

## **DVRPC CMP Focus Roadway Corridor Congestion Analysis**

### **Travel Time Index Summary: February 2020 versus February 2022**

The COVID-19 pandemic has continued to alter traffic conditions in the DVRPC region, as well as nationally, making it more challenging to understand evolving travel trends to prioritize improvements and recommend appropriate strategies for managing congestion. Congestion on average is down compared to pre-pandemic levels; however, increased traffic exists on some roadways. Uncertainties still remain, such as some commuters that may have taken transit prior to the pandemic may now be for health or other reasons driving to work, leading to more congestion on the region's roadways. Alternatively, some workers are working from home that previously commuted to work, resulting in less congestion. This summary analysis identifies which CMP roadway corridors experienced the most congestion in February 2022, and which ones experienced the most change comparing February 2020 (pre-pandemic) to February 2022. Analysis was performed for both the 7:00-8:00 AM and 5:00-6:00 PM weekday peak hour time periods.

Archived GPS vehicle probe data from the RITIS Probe Data Analytics (PDA) Suite was used to analyze weekly peak hour congestion using the Travel Time Index (TTI) performance measure. TTI is defined as the ratio of the peak hour average travel time to the free-flow travel time (uncongested travel time). The higher the TTI, then the greater congestion. **The analysis of TTI during the PM peak indicates that 202 (36%) of the CMP corridors experienced more congestion in February 2022 than in February 2020. However, regionally there was less congestion in February 2022 than February 2020 with TTI dropping on average from 1.25 in 2020 to 1.21 in 2022, or 3.2%.**

The top ten CMP corridors with the most congestion in February 2022 and the top ones with the most increase in congestion comparing February 2020 to February 2022 were analyzed separately by state within the DVRPC region. Tables 1 to 4 list the top CMP corridors with the most congestion in February 2022 during the AM and PM peak hour; Tables 5 to 8 list the top ones with the greatest increase and percent change increase in congestion comparing February in 2020 to 2022 for the DVRPC Pennsylvania counties; and Tables 9 to 12 indicate the same for the DVRPC New Jersey counties. Figures 1 and 2 show mapping of the most congested CMP corridors using the TTI measure for February 2020 and 2022, respectively, and Figure 3 shows the change in TTI. Additional analysis (see Tables 13 and 14) include all the CMP corridors average weekly and monthly TTI including the absolute and percent change, along with the rankings of most congested corridors and most absolute and percent change analyzed separately by state. A rank of one indicates the most congested, or most absolute or percent change increase.

CMP corridors in the Pennsylvania portion of the DVRPC region with the most congestion in February 2022 during the peak hours include I-95 from Academy Road to Frankford Avenue, I-76 from I-676 (Vine Street Expressway) to US 1, I-676 from I-95 to I-76; US 1 from I-76 to PA 611, and Market Street from I-95 (Penn's Landing) to Broad Street in Philadelphia; I-76 from US 1 to I-476 in Montgomery County; I-476 from US 1 to Baltimore Pike (Swarthmore) in Delaware County; and US 30 Bypass from US 30 Business to Reeceville Road in Chester County (see Tables 1 and 2). In the New Jersey portion of the DVRPC region, top locations include I-76 from the Walt Whitman Bridge to I-295, I-295 from NJ 42 to NJ 70, I-676 from the Benjamin Franklin Bridge to I-76, and NJ 168 (Black Horse Pike) from I-295 to NJ 42 in Camden County; NJ 55 from NJ 42 to NJ 47 and NJ 45 from US 130 to Kings Highway in Gloucester County; NJ 42 from the AC Expressway to I-295 in Camden and Gloucester Counties; and CR 583 (Princeton Pike) from I-295 to NJ 27 and NJ 29 from Cass Street to I-295 in Mercer County (see Tables 3 and 4).

CMP corridors that experienced the most change and percent change increase in TTI comparing February 2020 to February 2022 in the DVRPC Pennsylvania counties include Market Street from I-95 (Penn's Landing) to Broad Street, I-676 from I-95 to I-76, I-76 from I-676 to US 1, US 1 from I-76 to PA 611, I-95 from Academy Road to Frankford Avenue and Broad Street from Girard Avenue to US 1 in Philadelphia; I-76 from US 1 to I-476 in Montgomery County; US 322 from PA 82 to US 30 Business in Chester County; and I-95 from I-476 to US 322 in Delaware County (see Tables 5 to 8). CMP corridors that experienced the greatest change and percent change increase in TTI in the DVRPC New Jersey counties include I-295 from US 130 to NJ 70, I-76 from the Walt Whitman Bridge to I-295, and the NJ Turnpike from Exit 3 to Exit 4 in Camden County; NJ 55 from NJ 42 to NJ 47 and US 322 from I-295 to the NJ Turnpike in Gloucester County; NJ 42 from the AC Expressway to I-295 in Camden and Gloucester Counties; NJ 31 from I-295 to CR 518 and the NJ Turnpike from Exit 7A to Exit 8 in Mercer County; and NJ 70 from NJ 73 to Eayrestown Road in Burlington County (see Tables 9 to 12).

## CMP Corridors with the Highest February 2022 TTI Pennsylvania Portion of the DVRPC Region

**Table 1: Top Ten CMP Corridors during the 7:00-8:00 AM Peak Hour**

CMP ID	Corridor	Direction	County	2022 <sup>1</sup>	2020
026	I-95 from Academy Rd to PA 90 (Betsy Ross Br)	SB	Philadelphia	2.78	2.56
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	EB	Philadelphia	2.54	2.09
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	2.34	1.66
027	I-95 from PA 90 (Betsy Ross Br) to Frankford Ave	SB	Philadelphia	2.29	3.21
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	WB	Philadelphia	2.09	1.96
019	I-76 from US 1 (City Ave) to I-476	EB	Montgomery	2.08	1.49
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	2.00	0.96
019	I-76 from US 1 (City Ave) to I-476	WB	Montgomery	1.94	1.92
041	US 1 from I-76 to PA 611	SB	Philadelphia	1.81	1.81
057	US 30 Bypass from US 30 Bus to Reeceville Rd	EB	Chester	1.80	2.12

**Table 2: Top Ten CMP Corridors during the 5:00-6:00 PM Peak Hour**

CMP ID	Corridor	Direction	County	2022 <sup>1</sup>	2020
117	I-676 (Vine Street Expy) from I-76 to I-95	EB	Philadelphia	4.18	3.45
017	I-76 from I-676 (Vine Street Expy) to US 30	EB	Philadelphia	3.60	3.23
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	3.25	1.81
041	US 1 from I-76 to PA 611	NB	Philadelphia	3.05	2.17
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	WB	Philadelphia	2.66	2.05
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	2.61	1.39
027	I-95 from PA 90 (Betsy Ross Br) to Frankford Ave	NB	Philadelphia	2.47	1.74
013	I-476 from US 1 to Baltimore Pk (Swarthmore)	SB	Delaware	2.43	1.94
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	EB	Philadelphia	2.24	1.94
017	I-76 from I-676 (Vine Street Expy) to US 30	WB	Philadelphia	2.21	1.55

## New Jersey Portion of the DVRPC Region

**Table 3: Top Ten CMP Corridors during the 7:00-8:00 AM Peak Hour**

CMP ID	Corridor	Direction	County	2022 <sup>1</sup>	2020
258	NJ 55 from NJ 42 to NJ 47	NB	Gloucester	2.42	2.73
211	NJ 42 from AC Expressway to I-295	NB	Camden, Gloucester	1.77	2.23
212	NJ 168 (Black Horse Pk) from I-295 to NJ 42	NB	Camden	1.41	1.63
301	CR 583 (Princeton Pk) from I-295 to NJ 27	NB	Mercer	1.28	1.70
278	NJ 29 from Cass St to I-295	NB	Mercer	1.25	1.24
260	NJ 45 from US 130 to Kings Hwy	NB	Gloucester	1.24	1.24
218	US 1 from Alexander Rd to County Line	NB	Mercer	1.23	1.10
269	NJ 70 from NJ 73 to Eayrestown Rd	WB	Burlington	1.23	1.16
298	NJ 129 from NJ 29 to US 1	NB	Mercer	1.23	1.40
214	Sicklerville Rd/536 Spur from AC Expr to NJ 42	NB	Camden	1.22	1.12

**Table 4: Top Ten CMP Corridors during the 5:00-6:00 PM Peak Hour**

CMP ID	Corridor	Direction	County	2022 <sup>1</sup>	2020
228	I-76 from Walt Whitman Bridge to I-295	EB	Camden	2.17	1.98
208	I-295 from NJ 42 to NJ 70	SB	Camden	2.09	1.95
258	NJ 55 from NJ 42 to NJ 47	NB	Gloucester	1.93	1.79
227	I-676 from I-76 to Benjamin Franklin Bridge	SB	Camden	1.73	2.05
212	NJ 168 (Black Horse Pk) from I-295 to NJ 42	SB	Camden	1.69	1.71
272	NJ 73 from NJ Turnpike to NJ 70	SB	Burlington	1.53	1.74
267	NJ 70 from NJ 38 to I-295	EB	Camden	1.52	1.53
268	NJ 70 from I-295 to NJ 73	EB	Camden, Burlington	1.52	1.58
298	NJ 129 from NJ 29 to US 1	SB	Mercer	1.50	1.69
236	US 130 from US 30 to I-76	SB	Camden	1.49	1.63

*CMP ID highlighted in blue indicates a corridor that is in both the 7:00-8:00 AM and 5:00-6:00 PM peak hour top ten lists*

<sup>1</sup> Sorted from high to low by 2022 TTI where a higher TTI indicates greater congestion

**February 2020 vs 2022 TTI Comparison: Pennsylvania Portion of the DVRPC Region  
7:00-8:00 AM Peak Hour**

**Table 5: Top Ten CMP Corridors with the Greatest Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta <sup>2</sup>	% Change
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	1.04	108.3
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	0.68	41.0
019	I-76 from US 1 (City Ave) to I-476	EB	Montgomery	0.59	39.6
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	EB	Philadelphia	0.45	21.5
140	US 322 from PA 82 to US 30 Business	EB	Chester	0.22	16.1
026	I-95 from Academy Rd to PA 90 (Betsy Ross Br)	SB	Philadelphia	0.22	8.6
100	PA 611 (Broad St) from Girard Ave to US 1	SB	Philadelphia	0.21	18.6
060	US 322 from PA 452 to US 1	EB	Delaware	0.20	14.5
163	PA 3 (Walnut St) from Broad St to 23rd St	WB	Philadelphia	0.19	18.4
117*	I-676 (Vine Street Expy) from I-76 to I-95	EB	Philadelphia	0.17	12.0

**Table 6: Top Ten CMP Corridors with the Greatest Percent Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta	% Change <sup>3</sup>
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	1.04	108.3
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	0.68	41.0
019	I-76 from US 1 (City Ave) to I-476	EB	Montgomery	0.59	39.6
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	EB	Philadelphia	0.45	21.5
100	PA 611 (Broad St) from Girard Ave to US 1	SB	Philadelphia	0.21	18.6
163	PA 3 (Walnut St) from Broad St to 23rd St	WB	Philadelphia	0.19	18.4
140	US 322 from PA 82 to US 30 Business	EB	Chester	0.22	16.1
084	PA 3 (West Chester Pk) from PA 352 to US 202	EB	Chester	0.14	15.1
026	I-95 from Academy Rd to PA 90 (Betsy Ross Br)	NB	Philadelphia	0.16	15.0
025	I-95 from PA 63 to Academy Rd	SB	Bucks	0.14	14.9

*CMP ID highlighted in blue indicates a corridor that is in both top ten lists for absolute and percent change in TTI for the 7:00-8:00 AM peak hour*

**5:00-6:00 PM Peak Hour**

**Table 7: Top Ten CMP Corridors with the Greatest Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta <sup>2</sup>	% Change
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	1.44	79.6
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	1.22	87.8
041	US 1 from I-76 to PA 611	NB	Philadelphia	0.88	40.6
027	I-95 from PA 90 (Betsy Ross Br) to Frankford Ave	NB	Philadelphia	0.73	42.0
117	I-676 (Vine Street Expy) from I-76 to I-95	EB	Philadelphia	0.73	21.2
017	I-76 from I-676 (Vine Street Expy) to US 30	WB	Philadelphia	0.66	42.6
031	I-95 from I-476 to US 322 (Commodore Barry Br)	SB	Delaware	0.63	40.6
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	WB	Philadelphia	0.61	29.8
013	I-476 from US 1 to Baltimore Pk (Swarthmore)	SB	Delaware	0.49	25.3
025	I-95 from PA 63 to Academy Rd	SB	Bucks	0.48	33.1

**Table 8: Top Ten CMP Corridors with the Greatest Percent Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta	% Change <sup>3</sup>
078	Market St from I-95 (Penn's Landing) to Broad St	EB	Philadelphia	1.22	87.8
117	I-676 (Vine Street Expy) from I-76 to I-95	WB	Philadelphia	1.44	79.6
017	I-76 from I-676 (Vine Street Expy) to US 30	WB	Philadelphia	0.66	42.6
027	I-95 from PA 90 (Betsy Ross Br) to Frankford Ave	NB	Philadelphia	0.73	42.0
031	I-95 from I-476 to US 322 (Commodore Barry Br)	SB	Delaware	0.63	40.6
041	US 1 from I-76 to PA 611	NB	Philadelphia	0.88	40.6
025	I-95 from PA 63 to Academy Rd	SB	Bucks	0.48	33.1
024	I-95 from PA 132 (Street Rd) to PA 63	NB	Bucks	0.31	31.0
018	I-76 from US 30 (Girard Ave) to US 1 (City Ave)	WB	Philadelphia	0.61	29.8
100	PA 611 (Broad St) from Girard Ave to US 1	NB	Philadelphia	0.38	29.5

*CMP ID highlighted in blue indicates a corridor that is in both top ten lists for absolute and percent change in TTI for the 5:00-6:00 PM peak hour*

*\*Top tenth CMP corridor tied with other corridors, please see Table 13 for the remaining list of corridors*

<sup>2</sup> Sorted from high to low by TTI change (or delta), where delta is defined as February 2022 TTI minus February 2020 TTI

<sup>3</sup> Sorted from high to low by TTI percent change, where change is defined as the difference of February 2022 TTI minus 2020 TTI divided by 2020 TTI

## February 2020 vs 2022 TTI Comparison: New Jersey Portion of the DVRPC Region 7:00-8:00 AM Peak Hour

**Table 9: Top Ten CMP Corridors with the Greatest Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta <sup>2</sup>	% Change
205	NJ Turnpike from Exit 3 to Exit 4	NB	Camden	0.19	20.2
240	US 322 from I-295 to NJ Turnpike	WB	Gloucester	0.15	15.5
248	NJ 31 from CR 623 to CR 518	NB	Mercer	0.14	14.3
269	NJ 70 from NJ 73 to Eayrestown Rd	EB	Burlington	0.14	13.1
207	I-295 from US 130 to NJ 42	NB	Camden	0.13	12.0
218	US 1 from Alexander Rd to County Line	NB	Mercer	0.13	11.8
202	NJ Turnpike from Exit 7A to Exit 8	SB	Mercer	0.12	12.4
247	NJ 31 from I-295 to CR 623	NB	Mercer	0.12	11.1
214	Sicklerville Rd/ 536 Spur from AC Expr to NJ 42	NB	Camden	0.10	8.9
220*	US 206 from I-295 to CR 604 (Elm Rd)	SB	Mercer	0.09	9.2

**Table 10: Top Ten CMP Corridors with the Greatest Percent Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta	% Change <sup>3</sup>
205	NJ Turnpike from Exit 3 to Exit 4	NB	Camden	0.19	20.2
240	US 322 from I-295 to NJ Turnpike	WB	Gloucester	0.15	15.5
248	NJ 31 from CR 623 to CR 518	NB	Mercer	0.14	14.3
269	NJ 70 from NJ 73 to Eayrestown Rd	EB	Burlington	0.14	13.1
202	NJ Turnpike from Exit 7A to Exit 8	SB	Mercer	0.12	12.4
207	I-295 from US 130 to NJ 42	NB	Camden	0.13	12.0
218	US 1 from Alexander Rd to County Line	NB	Mercer	0.13	11.8
247	NJ 31 from I-295 to CR 623	NB	Mercer	0.12	11.1
220	US 206 from I-295 to CR 604 (Elm Rd)	SB	Mercer	0.09	9.2
214	Sicklerville Rd/536 Spur from AC Exp to NJ 42	NB	Camden	0.10	8.9

*CMP ID highlighted in blue indicates a corridor that is in both top ten lists for absolute and percent change in TTI for the 7:00-8:00 AM peak hour*

## 5:00-6:00 PM Peak Hour

**Table 11: Top Ten CMP Corridors with the Greatest Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta <sup>2</sup>	% Change
207	I-295 from US 130 to NJ 42	SB	Camden	0.28	28.9
228	I-76 from Walt Whitman Bridge to I-295	EB	Camden	0.19	9.6
208	I-295 from NJ 42 to NJ 70	SB	Camden	0.14	7.2
258	NJ 55 from NJ 42 to NJ 47	NB	Gloucester	0.14	7.8
247	NJ 31 from I-295 to CR 623	SB	Mercer	0.13	11.5
248	NJ 31 from CR 623 to CR 518	NB	Mercer	0.13	12.6
211	NJ 42 from AC Expressway to I-295	SB	Camden, Gloucester	0.12	10.1
267	NJ 70 from NJ 38 to I-295	WB	Camden	0.12	9.2
240	US 322 from I-295 to NJ Turnpike	EB	Gloucester	0.11	10.1
266	NJ 42 from AC Expressway to US 322	SB	Gloucester	0.11	8.5

**Table 12: Top Ten CMP Corridors with the Greatest Percent Change Increase in TTI**

CMP ID	Corridor	Direction	County	Delta	% Change <sup>3</sup>
207	I-295 from US 130 to NJ 42	SB	Camden	0.28	28.9
248	NJ 31 from CR 623 to CR 518	NB	Mercer	0.13	12.6
247	NJ 31 from I-295 to CR 623	SB	Mercer	0.13	11.5
211	NJ 42 from AC Expressway to I-295	SB	Camden, Gloucester	0.12	10.1
240	US 322 from I-295 to NJ Turnpike	EB	Gloucester	0.11	10.1
214	Sicklerville Rd/ 536 Spur from AC Exp to NJ 42	NB	Camden	0.10	9.6
228	I-76 from Walt Whitman Bridge to I-295	EB	Camden	0.19	9.6
264	CR 553 (Kings Hwy) from I-295 to NJ 55	NB	Gloucester	0.10	9.3
267	NJ 70 from NJ 38 to I-295	WB	Camden	0.12	9.2
248	NJ 31 from CR 623 to CR 518	SB	Mercer	0.09	8.9

*CMP ID highlighted in blue indicates a corridor that is in both top ten lists for absolute and percent change in TTI for the 5:00-6:00 PM peak hour*

\*Top tenth CMP corridor tied with other corridors, please see Table 13 for the remaining list of corridors

Data Source: University of Maryland CATT Lab RITIS-PDA Suite. DVRPC GIS web mapping is available [here](#) to identify the location of the CMP corridors. Select the CMP Focus Roadway Facilities tab to access the CMP corridors. If you have a RITIS-PDA Suite login, the CMP corridors can be accessed using the PDA analysis tools that provide access to the segment sets. In the Display Options button, type "CMP TMC" to get a list of the CMP corridor segment sets.