

PRIMARY TRANSIT CORRIDORS TRAFFIC TRENDS ANALYSIS

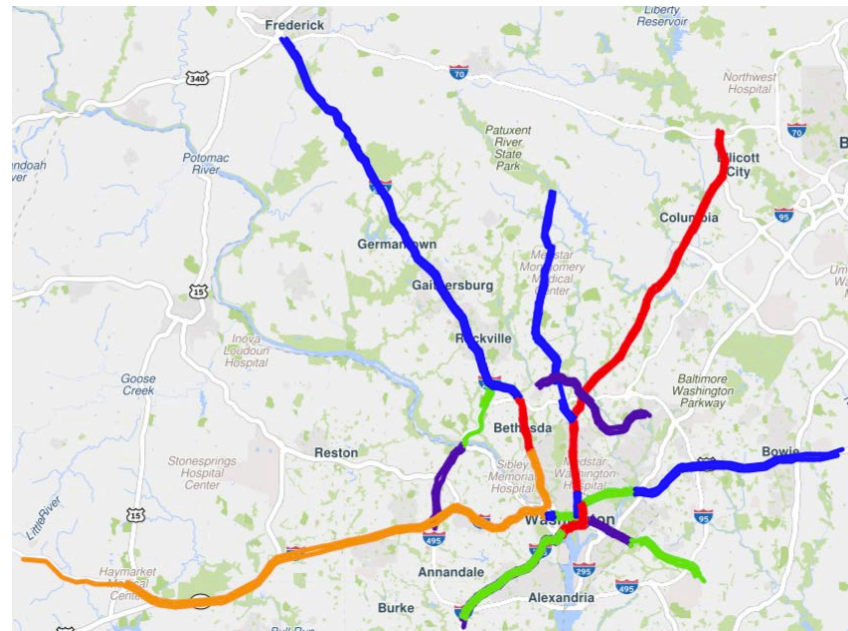
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Regional Public Transportation Subcommittee
October 26, 2021

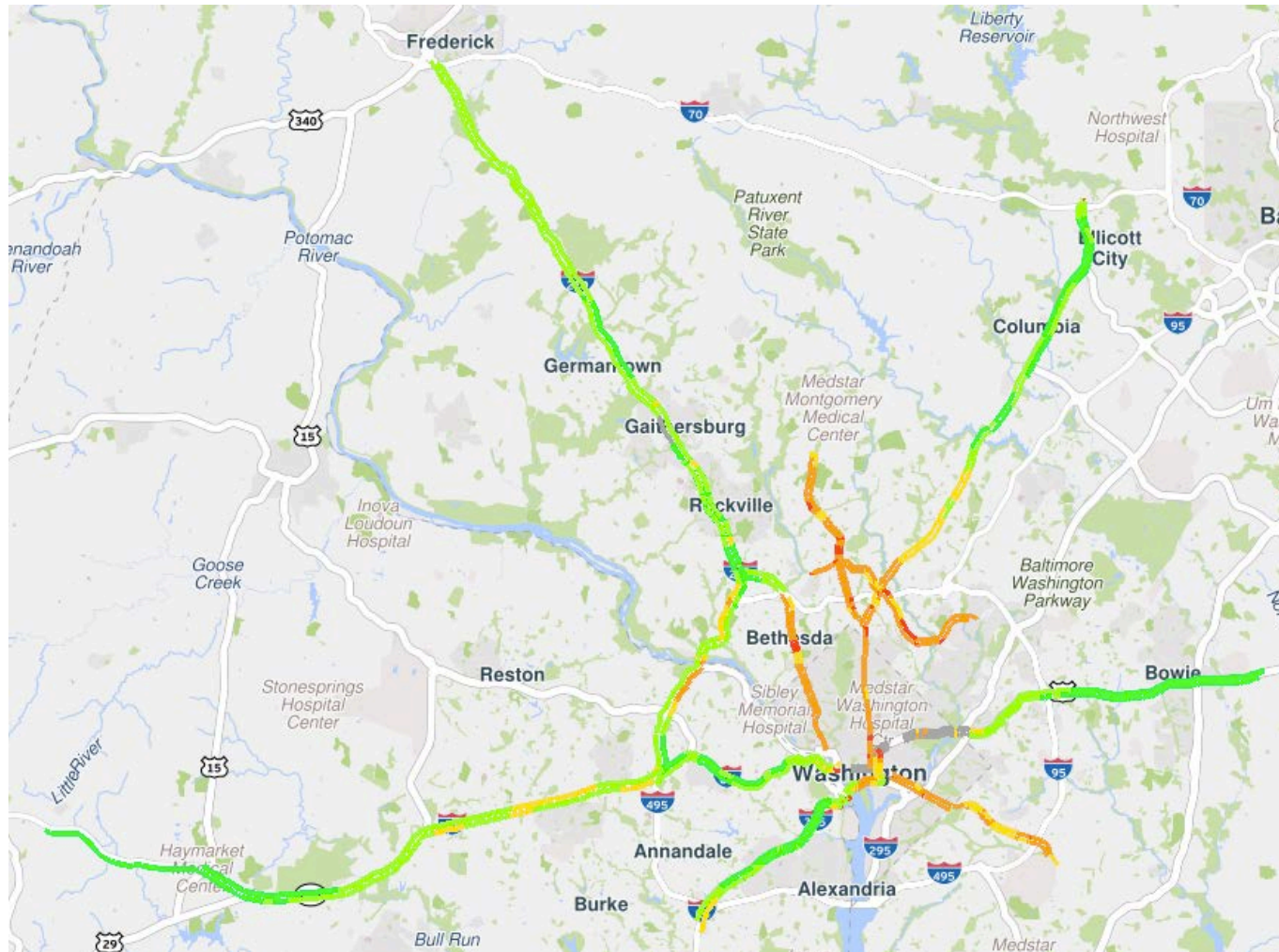


Purpose

- Review primary transit corridors along the NCR across recent months to understand changes in traffic trends.
- Corridors Analyzed include:
 1. I-395
 2. I-270
 3. I-66
 4. I-495
 5. US-50
 6. US-29
 7. MD-97
 8. MD-355
 9. MD-193
 10. Pennsylvania Ave SE



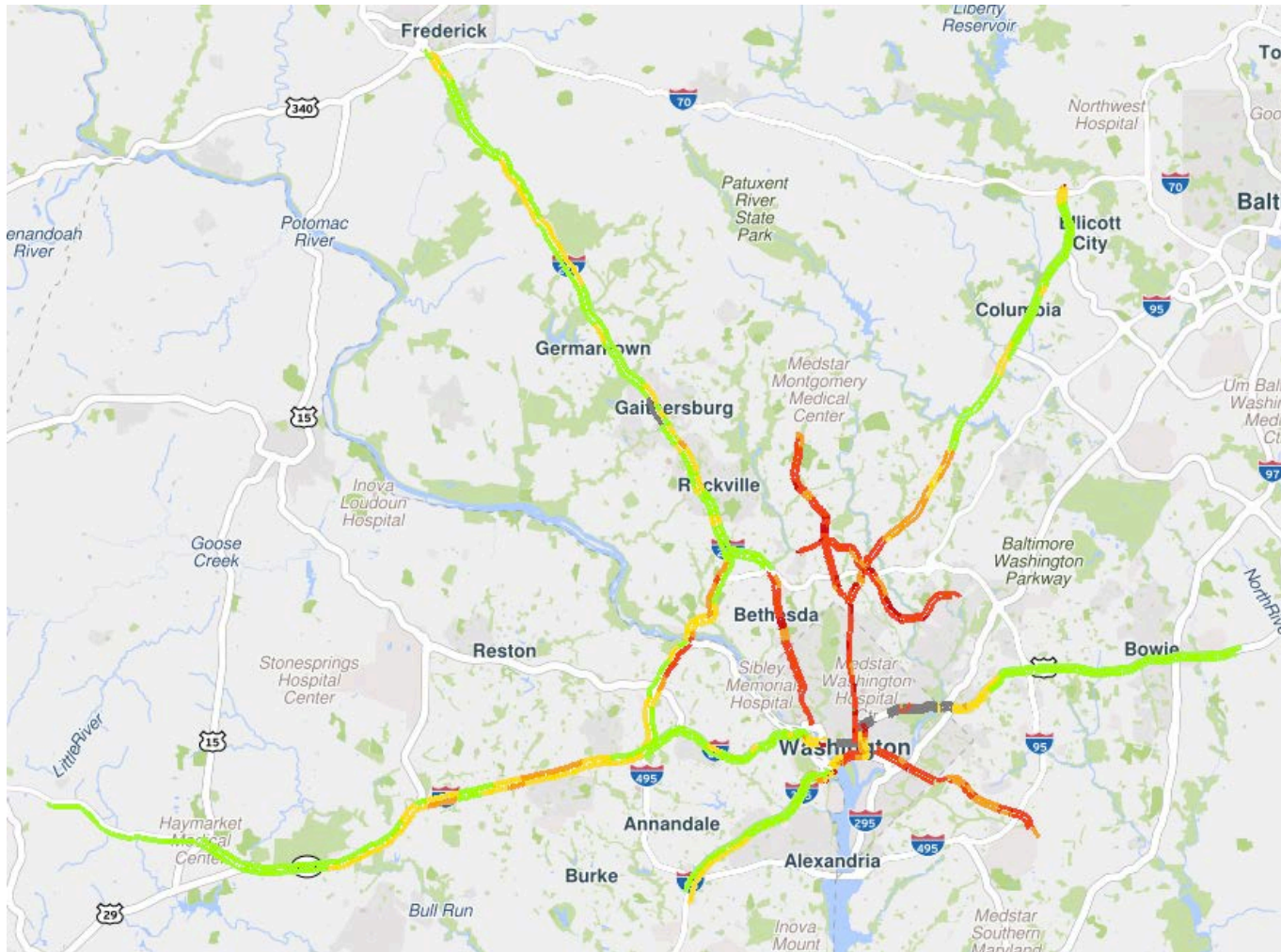
Daily Congestion: September 2021



Daily traffic measured between 6am and 8pm



Daily Travel Time Index: September 2021

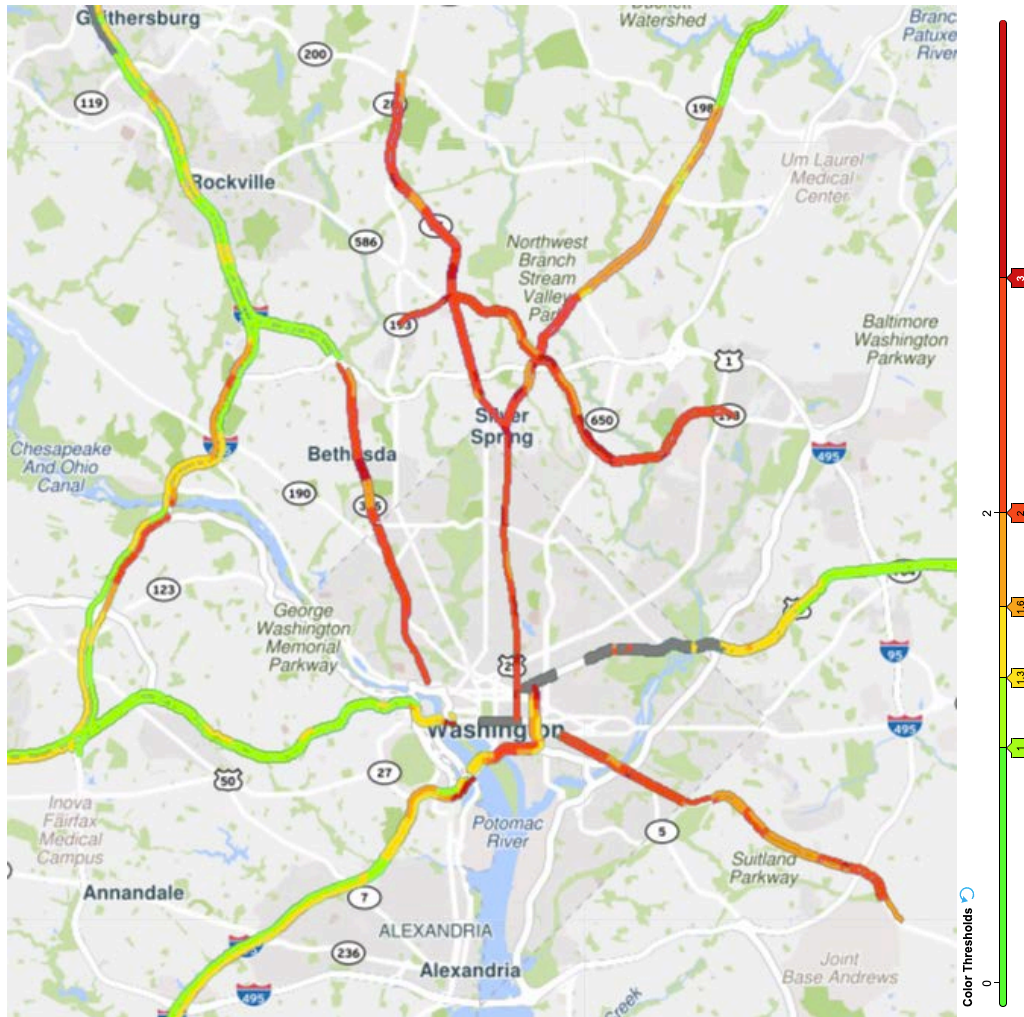


Travel Time Index (TTI)

- Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time)



Daily Travel Time Index: September 2021

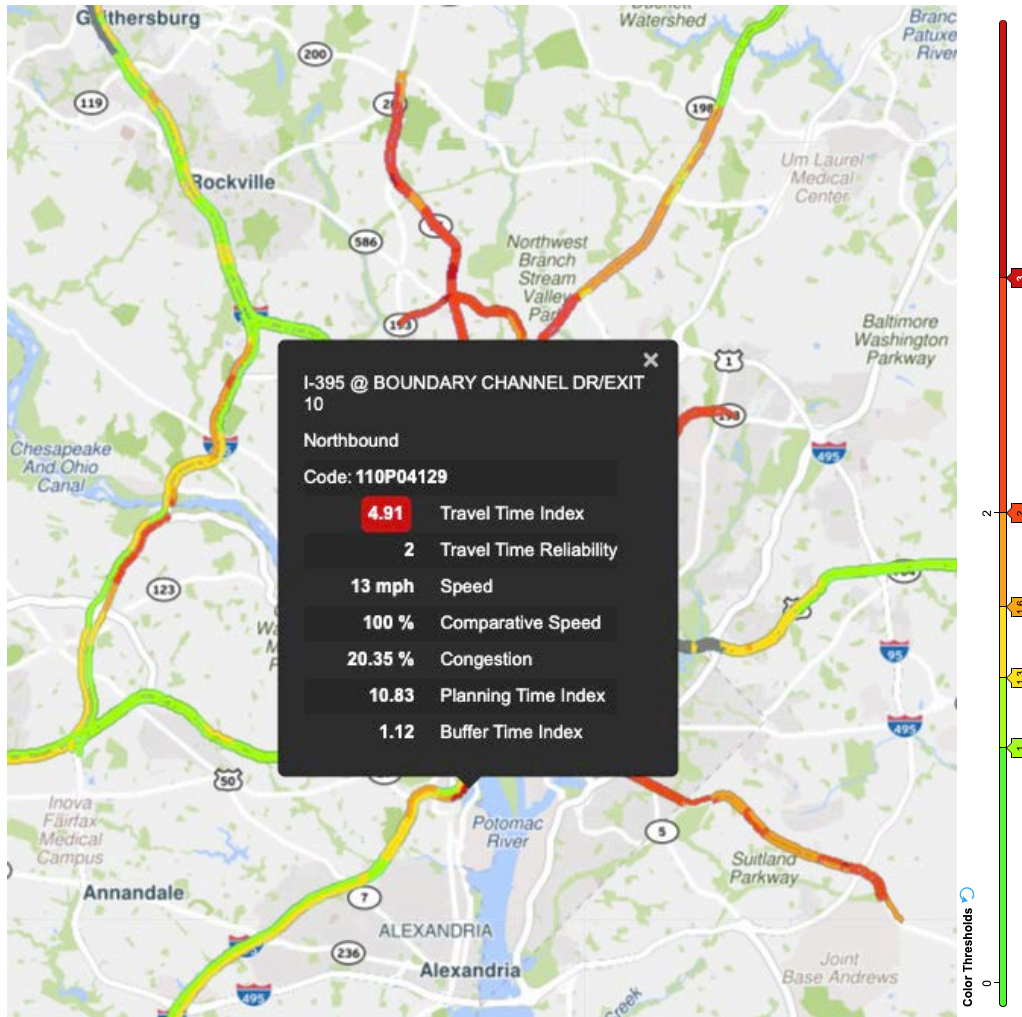


Higher TTI's (>2) are seen in red primarily along routes

1. MD-97
2. MD-193
3. MD-355 / Wisconsin Ave NW
4. US-29 / Georgia Ave NW
5. Pennsylvania Ave SE
6. I-395



Daily Travel Time Index: September 2021

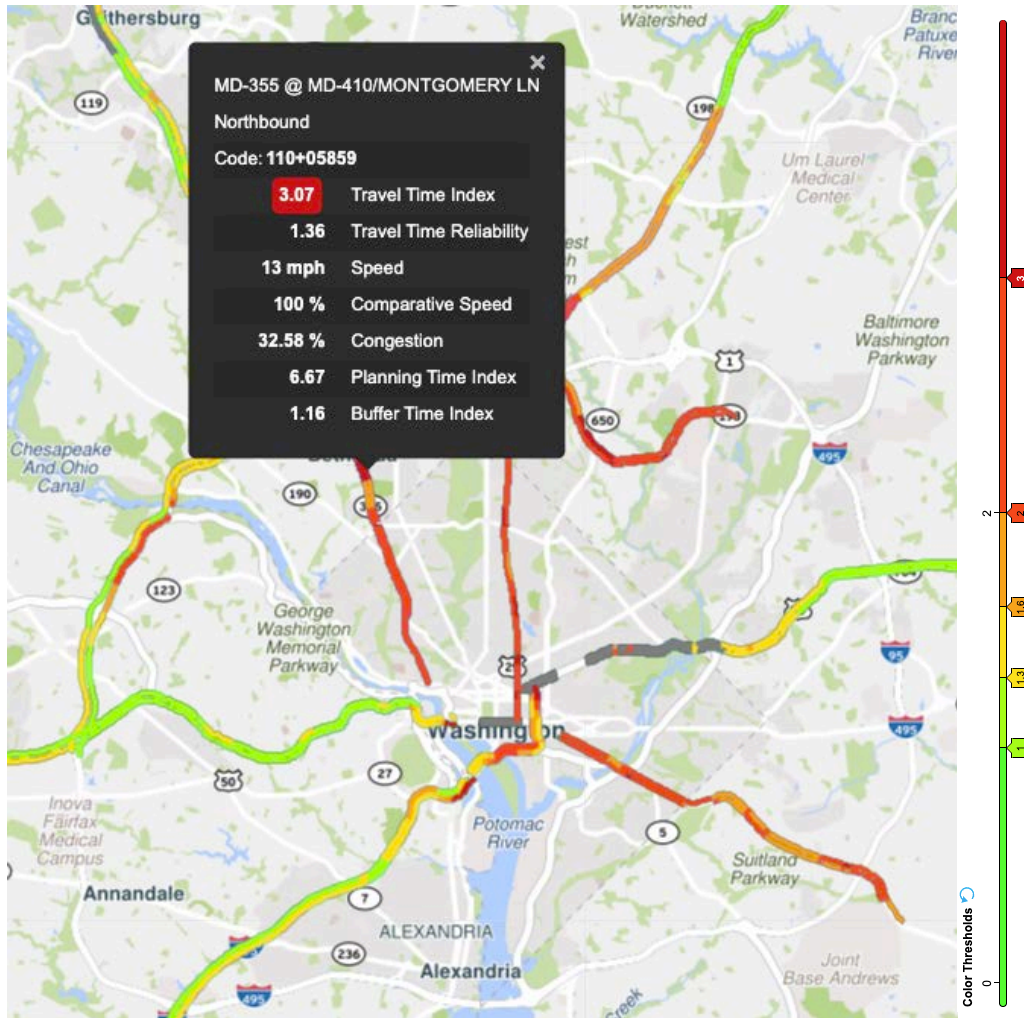


Significantly high TTI's (>3) can be seen in dark red primarily along routes

1. I-395 Northbound



Daily Travel Time Index: September 2021

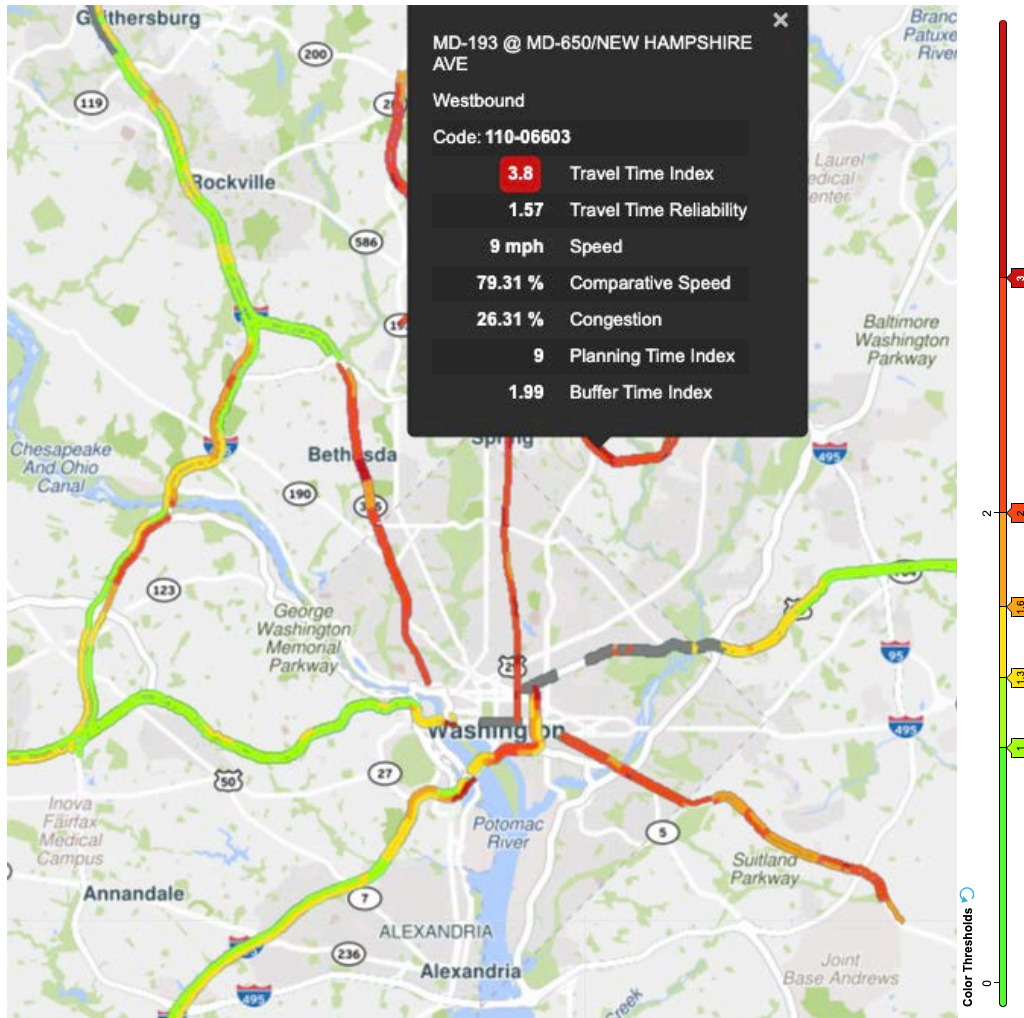


Significantly high TTI's (>3) can be seen in dark red primarily along routes

1. MD-355 Northbound



Daily Travel Time Index: September 2021



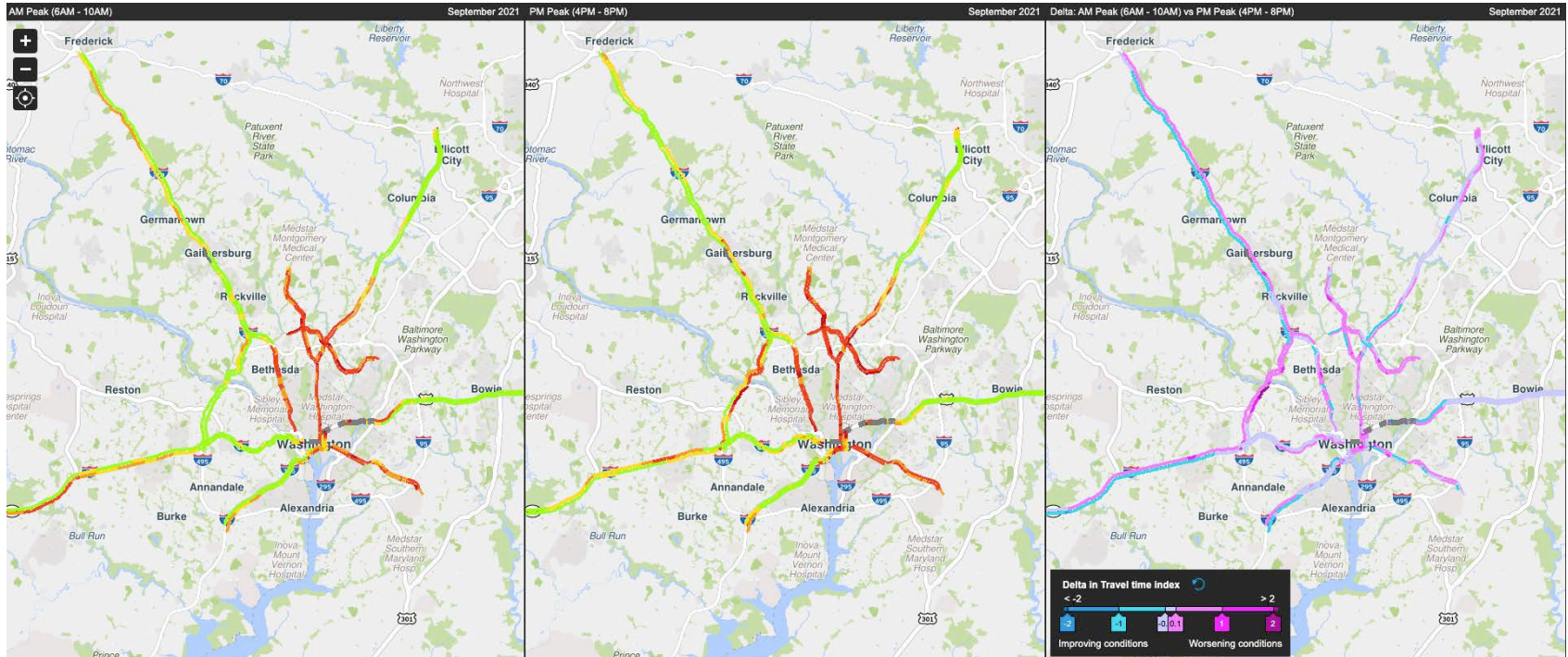
Significantly high TTI's (>3) can be seen in dark red primarily along routes

1. MD-193 Westbound



Travel Time Index: September 2021

AM Peak (6-10AM) | PM Peak (4-8PM) | Δ AM vs PM Peak Periods



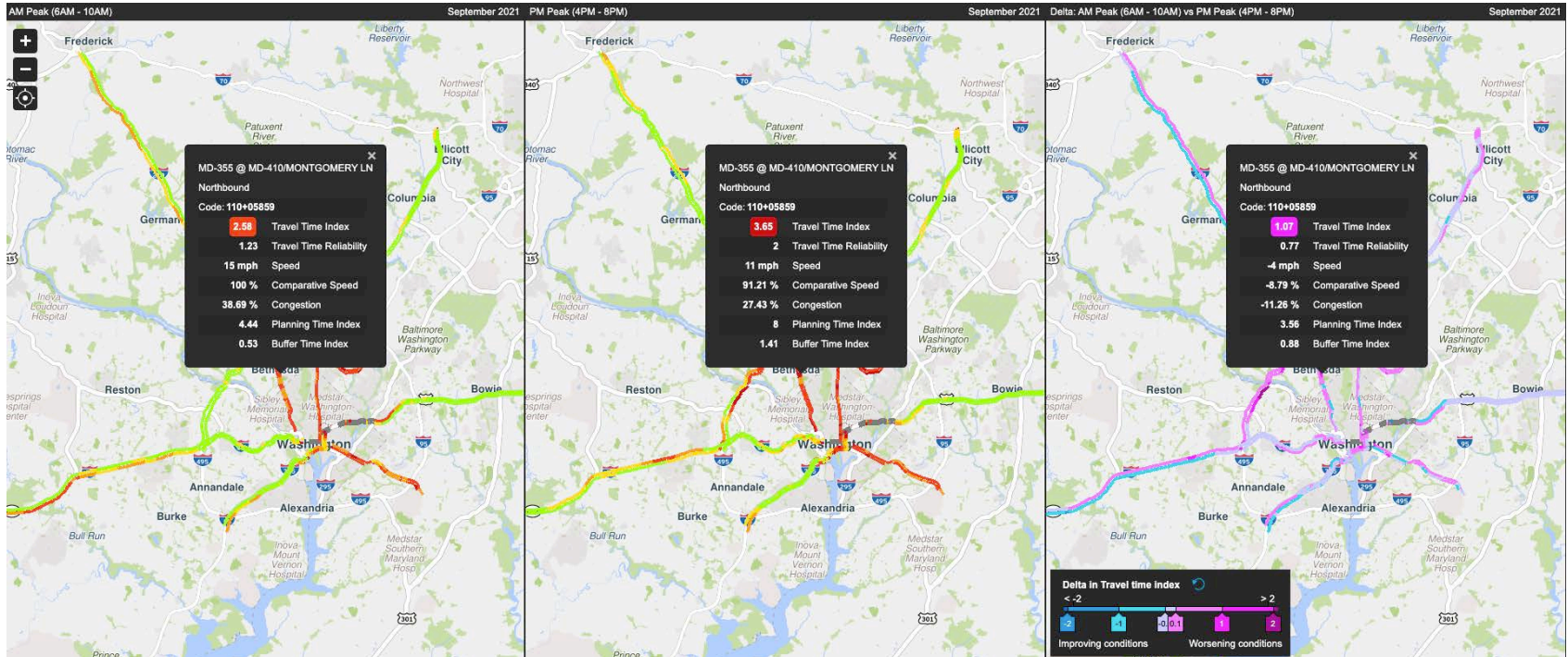
Purple / Magenta colors signify higher TTIs during PM Peak

Blue / Cyan signify higher TTI during AM Peak



Travel Time Index: September 2021

AM Peak (6-10AM) | PM Peak (4-8PM) | Δ AM vs PM Peak Periods



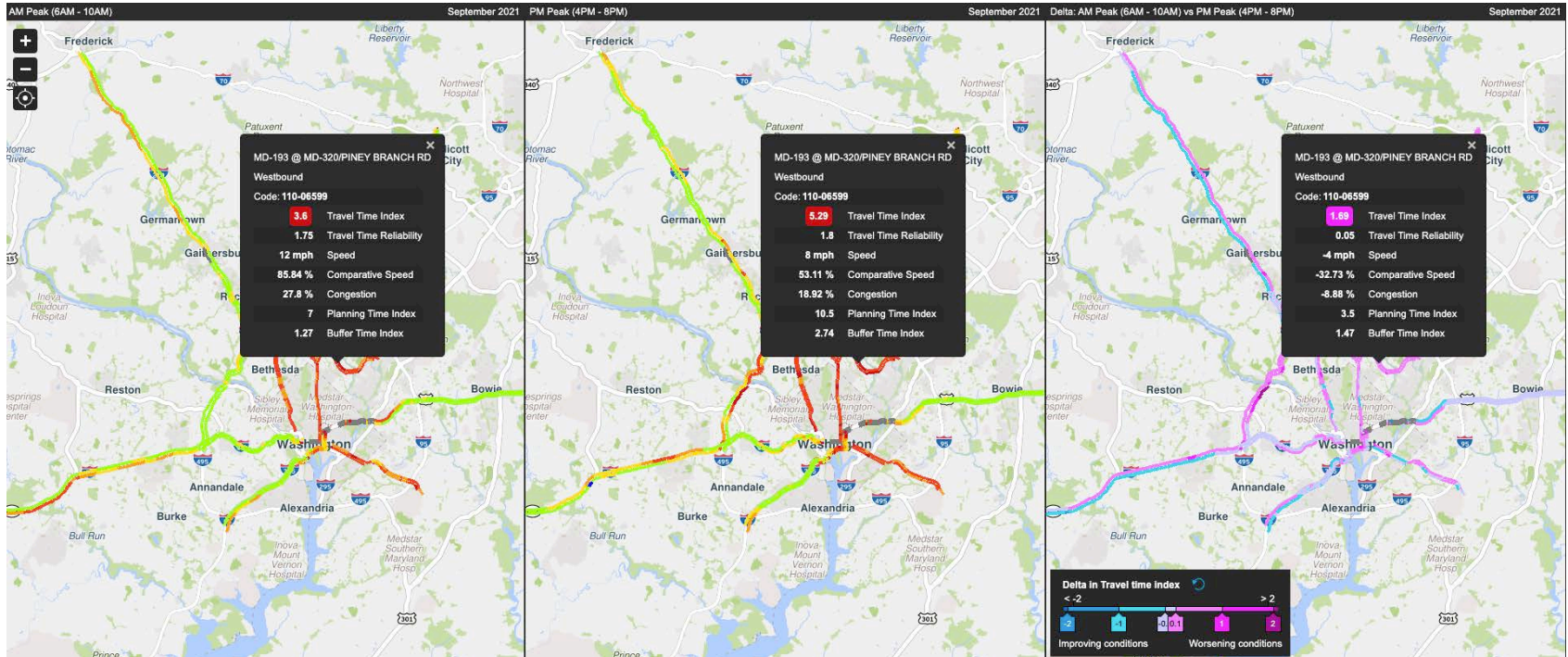
MD-355 shows high TTI in both directions across peak periods.

PM peak period Northbound travel +1.07 TTI / +10% congestion



Travel Time Index: September 2021

AM Peak (6-10AM) | PM Peak (4-8PM) | Δ AM vs PM Peak Periods

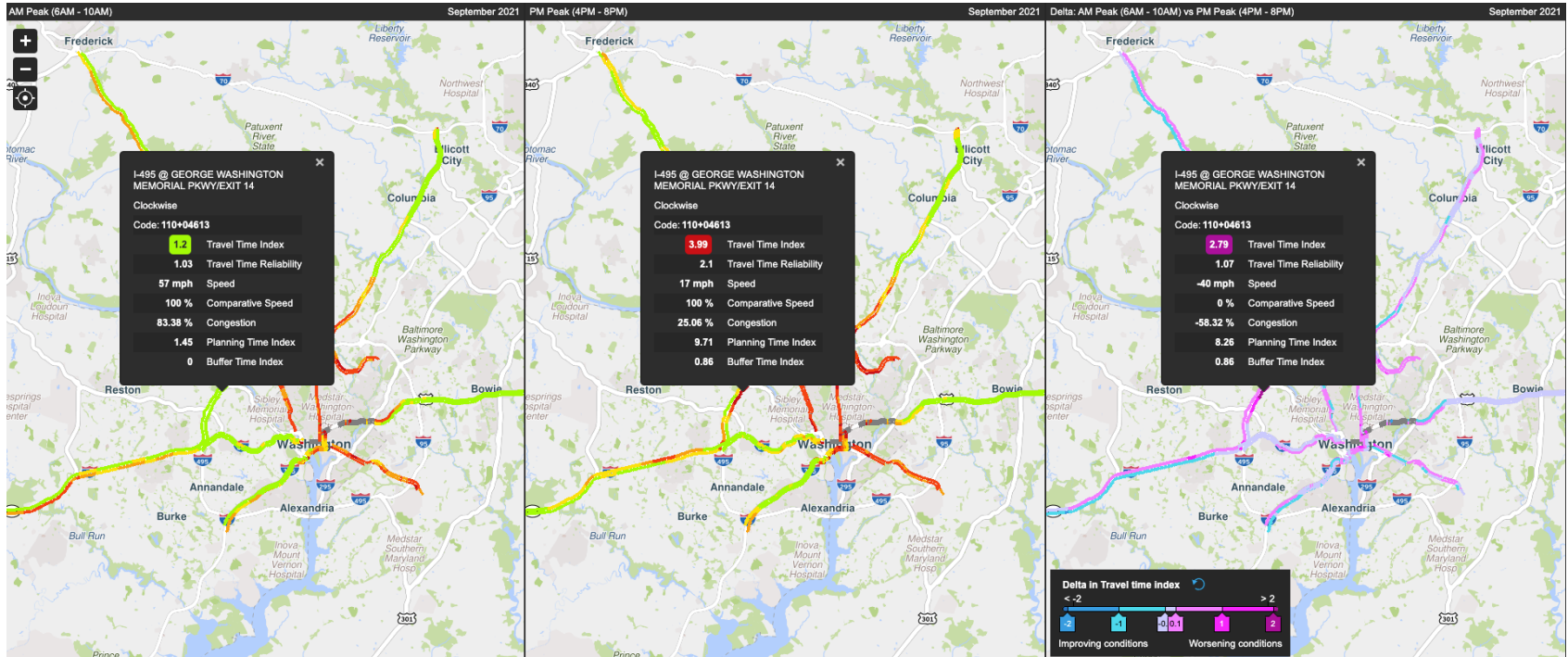


MD-193 Westbound significantly high TTI across AM / PM Peaks

Travel Time in PM peak as high as 5.3 / speeds as low as 8mph.

Travel Time Index: September 2021

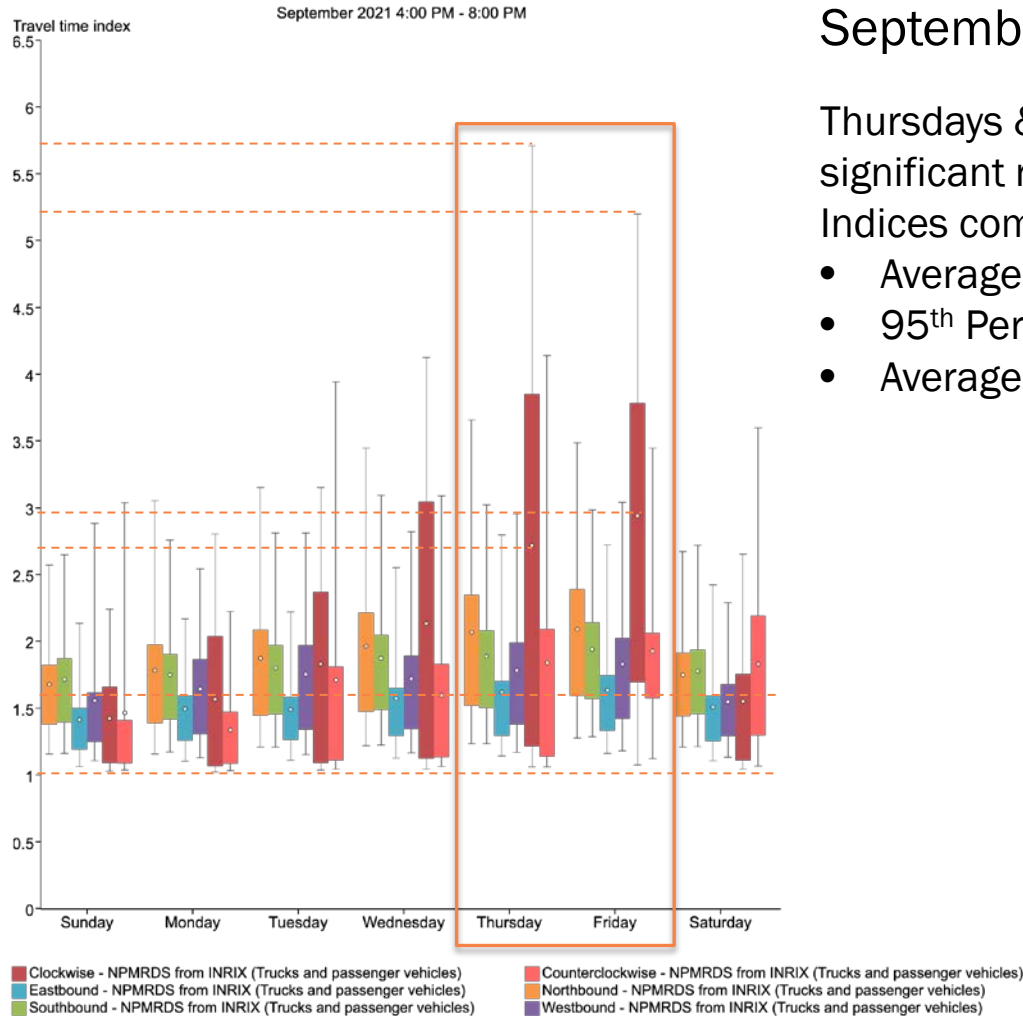
AM Peak (6-10AM) | PM Peak (4-8PM) | Δ AM vs PM Peak Periods



I-495 Clockwise shows highest change in TTI from AM to PM Peak Periods (over 2.5x with almost 60% more congestion)



Performance chart



September PM Peak Period TTI by Day

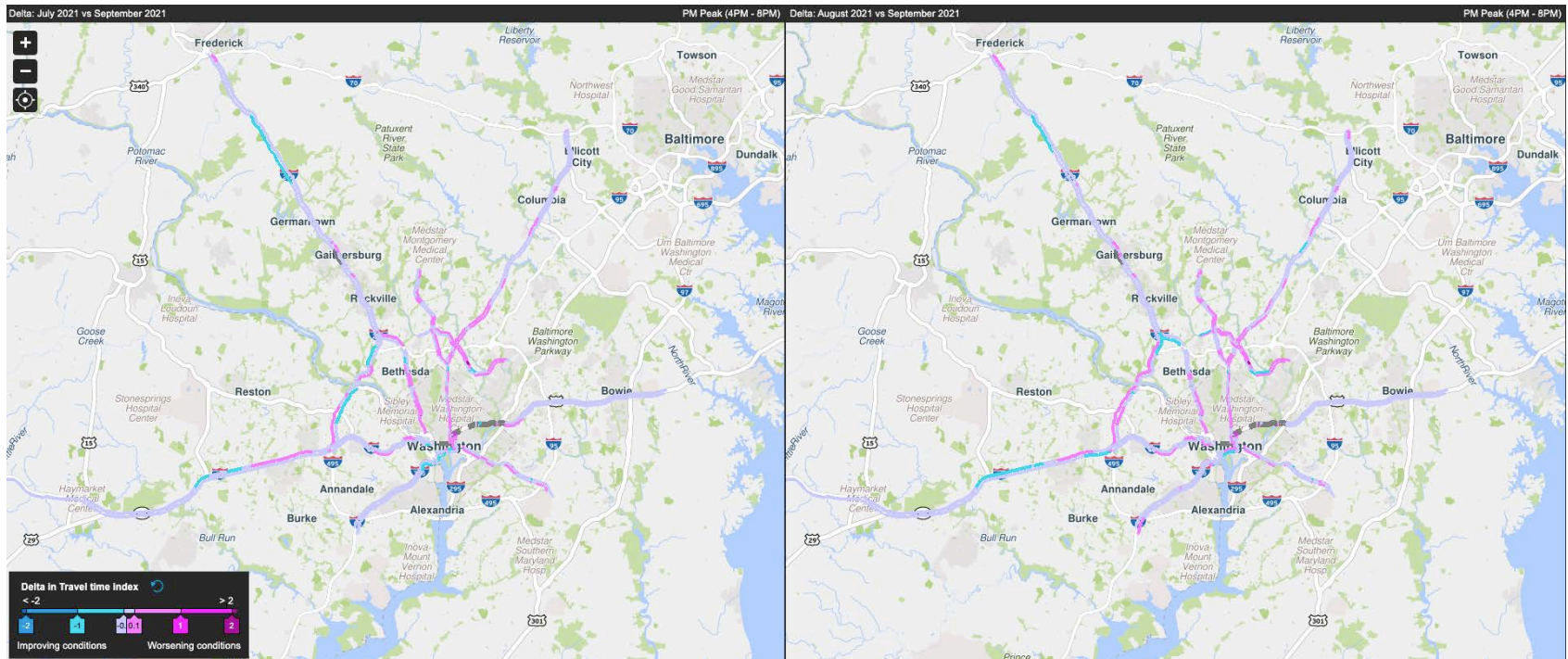
Thursdays & Fridays shows significant ranges in Travel Time Indices compared to rest of week

- Average Th/Fr TTI ~ 2.75 - 3
- 95th Percentiles ~ 5.25 - 5.75
- Average TTI ~ 1.57



Travel Time Index: Δ By Month

Δ Jul 2021 vs Sep 2021 PM Peak | Δ Aug 2021 vs Sep 2021 PM Peak

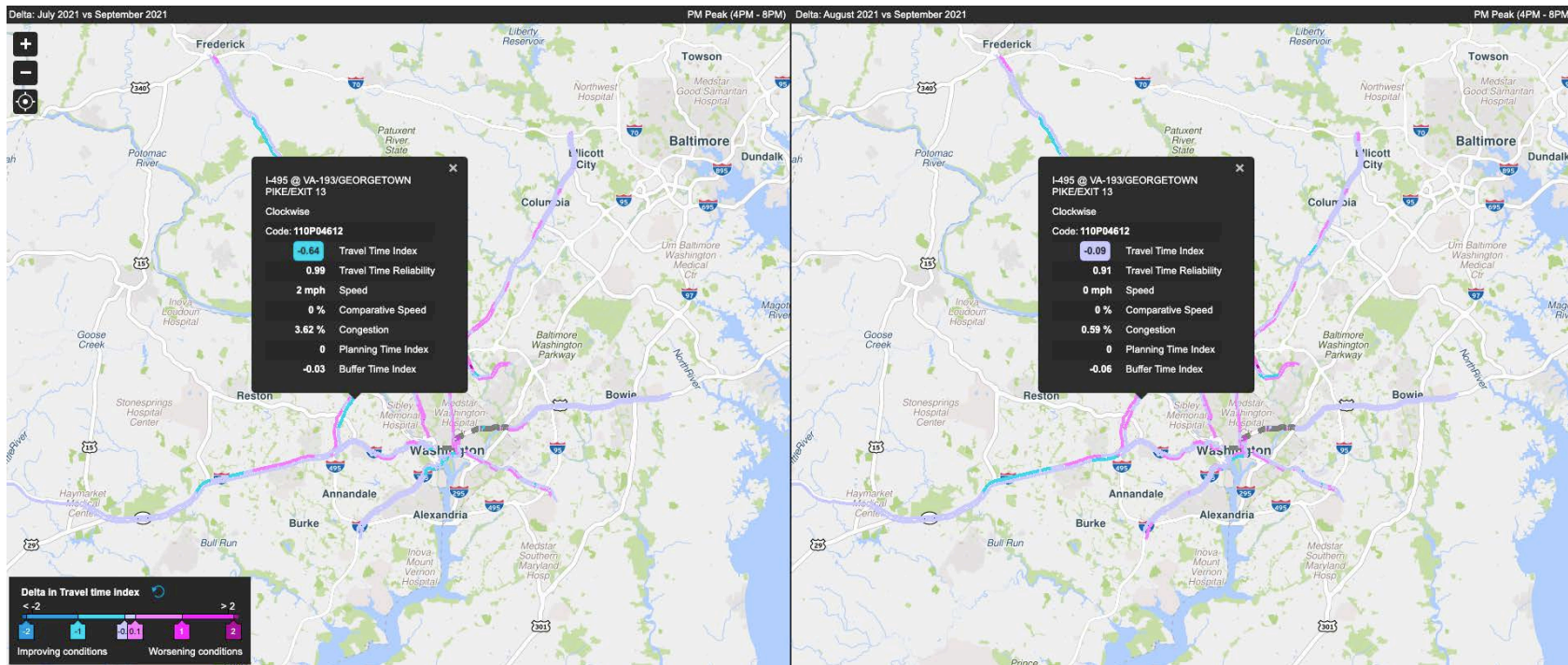


Travel times have increased along primary transit corridors from July to September 2021

TTI and Congestion decreased along I-495 traveling counter-clockwise during this period

Travel Time Index: Δ By Month

Δ Jul 2021 vs Sep 2021 PM Peak | Δ Aug 2021 vs Sep 2021 PM Peak

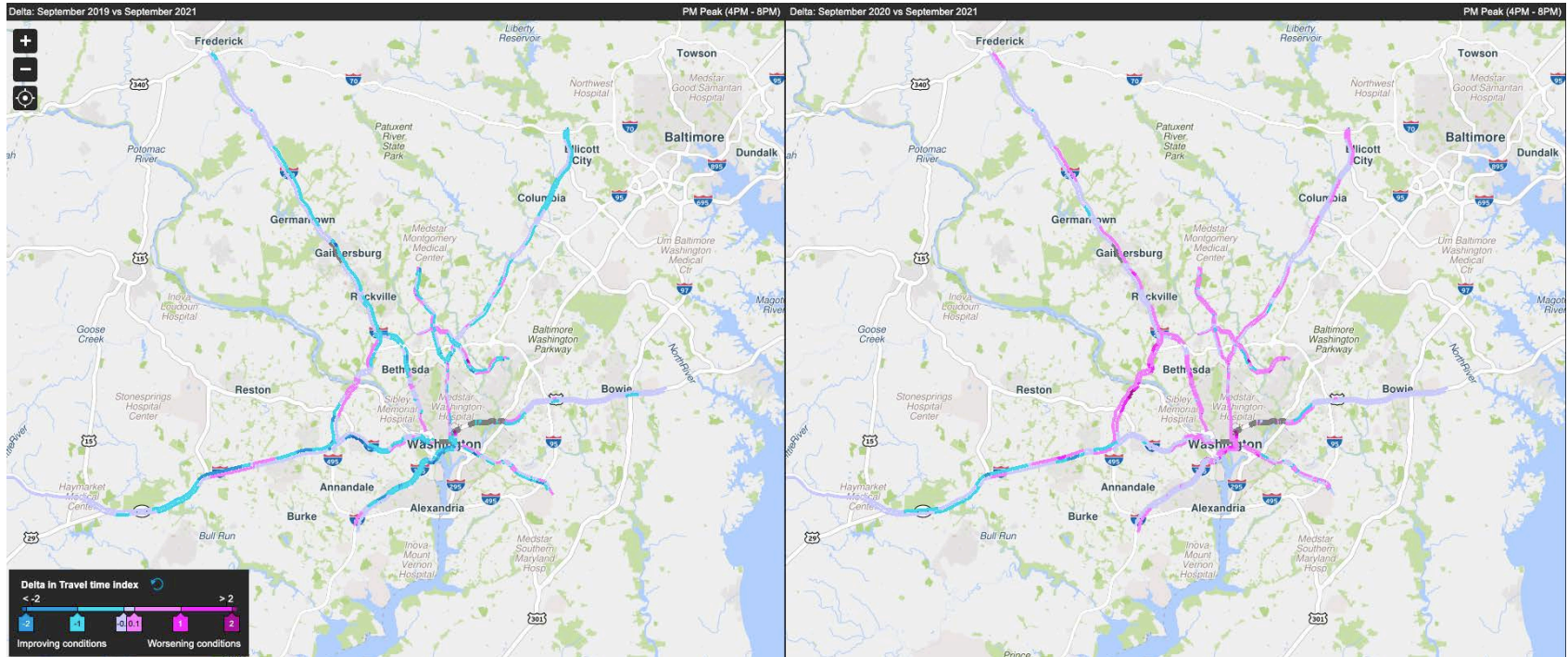


I-495 Counter-Clockwise | Δ Jul 2019 vs Sep 2021: TTI - 0.54 / Congestion +4%

I-495 Counter-Clockwise | Δ Aug 2019 vs Sep 2021: TTI - 0.09 / Congestion +1%

Travel Time Index: Δ By Year

Δ Sep 2019 vs Sep 2021 PM Peak | Δ Sep 2020 vs Sep 2021 PM Peak

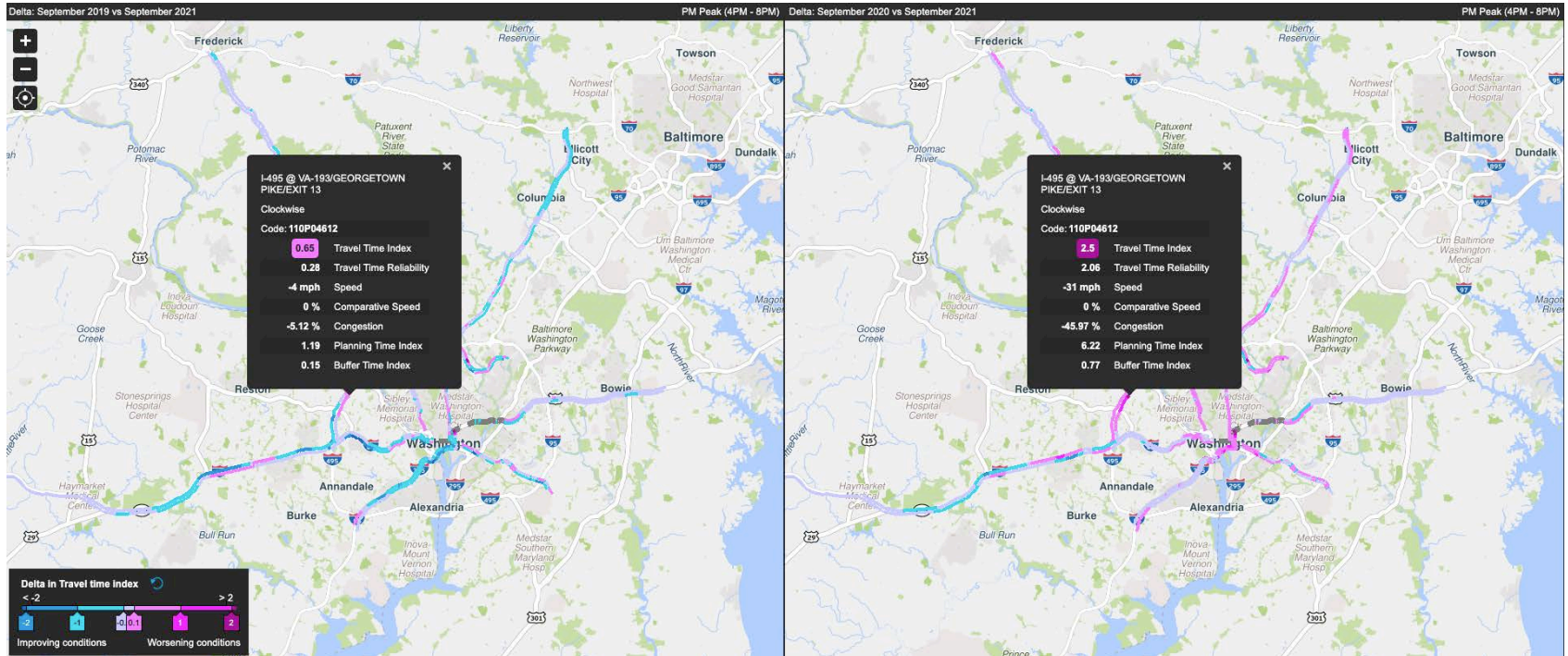


September 2021 travel time indices are still lower than pre-pandemic TTI on most transit corridor routes.

Compared to 2020 TTI, I-495 Clockwise, I-395 Northbound experienced the largest increase in TTI and Congestion

Travel Time Index: Δ By Year

Δ Sep 2019 vs Sep 2021 PM Peak | Δ Sep 2020 vs Sep 2021 PM Peak



I-495 Clockwise | Δ Sep 2019 vs Sep 2021: TTI + 0.65 / Congestion + 5%

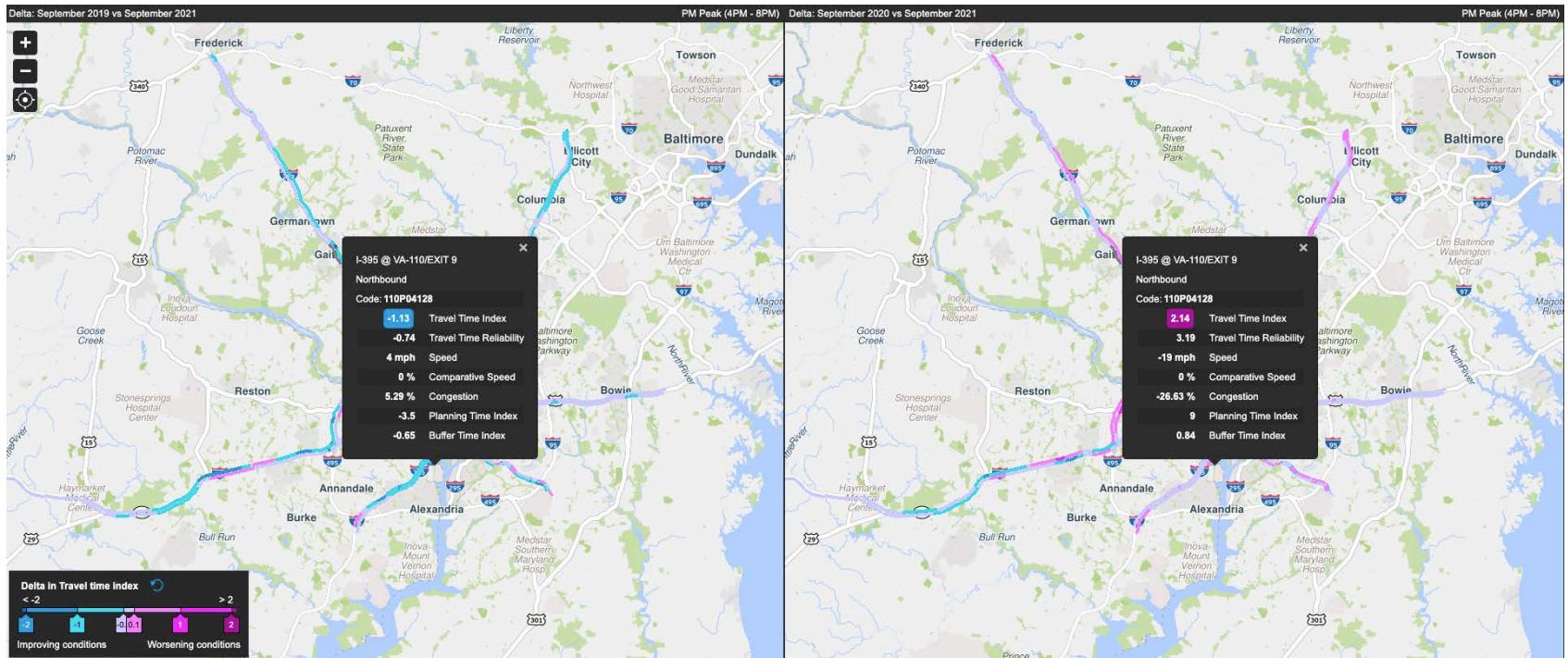


I-495 Clockwise | Δ Sep 2020 vs Sep 2021: TTI +2.5 / Congestion + 45%



Travel Time Index: Δ By Year

Δ Sep 2019 vs Sep 2021 PM Peak | Δ Sep 2020 vs Sep 2021 PM Peak



I-395 Northbound | Δ Sep 2019 vs Sep 2021: TTI - 1.13 / Congestion -5%



I-395 Northbound | Δ Sep 2020 vs Sep 2021: TTI +2.14 / Congestion + 25%



Takeaways

- Increased travel times in September 2021 were seen primarily along routes
 - MD-97
 - MD-193
 - MD-355 / Wisconsin Ave NW
 - US-29 / Georgia Ave NW
 - Pennsylvania Ave SE
 - I-395
- PM Peak Period TTI and congestion were higher than AM Peak
- Thursdays & Fridays show highest average TTI for PM Peak Period
- Travel times increased along most transit corridors from July – Sep 2021
 - Exceptions include: I-495 CCW; I-270 S; I-66 W; I-395 N
- Travel times are slightly lower than pre-pandemic along primary transit corridors, but have increased over the past year.



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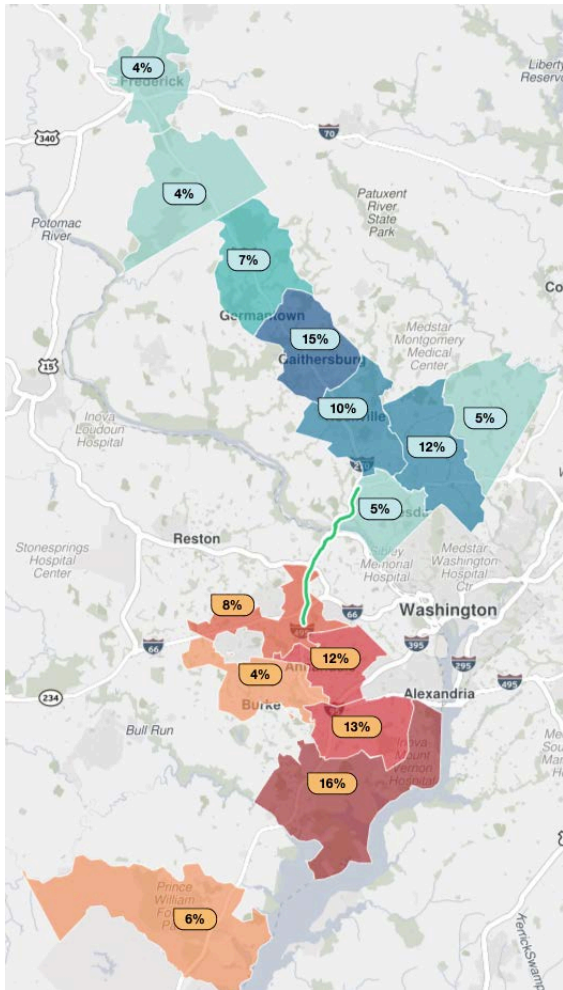
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National Capital Region
Transportation Planning Board

Appendix



Segment Analysis for I-495 Clockwise Th/Fr 4-8pm Peak Period

Primary Origin Sub-Counties:

- Mount Vernon – 16%
- Lee – 13%
- Mason – 12%

Primary Destination Sub-Counties:

- Gaithersburg – 15%
- Silver Spring – 12%
- Rockville – 10%

Appendix

Median Travel Time Index per road

Road	TTI AM Peak	TTI Midday	TTI PM Peak	TTI Daily
MD-97	2.35	2.675	2.86	2.67
7TH ST	2.32	2.52	2.75	2.53
MD-193	2.34	2.48	2.75	2.53
PENNSYLVANIA AVE SE	2.26	2.405	2.47	2.42
MD-355	2.395	2.355	2.46	2.36
WISCONSIN AVE NW	2.23	2.605	2.46	2.505
MD-4	2.105	2.17	2.185	2.175
US-29	1.79	1.78	1.89	1.89
I-395	1.55	1.535	1.745	1.575
I-495	1.15	1.44	1.69	1.47
US-50	1.22	1.17	1.21	1.225

Percent of Travel Time Index > 3 per road

Road	% of TTI > 3	% of Road Miles > 3
US-29	23%	8%
MD-97	18%	16%
I-395	15%	7%
MD-193	15%	19%
PENNSYLVANIA AVE SE	7%	12%
MD-355	6%	15%
I-495	4%	10%
7TH ST	3%	14%
WISCONSIN AVE NW	3%	17%
MD-4	2%	2%
US-50	2%	1%

* TTI > 3 represents 5% of total road miles analyzed

Median Travel Time Index per Road

Median TTI vs Max TTI (PM Peak)

- US-29 – 1.89 | 5.45
- MD-193 – 2.75 | 5.29
- I-395 – 7.47 | 1.75

Percent of TTI > 3 per road

- US-29 – 23%
- MD-97 – 18%
- I-395 – 15%
- 56% of TTI > 3 | 31% of road miles in category

