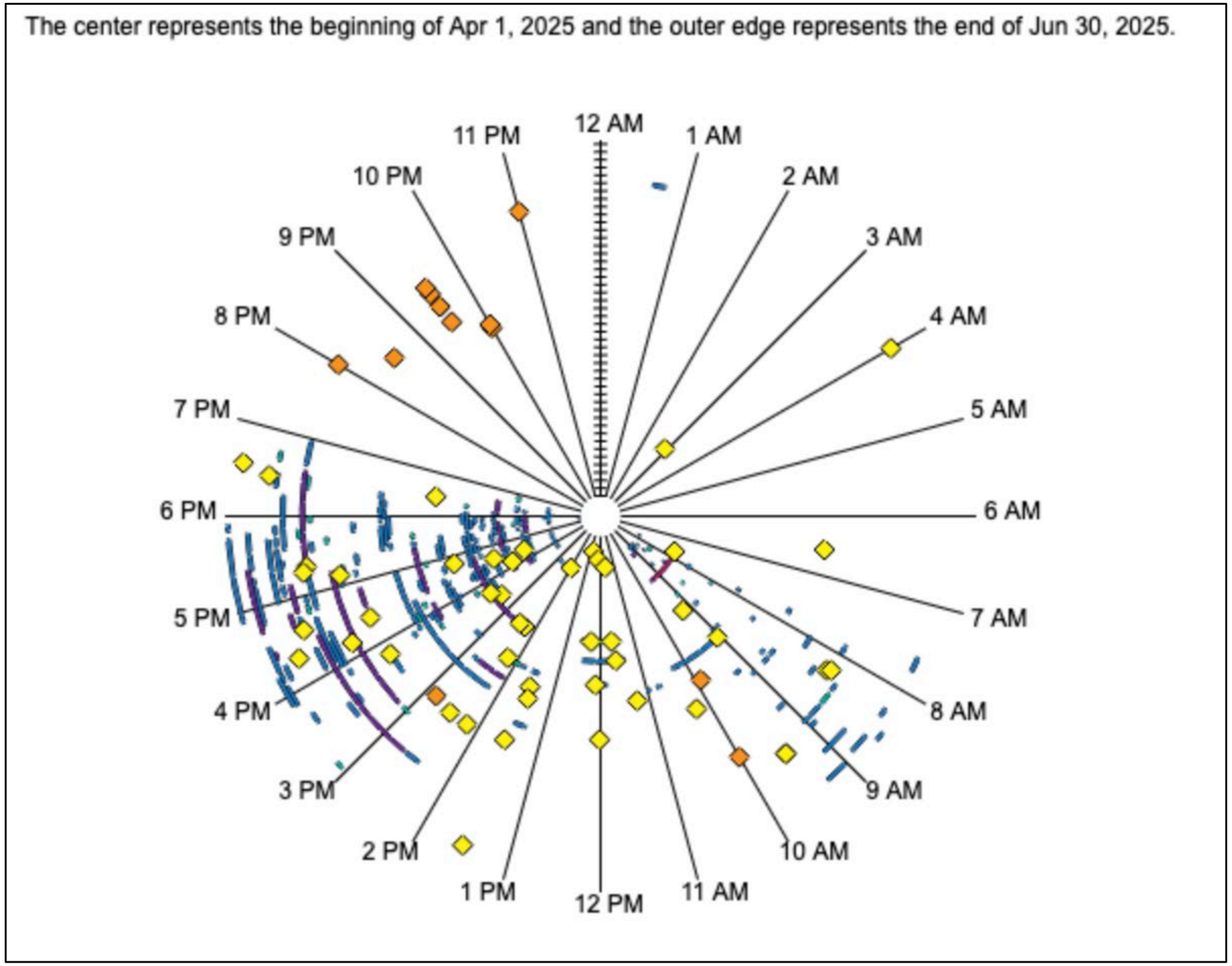
#4 Bottleneck: I-40 W @ AVIATION PKWY/EXIT 285

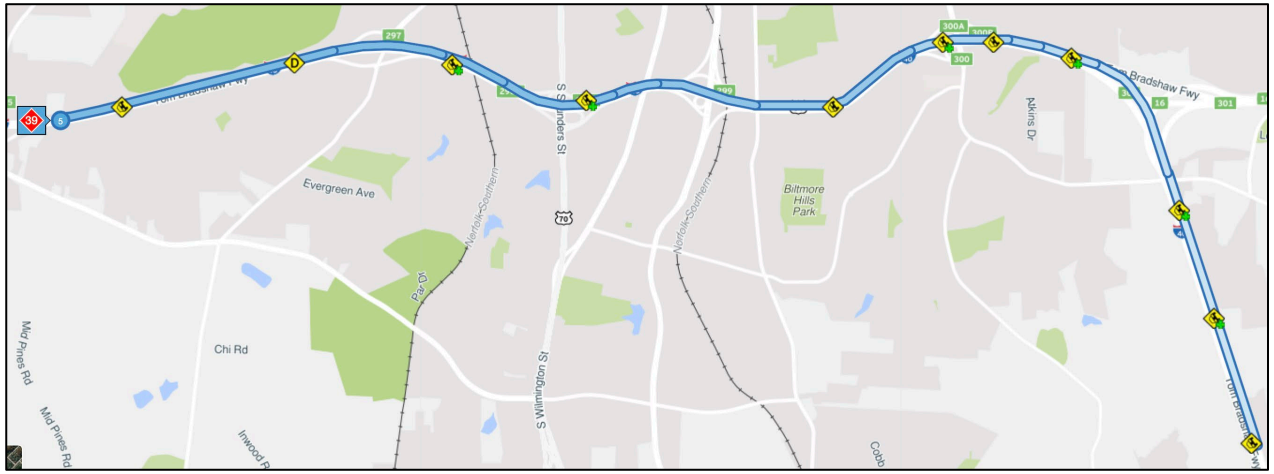
Q4 FY2025



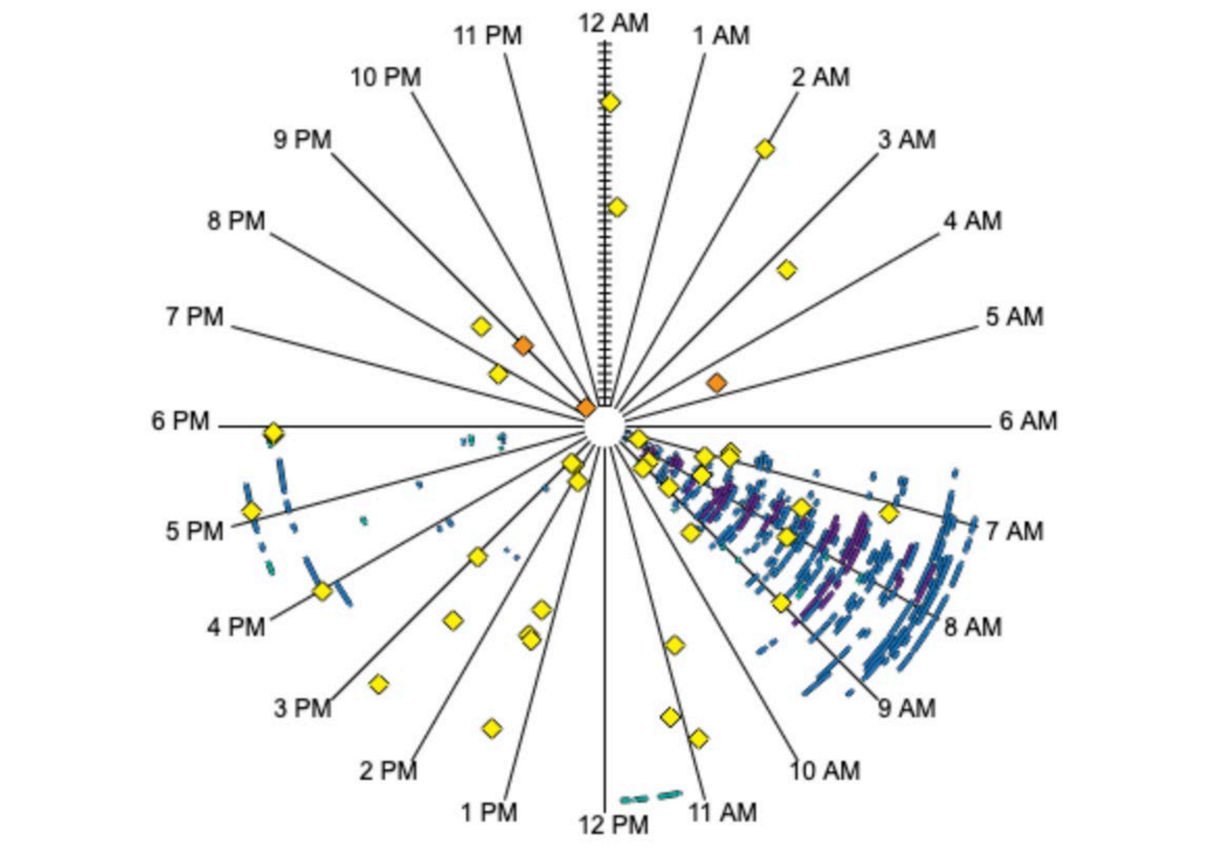


#5 Bottleneck: I-40 W @ GORMAN ST/EXIT 295

Q4 FY2025

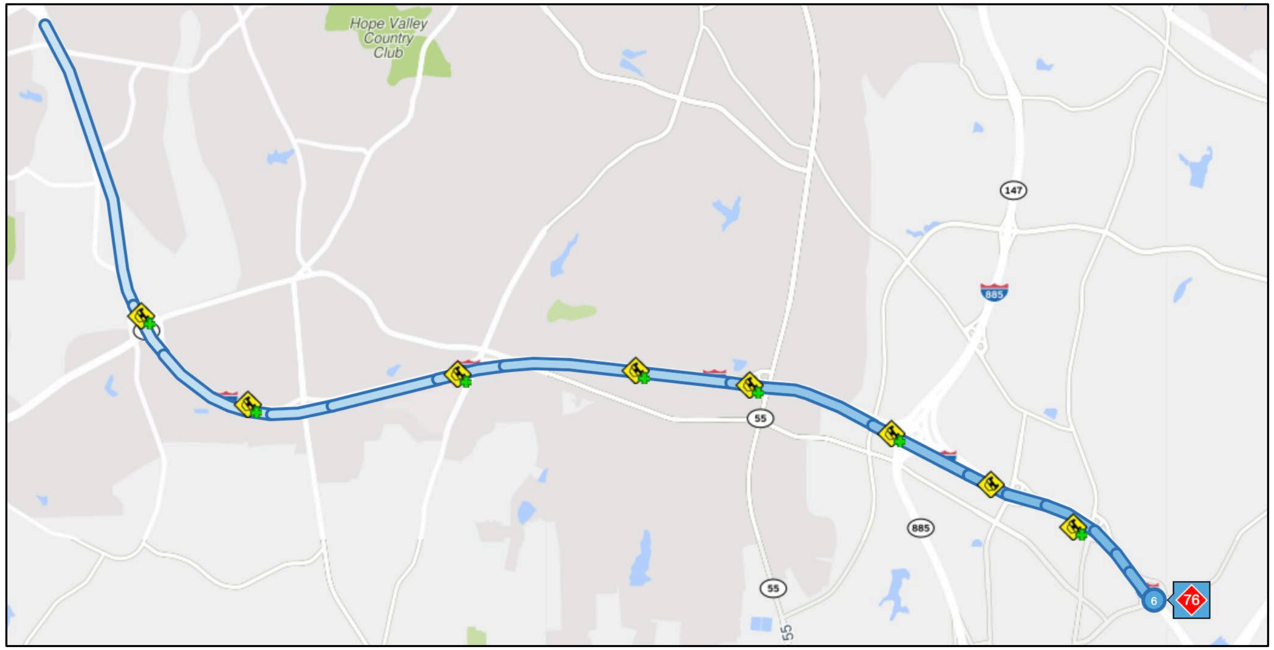


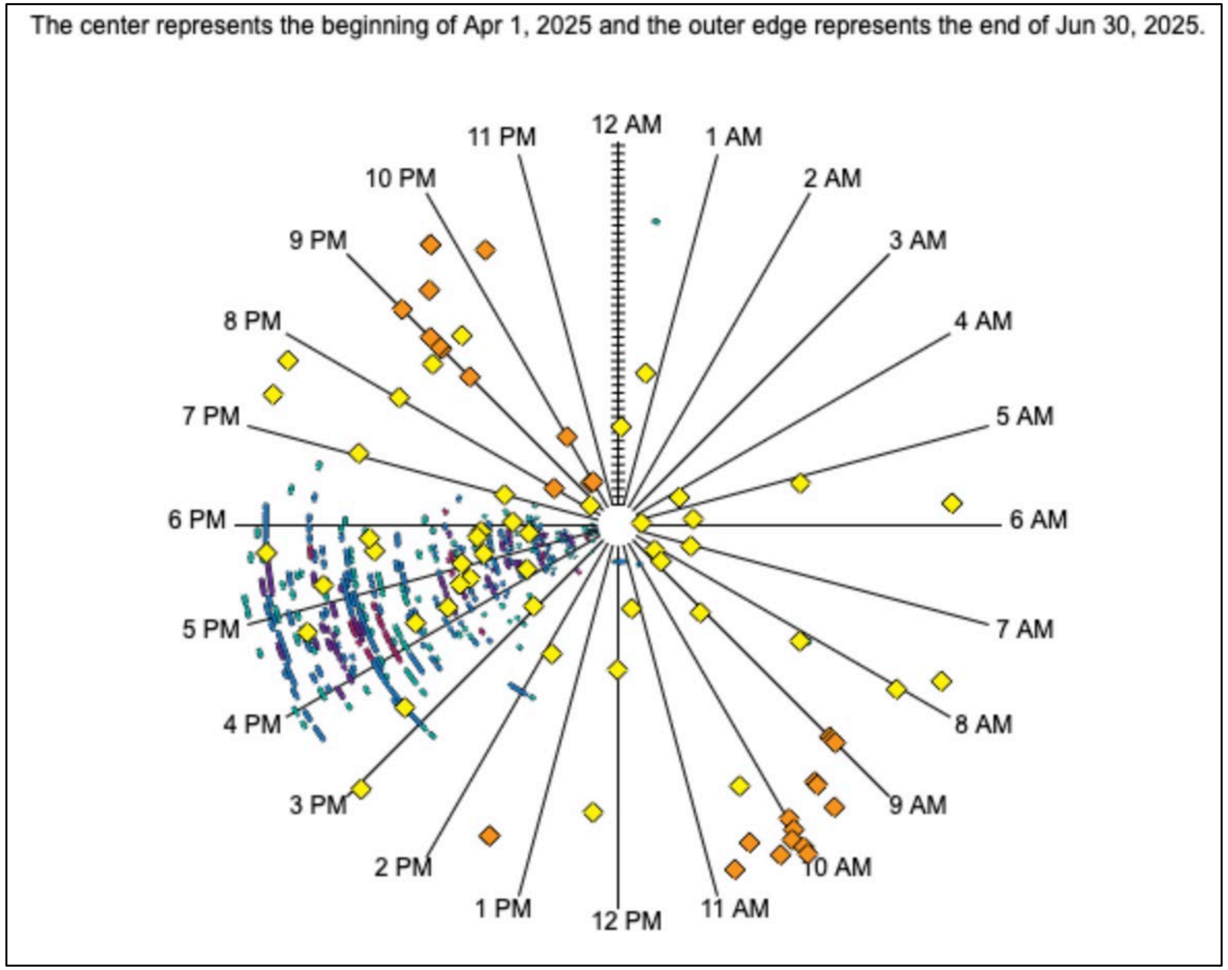
The center represents the beginning of Apr 1, 2025 and the outer edge represents the end of Jun 30, 2025.



#6 Bottleneck: I-40 E @ PAGE RD/EXIT 282

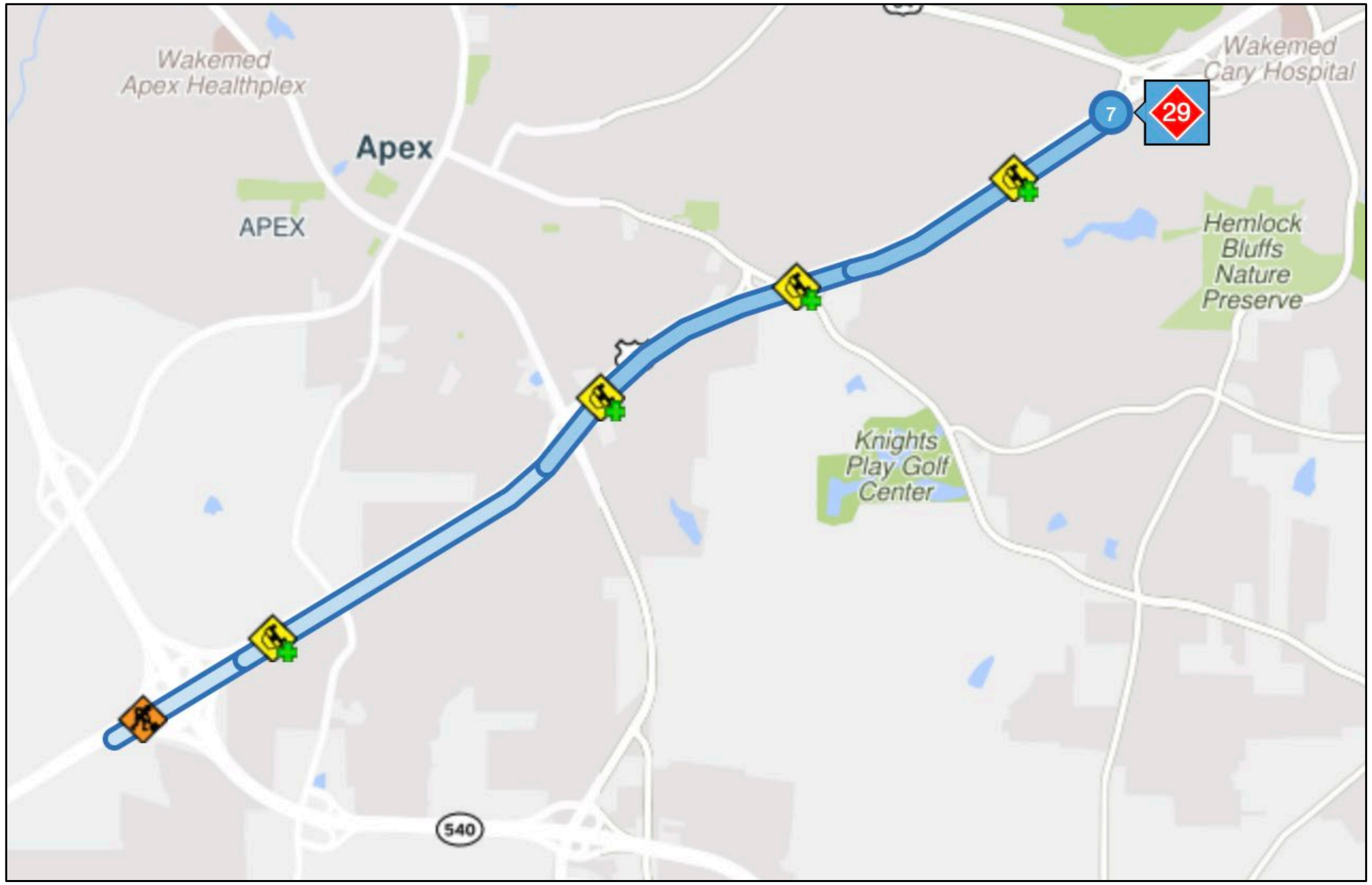
Q4 FY2025

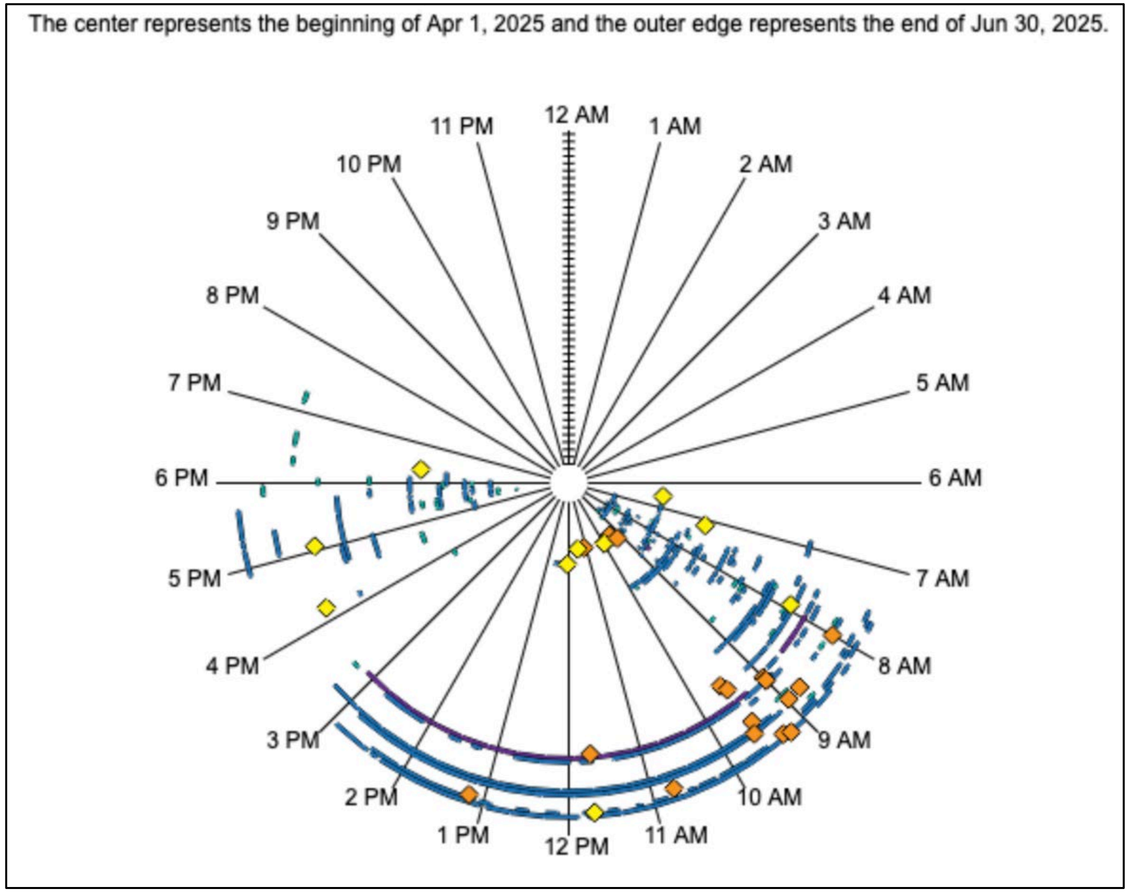




#7 Bottleneck: US-1 N @ US-64/EXIT 98

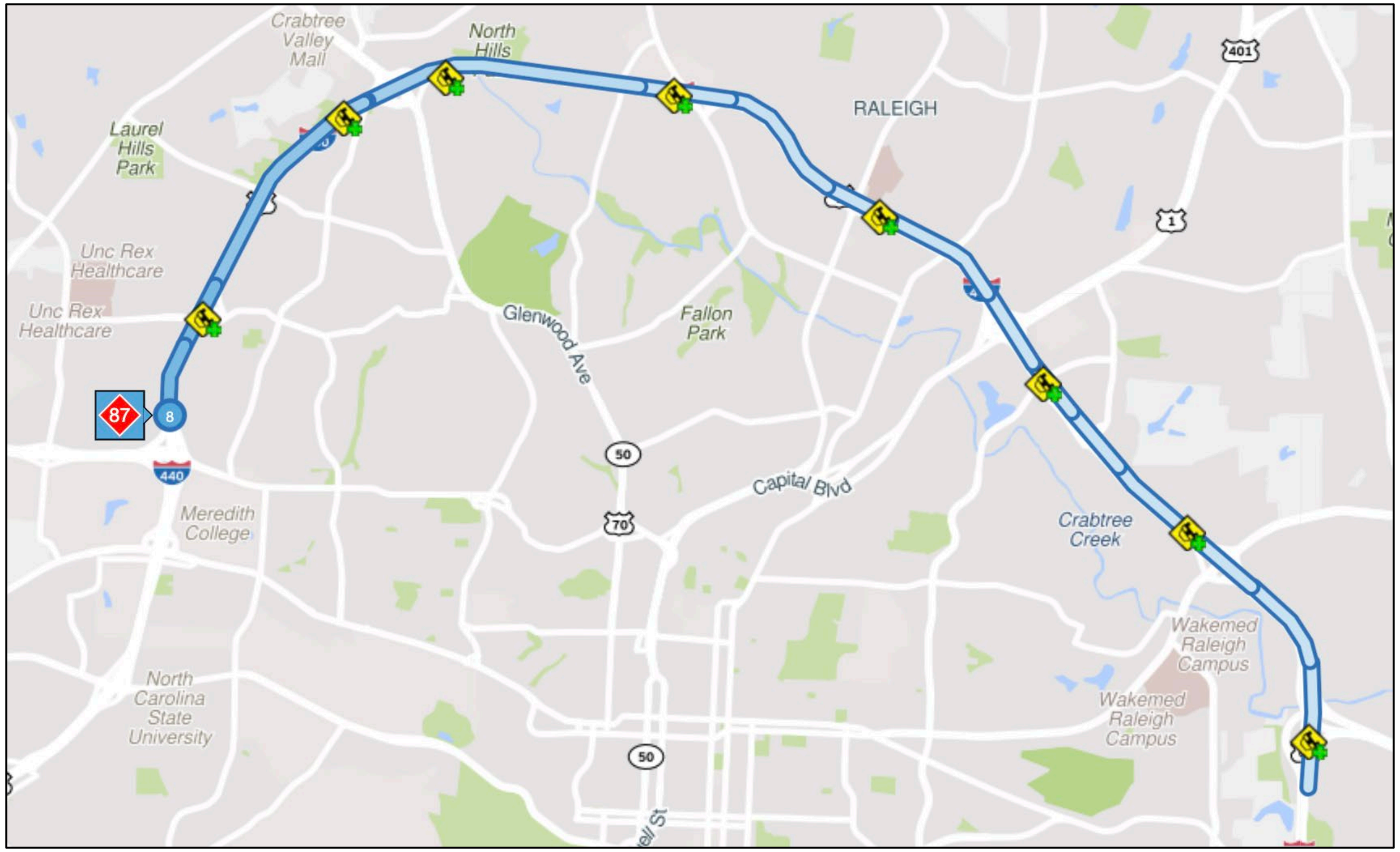
Q4 FY2025

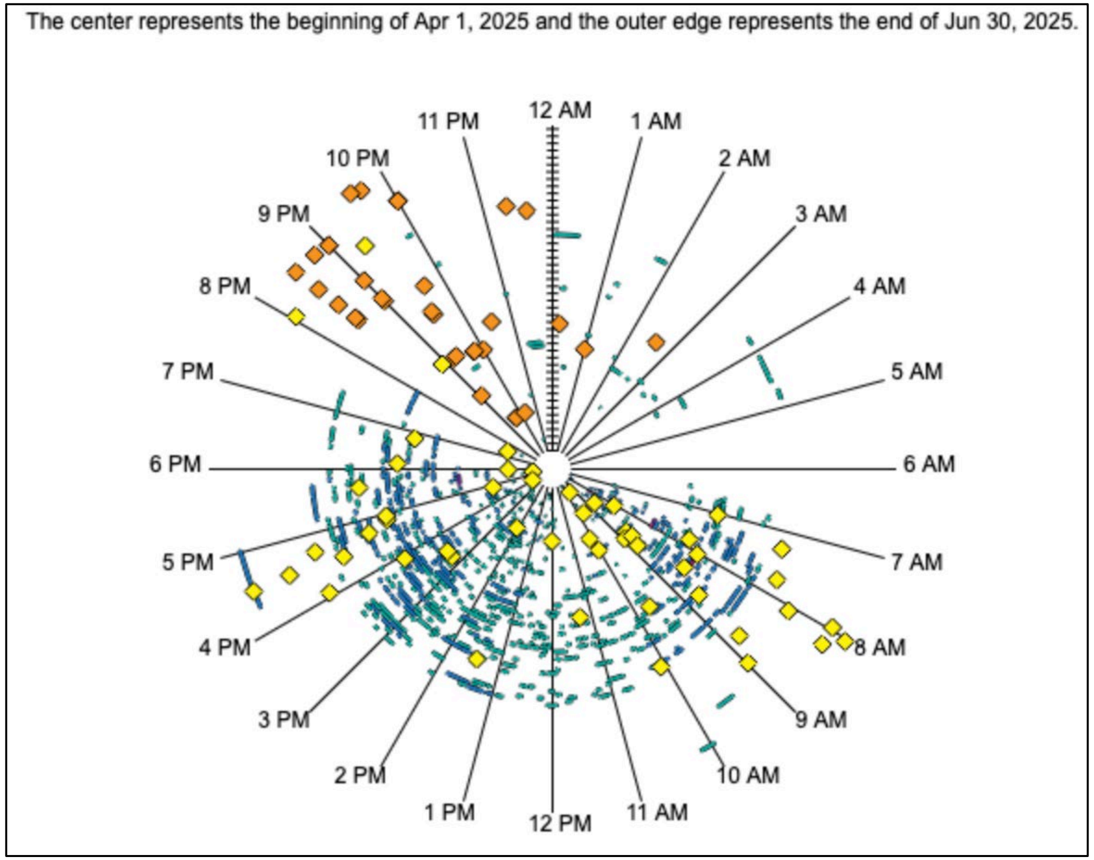




#8 Bottleneck: I-440 S (CCW)@ WADE AVE/EXIT 4

Q4 FY2025

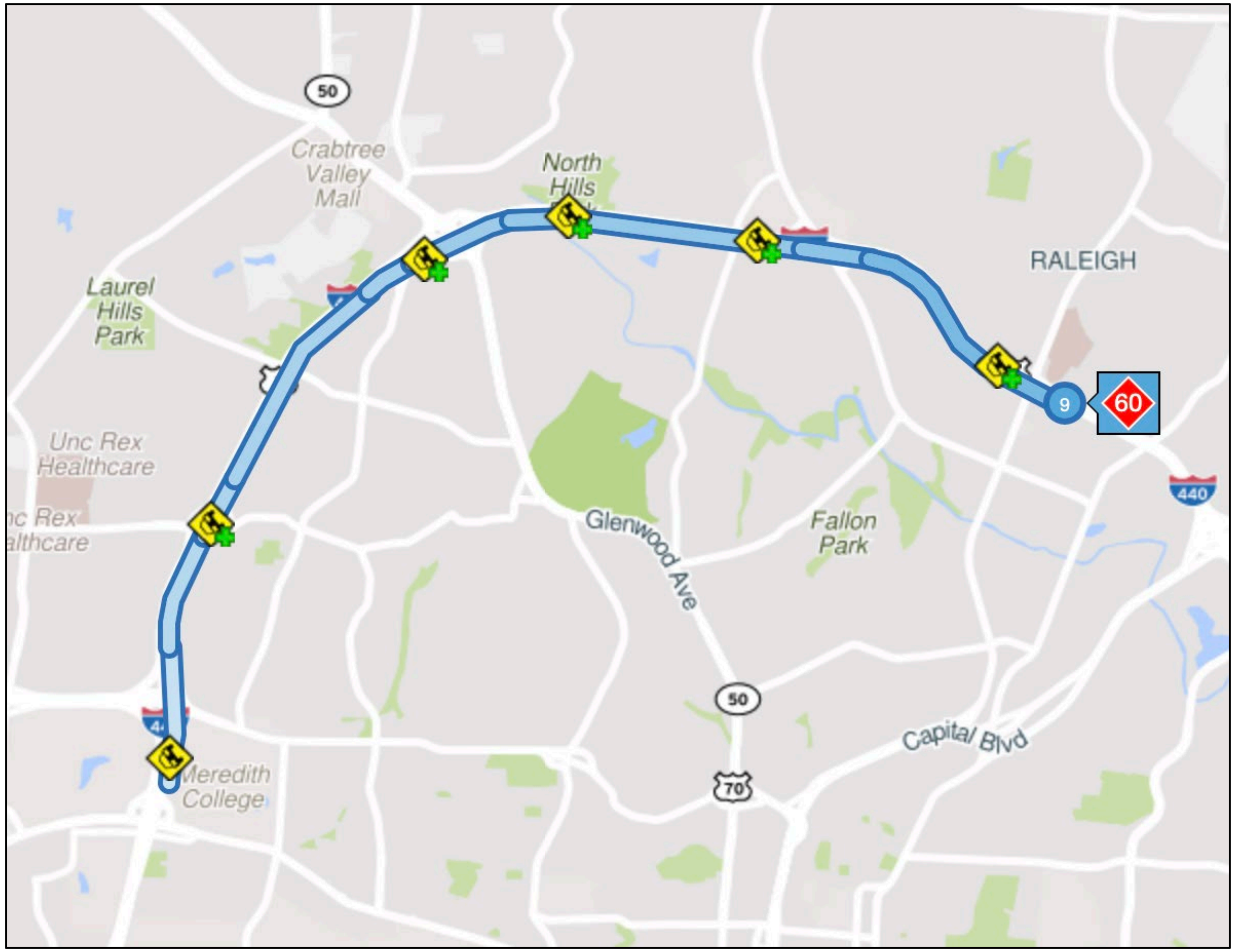




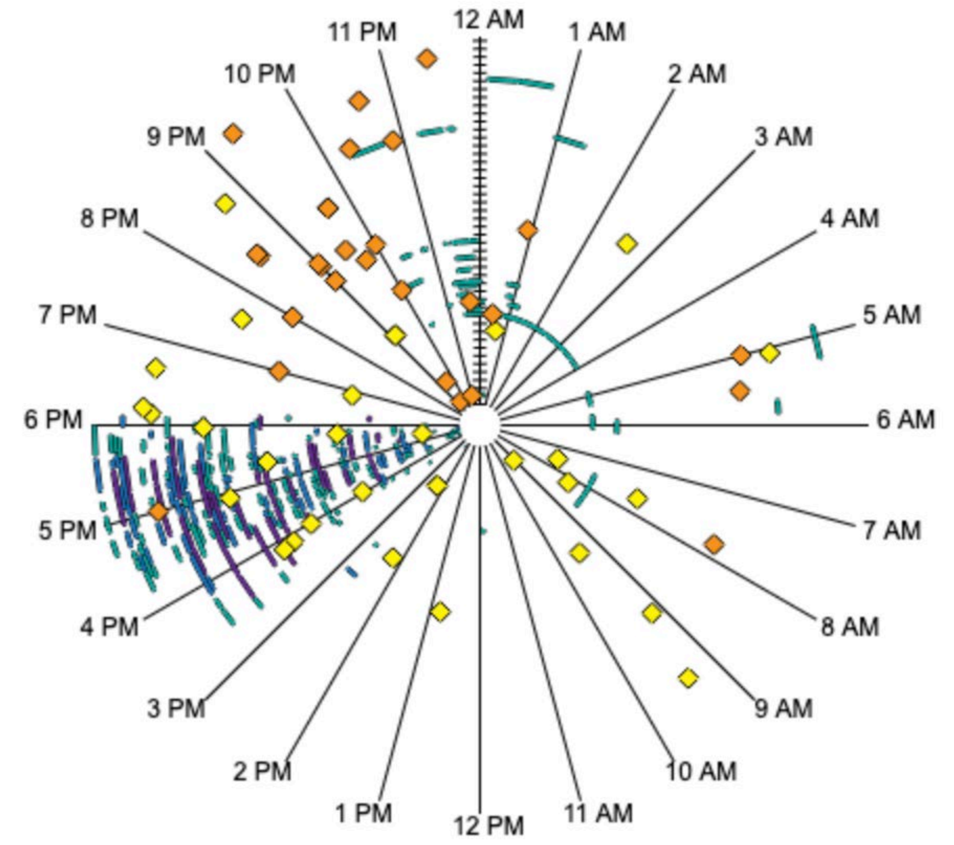
CAMPO
NC Capital Area Metropolitan Planning Organization

#9 Bottleneck: I-440 E (CW) @ WAKE FOREST RD/EXIT 10

Q4 FY2025

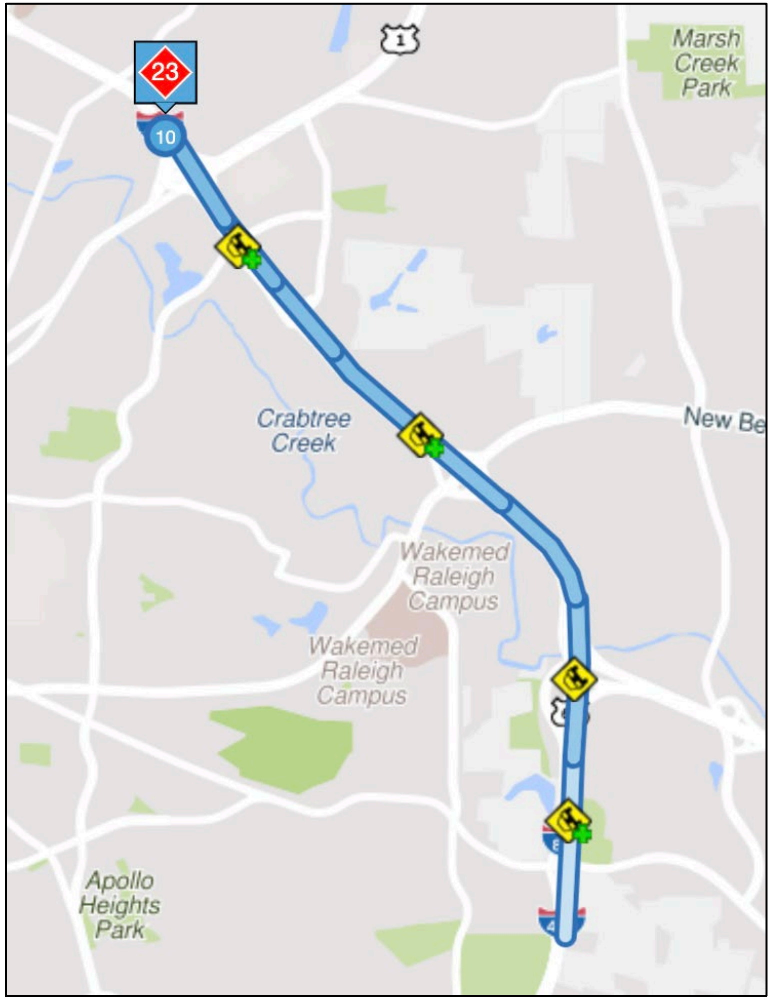


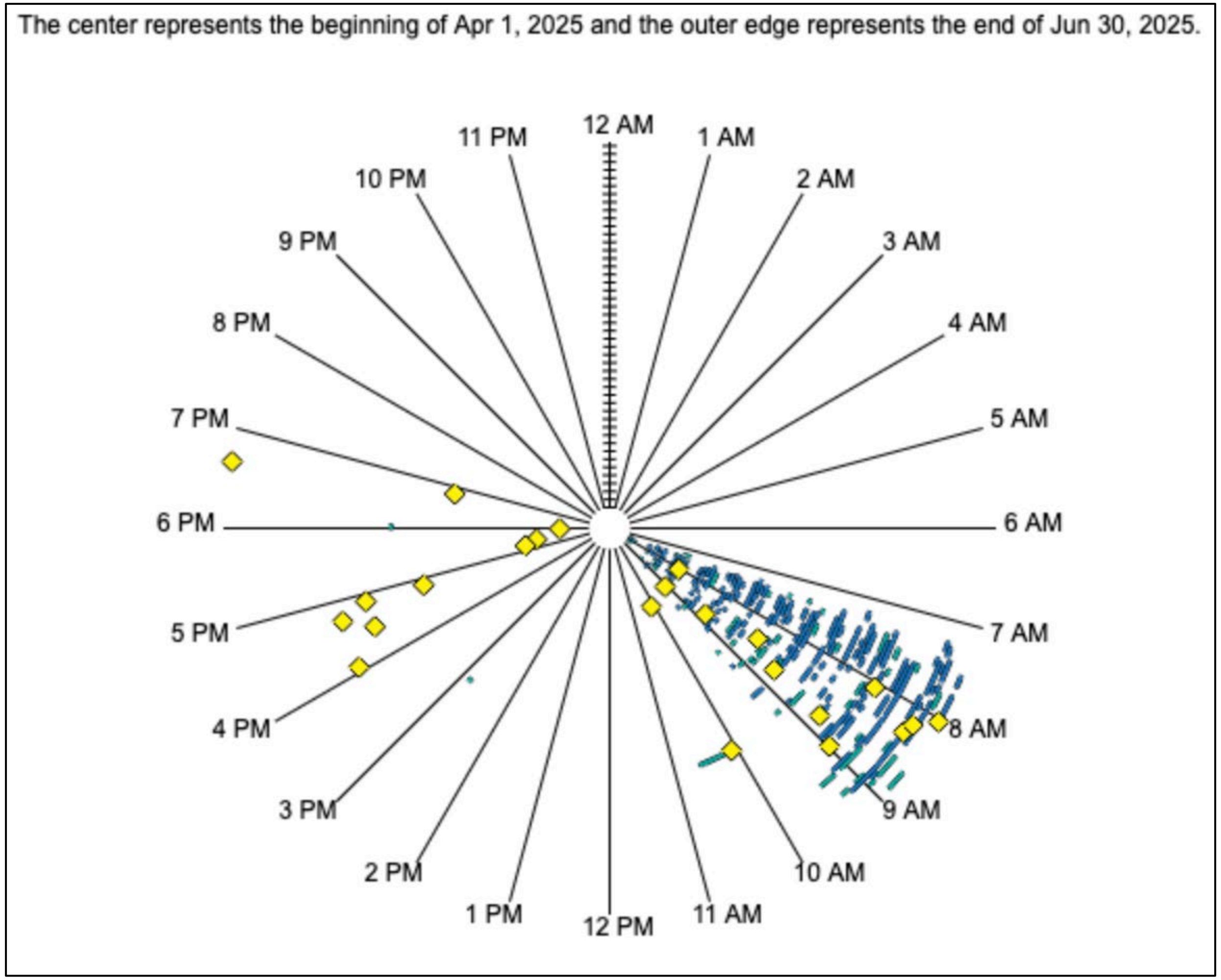
The center represents the beginning of Apr 1, 2025 and the outer edge represents the end of Jun 30, 2025.



#10 Bottleneck: I-440 W (CCW) @ US-401/US-1/CAPITAL BLVD/EXIT 11

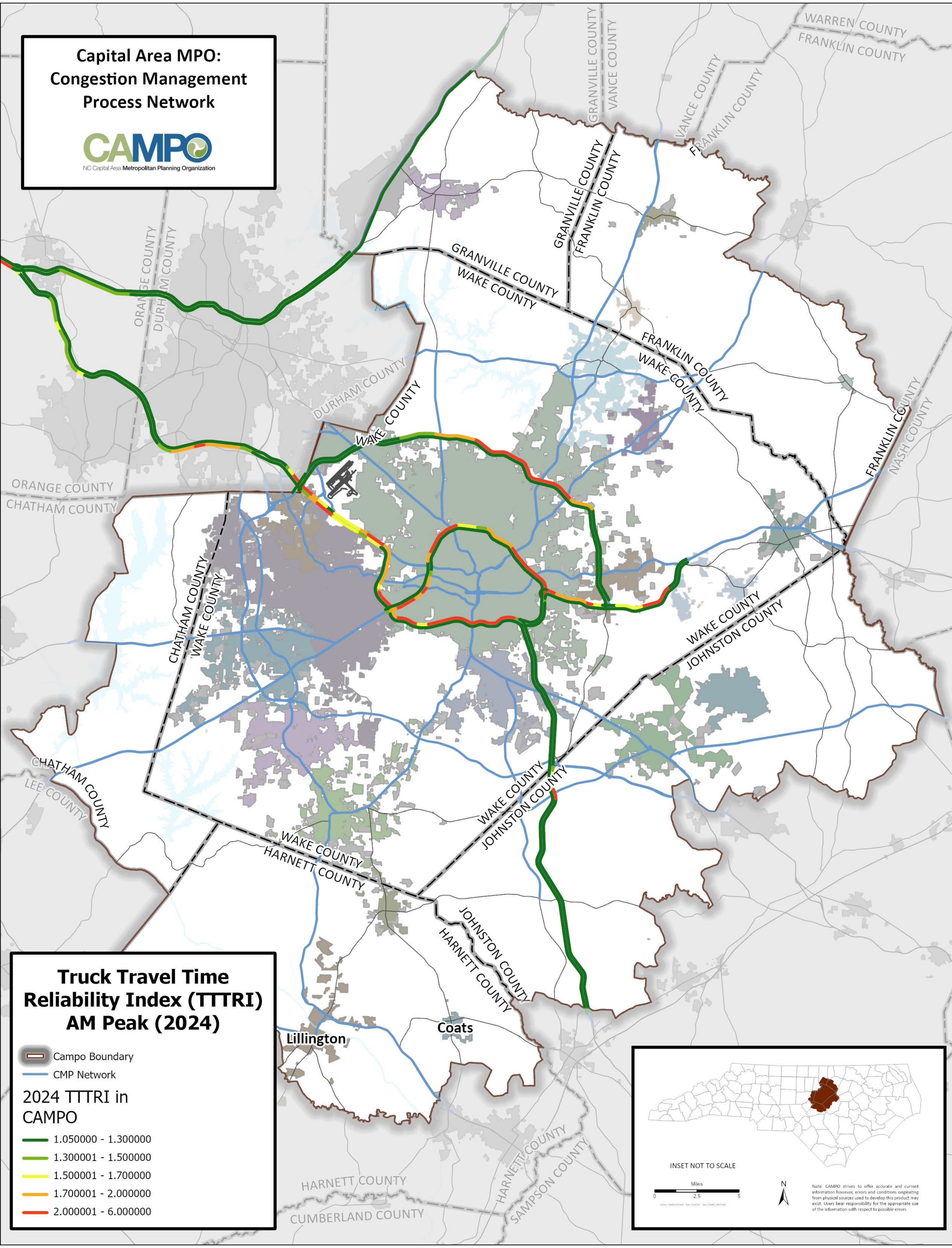
Q4 FY2025



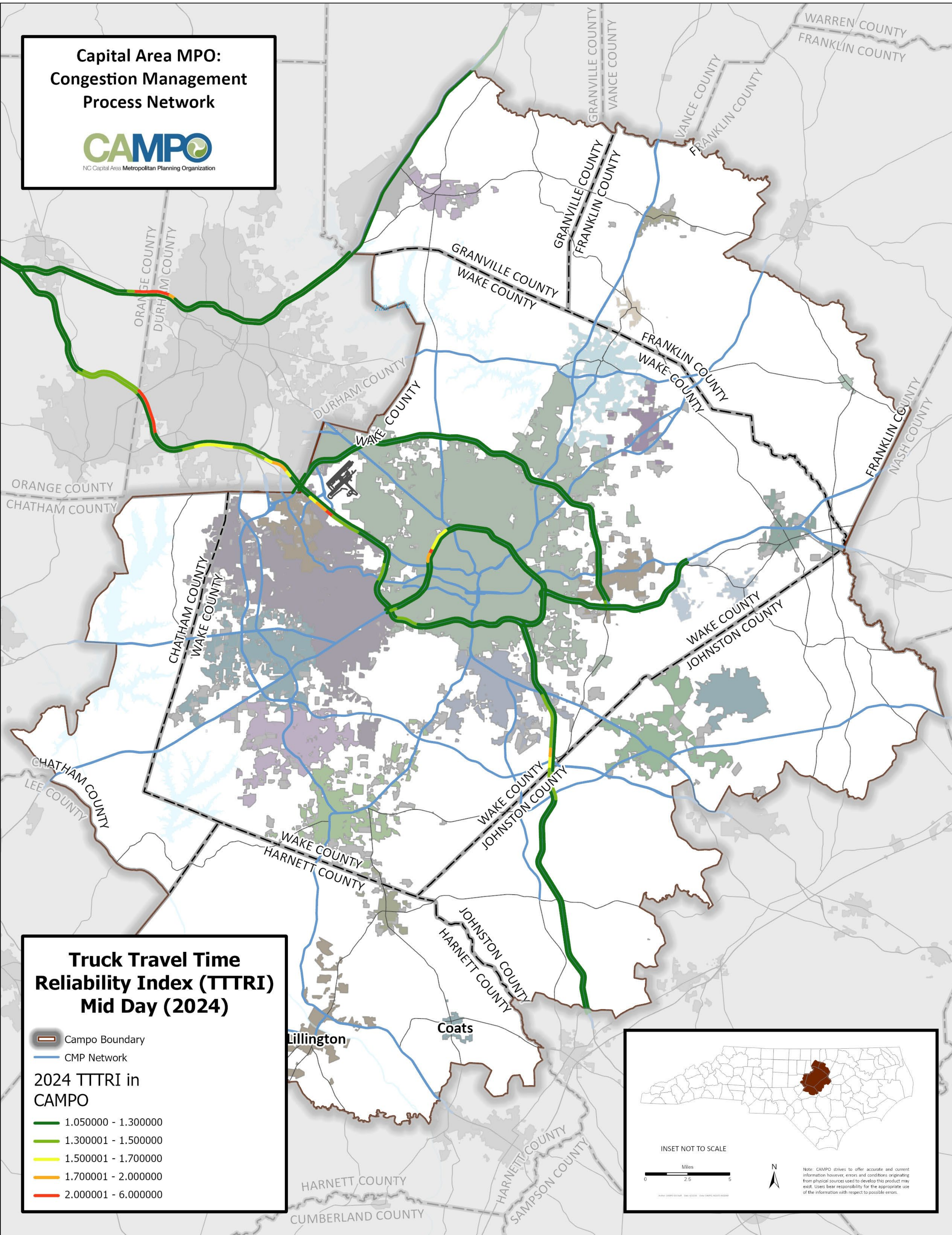


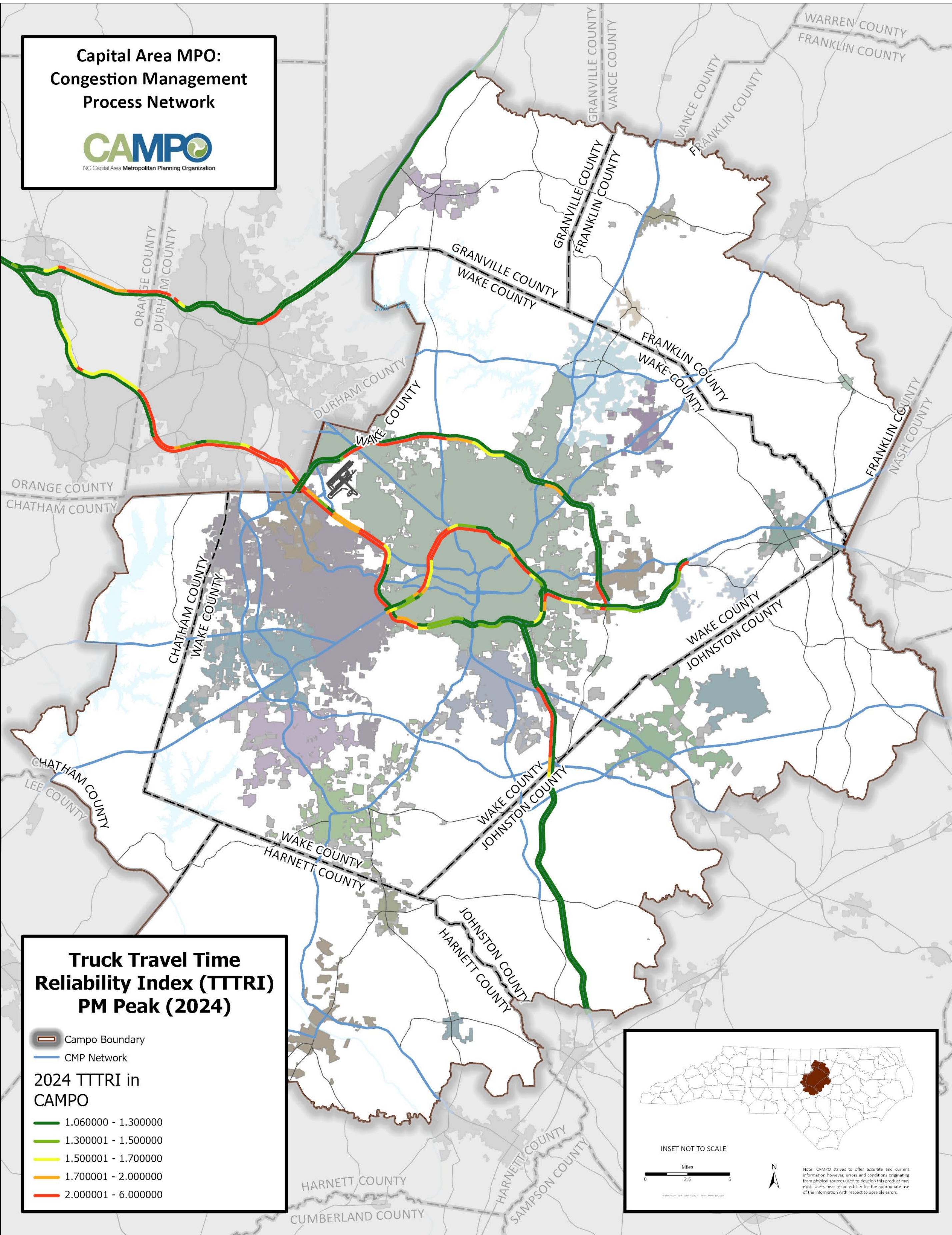
APPENDIX B: Truck Travel Time Reliability Index Maps (FY 2024)

Congestion Management Process – Status of the System Report

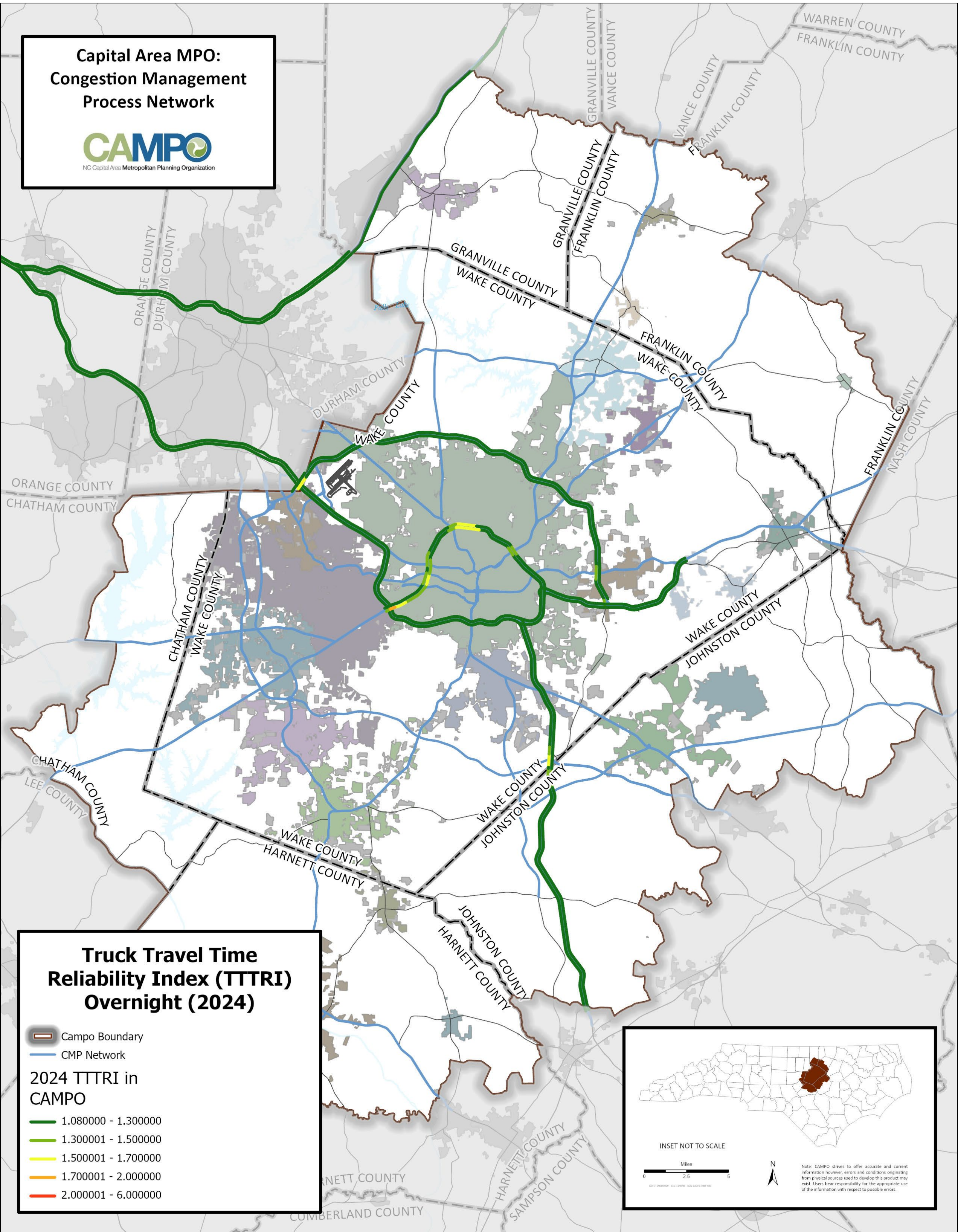


Capital Area MPO: Congestion Management Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time Reliability Index (TTTRI) AM Peak (2024)
Campo Boundary
CMP Network
2024 TTTRI in CAMPO
1.050000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
WAKE COUNTY
ORANGE COUNTY
DURHAM COUNTY
CHATHAM COUNTY
LEE COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
NASH COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY
Lillington
Coats
INSET NOT TO SCALE
Miles
0
2.5
5
N

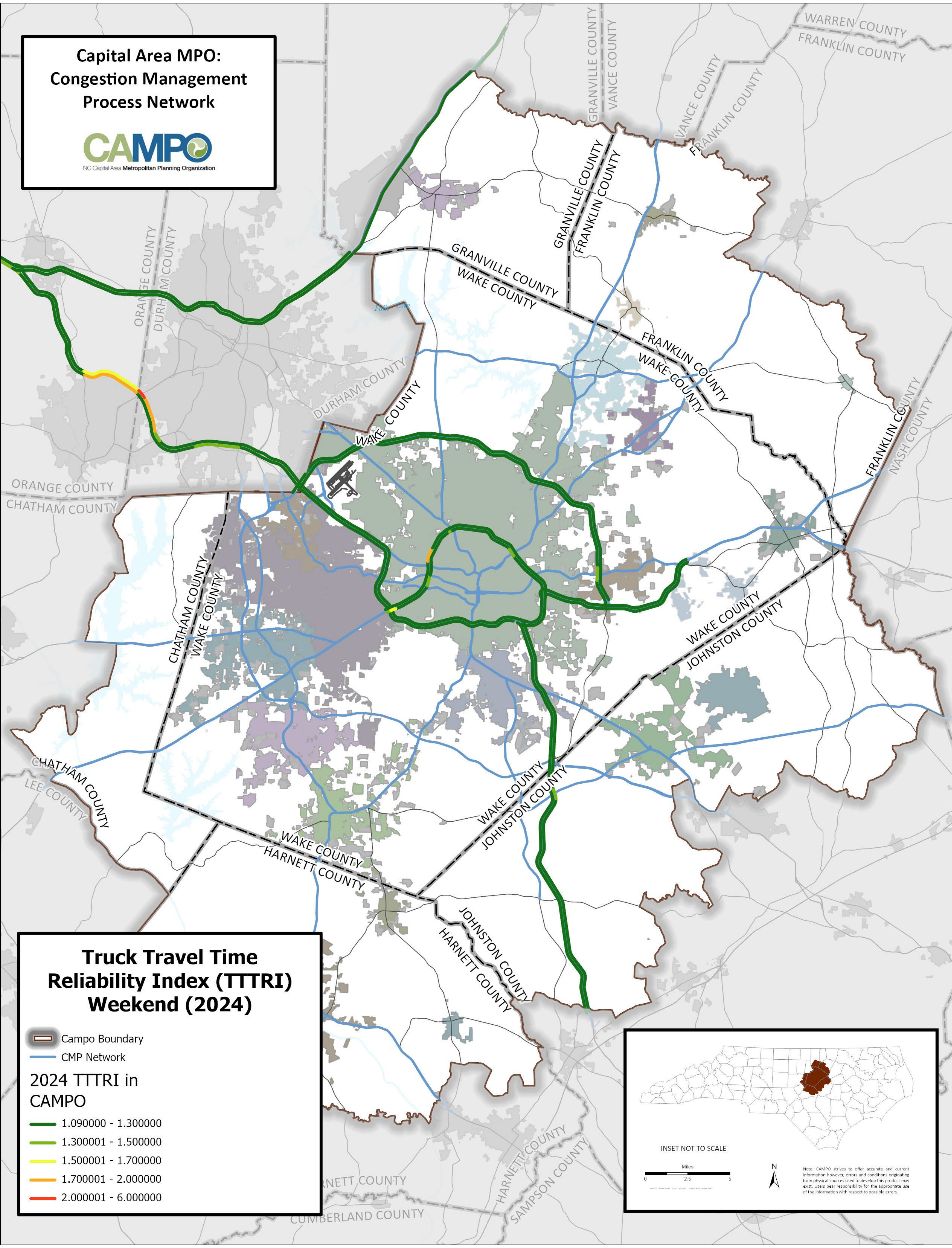

Capital Area MPO:
Congestion Management
Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time
Reliability Index (TTTRI)
Mid Day (2024)
Campo Boundary
CMP Network
2024 TTTRI in
CAMPO
1.050000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
VANCE COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
WAKE COUNTY
FRANKLIN COUNTY
WAKE COUNTY
ORANGE COUNTY
DURHAM COUNTY
DURHAM COUNTY
WAKE COUNTY
ORANGE COUNTY
CHATHAM COUNTY
CHATHAM COUNTY
WAKE COUNTY
FRANKLIN COUNTY
NASH COUNTY
WAKE COUNTY
JOHNSTON COUNTY
CHATHAM COUNTY
LEE COUNTY
WAKE COUNTY
JOHNSTON COUNTY
WAKE COUNTY
HARNETT COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
Lillington
Coats
INSET NOT TO SCALE
Miles
0
2.5
5
N
HARNETT COUNTY
SAMPSON COUNTY
HARNETT COUNTY
CUMBERLAND COUNTY



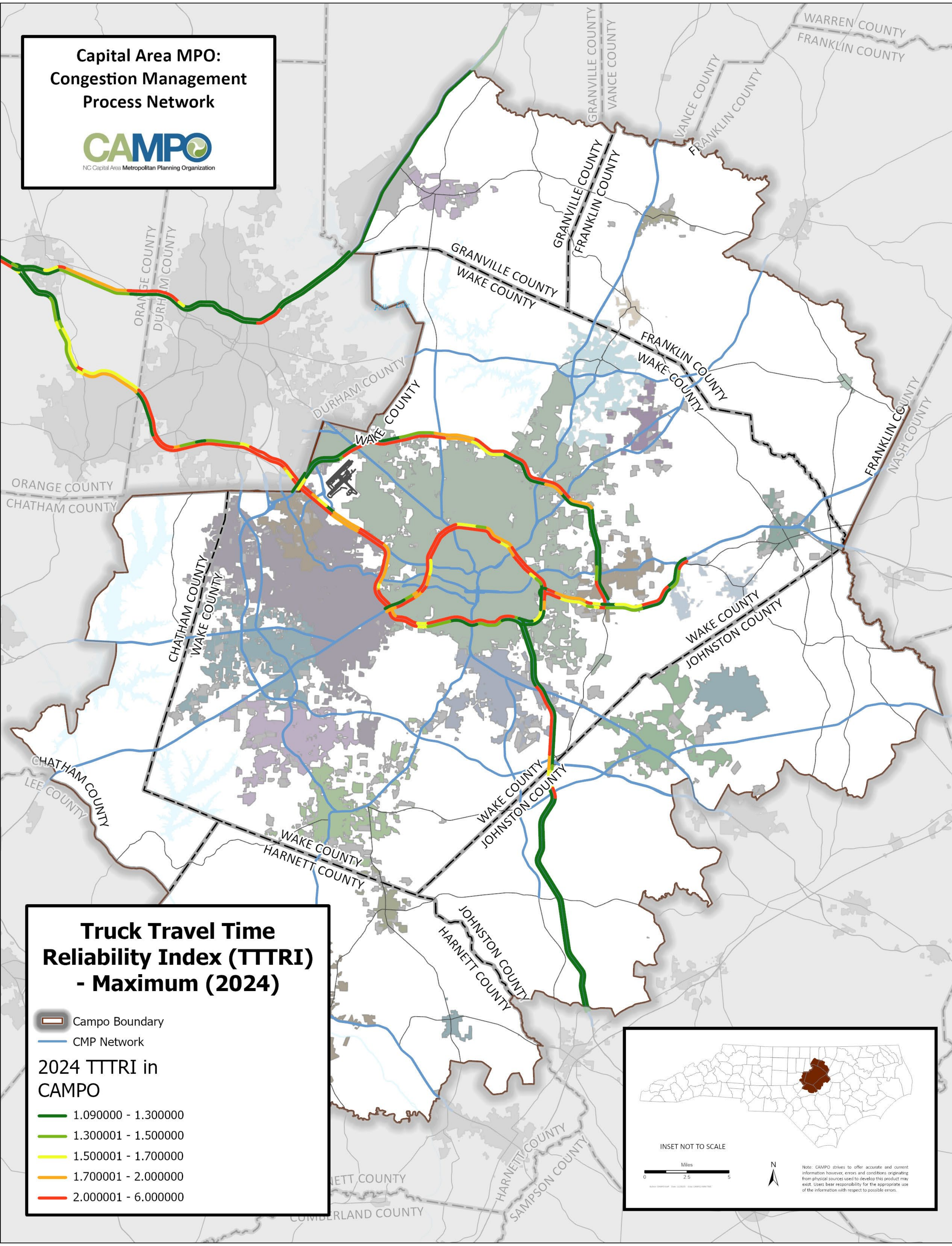
Capital Area MPO:
Congestion Management
Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time
Reliability Index (TTTRI)
PM Peak (2024)
Campo Boundary
CMP Network
2024 TTTRI in
CAMPO
1.060000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
INSET NOT TO SCALE
Miles
0
2.5
5
N
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
WAKE COUNTY
DURHAM COUNTY
ORANGE COUNTY
CHATHAM COUNTY
NASH COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
LEE COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY



Capital Area MPO: Congestion Management Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time Reliability Index (TTTRI) Overnight (2024)
Campo Boundary
CMP Network
2024 TTTRI in CAMPO
1.080000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
INSET NOT TO SCALE
Miles
0
2.5
5
N
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
WAKE COUNTY
DURHAM COUNTY
ORANGE COUNTY
CHATHAM COUNTY
NASH COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
LEE COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY



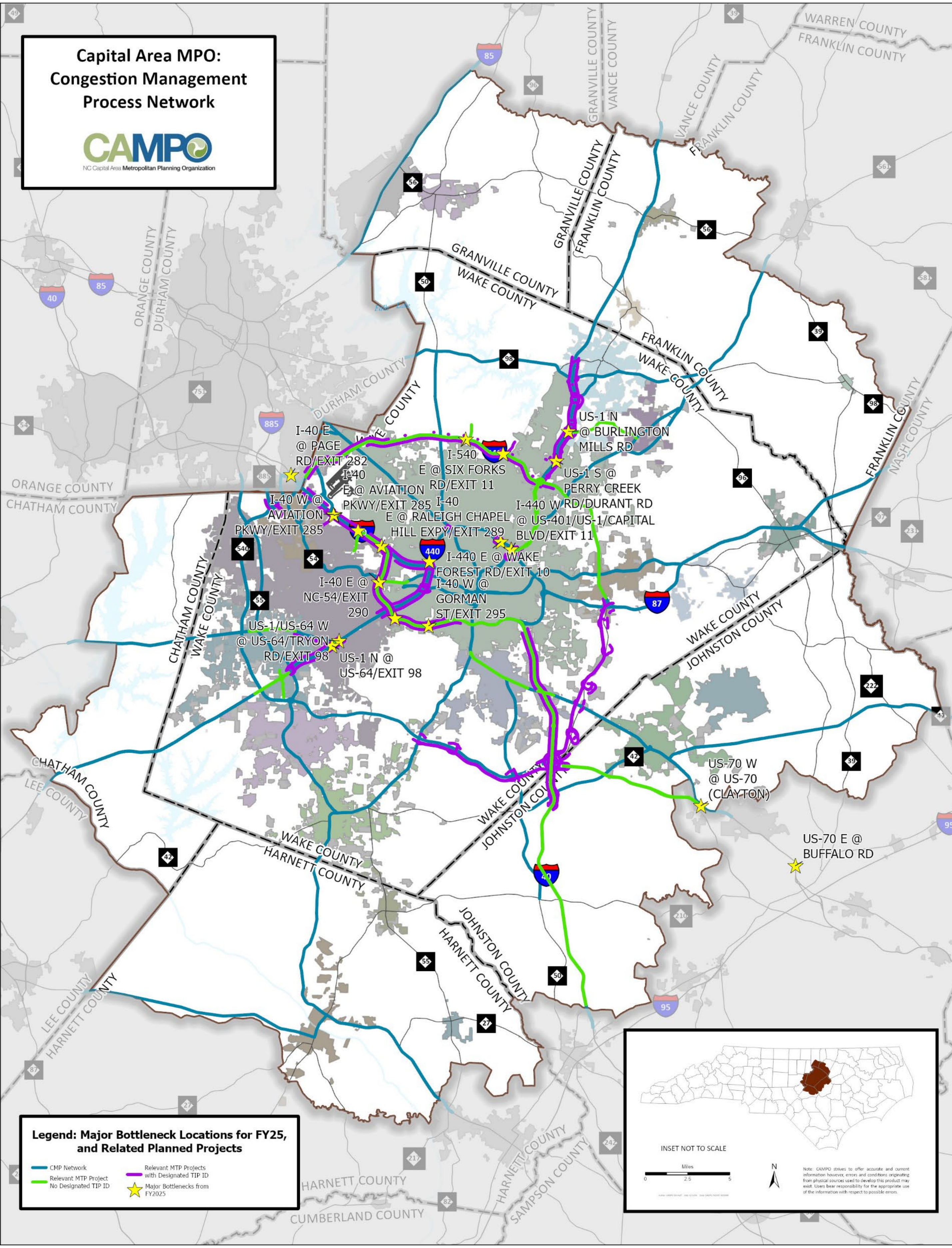
Capital Area MPO: Congestion Management Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time Reliability Index (TTTRI) Weekend (2024)
Campo Boundary
CMP Network
2024 TTTRI in CAMPO
1.090000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
INSET NOT TO SCALE
Miles
0
2.5
5
N
Note: CAMPO strives to offer accurate and current information however, errors and conditions originating from physical sources used to develop this product may exist. Users bear responsibility for the appropriate use of the information with respect to possible errors.
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
WAKE COUNTY
ORANGE COUNTY
DURHAM COUNTY
DURHAM COUNTY
WAKE COUNTY
NASH COUNTY
ORANGE COUNTY
CHATHAM COUNTY
CHATHAM COUNTY
WAKE COUNTY
WAKE COUNTY
JOHNSTON COUNTY
CHATHAM COUNTY
LEE COUNTY
WAKE COUNTY
HARNETT COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
HARNETT COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY



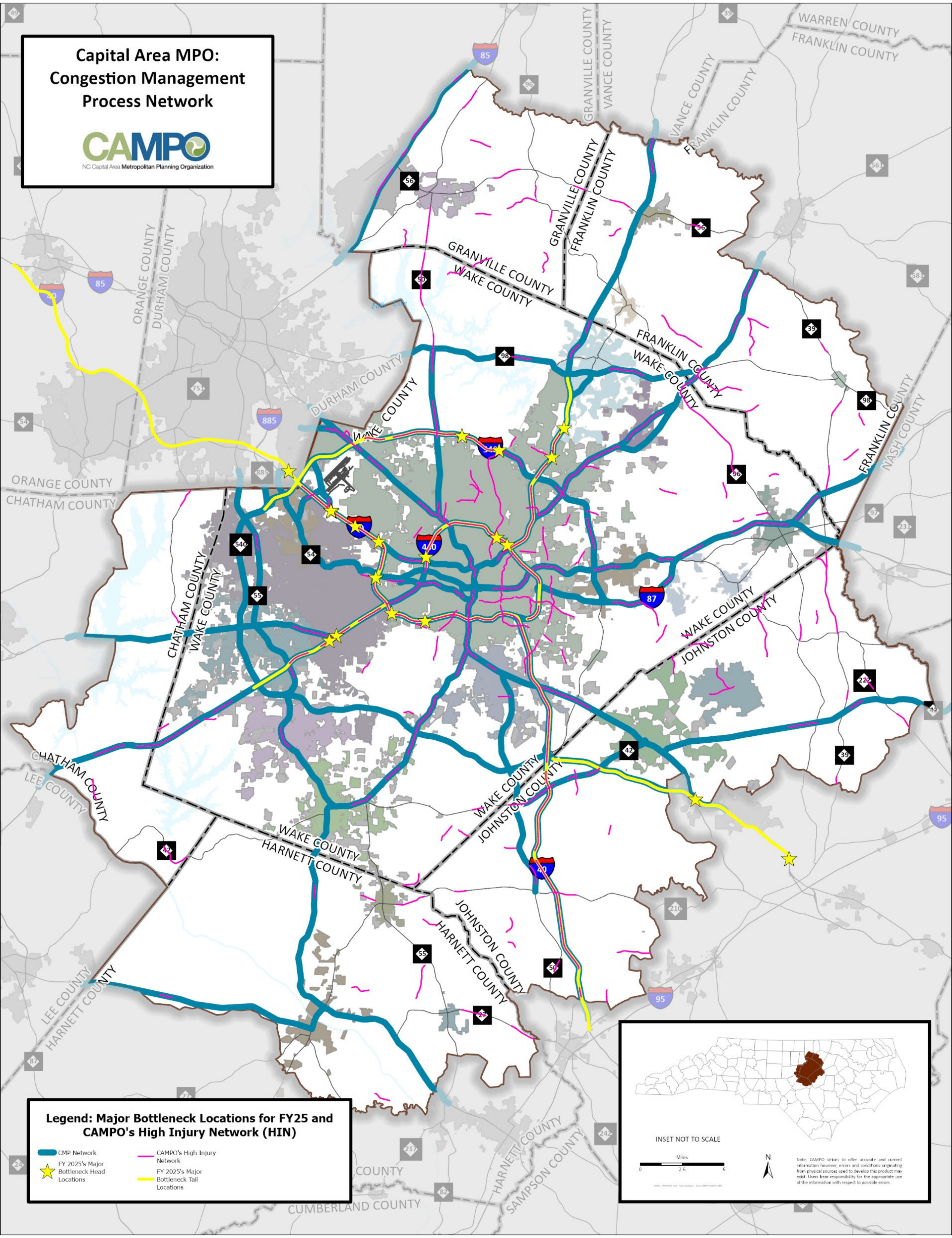
Capital Area MPO:
Congestion Management
Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Truck Travel Time Reliability Index (TTTRI) - Maximum (2024)
Campo Boundary
CMP Network
2024 TTTRI in CAMPO
1.090000 - 1.300000
1.300001 - 1.500000
1.500001 - 1.700000
1.700001 - 2.000000
2.000001 - 6.000000
INSET NOT TO SCALE
Miles
0
2.5
5
N
Note: CAMPO strives to offer accurate and current information however, errors and conditions originating from physical sources used to develop this product may exist. Users bear responsibility for the appropriate use of the information with respect to possible errors.
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
GRANVILLE COUNTY
WAKE COUNTY
FRANKLIN COUNTY
WAKE COUNTY
ORANGE COUNTY
DURHAM COUNTY
DURHAM COUNTY
WAKE COUNTY
ORANGE COUNTY
CHATHAM COUNTY
CHATHAM COUNTY
WAKE COUNTY
NASH COUNTY
WAKE COUNTY
JOHNSTON COUNTY
LEE COUNTY
WAKE COUNTY
HARNETT COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY

APPENDIX C:
FY25 Major Bottleneck Maps with Associated Network Analyses

Congestion Management Process – Status of the System Report



Capital Area MPO:
Congestion Management
Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
I-40 E @ PAGE RD/EXIT 282
I-40 E @ AVIATION PKWY/EXIT 285
I-40 W @ AVIATION PKWY/EXIT 285
I-540 E @ SIX FORKS RD/EXIT 11
I-40 E @ RALEIGH CHAPEL HILL EXPY/EXIT 289
US-1 N @ BURLINGTON MILLS RD
US-1 S @ PERRY CREEK RD/DURANT RD
I-440 W @ US-401/US-1/CAPITAL BLVD/EXIT 11
I-440 E @ WAKE FOREST RD/EXIT 10
I-40 E @ NC-54/EXIT 290
I-40 W @ GORMAN ST/EXIT 295
US-1/US-64 W @ US-64/TRYON RD/EXIT 98
US-1 N @ US-64/EXIT 98
US-70 W @ US-70 (CLAYTON)
US-70 E @ BUFFALO RD
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
WAKE COUNTY
DURHAM COUNTY
ORANGE COUNTY
CHATHAM COUNTY
NASH COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
LEE COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY
Legend: Major Bottleneck Locations for FY25, and Related Planned Projects
CMP Network
Relevant MTP Project No Designated TIP ID
Relevant MTP Projects with Designated TIP ID
Major Bottlenecks from FY2025
INSET NOT TO SCALE
Miles
0 2.5 5
N
Note: CAMPO strives to offer accurate and current information however, errors and conditions originating from physical sources used to develop this product may exist. Users bear responsibility for the appropriate use of the information with respect to possible errors.


Capital Area MPO: Congestion Management Process Network
CAMPO
NC Capital Area Metropolitan Planning Organization
Legend: Major Bottleneck Locations for FY25 and CAMPO's High Injury Network (HIN)
CMP Network
FY 2025's Major Bottleneck Head Locations
CAMPO's High Injury Network
FY 2025's Major Bottleneck Tail Locations
INSET NOT TO SCALE
Miles
0
2.5
5
N
Note: CAMPO strives to offer accurate and current information however, errors and conditions originating from physical sources used to develop this product may exist. Users bear responsibility for the appropriate use of the information with respect to possible errors.
WARREN COUNTY
FRANKLIN COUNTY
GRANVILLE COUNTY
VANCE COUNTY
ORANGE COUNTY
DURHAM COUNTY
WAKE COUNTY
CHATHAM COUNTY
JOHNSTON COUNTY
HARNETT COUNTY
LEE COUNTY
NASH COUNTY
SAMPSON COUNTY
CUMBERLAND COUNTY
85
885
540
440
40
87
95