

# CONGESTION REPORT

4th Quarter 2022

A quarterly update of the National Capital Region's traffic congestion, travel time reliability, top-10 bottlenecks and featured spotlight

January 2023



National Capital Region  
**Transportation Planning Board**

## **CONGESTION REPORT**

January 2023

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The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 24 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

### **CREDITS**

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# CONGESTION – TRAVEL TIME INDEX (TTI)

## Interstate System

TTI 4th Quarter 2022: **1.32** ↑4.0% or 0.05<sup>1</sup>  
 TTI Trailing 4 Quarters: **1.29** ↑6.5% or 0.08<sup>2</sup>

## Non-Interstate NHS<sup>3</sup>

TTI 4th Quarter 2022: **1.16** ↑1.0% or 0.01  
 TTI Trailing 4 Quarters: **1.14** ↑1.8% or 0.02

## Transit-Significant<sup>4</sup>

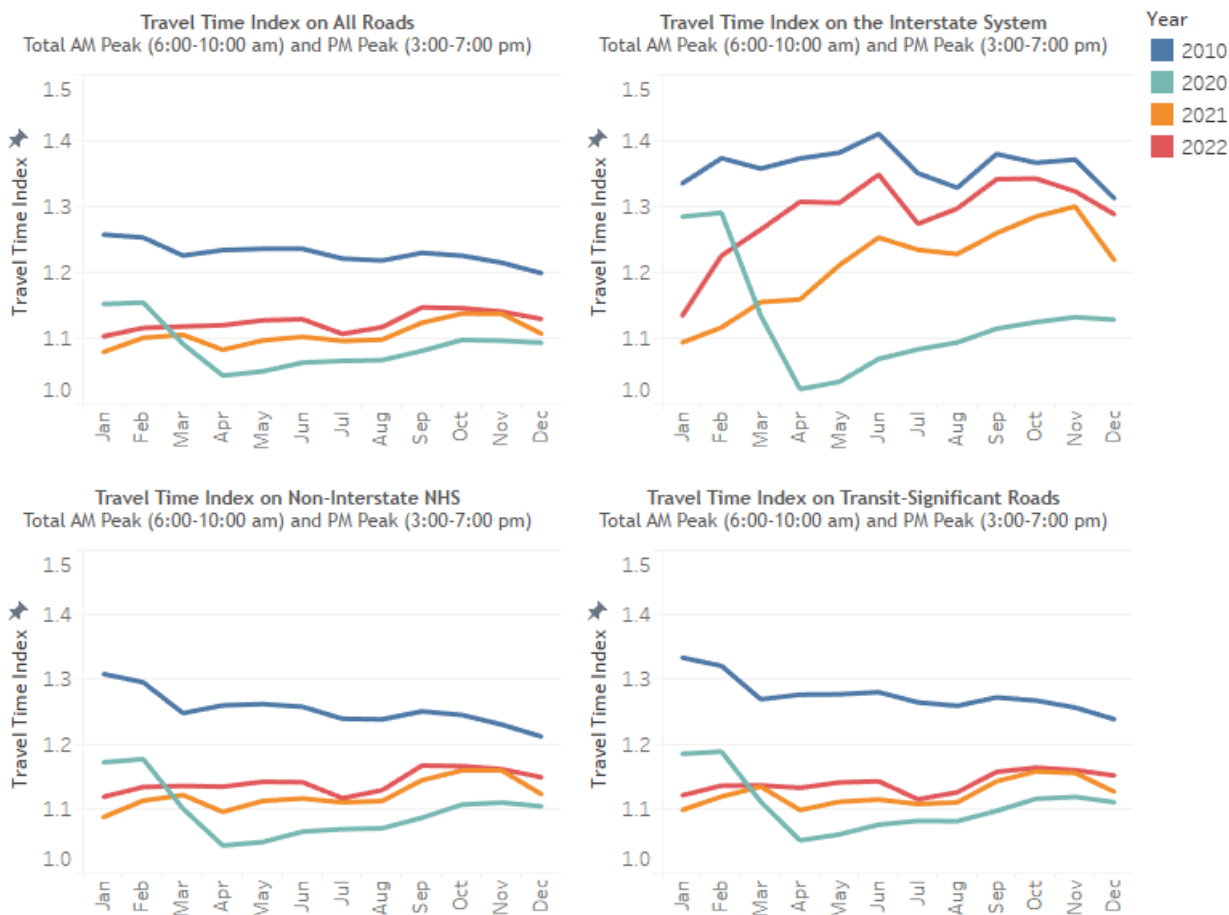
TTI 4th Quarter 2022: **1.16** ↑1.0% or 0.01  
 TTI Trailing 4 Quarters: **1.14** ↑1.5% or 0.02

## All Roads

TTI 4th Quarter 2022: **1.14** ↑1.0% or 0.01  
 TTI Trailing 4 Quarters: **1.12** ↑1.8% or 0.02

<sup>1</sup> Compared to 4th Quarter 2021; <sup>2</sup> Compared to one year earlier; <sup>3</sup> NHS: National Highway System; <sup>4</sup> See “Background” section.

**Figure 1 Monthly Travel Time Index for Total AM peak (6:00-10:00 am) and PM peak (3:00-7:00 pm)**



Source: TPB

*Travel Time Index (TTI), defined as the ratio of actual travel time to free-flow travel time, measures the intensity of congestion. The higher the index, the more congested traffic conditions it represents, e.g., TTI = 1.00 means free flow conditions, while TTI = 1.30 indicates the actual travel time is 30% longer than the free-flow travel time.*

# RELIABILITY – PLANNING TIME INDEX (PTI)

### Interstate System

PTI 4th Quarter 2022: **1.78** ↑7.7% or 0.13<sup>1</sup>  
 PTI Trailing 4 Quarters: **1.73** ↑10.7% or 0.17<sup>2</sup>

### Non-Interstate NHS<sup>3</sup>

PTI 4th Quarter 2022: **1.34** ↑3.4% or 0.04  
 PTI Trailing 4 Quarters: **1.30** ↑4.7% or 0.06

### Transit-Significant<sup>4</sup>

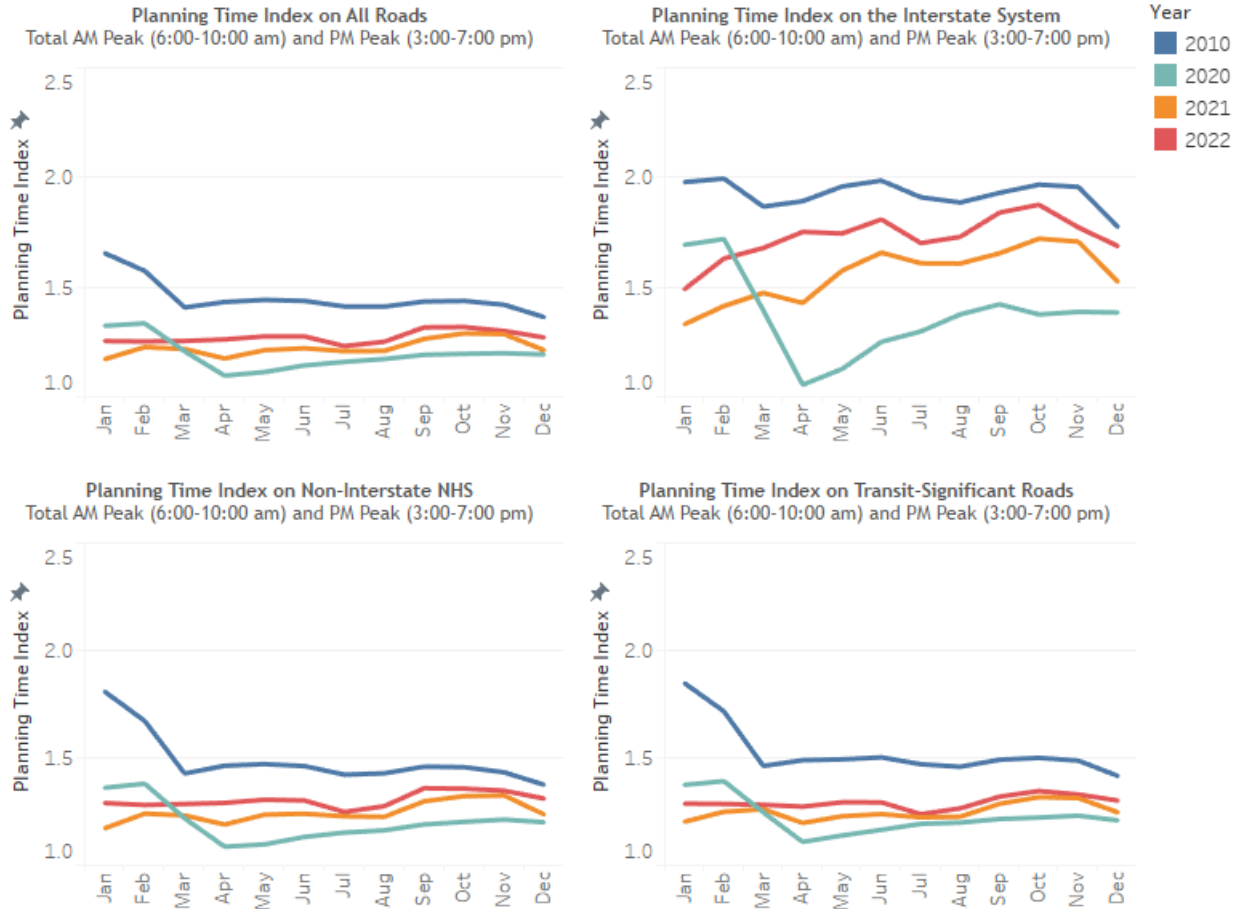
PTI 4th Quarter 2022: **1.33** ↑2.6% or 0.03  
 PTI Trailing 4 Quarters: **1.29** ↑3.5% or 0.04

### All Roads

PTI 4th Quarter 2022: **1.30** ↑2.7% or 0.03  
 PTI Trailing 4 Quarters: **1.27** ↑3.9% or 0.05

<sup>1</sup> Compared to 4th Quarter 2021; <sup>2</sup> Compared to one year earlier; <sup>3</sup> NHS: National Highway System; <sup>4</sup> See “Background” section.

**Figure 2 Monthly Planning Time Index for Total AM peak (6:00-10:00 am) and PM peak (3:00-7:00 pm)**



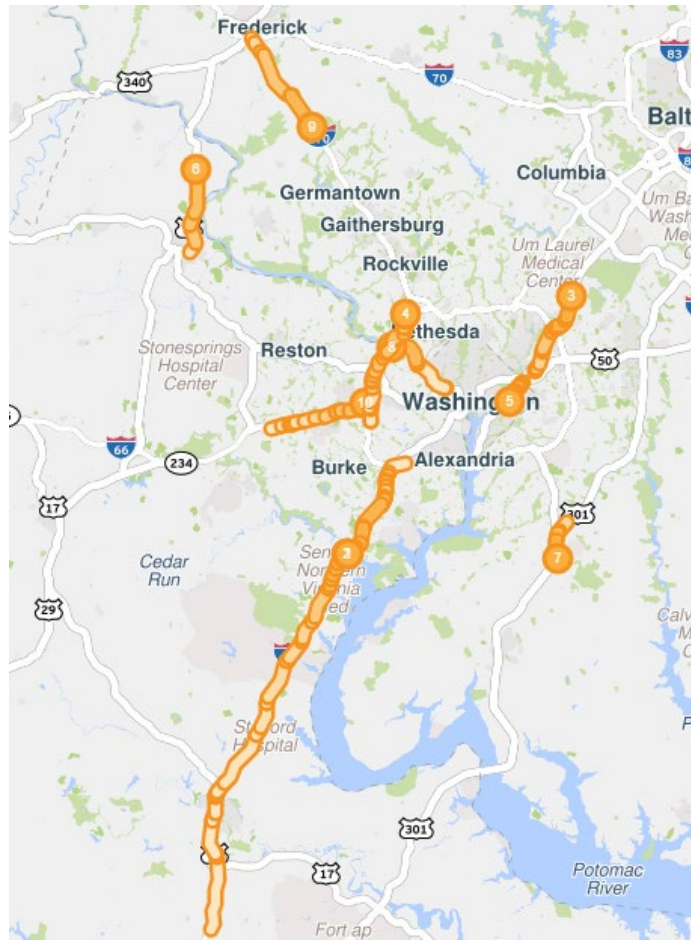
Source: TPB

**Planning Time Index (PTI)**, defined as the ratio of 95th percentile travel time to free flow travel time, measures travel time reliability. The higher the index, the less reliable traffic conditions it represents, e.g., PTI = 1.30 means a traveler must budget 30% longer than the uncongested travel time to arrive on time 95% of the instances (i.e., 19 out of 20 trips).

# TOP 10 BOTTLENECKS

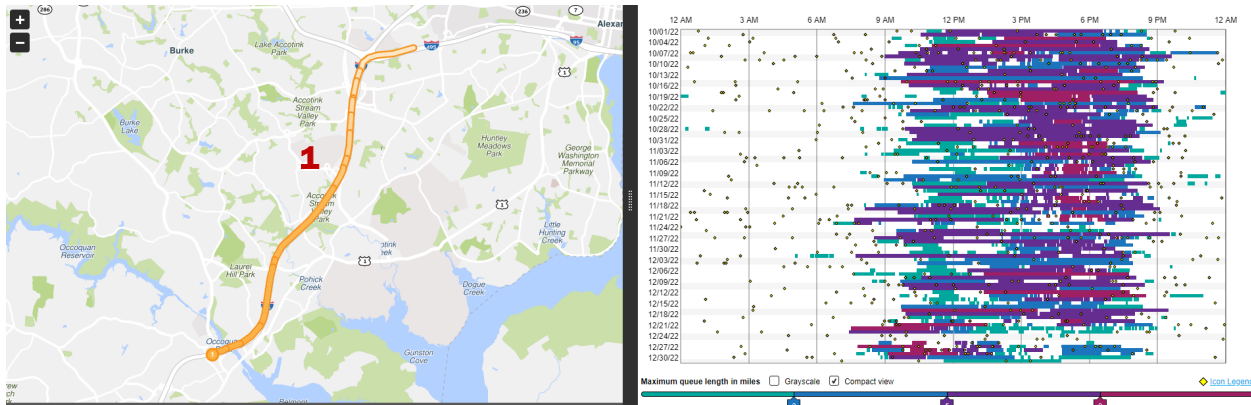
Rank (Last Quarter Rank)	Location	Average duration	Average max length (miles)	Total duration	Impact factor
1 (1)	I-95 S @ VA-123/EXIT 160	8 h 32 m	3.95	32 d 17 h 55 m	137,631
2 (2)	I-95 N @ VA-123/EXIT 160	4 h 20 m	4.79	16 d 15 h 28 m	120,789
3 (**)	MD-295 N @ POWDER MILL RD	6 h 7 m	2.78	23 d 11 h 21 m	73,042
4 (8)	I-495 CW @ I-270 SPUR	1 h 40 m	7.21	6 d 10 h 32 m	67,355
5 (3)	DC-295 S @ CAPITOL ST	7 h 34 m	1.6	29 d 1 h 49 m	58,342
6 (4)	US-15 N @ STUMPTOWN RD/LUCKETTS RD	1 h 24 m	7.04	5 d 9 h 50 m	52,021
7 (14)	US-301 S @ MCKENDREE RD/CEDARVILLE RD	4 h 2 m	2.3	15 d 11 h 49 m	50,243
8 (10)	GW PKY N @ I-495	4 h 34 m	0.91	17 d 13 h 3 m	46,365
9 (16)	I-270 S @ MD-109/EXIT 22	2 h 11 m	4.4	8 d 9 h 21 m	43,459
10 (5)	I-66 E @ I-495/EXIT 64	2 h 59 m	2.65	11 d 11 h 22 m	40,688

\*\*Not in the top 50 bottlenecks of the previous report.

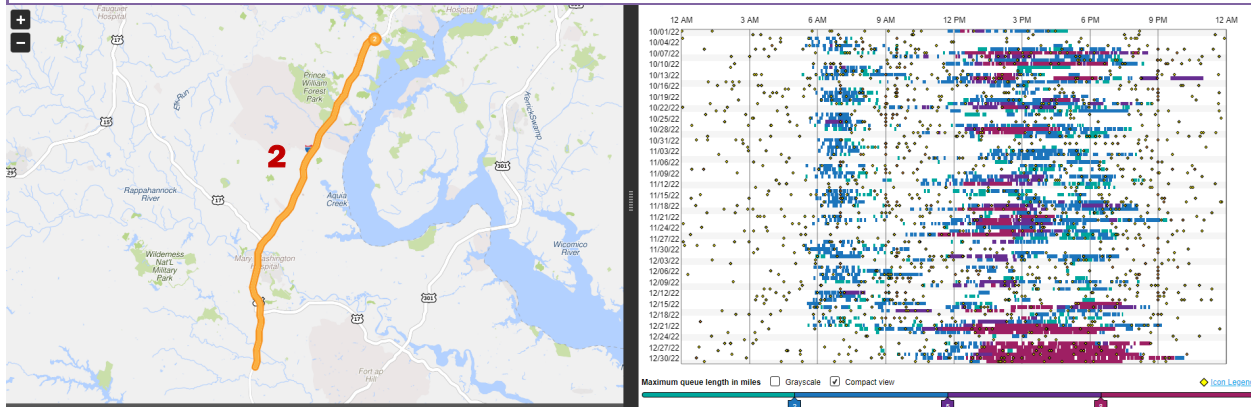


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor*
1	I-95 S @ VA-123/EXIT 160	8 h 32 m	3.95	32 d 17 h 55 m	137,631

\* The Impact Factor of a bottleneck is simply the product of the Average Duration (minutes), Average Max Length (miles) and the number of occurrences.

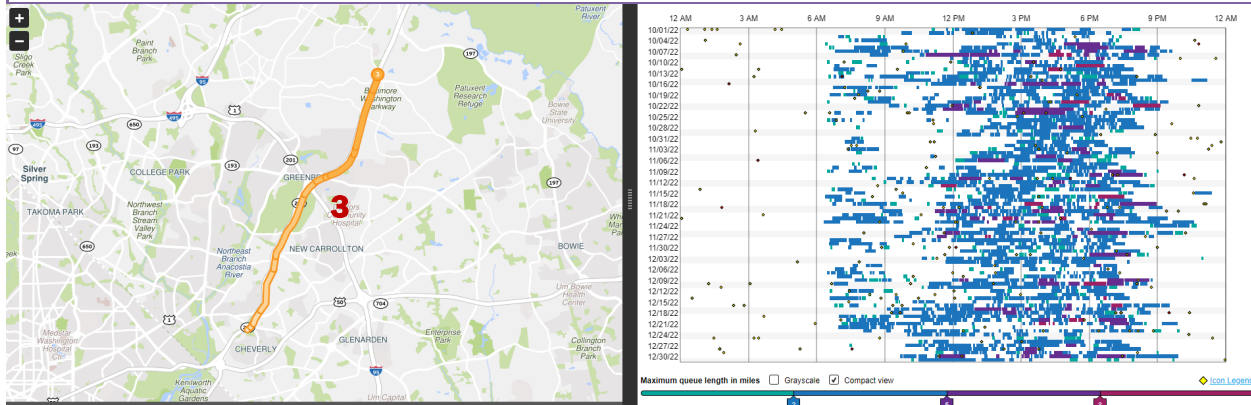


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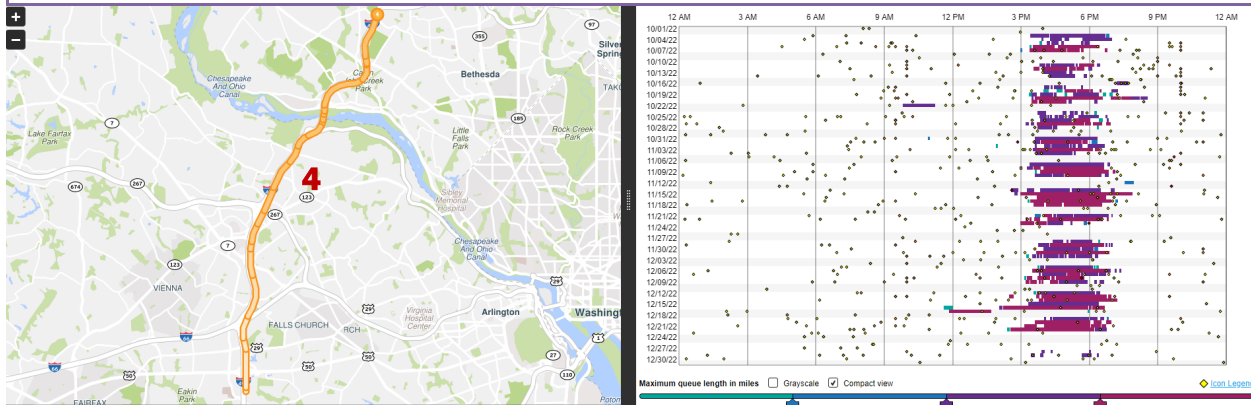




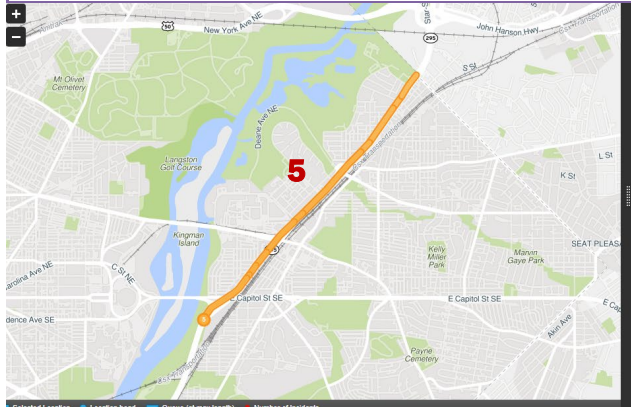
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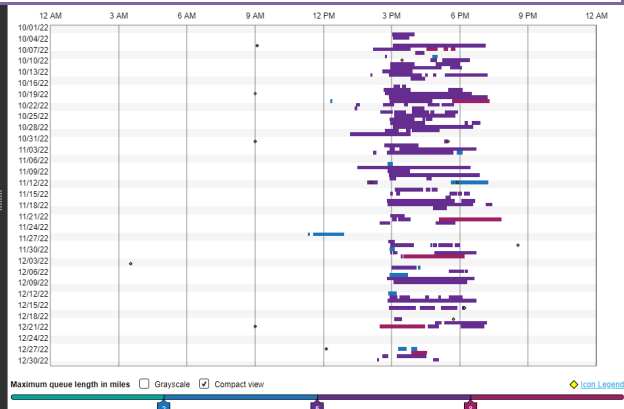
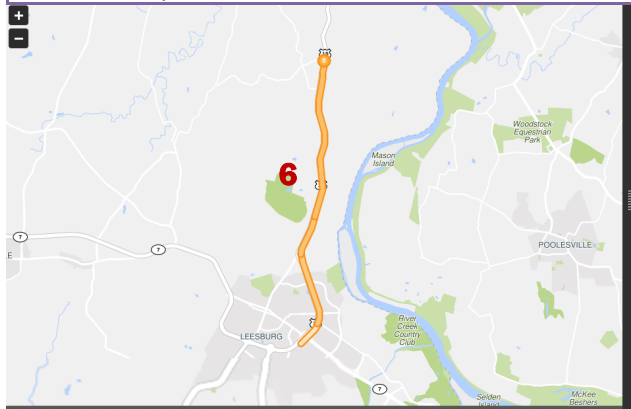
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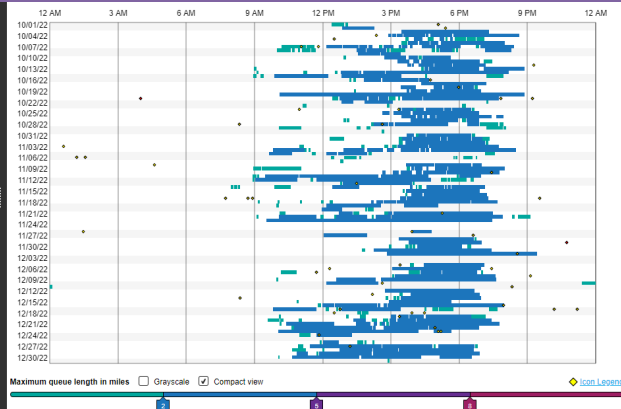
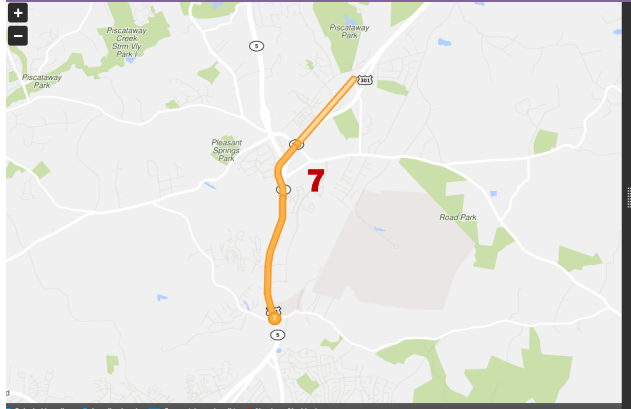
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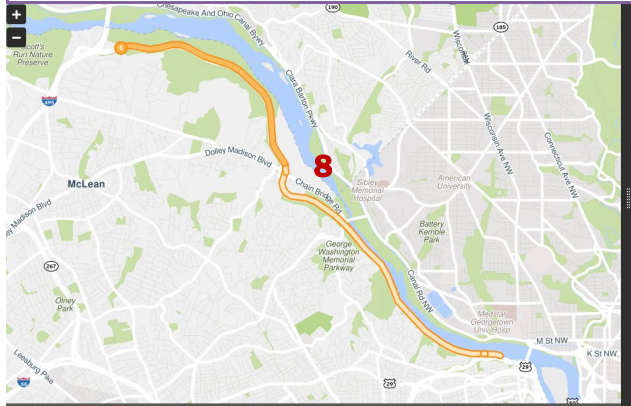
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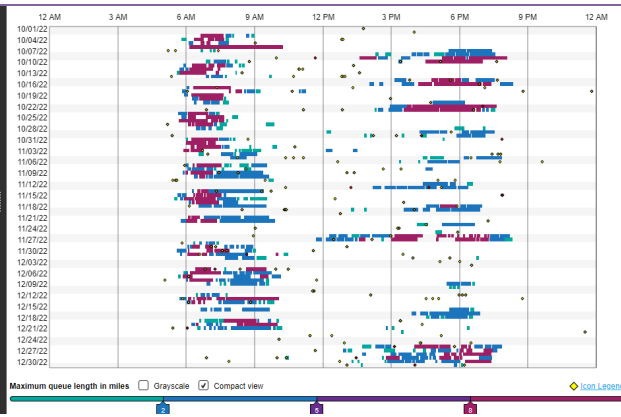
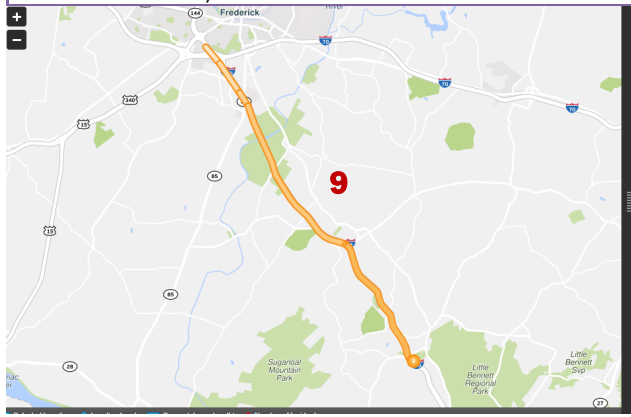
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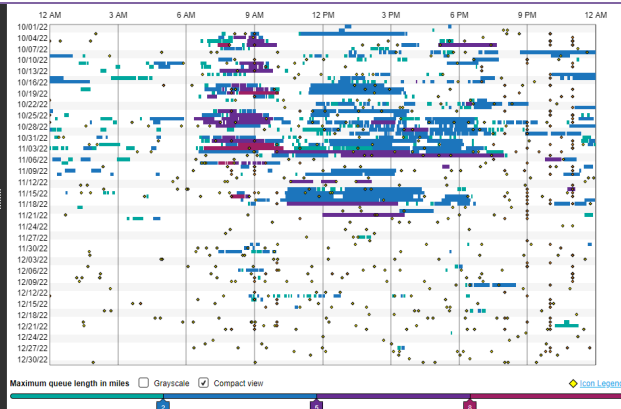
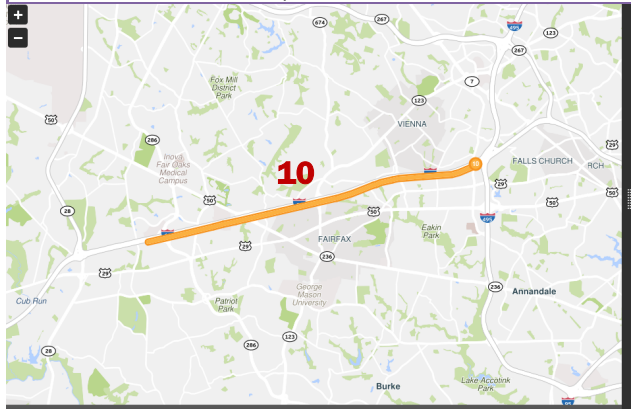
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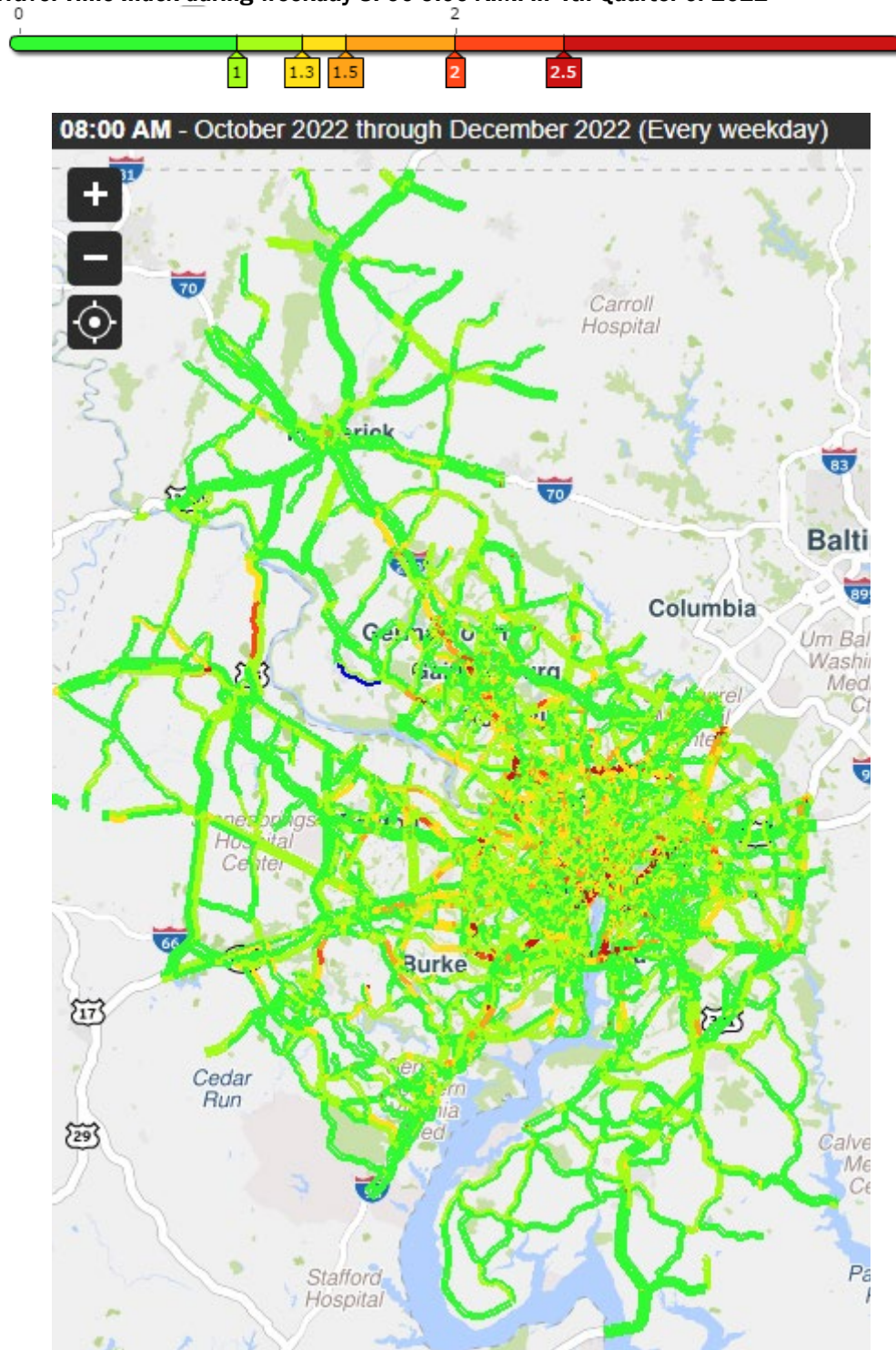


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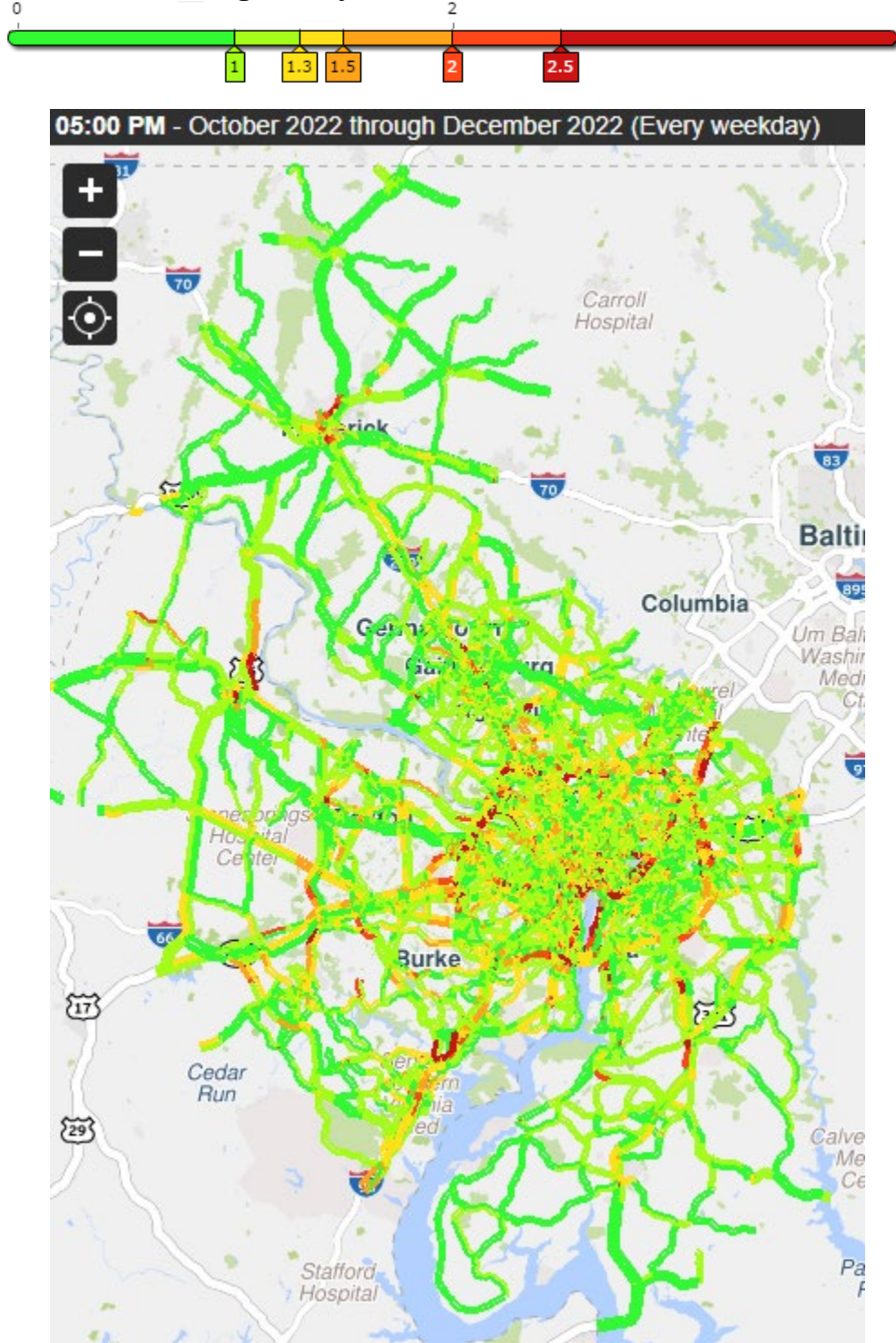
# CONGESTION MAPS

Figure 3. Travel Time Index during weekday 8: 00-9:00 A.M. in 4th Quarter of 2022



Source: University of Maryland CATT Lab

Figure 4. Travel Time Index during weekday 5:00-6:00 P.M. in 4th Quarter of 2022



Source: University of Maryland CATT Lab

## 2022Q4 SPOTLIGHT

This Spotlight will be added at a later date.