

CONGESTION REPORT

4th Quarter 2020

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

January 8, 2021



National Capital Region
Transportation Planning Board

ABOUT TPB

Transportation planning at the regional level is coordinated in the Washington area by the National Capital Region Transportation Planning Board (TPB). Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia, and the District of Columbia, 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 of the Metropolitan Washington Council of Governments.

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CONGESTION – TRAVEL TIME INDEX (TTI)

Interstate System

TTI 4th Quarter 2020: **1.13** ↓16.9% or 0.23¹
 TTI Trailing 4 Quarters: **1.13** ↓17.8% or 0.24²

Non-Interstate NHS³

TTI 4th Quarter 2020: **1.11** ↑7.6% or 0.09
 TTI Trailing 4 Quarters: **1.10** ↓8.0% or -0.10

Transit-Significant⁴

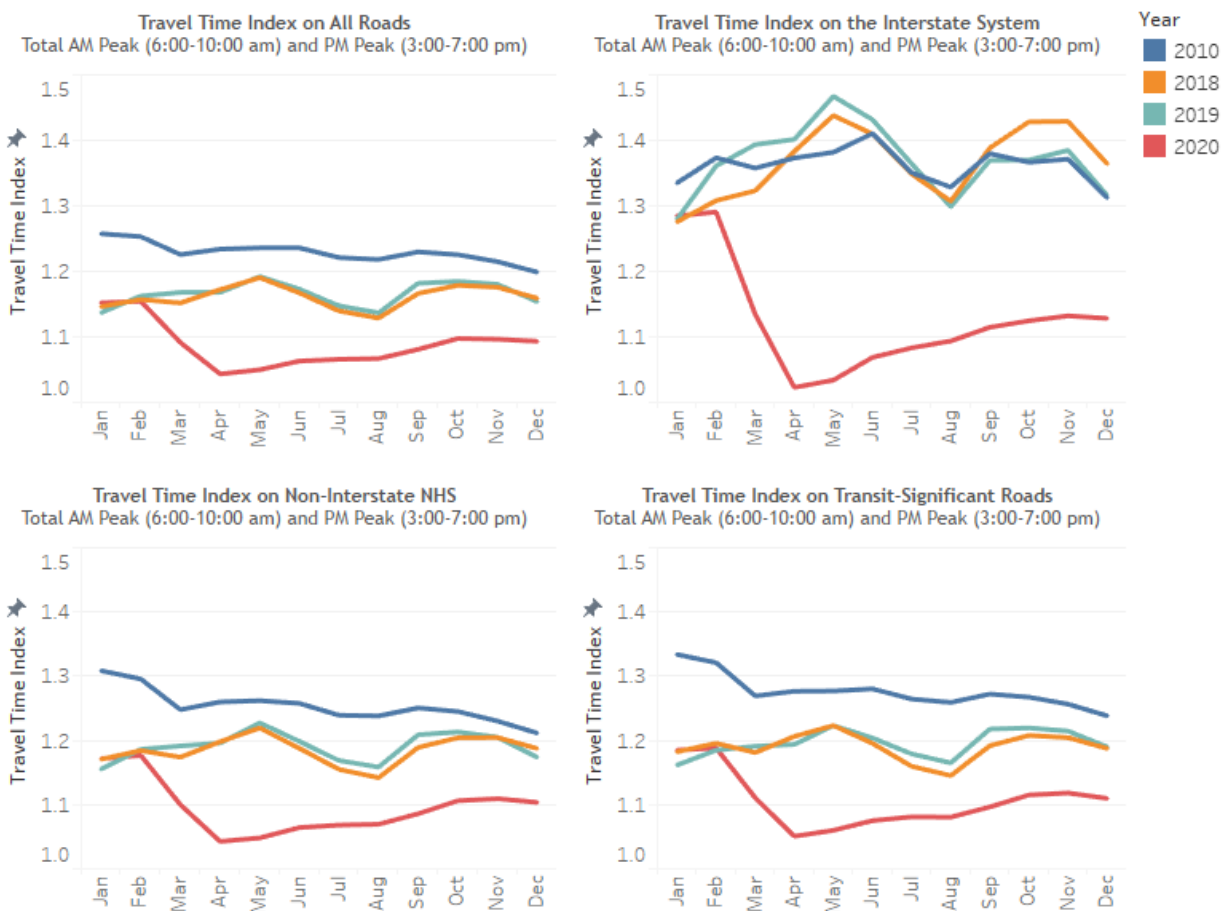
TTI 4th Quarter 2020: **1.11** ↓7.8% or -0.09
 TTI Trailing 4 Quarters: **1.11** ↓7.5% or -0.09

All Roads

TTI 4th Quarter 2020: **1.10** ↑6.6% or 0.08
 TTI Trailing 4 Quarters: **1.09** ↓6.7% or -0.08

¹ Compared to 4th Quarter 2019; ² Compared to one year earlier; ³ NHS: National Highway System; ⁴ 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)



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 2020: **1.38** ↓25.0% or -0.46¹
 PTI Trailing 4 Quarters: **1.37** ↓26.9% or -0.51²

Non-Interstate NHS³

PTI 4th Quarter 2020: **1.21** ↓15.0% or -0.21
 PTI Trailing 4 Quarters: **1.20** ↓15.3% or -0.22

Transit-Significant⁴

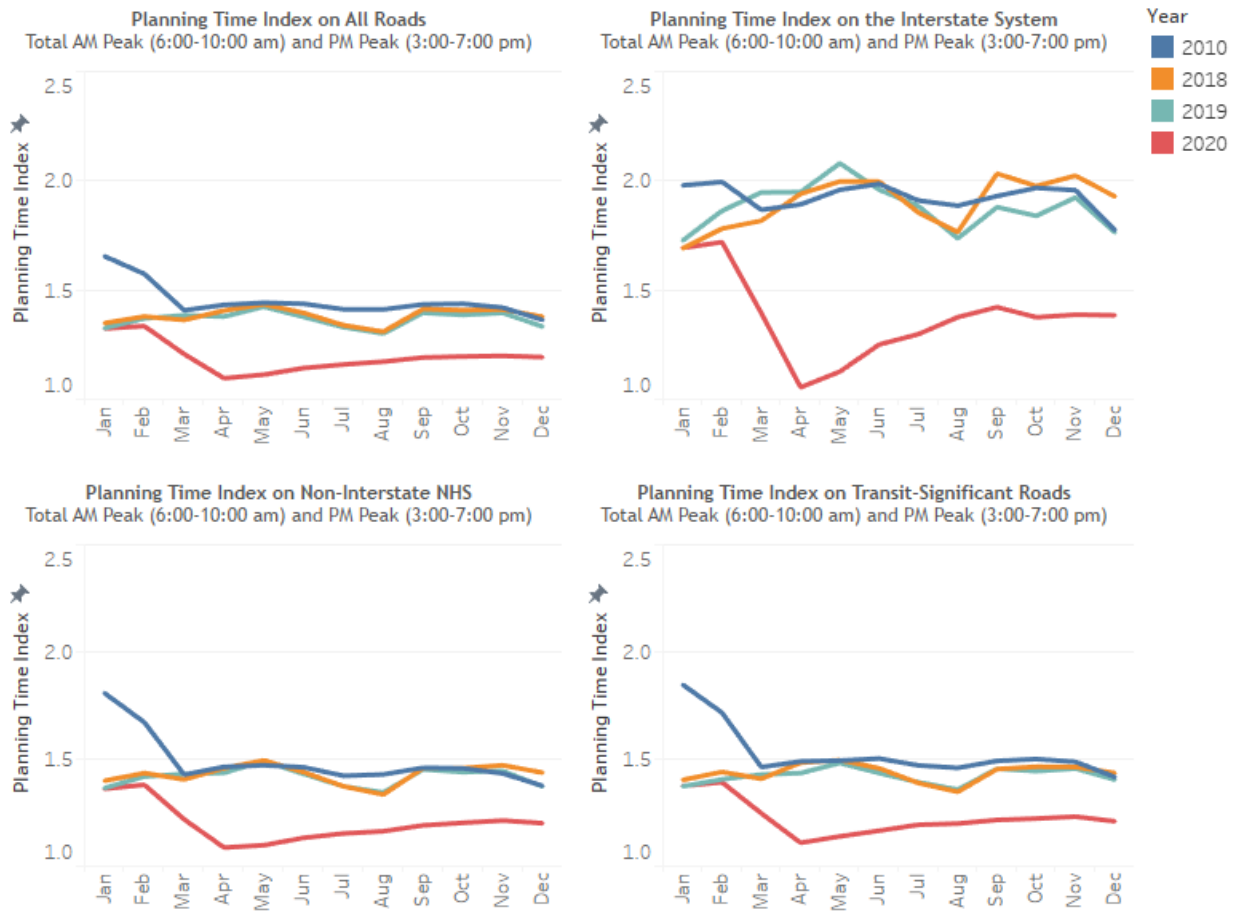
PTI 4th Quarter 2020: **1.22** ↓14.9% or -0.21
 PTI Trailing 4 Quarters: **1.22** ↓13.9% or -0.20

All Roads

PTI 4th Quarter 2020: **1.20** ↓12.8% or -0.18
 PTI Trailing 4 Quarters: **1.19** ↓12.6% or -0.17

¹ Compared to 4th Quarter 2019; ² Compared to one year earlier; ³ NHS: National Highway System; ⁴ 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)

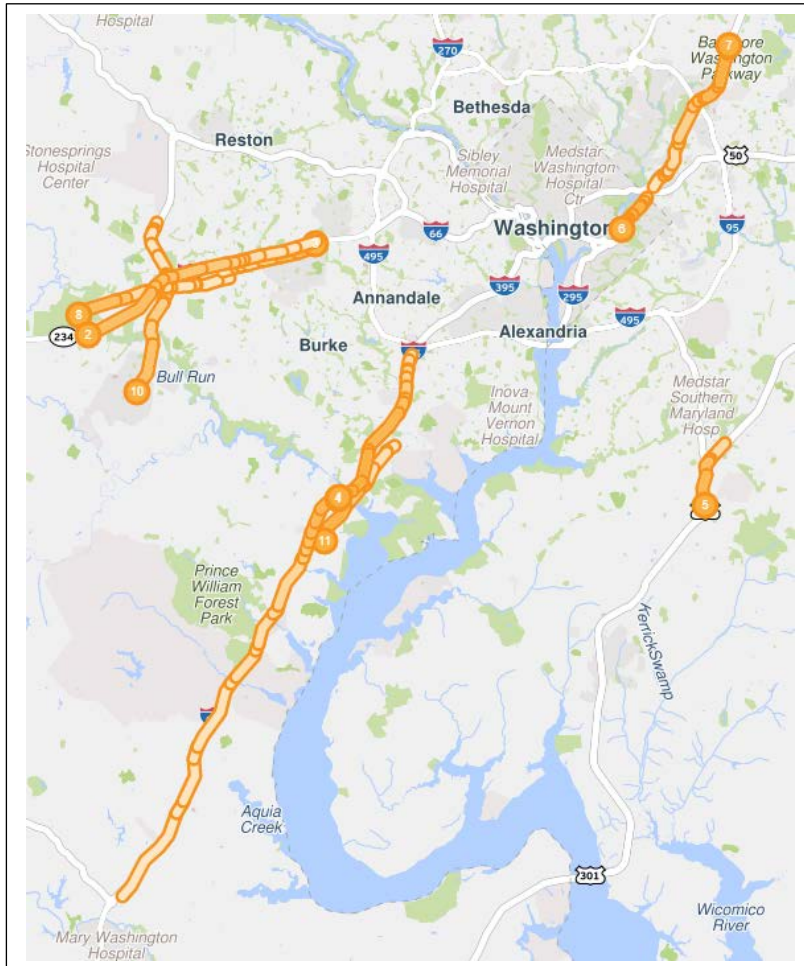


Planning Time Index (PTI), defined as the ratio of 95th percentile travel time to free flow travel time, measures travel time reliability. The higher the index, the less reliable traffic conditions it represents, e.g., PTI = 1.30 means a traveler must budget 30% longer than the uncongested travel time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

TOP 10 BOTTLENECKS

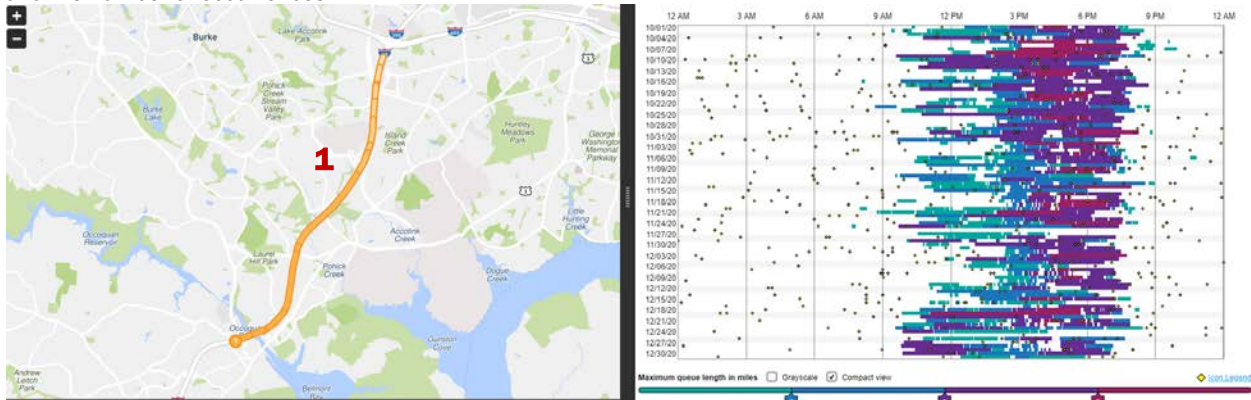
Rank (Last Quarter Rank)	Location	Average duration	Average max length (miles)	Total duration	Impact factor
1 (1)	I-95 S @ VA-123/EXIT 160	6 h 36 m	4.05	25 d 8 h 49 m	113,975
2 (20)	I-66 W @ VA-234/VA-234-BR/EXIT 47	2 h 25 m	7.47	9 d 6 h 56 m	96,054
3 (2)	I-66 E @ VADEN DR/EXIT 62	6 h 2 m	1.83	23 d 3 h 48 m	55,470
4 (4)	I-95 N @ VA-123/EXIT 160	2 h 12 m	4.09	8 d 10 h 38 m	49,264
5 (6)	US-301 S @ MCKENDREE RD/CEDARVILLE RD	3 h 44 m	2.28	14 d 9 h 1 m	46,247
6 (5)	DC-295 S @ E CAPITOL ST	6 h 35 m	1.36	25 d 6 h 16 m	44,539
7 (7)	BW PKWY N @ POWDER MILL RD	3 h 12 m	2.85	12 d 7 h 52 m	39,964
8 (14)	US-29 S @ VA-234/MANASSAS-SUDLEY RD/SUDLEY RD	2 h 35 m	3.16	9 d 23 h 9 m	37,953
9 (**)	VA-28 S @ PRESCOTT AVE/SUDLEY RD	1 h 6 m	4.69	4 d 6 h 34 m	27,645
10 (**)	US-1 S @ OPITZ BLVD/REDDY DR	1 h 49 m	2.79	7 d 14 m	26,558

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

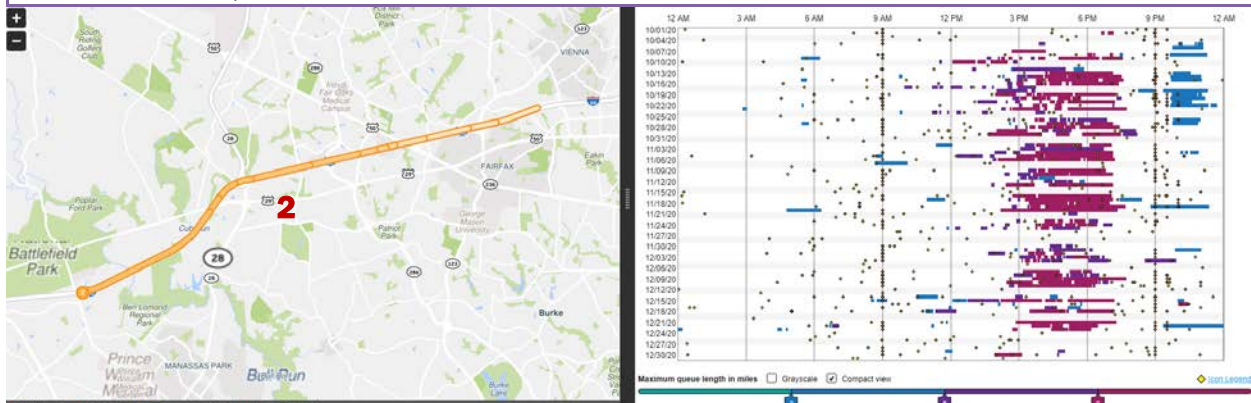


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor*
1	I-95 S @ VA-123/EXIT 160	6 h 36 m	4.05	25 d 8 h 49 m	113,975

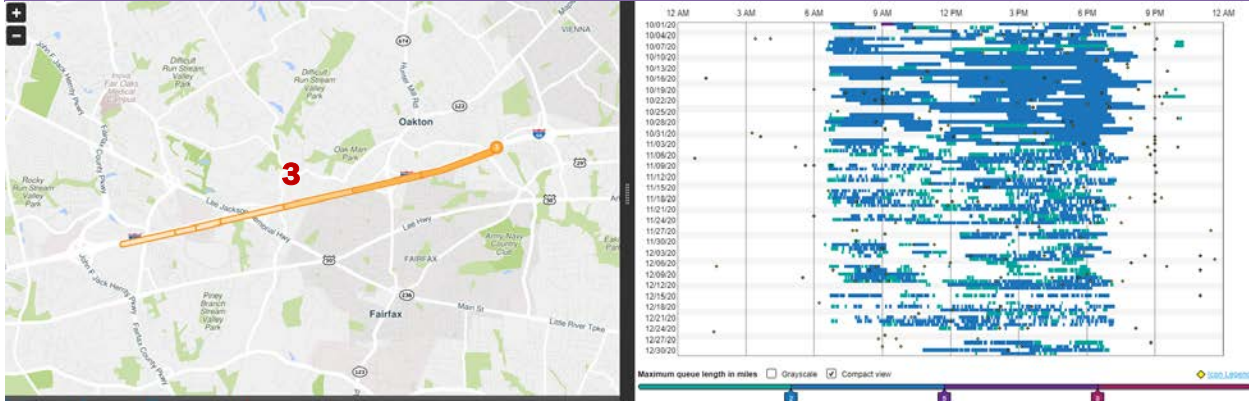
* The Impact Factor of a bottleneck is simply the product of the Average Duration (minutes), Average Max Length (miles) and the number of occurrences.



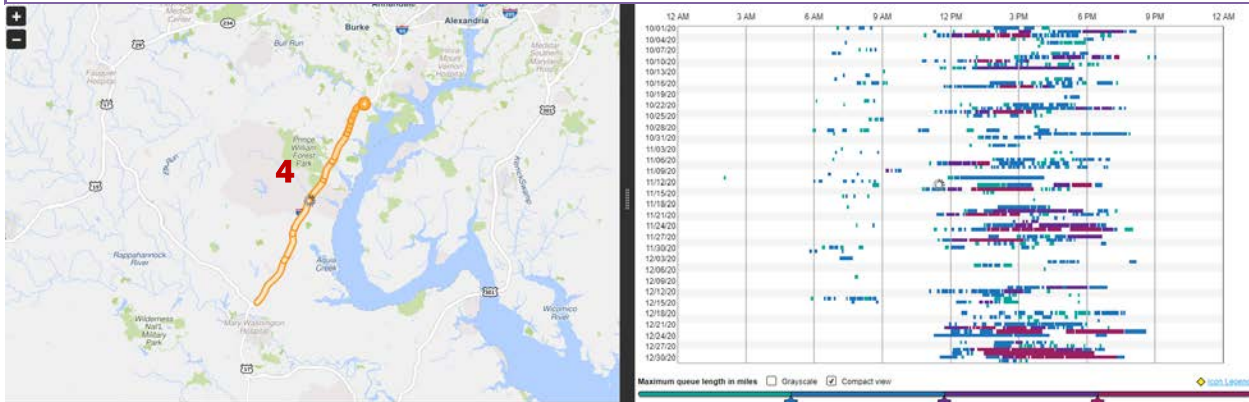
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
2	I-66 W @ VA-234/VA-234-BR/EXIT 47	2 h 25 m	7.47	9 d 6 h 56 m	96,054



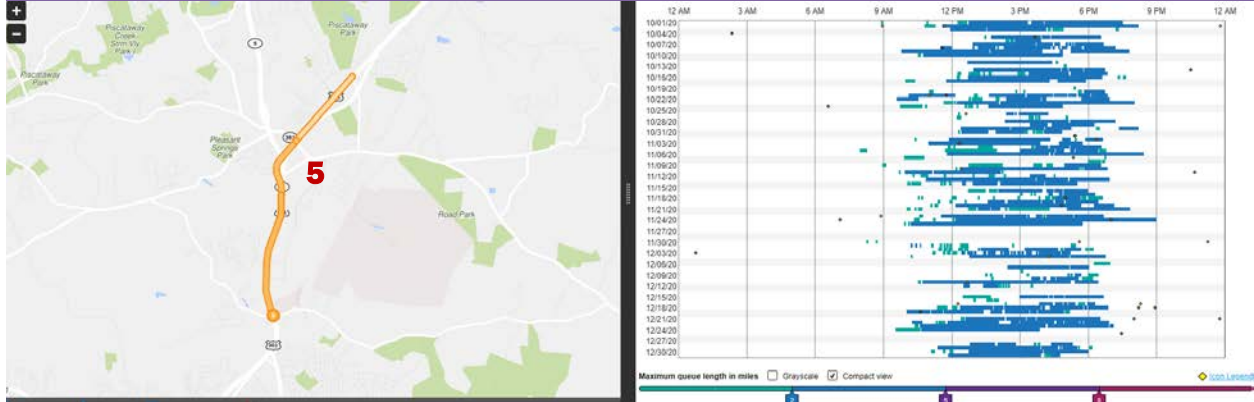
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
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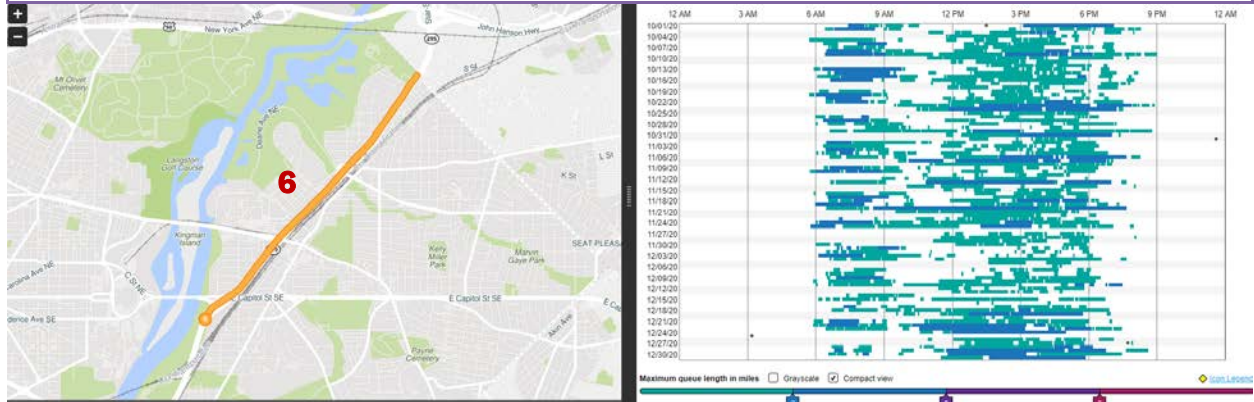
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4	I-95 N @ VA-123/EXIT 160	2 h 12 m	4.09	8 d 10 h 38 m	49,264



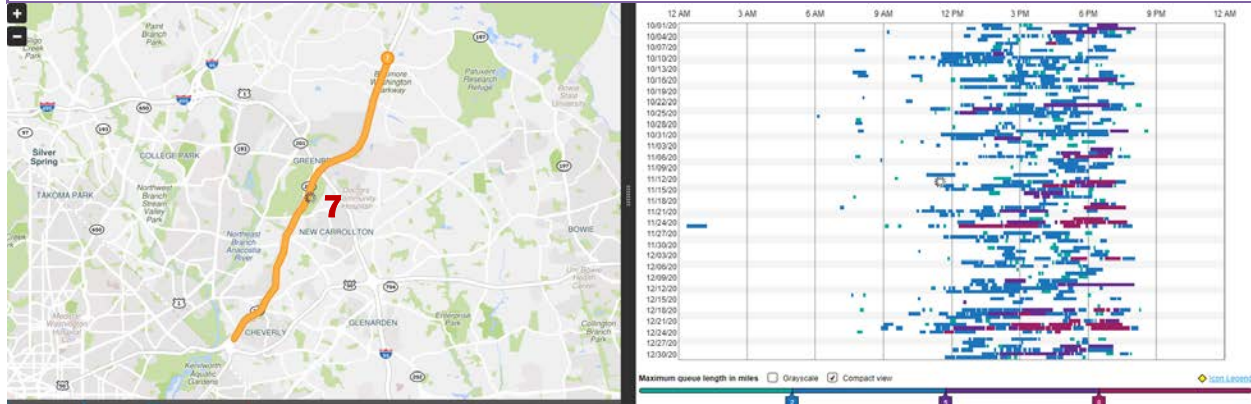
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
5	US-301 S @ MCKENDREE RD/CEDARVILLE RD	3 h 44 m	2.28	14 d 9 h 1 m	46,247



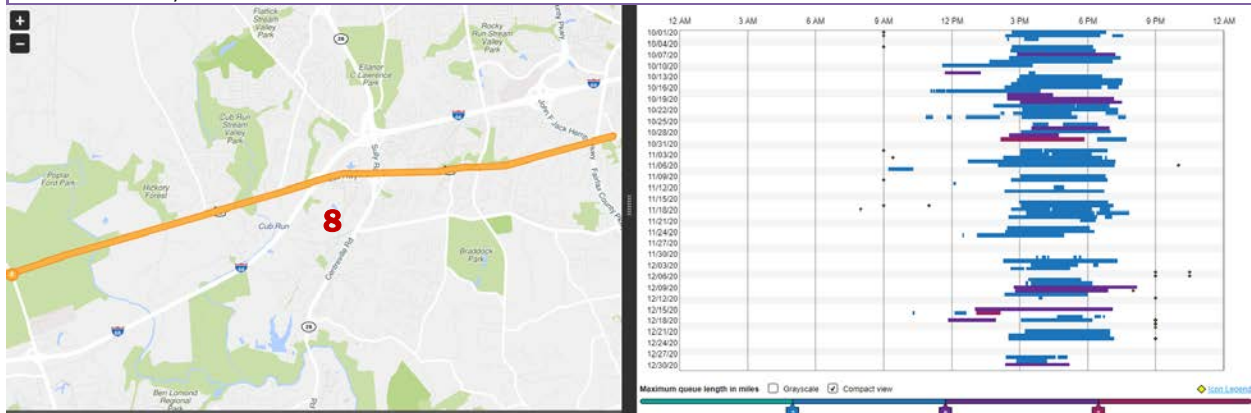
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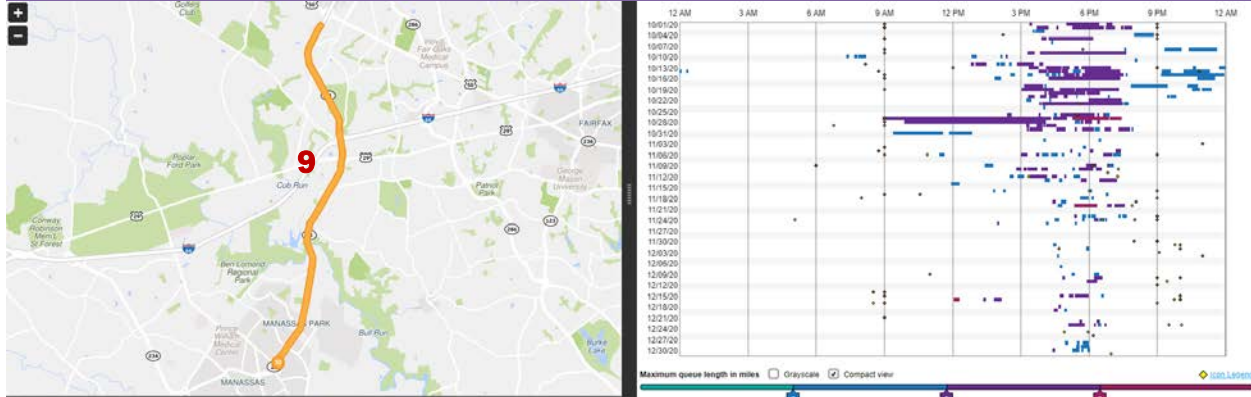
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7	BW PKWY N @ POWDER MILL RD	3 h 12 m	2.85	12 d 7 h 52 m	39,964



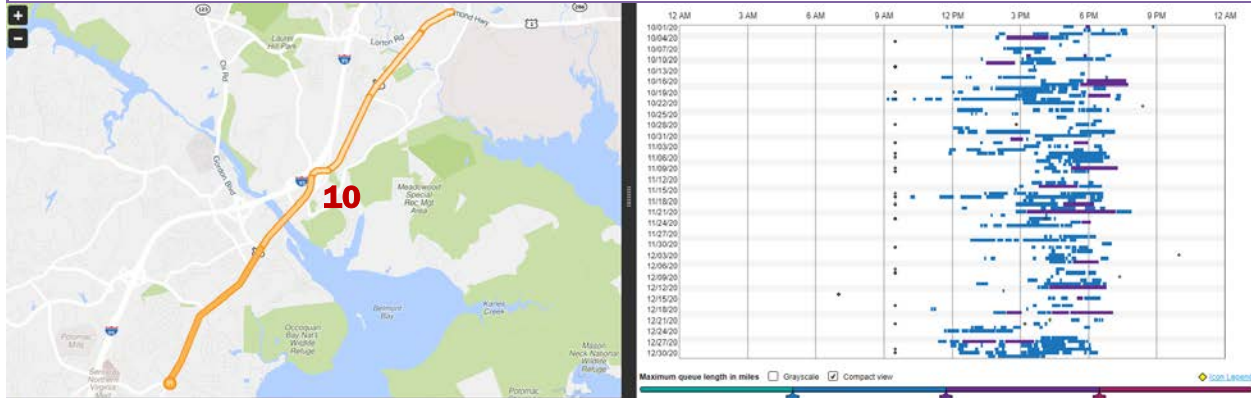
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8	US-29 S @ VA-234/MANASSAS-SUDLEY RD/SUDLEY RD	2 h 35 m	3.16	9 d 23 h 9 m	37,953



Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
9	VA-28 S @ PRESCOTT AVE/SUDLEY RD	1 h 6 m	4.69	4 d 6 h 34 m	27,645



Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
10	US-1 S @ OPITZ BLVD/REDDY DR	1 h 49 m	2.79	7 d 14 m	26,558



CONGESTION MAPS

Figure 3. Travel Time Index during weekday 8: 00-9:00 A.M. in 4th Quarter of 2020

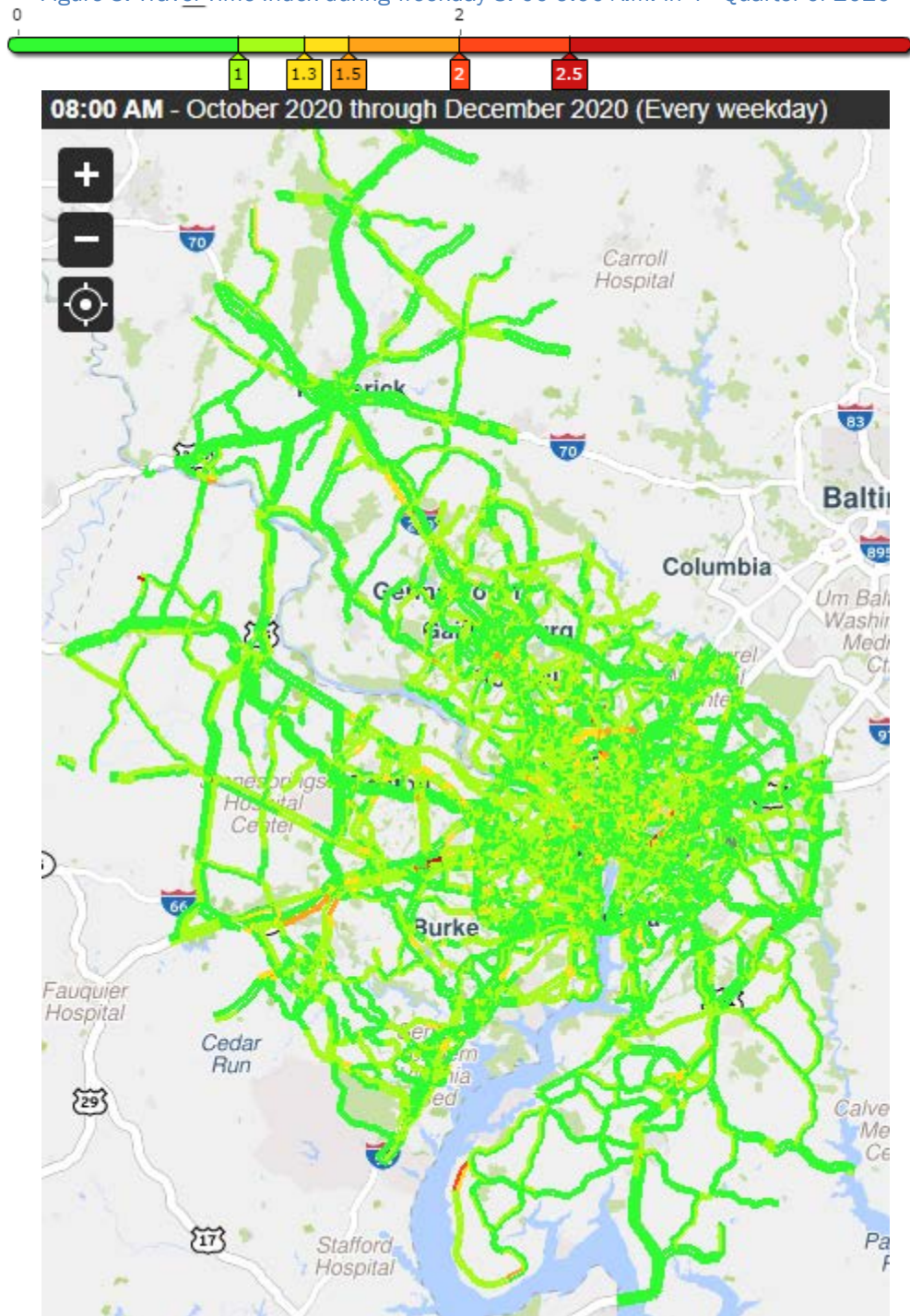
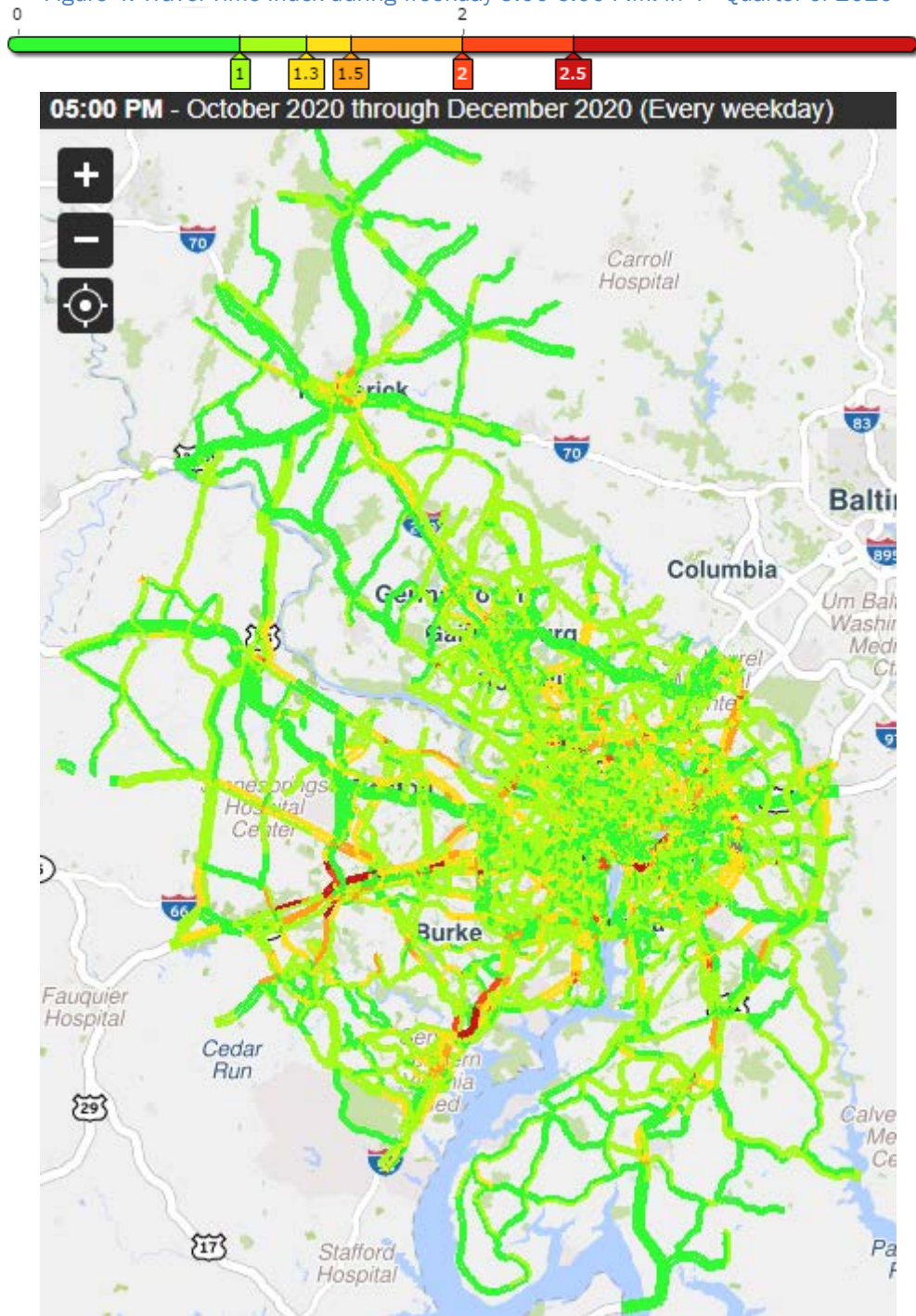


Figure 4. Travel Time Index during weekday 5:00-6:00 P.M. in 4th Quarter of 2020



2020Q4 SPOTLIGHT: THE CURVES FLATTEN

The 4th quarter of 2020 continued congestion levels similar to those at the end of the 3rd quarter. In other words, what had been a slow increase in regional congestion in the 3rd quarter compared to the historic lows of the 2nd quarter flattened out for the 4th quarter. Traffic patterns remained as they were in the 3rd quarter, relatively busy in the outer portions of the region, less so in the core. Analysis over the coming quarters (and indeed years) may shed light on how much of these congestion-reducing impacts will only exist for as long as the pandemic, versus being permanent changes to people's travel.



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