

## Asheville Area Congestion Report

French Broad River MPO

## Introduction

The Asheville Metropolitan Area has continued to see population and employment growth throughout much of the region over the last several years, despite increasing housing costs, a pandemic, and numerous other challenges. The last several years have highlighted our region's economic resilience and continued desirability.

The region's continued growth has also brought about concerns about the impact on transportation infrastructure and its ability to continue to facilitate the movement of people and goods. Numerous transportation projects are currently underway to add capacity to interstates, arterials, and intersections in order to better accommodate increasing vehicular travel as well as projected increases in vehicular travel.

This report serves as a follow-up to the French Broad River MPO's Congestion Management Process, developed in 2018, as well as the Asheville Area Congestion Report, completed in 2020, in order to continue to monitor congestion and its impacts on the region's transportation network.

## Major Takeaways

1. Traffic delay has significantly decreased since the pandemic started and has not returned to pre-pandemic levels despite Vehicle Miles Traveled (VMT) returning to pre-pandemic levels. The amount of vehicle delay in the five-county (Buncombe, Haywood, Henderson, Madison, and Transylvania counties) region in 2021 was roughly half what it was in 2019. The amount of roadway mileage experiencing significant issues with reliability have decreased significantly since 2019.
2. AM delay continues to be minimal in the region, PM delay continues to be more significant. This was a major takeaway from the 2019 Asheville Area Congestion Report and continues to be the case. This likely reflects the patterns of retirees, tourists, and significant amounts of the workforce working a different schedule.
3. Work from Home continues to increase throughout most of the region. Prior to the pandemic the Asheville Metro Area ranked 6th in the country for percentage of workers working from home; the percentage continues to increase although the Asheville Area is no longer ranked 6th due to large increases in other metro areas.
4. Commuting without a car appears to be stagnant or decreasingdepending on the mode- throughout the entire region. Commute to Work data from US Census Bureau continues to reflect decreases or stagnation in the region's residents who bike, walk, carpool, or take public transportation to work.
5. Cross-county commuting has increased significantly. Each of the five counties has observed significant decreases in the number of residents working and living in the same county. Some economic centers have also seen significant shifts in where lower-income workers are coming from, likely reflecting displacement from the region's continuing housing shortage.

## POST-PANDEMIC TRAFFIC DELAY \& CAUSES

Observed amounts of traffic delay in the fivecounty region have decreased significantly since the beginning of the pandemic with only marginal gains towards pre-pandemic levels, despite VMT returning to pre-pandemic levels. In other words, vehicles are moving as much or more than they were in 2019, but there is less delay.

The significant reduction in delay is likely due to a redistribution of traffic to non-peak hours, as has been observed with spikes of work from home. Programs such as the region's Transportation Demand Management (TDM) should continue to work with employers to help instill the benefits of telecommuting but more analysis should be done on changes in to hourly travel patterns.

## Causes of Delay

The causes of delay have also changed significantly since the last report was published in 2020. Most notably, recurring congestion, or congestion caused by an influx of vehicles ("traffic jams,") decreased by more than 60\% between 2019 and 2021. Recurring congestion accounted for roughly $35 \%$ of congestion incidents in the region in 2019; it accounted for only $21 \%$ in 2021.

Some causes of congestion did observe an increasethese most notably include congestion incidents related to work zone activities or work zone incidents. This likely correlates with significant construction projects along I-26, including I-4700 and I-4400.




## Top Bottlenecks in the Region in 2021

Data from HERE was provided on the top bottlenecks in the five-county region for 2021. This data is ranked based on total delay which is calculated by the total time a congestion event takes place multiplied by the estimated number of vehicles involved.
\#1 WESTBOUND I-26 @ NC 191 (EXIT 33)

| \# of Events | 543 |
| :--- | :--- |
| Average Daily Duration | 1 h 6 m |
| Total Hours of Delay | $183,387,389$ |
| 2019 Ranking | $\# 1$ |


| \#2 EASTBOUND I-26 @ NC 280 (EXIT 40) |  |
| :--- | :--- |
| \# of Events | 282 |
| Average Daily Duration | 1 h 18 m |
| Total Hours of Delay | $146,288,146$ |
| 2019 Ranking | $\# 7$ |

\#3 EASTBOUND I-26 @ NC 146 (EXIT 37)

| \# of Events | 186 |
| :--- | :--- |
| Average Daily Duration | 41 m |
| Total Hours of Delay | $123,138,521$ |
| 2019 Ranking | $\# 3$ |

\#4 WESTBOUND I-26 @ NC 146 (EXIT 37)

| \# of Events | 457 |
| :--- | :--- |
| Average Daily Duration | 58 m |
| Total Hours of Delay | $120,286,571$ |
| 2019 Ranking | $\# 6$ |

\#5 WESTBOUND I-26 @ US 25 (EXIT 44)

| \# of Events | 267 |
| :--- | :--- |
| Average Daily Duration | 22 m |
| Total Hours of Delay | $97,884,614$ |
| 2019 Ranking | \#16 |

\#6 WESTBOUND I-26 @ NC 280 (EXIT 40)

| \# of Events | 374 |
| :--- | :--- |
| Average Daily Duration | 33 m |
| Total Hours of Delay | $81,756,589$ |
| 2019 Ranking | $\# 22$ |

\#7 WESTBOUND US 64 @ DUNCAN HILL ROAD

| $\#$ of Events | 7 |
| :--- | :--- |
| Average Daily Duration | 5 h 25 m |
| Total Hours of Delay | $57,511,192$ |
| 2019 Ranking | - |

\#8 EASTBOUND I-26 @ US 25 (EXIT 44)

| \# of Events | 375 |
| :--- | :--- |
| Average Daily Duration | 24 m |
| Total Hours of Delay | $54,813,062$ |
| 2019 Ranking | $\# 33$ |

\#9 WESTBOUND I-40 @ NEWFOUND ROAD (EXIT 33)

| \# of Events | 111 |
| :--- | :--- |
| Average Daily Duration | 11 m |
| Total Hours of Delay | $36,706,869$ |
| 2019 Ranking | $\# 19$ |

\#10 WESTBOUND I-40 @ WIGGINS
ROAD (EXIT 37)

| \# of Events | 86 |
| :--- | :--- |
| Average Daily Duration | 12 m |
| Total Hours of Delay | $36,168,119$ |
| 2019 Ranking | $\# 20$ |

It should be noted that many of the top bottlenecks in the region overlap with on-going construction projects. I-26 has construction from US 64 to I-40 as part of $\mathrm{I}-4700$ and I-4400, likely adding to the delays observed along that corridor.

TOP 10 Bottlenecks in the Five-County Area in 2021 with associated queue lengths. Map provided by RITIS.


## Evaluating Delay

For this report, the MPO primarily looks at two different metrics: Travel Time Index and Planning Time Index. These metrics are used throughout the country and in other parts of the world to determine travel-time reliability and better measure the impact of congestion on roadway users. These measures generally take on different aspects of how users experience congestion.

Per the Bureau of Transportation Statistics ${ }^{1}$, Travel Time Index (TTI) is the ratio of the travel time during the peak period to the time required to make the same trip at free-flow speeds. A value of 1.5 , for example, indicates a 10 -minute free-flow trip requires 15 minutes during the peak period. Generally, this metric helps to identify areas with more recurring congestion, i.e. areas where daily congestion events are expected during the defined time period.

The Planning Time Index (PTI) is the ratio of travel time on the worst day of the month (the 95th percentile travel time) compared to the time required to make the same trip at free-flow speeds. A PTI of 1.5 indicates a 10 -minute free-flow trip takes more than 15 minutes only one day per month ${ }^{2}$. Generally, this metric helps to identify areas where nonrecurring congestion may be occurring more frequently and/ or may be more severe.

For this report, TTI and PTI were collected for roadway segments identified in the MPO's Congestion Management Process for AM (7-9AM) and PM (4-6PM) peaks. The below maps illustrate the data by roadway segment in the region for each peak period identified.

[^0]


AM TRAVEL TIME INDEX

## 0.5\%

of studied roadway miles had a Travel Time Index > 1.5 in $\underline{2021}$

## 3.6\%

of studied roadway miles had a Travel Time Index > 1.5 in $\underline{2019}$


PM TRAVEL TIME INDEX

## 5.1\%

of studied roadway miles had a
Travel Time Index > 1.5 in 2021

## 10.8\%

of studied roadway miles had a
Travel Time Index > 1.5 in 2019


AM PLANNING TIME INDEX
of studied roadway miles had a
Planning Time Index > 1.5 in $\underline{\underline{2021}}$

16\%
of studied roadway miles had a Planning Time Index > 1.5 in $\underline{2019}$


AM PLANNING TIME INDEX

27\%
of studied roadway miles had a
Planning Time Index > 1.5 in 2021
51.4\%
of studied roadway miles had a Planning Time Index > 1.5 in $\underline{2019}$

## How People Commute \& Move in the Region

Data about how people commute is provided by the US Census Bureau's American Community Survey (ACS.) An important note is this is survey data that is collected from a portion of the population on an annual basis which focuses on residents' commute to work. With bicycle and pedestrian travel especially, this data shouldn't be used to surmise overall demand for bicycle and pedestrian travel as many of those trips are made for recreational purposes and there is limited data to reflect that information.

However, the overall picture about how the region's workers commute is dominated by people driving alone. In 2021, it's estimated that $77.9 \%$ of workers drove alone, In comparison to past years, driving alone is down significantly from the peak in 2015 at $80.8 \%$ from the same dataset. However, in terms of absolutes the number of workers driving alone is estimated to have increased by more than 22,000 from roughly 159,000 in 2010 to 181,000 in 2021.

While driving alone makes up the majority of workers commuting, other options take up a significant percentage of commuting in the region. Working from Home is the second largest "commute to work" in the region after steady increases over the last decade. To note, this data reflects five-year estimates so is almost certainly deflating the spike in working from home after 2020. Interestingly, every county in the region- with the exception of Haywood- observed a doubling of working from home between 2010 and 2021.



## Working from Home by County (US Census ACS)



## Carpooling, Transit, and Active Transportation

Less favorable data reflects the role of carpooling, biking, walking, and public transportation in regional commuting. These modes are important to providing accessibility, affordability, and sustainable access to jobs in the region while likely decreasing congestion.

Carpooling is- and has been- one of the most significant "modes" of commuting in the region. This may include family members or friends commuting together or carpools setup through employers or groups of employees. In 2021, $7.9 \%$ of the workers in the region reported carpooling as their primary means of getting to work- the third most significant "mode" in the region.

However, carpooling has been on a steady decline since 2010. In 2010, 11.8\% or more than 23,000 residents reported carpooling as their primary means of commuting- that number decreased to a little more than 18,000 in 2021.

Active transportation modes- walking and biking- make up almost $2 \%$ of commuters in the region which is only slightly down from $2.5 \%$ in 2010 . While the percentage of workers walking and biking has fluctuated some, it generally appears to be stagnant for each mode with some insignificant decreases.

Public transportation for commuting has remained remarkably flat at roughly $0.5 \%$. There are some more localized trends that should be looked at more closely, including a decrease from $2 \%$ to $1 \%$ of Asheville workers utilizing public transportation for commuting and an increase from $0.1 \%$ to $1.1 \%$ of Hendersonville residents utilizing public transportation for commuting. Overall, while the increase in working from home has provided regional congestion benefits, the continued reliance on single-occupied vehicles may yield continued issues with congestion.


## Transit and Congestion

The CMP also identifies increasing transit use as a recommendation to help address congestion along destination corridors. For this analysis, annual ridership for fixed-route transit routes overlapping the identified corridors was calculated based on route-by-route ridership counts provided by local transit agencies. To note: considerations were made to calculate stop-by-stop ridership numbers, but congestion impacting each route could impact users along the entire route, regardless of whether their stop is along the corridor or not. Also, not every destination corridor identified in the CMP is currently served by fixed-route transit. Those corridors have been noted in the table provided below.

| Facility | From | To | City/Area | Transit Route(s) | Transit Riders (2019) | Transit Riders (2021) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Patton Avenue | Haywood Road | 1-240 | Asheville | WE1, WE2, W5 | 209,030 | 544,336 |
| Swannanoa River Road | Biltmore Avenue | Tunnel Road | Asheville | WE1 | 237,729 | 306,578 |
| Haywood Road | I-240 | Patton Avenue | Asheville | W1, W2, W6 | 361,558 | 297,229 |
| Tunnel/South Tunnel Road | Swannanoa River Road | Tunnel | Asheville | WE2, 170 | 297,308 | 226,427 |
| Biltmore Avenue | College Street | Biltmore Village | Asheville | S1, S2, S5 | 263,917 | 175,173 |
| Sweeten Creek Road | I-40 | US 25 | Asheville | S1, S5 | 96,270 | 146,006 |
| Merrimon Avenue | I-240 | Beaverdam Road | Asheville | N1, N2 | 198,829 | 123,850 |
| Hendersonville Road | Lodge Street | Blue Ridge Parkway | Asheville | S3, S6 | 182,164 | 65,494 |
| US 64 | Blythe Street | King Street | Hendersonville | Rt. 1 | 31,077 | 25,765 |
| Charlotte Street | Chestnut Street | College Street | Asheville | N5 | 34,723 | 18,877 |
| Spartenburg Highway | Brooklyn Avenue | NC 225 | Hendersonville | Rt. 2 | 23,836 | 16,846 |
| NC 225 | Highland Lake Road | US 176 | Flat Rock | Rt. 2 | 23,836 | 16,846 |
| US 25B | US 176 | NC 191 | Hendersonville | Rt. 3 | 23,836 | 13,753 |
| North Main Street | US 276/Pigeon | Walnut | Waynesville | Mountaineer Rt | 3,080 | 3,783 |
| South Main Street | Hyatt Creek | US 276 | Waynesville | Mountaineer Rt | 3,080 | 3,783 |
| NC 110 | Main Street | Henson Cove Road | Canton | Black Bear Rt | 3,080 | 3,783 |
| Weaver Boulevard | I-26 | Main Street | Weaverville |  | No Fixed Rt Service |  |
| NC 191 | US 25B | Blythe Street | Hendersonville |  | No Fixed Rt Service |  |
| Amboy / Meadow Road | I-240 | Biltmore Avenue | Asheville |  | No Fixed Rt Service |  |
| Elk Mountain Road | I-26 | Riverside Drive | Woodfin |  | No Fixed Rt Service |  |
| NC 213 | Main Street | 1-26 | Mars Hill |  | No Fixed Rt Service |  |

## Bicycle and Pedestrian

The 2018 CMP classifies "congested" roadways into different corridor types with Destination Corridors identified as major roadway corridors experiencing congestion that intersect areas that are relatively more conducive to bicycle and pedestrian travel. This identification is important for two different reasons: 1) IMPROVE SAFETY: in areas where bicycle and pedestrian travel is more likely to occur, prioritizing speed and vehicular movements can lead to more safety concerns for people traveling by bike or walking; and 2) REDUCE CONGESTION: enhancing bicycle and pedestrian accommodations along these corridors and inducing more trips by those modes may play a significant role in reducing congestion in those areas.

This section of the report helps to monitor Destination Corridors in terms of how these roads interact with bicycle and pedestrian modes. The corridors below are sorted based on a bicycle and pedestrian risk score developed by NCDOT as part of the Prioritization Process. The bicycle and pedestrian risk score is based on roadway accommodations as well as bicycle and pedestrian trip generators to develop an index based on projected use as well risk to each user. For this analysis, some CMP corridors are longer than the segments in the bicycle and pedestrian risk score so an average of overlapping segments has been applied. Also of note is the bicycle and pedestrian risk score has not been updated since the last report so it should be noted that significant changes have occurred on a couple of corridors in the region but are not reflected in the score in the table below.

Along with the bicycle and pedestrian risk score are recorded bicycle and pedestrian crashes within 50 feet of the identified corridor over a five-year period (2017-2021.)


| Facility | From | To | Bike Crashes | Pedestrian Crashes | Total Crashes | KA Crashes | NC DOT Crash Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Patton Avenue | Haywood Road | I-240 | 5 | 8 | 13 | 3 | 31.1 |
| Henderson Road | Lodge Street | Blue Ridge Parkway | 2 | 6 | 8 | 1 | 46.6 |
| NC 110 | Main Street | Henson Grove Road | 1 | 5 | 6 | 1 | 35.8 |
| Amboy / Meadow | I-240 | Biltmore Avenue | 2 | 3 | 5 | 1 | 43.3 |
| Merrimon Avenue | I-240 | Beaverdam Road | 3 | 12 | 15 | 0 | 50.1* |
| Biltmore Avenue | College Street | Biltmore Village | 2 | 12 | 14 | 0 | 48.9 |
| Tunnel / S Tunnel Road | Beaucatcher Tunnel | Swannanoa River Road | 4 | 10 | 14 | 0 | 46.9 |
| Haywood Road | I-240 | Patton Avenue | 6 | 4 | 10 | 0 | 38.9 |
| US 25B | US 176 | NC 191 | 0 | 7 | 7 | 0 | 31.3 |
| Swannanoa River Road | Biltmore Avenue | Tunnel Road | 0 | 6 | 6 | 0 | 43.3 |
| Spartenburg Highway | Brooklyn Avenue | NC 225 | 3 | 2 | 5 | 0 | 44.5 |
| US 64 | Blythe Street | King Street | 0 | 3 | 3 | 0 | 46.2 |
| South Main Street | Hyatt Creek | Pigeon Avenue | 1 | 2 | 3 | 0 | 44.5 |
| Greenville Highway | Highland Lake Road | Spartanburg Highway | 1 | 1 | 2 | 0 | 41.6 |
| Charlotte Street | Chestnut Street | College Street | 0 | 1 | 1 | 0 | 50.4* |
| Weaver Boulevard | I-26 | Main Street | 0 | 1 | 1 | 0 | 50.3 |
| N Main Street | Pigeon Street | Walnut Street | 0 | 1 | 1 | 0 | 46 |
| Sweeten Creek Road | I-40 | McDowell Street | 0 | 0 | 0 | 0 | 39.9 |
| NC 191 | US 25B | Blythe Street | 0 | 0 | 0 | 0 | 46.1 |
| Elk Mountain Road | I-26 | Riverside Drive | 0 | 0 | 0 | 0 | 40.8 |
| NC 213 | Main Street | I-26 | 0 | 0 | 0 | 0 | 37.7 |

*Significant roadway changes have been made that are not reflected in the crash risk score.
Corridors in the table are ranked by KA (serious and fatal) bicycle and pedestrian crashes between 2017 and 2021.

## Commuting Patterns

A significant part of the region's continuing shift in traffic and travel patterns includes some of the changes in commuting patterns being observed. While it is important to again note that commuting only accounts for one trip purpose and does not account all travel patterns, commuting plays a significant role in determining peak-hours of travel.

Data for this section on commuting was provided through the Longitudinal Employer Household Dynamics (LEHD) dataset provided through the US Census Bureau. It should be noted this data reflects general employer and employee locations, but does not necessarily mean each employee is commuting daily to that location.

Overall, the LEHD data illustrates an increase in cross-county commuting over the last 18 years. The number of Henderson County residents commuting to Buncombe County for jobs has increased 142 percent since 2002 and is the largest county-to-county connection in the region. Other sizeable increases have been observed for Haywood County, Madison County, and McDowell County residents with jobs in Buncombe County.

## Six Largest County-to-County Connection for All Jobs

| Worker Origin | Worker Destination | Number of <br> Workers, 2020 | Change <br> Since 2002 |
| :--- | :--- | :--- | :--- |
| Henderson | Buncombe | 12,305 | $+7,231$ |
| Buncombe | Henderson | 7,308 | $(165)$ |
| Haywood | Buncombe | 5,903 | $+2,353$ |
| Buncombe | Mecklenburg | 4,682 | $+1,744$ |
| Madison | Buncombe | 3,393 | +760 |
| McDowell | Buncombe | 3,046 | $+1,874$ |



Of note is the increasing connection of Buncombe County residents with jobs in Mecklenburg County. Many of these residents are unlikely to be commuting between the two counties daily but may correlate with some of the increase in working from home in Buncombe County observed through ACS data. LEHD data also reflected increases in Buncombe County residents with jobs in Wake County which is likely a result of increased telecommuting but also caveats within the data that focuses on the employer's zip code which may include state government workers whose "employer" is in Wake County but they may never/seldom physically work there.

## Other Impacts on Changing Commuting Patterns

The change in commuting patterns has significant impacts on both transportation as well as economic development, workforce, and housing considerations. The change in commuting patterns can be seen as an increasingly regional issue that reflects where workers are choosing to live and where employers may need to increasingly seek talent.

The region's largest county, Buncombe, saw a net increase of 32,415 jobs between 2002 and 2019, per LEHD data. Of those net gains, 29,170- or $90 \%$ - of the net job growth was filled by workers that reside outside of Buncombe County.

It should also be noted that this trend is not unique to Buncombe. Henderson County saw a net increase of 5,297 jobs in that same time period, of which $78 \%$ were filled with out-of-county residents. Haywood County saw a net increase of 2,001 jobs, of which $106 \%$ were filled by out-of-county residents. In other words, Haywood County increased the number of jobs but the number of residents employed in Haywood County decreased. Across the region, cross-county transportation for jobs is of increasing importance.

|  | Change in Buncombe County Worker <br> Origin 2002-2019 |  |
| ---: | :---: | :---: |
| 40000 | (Longitudinal Employer Household Dynamics) |  |
| 30000 |  |  |
| 20000 |  | 29170 |
| 10000 | 3245 |  |
| 0 | Buncombe County | Outside of Buncombe County |

## Equity Considerations

Some of the LEHD data also enables a greater examination of worker/ employment trends by earnings. The overall trend appears to show lower-income workers moving further from the regional employment centers of the region.

In the City of Asheville, the number of workers earning less than $\$ 3,333$ / Month were increasingly coming from outside of Buncombe County and decreasingly from within the City limits or even within Buncombe County. This indicates a challenge for Buncombe County industries with lower wages but also indicates what are likely increasing transportation burdens on lower-income workers. The regional housing crisis is likely a major factor in this shift. Similar trends in other jurisdictions were observed but not to the same extent as what is being observed in Asheville.

## Change in Origin of Asheville Workers Earning <\$3,333/Month, 2002-2020



## Appendix A: Travel Time Index Tables by Route Classification

Legend

| Attribute | What it Means |
| :--- | :--- |
| Travel Time Index | A ratio of average travel-time over a select time period over free-flow travel-time |
| TTI Day | Travel Time Index Throughout the Day (6AM - 9PM) |
| TTI AM | Travel Time Index in the AM Rush (7AM - 9AM) |
| TTI PM | Travel Time Index in the PM Rush (4PM - 6PM) |
| Change | Change in Travel Time Index between 2019 and 2021 |


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## Freight Corridors

| F2 WB | I-26 WB NC 280 to I-40 | 1.12 | 1.03 | 1.44 | 1.19 | 1.09 | 1.59 | 0.07 | 0.06 | 0.15 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F2 EB | I-26 EB I-40 to NC 280 | 1.16 | 1.04 | 1.3 | 1.11 | 1.04 | 1.37 | -0.05 | 0.00 | 0.07 |
| F8 WB | I-40 WB I-26 to Exit 37 | 1.01 | 0.93 | 1.26 | 1.01 | 0.95 | 1.14 | 0.00 | 0.02 | -0.12 |
| F1 WB | I-26 WB US 25 to NC 280 | 1.1 | 1.07 | 1.18 | 1.04 | 1 | 1.09 | -0.06 | -0.07 | -0.09 |
| F7 WB | I-240 WB 74A to Future 26 | 0.96 | 0.9 | 1.17 | 1.03 | 0.93 | 1.42 | 0.07 | 0.03 | 0.25 |
| F5 EB | I-240 EB I-40 to Future 26 | 0.97 | 0.96 | 1.08 | 1.04 | 1.09 | 1.23 | 0.07 | 0.13 | 0.15 |
| F6 SB | Future 26 SB from Weaver Blvd to I-240 | 0.98 | 1.03 | 1.05 | 1.04 | 1.18 | 1.11 | 0.06 | 0.15 | 0.06 |
| F9 WB | I-40 WB Exit 37 to US 23/74 | 0.98 | 0.94 | 1.04 | 0.99 | 0.96 | 1.03 | 0.01 | 0.02 | -0.01 |
| F1 EB | I-26 EB NC 280 to US 25 | 1.02 | 0.97 | 1.03 | 1 | 0.98 | 1.02 | -0.02 | 0.01 | -0.01 |
| F3 WB | I-40 WB US 74A to I-26 | 0.96 | 0.92 | 0.98 | 0.97 | 0.95 | 1.06 | 0.01 | 0.03 | 0.08 |
| F9 EB | I-40 EB US 23/74 to Exit 37 | 0.96 | 0.91 | 0.97 | 0.94 | 0.94 | 0.94 | -0.02 | 0.03 | -0.03 |
| F4 WB | I-40 WB NC 9 to US 74A | 0.97 | 0.93 | 0.96 | 0.99 | 0.96 | 1.06 | 0.02 | 0.03 | 0.10 |
| F6 NB | Future 26 NB from l-240 to Weaver Blvd | 0.93 | 0.9 | 0.96 | 0.97 | 0.96 | 1.02 | 0.04 | 0.06 | 0.06 |
| F4 EB | I-40 EB US 74A to NC 9 | 0.98 | 0.95 | 0.96 | 0.98 | 0.97 | 0.98 | 0.00 | 0.02 | 0.02 |
| F5 WB | I-240 WB Future 26 to I-40 | 0.91 | 0.88 | 0.95 | 1.03 | 1.02 | 1.14 | 0.12 | 0.14 | 0.19 |
| F7 EB | I-240 EB Future 26 to 74A | 0.93 | 0.9 | 0.94 | 0.97 | 0.98 | 1.03 | 0.04 | 0.08 | 0.09 |
| F3 EB | I-40 EB I-26 to US 74A | 0.96 | 0.93 | 0.93 | 0.96 | 0.96 | 0.95 | 0.00 | 0.03 | 0.02 |
| F8 EB | I-40 EB Exit 37 to I-26 | 0.93 | 0.91 | 0.92 | 0.95 | 0.95 | 0.98 | 0.02 | 0.04 | 0.06 |

## Mobility Corridors

|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM |
| M12 NB | NC 9 NB Blue Ridge to US 70 | 1.17 | 1.07 | 1.5 | 1.39 | 1.19 | 1.54 | 0.22 | 0.12 | 0.04 |
| M17 EB | US 64 EB King to Howard Gap | 1.07 | 1.03 | 1.42 | 1.22 | 1.05 | 1.35 | 0.15 | 0.02 | -0.07 |
| M2 SB | US 25A SB I-40 to NC 280 | 0.98 | 0.97 | 1.37 | 1.6 | 1.2 | 2.28 | 0.62 | 0.23 | 0.91 |
| M5 SB | US 25B SB Reems Creek to New Stock | 1.14 | 1.15 | 1.36 | 1.6 | 1.47 | 1.75 | 0.46 | 0.32 | 0.39 |
| M5 NB | US 25B NB New Stock to Reems Creek | 1.11 | 1.1 | 1.33 | 1.55 | 1.47 | 1.69 | 0.44 | 0.37 | 0.36 |
| M17 WB | US 64 WB Howard Gap to King | 1.08 | 1.06 | 1.32 | 1.23 | 1.03 | 1.29 | 0.15 | -0.03 | -0.03 |
| M14 NB | NC 112 NB NC 191 to US 1923 | 1 | 1.05 | 1.3 | 1.14 | 1.11 | 1.43 | 0.14 | 0.06 | 0.13 |
| M9 SB | NC 280 SB US 25 to Butler Bridge | 1.06 | 1.05 | 1.29 | 1.23 | 1.14 | 1.39 | 0.17 | 0.09 | 0.1 |
| M12 SB | NC 9 SB US 70 to Blue Ridge | 1.06 | 1.01 | 1.27 | 1.29 | 1.15 | 1.36 | 0.23 | 0.14 | 0.09 |
| M20 NB | US 276 NB Main to US 19 | 1.05 | 1.01 | 1.27 | 1.07 | 0.98 | 1.13 | 0.02 | -0.03 | -0.14 |
| M15 SB | NC 280 SB Butler Bridge to 191 | 1.01 | 1.03 | 1.26 | 1.12 | 1.1 | 1.22 | 0.11 | 0.07 | -0.04 |
| M9 NB | NC 280 NB Butler Bridge to US 25 | 1.05 | 1.04 | 1.23 | 1.16 | 1.09 | 1.22 | 0.11 | 0.05 | -0.01 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM |
| M8 SB | US 25 SB BRP to Cane Creek | 0.95 | 0.96 | 1.18 | 1.09 | 1.02 | 1.24 | 0.14 | 0.06 | 0.06 |
| M1 SB | US 19/23 WB Haywood to NC 151 | 0.95 | 0.93 | 1.17 | 1.43 | 1.31 | 1.55 | 0.48 | 0.38 | 0.38 |
| M2 NB | US 25A NB NC 280 to I-40 | 0.92 | 0.96 | 1.16 | 1.41 | 1.29 | 1.79 | 0.49 | 0.33 | 0.63 |
| M13 NB | NC 191 NB NC 280 to I-26 | 0.95 | 0.95 | 1.16 | 1.1 | 1.03 | 1.31 | 0.15 | 0.08 | 0.15 |
| M8 NB | US 25 NB Cane Creek to BRP | 0.95 | 0.93 | 1.15 | 1.11 | 1.06 | 1.19 | 0.16 | 0.13 | 0.04 |
| M21 WB | US 19 WB Russ to Jonathan Creek | 1 | 0.95 | 1.15 | 0.91 | 0.91 | 0.91 | -0.09 | -0.04 | -0.24 |
| M11 EB | NC 146 EB I-26 to US 25 | 0.98 | 1.03 | 1.14 | 1.08 | 1.09 | 1.16 | 0.1 | 0.06 | 0.02 |
| M13 SB | NC 191 SB I-26 to NC 280 | 0.94 | 0.93 | 1.12 | 1.14 | 1.05 | 1.44 | 0.2 | 0.12 | 0.32 |
| M1 NB | US 19/23 EB NC 151 to Haywood | 0.95 | 1 | 1.08 | 1.43 | 1.61 | 1.51 | 0.48 | 0.61 | 0.43 |
| M11 WB | NC 146 WB US 25 to I-26 | 0.94 | 1.01 | 1.07 | 1.07 | 1.1 | 1.16 | 0.13 | 0.09 | 0.09 |
| M6 NB | US 25 NB Beaverdam to New Stock | 0.94 | 0.92 | 1.07 | 1.05 | 1 | 1.11 | 0.11 | 0.08 | 0.04 |
| M18 WB | US 64 WB Blythe to Brickyard | 1 | 1 | 1.07 | 1 | 0.99 | 1.01 | 0 | -0.01 | -0.06 |
| M18 EB | US 64 EB Brickyard to Blythe | 1 | 1.01 | 1.07 | 0.99 | 0.98 | 1 | -0.01 | -0.03 | -0.07 |
| M20 SB | US 276 SB US 19 to Main | 0.95 | 0.91 | 1.06 | 1.02 | 0.94 | 1.06 | 0.07 | 0.03 | 0 |
| M21 EB | US 19 EB Jonathan Creek to Russ | 0.97 | 0.97 | 1.06 | 0.91 | 0.89 | 0.91 | -0.06 | -0.08 | -0.15 |
| M14 SB | NC 112 SB US 1923 to NC 191 | 0.96 | 1 | 1.05 | 1.08 | 1.09 | 1.17 | 0.12 | 0.09 | 0.12 |
| M15 NB | NC 280 NB 191 to Butler Bridge | 0.95 | 0.97 | 1.04 | 1.08 | 1.08 | 1.16 | 0.13 | 0.11 | 0.12 |
| M7 WB | US 70 WB BRP to I-240 | 0.89 | 0.88 | 1.04 | 1.06 | 0.98 | 1.14 | 0.17 | 0.1 | 0.1 |
| M3 SB | US 74A SB I-40 to Old Fort | 0.94 | 0.95 | 1 | 1.06 | 1.11 | 1.09 | 0.12 | 0.16 | 0.09 |
| M6 SB | US 25 SB New Stock to Beaverdam | 0.92 | 0.92 | 0.98 | 0.99 | 0.96 | 1.02 | 0.07 | 0.04 | 0.04 |
| M7 EB | US 70 EB I-240 to BRP | 0.86 | 0.84 | 0.98 | 0.93 | 0.9 | 0.97 | 0.07 | 0.06 | -0.01 |
| M19 NB | US 25B NB 191 to Butler Bridge | 0.91 | 0.94 | 0.97 | 0.99 | 1.03 | 0.99 | 0.08 | 0.09 | 0.02 |
| M3 NB | US 74A NB Old Fort to l-40 | 0.93 | 0.98 | 0.97 | 1 | 1.11 | 0.98 | 0.07 | 0.13 | 0.01 |
| M19 SB | US 25B SB Butler Bridge to 191 | 0.91 | 0.93 | 0.97 | 0.95 | 0.95 | 0.97 | 0.04 | 0.02 | 0 |
| M4 SB | NC 63 SB Newfound to US 19/23 | 0.9 | 0.94 | 0.96 | 1.23 | 1.23 | 1.16 | 0.33 | 0.29 | 0.2 |
| M4 NB | NC 63 NB US 19/23 to Newfound | 0.88 | 0.89 | 0.96 | 1.06 | 1.03 | 1.06 | 0.18 | 0.14 | 0.1 |
| M16 SB | NC 191 SB 280 to Blythe | 0.89 | 0.95 | 0.94 | 1.12 | 1.1 | 1.22 | 0.23 | 0.15 | 0.28 |
| M22 SB | NC 209 SB I-40 to US 23/74 | 0.89 | 0.88 | 0.94 | 0.96 | 0.93 | 0.97 | 0.07 | 0.05 | 0.03 |
| M22 NB | NC 209 NB US 23/74 to I-40 | 0.89 | 0.88 | 0.93 | 1.16 | 1.1 | 1.19 | 0.27 | 0.22 | 0.26 |
| M16 NB | NC 191 NB Blythe to 280 | 0.88 | 0.92 | 0.91 | 1.08 | 1.08 | 1.16 | 0.2 | 0.16 | 0.25 |
| M23 NB | US 19 NB Main to Wiggins | 0.85 | 0.83 | 0.89 | 0.9 | 0.89 | 0.9 | 0.05 | 0.06 | 0.01 |
| M23 SB | US 19 SB Wiggins to Main | 0.86 | 0.86 | 0.88 | 0.93 | 0.92 | 0.94 | 0.07 | 0.06 | 0.06 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM |
| M10 EB | Mills Gap US 25 to Concord Road |  |  |  |  |  |  | 0 | 0 | 0 |
| M10 WB | Mills Gap US 25 to Concord Road |  |  |  |  |  |  | 0 | 0 | 0 |

## Destination Corridors

|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM |
| D1 SB | US 25 SB Lodge to BRP | 1.04 | 1.05 | 1.45 | 1 | 0.97 | 1.22 | -0.04 | -0.08 | -0.23 |
| D11 SB | Patton SB I-240 to Haywood | 1.04 | 1.04 | 1.4 | 1.27 | 1.09 | 1.67 | 0.23 | 0.05 | 0.27 |
| D10 NB | US 25A NB I-40 to US 25 | 1.03 | 1.01 | 1.36 | 1.3 | 1.07 | 1.46 | 0.27 | 0.06 | 0.1 |
| D7 EB | Weaver EB from l-26 to Main | 1.11 | 0.99 | 1.34 | 1.4 | 1.26 | 1.48 | 0.29 | 0.27 | 0.14 |
| D7 WB | Weaver WB from Main to I-26 | 1.09 | 0.99 | 1.32 | 1.33 | 1.13 | 1.45 | 0.24 | 0.14 | 0.13 |
| D1 NB | US 25 NB BRP to Lodge | 1.03 | 1.01 | 1.32 | 1.01 | 0.94 | 1.11 | -0.02 | -0.07 | -0.21 |
| D11 NB | Patton NB Haywood to I-240 | 0.98 | 1.07 | 1.23 | 1.25 | 1.25 | 1.37 | 0.27 | 0.18 | 0.14 |
| D3 SB | Haywood SB Patton to I-240 | 0.89 | 0.81 | 1.21 | 1.19 | 1.01 | 1.37 | 0.3 | 0.2 | 0.16 |
| D8 WB | Tunnel from NC 81 to Tunnel | 0.91 | 0.8 | 1.18 | 1.07 | 0.95 | 1.15 | 0.16 | 0.15 | -0.03 |
| D8 EB | Tunnel from Tunnel to NC 81 | 0.88 | 0.76 | 1.09 | 1 | 0.91 | 1.06 | 0.12 | 0.15 | -0.03 |
| D13 EB | US 64 EB Blythe to King | 0.98 | 1.01 | 1.08 | 1.15 | 1.07 | 1.18 | 0.17 | 0.06 | 0.1 |
| D19 NB | N Main NB Pigeon to Walnut | 0.91 | 0.81 | 1.07 | 1.26 | 1.07 | 1.3 | 0.35 | 0.26 | 0.23 |
| D6 NB | US 25 NB I-240 to Beaverdam | 0.87 | 0.83 | 1.06 | 1.06 | 0.95 | 1.16 | 0.19 | 0.12 | 0.1 |
| D14 NB | US 225 NB Highland Lake to US 176 | 1 | 0.96 | 1.06 | 1.04 | 0.98 | 1.07 | 0.04 | 0.02 | 0.01 |
| D6 SB | US 25 SB Beaverdam to I-240 | 0.85 | 0.81 | 1.04 | 1.04 | 0.89 | 1.19 | 0.19 | 0.08 | 0.15 |
| D3 NB | Haywood NB I-240 to Patton | 0.83 | 0.79 | 1.01 | 1.09 | 0.95 | 1.22 | 0.26 | 0.16 | 0.21 |
| D15 WB | US 176 WB Brooklyn to 225 | 0.9 | 0.9 | 1.01 | 1.07 | 1.07 | 1.16 | 0.17 | 0.17 | 0.15 |
| D5 SB | NC 81 SB US 70 to Biltmore | 0.89 | 0.86 | 1.01 | 1 | 0.91 | 1.06 | 0.11 | 0.05 | 0.05 |
| D19 SB | N Main SB Walnut to Pigeon | 0.84 | 0.75 | 1 | 1.15 | 0.96 | 1.2 | 0.31 | 0.21 | 0.2 |
| D13 WB | US 64 WB King to Blythe | 0.87 | 0.96 | 1 | 1.03 | 1.03 | 1.06 | 0.16 | 0.07 | 0.06 |
| D10 SB | US 25A SB US 25 to I-40 | 0.9 | 0.91 | 1 | 0.98 | 0.9 | 1.04 | 0.08 | -0.01 | 0.04 |
| D14 SB | US 225 SB US 176 to Highland Lake | 0.91 | 0.9 | 0.96 | 0.99 | 0.97 | 1.01 | 0.08 | 0.07 | 0.05 |
| D15 EB | US 176 EB 225 to Brooklyn | 0.85 | 0.84 | 0.95 | 1 | 0.98 | 1.05 | 0.15 | 0.14 | 0.1 |
| D18 SB | S Main SB Pigeon to Hyatt Creek | 0.85 | 0.83 | 0.95 | 1 | 0.91 | 1.03 | 0.15 | 0.08 | 0.08 |
| D5 NB | NC 81 NB Biltmore to US 70 | 0.84 | 0.82 | 0.94 | 0.94 | 0.86 | 0.98 | 0.1 | 0.04 | 0.04 |
| D18 NB | S Main NB Hyatt Creek to Pigeon | 0.82 | 0.79 | 0.92 | 0.97 | 0.88 | 1.02 | 0.15 | 0.09 | 0.1 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | TTI Day | TTI AM | TTI PM | TTI Day | TTI AM | TTI PM |
| D2 NB | NC 191 NB US 25B to Blythe | 0.82 | 0.86 | 0.88 | 0.91 | 0.92 | 0.92 | 0.09 | 0.06 | 0.04 |
| D20 WB | 213 WB 26 to Main | 0.81 | 0.81 | 0.87 | 0.86 | 0.84 | 0.88 | 0.05 | 0.03 | 0.01 |
| D17 NB | US 25 NB 176 to 191 | 0.77 | 0.81 | 0.86 | 0.9 | 0.89 | 0.9 | 0.13 | 0.08 | 0.04 |
| D17 SB | US 25 SB 191 to 176 | 0.73 | 0.72 | 0.85 | 0.92 | 0.81 | 1 | 0.19 | 0.09 | 0.15 |
| D2 SB | NC 191 SB Blythe to US 25B | 0.81 | 0.81 | 0.85 | 0.86 | 0.83 | 0.87 | 0.05 | 0.02 | 0.02 |
| D20 EB | 213 EB Main to 26 | 0.79 | 0.8 | 0.82 | 0.85 | 0.84 | 0.85 | 0.06 | 0.04 | 0.03 |
| D4 EB | Amboy/Meadow EB I-240 to Biltmore |  |  |  |  |  |  |  |  |  |
| D4 WB | Amboy/Meadow WB Biltmore to I- $240$ |  |  |  |  |  |  |  |  |  |
| D21 | Biltmore Avenue |  |  |  |  |  |  |  |  |  |
| D21 | Biltmore Avenue |  |  |  |  |  |  |  |  |  |
| D9 | Charlotte Street |  |  |  |  |  |  |  |  |  |
| D9 | Charlotte Street |  |  |  |  |  |  |  |  |  |
| D12 | Elk Mountain |  |  |  |  |  |  |  |  |  |
| D12 | Elk Mountain |  |  |  |  |  |  |  |  |  |
| D16 NB | NC 110 |  |  |  |  |  |  |  |  |  |
| D16 SB | NC 110 |  |  |  |  |  |  |  |  |  |

## Appendix B: Planning Time Index Tables by Route Classification

Legend

| Attribute | What it Means |
| :--- | :--- |
| Planning Time Index | A ratio of 95th percentile travel-time over a select time period over free-flow travel-time |
| PTI Day | Planning Time Index Throughout the Day (6AM - 9PM) |
| PTI AM | Planning Time Index in the AM Rush (7AM - 9AM) |
| PTI PM | Planning Time Index in the PM Rush (4PM - 6PM) |
| Change | Change in Planning Time Index between 2019 and 2021 |


—Travel Time - - Planning Time

## Freight Corridors

|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| F2 WB | I-26 WB NC 280 to I-40 | 1.77 | 1.12 | 2.52 | 2.02 | 1.42 | 3.11 | 0.25 | 0.30 | 0.59 |
| F2 EB | I-26 EB I-40 to NC 280 | 1.73 | 1.16 | 2.14 | 1.72 | 1.21 | 2.36 | -0.01 | 0.05 | 0.22 |
| F8 WB | I-40 WB I-26 to Exit 37 | 1.14 | 1 | 1.98 | 1.25 | 1.07 | 1.84 | 0.11 | 0.07 | -0.14 |
| F1 WB | I-26 WB US 25 to NC 280 | 1.39 | 1.09 | 1.9 | 1.23 | 1.09 | 1.65 | -0.16 | 0.00 | -0.25 |
| F7 WB | I-240 WB 74A to Future 26 | 1.09 | 0.98 | 1.88 | 1.46 | 1.02 | 2.58 | 0.37 | 0.04 | 0.70 |
| F5 EB | I-240 EB I-40 to Future 26 | 1.09 | 1.1 | 1.63 | 1.33 | 1.67 | 2.21 | 0.24 | 0.57 | 0.58 |
| F6 SB | Future 26 SB from Weaver Blvd to I-240 | 1.1 | 1.24 | 1.43 | 1.33 | 1.98 | 1.71 | 0.23 | 0.74 | 0.28 |
| F9 WB | I-40 WB Exit 37 to US 23/74 | 1.08 | 1.01 | 1.42 | 1.07 | 1.05 | 1.14 | -0.01 | 0.04 | -0.28 |
| F3 WB | I-40 WB US 74A to I-26 | 1.05 | 1 | 1.24 | 1.07 | 1.03 | 1.34 | 0.02 | 0.03 | 0.10 |
| F5 WB | I-240 WB Future 26 to I-40 | 1.01 | 0.96 | 1.13 | 1.14 | 1.1 | 1.58 | 0.13 | 0.14 | 0.45 |
| F6 NB | Future 26 NB from I-240 to Weaver Blvd | 1.02 | 0.99 | 1.12 | 1.07 | 1.04 | 1.37 | 0.05 | 0.05 | 0.25 |
| F1 EB | I-26 EB NC 280 to US 25 | 1.13 | 1.06 | 1.11 | 1.1 | 1.08 | 1.13 | -0.03 | 0.02 | 0.02 |
| F7 EB | I-240 EB Future 26 to 74A | 1.03 | 1 | 1.06 | 1.15 | 1.23 | 1.52 | 0.12 | 0.23 | 0.46 |
| F4 WB | I-40 WB NC 9 to US 74A | 1.08 | 0.99 | 1.03 | 1.04 | 1.03 | 1.08 | -0.04 | 0.04 | 0.05 |
| F8 EB | I-40 EB Exit 37 to I-26 | 1.04 | 0.98 | 1.03 | 1.08 | 1.04 | 1.2 | 0.04 | 0.06 | 0.17 |
| F9 EB | I-40 EB US 23/74 to Exit 37 | 1.03 | 0.98 | 1.02 | 1.01 | 1.01 | 1.01 | -0.02 | 0.03 | -0.01 |
| F4 EB | I-40 EB US 74A to NC 9 | 1.11 | 1.02 | 1.01 | 1.06 | 1.05 | 1.05 | -0.05 | 0.03 | 0.04 |
| F3 EB | I-40 EB I-26 to US 74A | 1.06 | 1.01 | 1.01 | 1.05 | 1.04 | 1.05 | -0.01 | 0.03 | 0.04 |

## Mobility Corridors

|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| M12 NB | NC 9 NB Blue Ridge to US 70 | 1.74 | 1.42 | 2.31 | 1.93 | 1.55 | 2.13 | 0.19 | 0.13 | -0.18 |
| M17 EB | US 64 EB King to Howard Gap | 1.58 | 1.4 | 2.13 | 2 | 1.54 | 2.18 | 0.42 | 0.14 | 0.05 |
| M14 NB | NC 112 NB NC 191 to US 1923 | 1.35 | 1.38 | 2.1 | 1.72 | 1.41 | 2.44 | 0.37 | 0.03 | 0.34 |
| M2 SB | US 25A SB I-40 to NC 280 | 1.39 | 1.15 | 2.1 | 1.6 | 1.2 | 2.28 | 0.21 | 0.05 | 0.18 |
| M21 WB | US 19 WB Russ to Jonathan Creek | 1.48 | 1.25 | 1.82 | 1.03 | 1.03 | 1.03 | -0.45 | -0.22 | -0.79 |
| M13 NB | NC 191 NB NC 280 to I-26 | 1.23 | 1.18 | 1.81 | 1.54 | 1.29 | 2.25 | 0.31 | 0.11 | 0.44 |
| M17 WB | US 64 WB Howard Gap to King | 1.62 | 1.41 | 1.79 | 1.93 | 1.53 | 2.04 | 0.31 | 0.12 | 0.25 |
| M5 SB | US 25B SB Reems Creek to New Stock | 1.48 | 1.42 | 1.76 | 1.6 | 1.47 | 1.75 | 0.12 | 0.05 | -0.01 |
| M12 SB | NC 9 SB US 70 to Blue Ridge | 1.5 | 1.34 | 1.72 | 1.83 | 1.56 | 1.83 | 0.33 | 0.22 | 0.11 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| M5 NB | US 25B NB New Stock to Reems Creek | 1.47 | 1.41 | 1.68 | 1.55 | 1.47 | 1.69 | 0.08 | 0.06 | 0.01 |
| M20 NB | US 276 NB Main to US 19 | 1.5 | 1.38 | 1.67 | 1.36 | 1.24 | 1.47 | -0.14 | -0.14 | -0.2 |
| M2 NB | US 25A NB NC 280 to I-40 | 1.22 | 1.17 | 1.66 | 1.41 | 1.29 | 1.79 | 0.19 | 0.12 | 0.13 |
| M13 SB | NC 191 SB I-26 to NC 280 | 1.18 | 1.11 | 1.66 | 1.72 | 1.37 | 2.74 | 0.54 | 0.26 | 1.08 |
| M9 SB | NC 280 SB US 25 to Butler Bridge | 1.36 | 1.25 | 1.65 | 1.59 | 1.36 | 1.92 | 0.23 | 0.11 | 0.27 |
| M 15 SB | NC 280 SB Butler Bridge to 191 | 1.34 | 1.23 | 1.57 | 1.5 | 1.4 | 1.61 | 0.16 | 0.17 | 0.04 |
| M8 NB | US 25 NB Cane Creek to BRP | 1.26 | 1.16 | 1.57 | 1.52 | 1.41 | 1.68 | 0.26 | 0.25 | 0.11 |
| M8 SB | US 25 SB BRP to Cane Creek | 1.26 | 1.17 | 1.52 | 1.51 | 1.3 | 1.73 | 0.25 | 0.13 | 0.21 |
| M9 NB | NC 280 NB Butler Bridge to US 25 | 1.34 | 1.26 | 1.47 | 1.51 | 1.38 | 1.53 | 0.17 | 0.12 | 0.06 |
| M21 EB | US 19 EB Jonathan Creek to Russ | 1.25 | 1.25 | 1.43 | 1.04 | 1.01 | 1.04 | -0.21 | -0.24 | -0.39 |
| M11 EB | NC 146 EB I-26 to US 25 | 1.26 | 1.31 | 1.42 | 1.45 | 1.47 | 1.54 | 0.19 | 0.16 | 0.12 |
| M1 SB | US 19/23 WB Haywood to NC 151 | 1.25 | 1.15 | 1.42 | 1.43 | 1.31 | 1.55 | 0.18 | 0.16 | 0.13 |
| M1 NB | US 19/23 EB NC 151 to Haywood | 1.22 | 1.34 | 1.36 | 1.43 | 1.61 | 1.51 | 0.21 | 0.27 | 0.15 |
| M11 WB | NC 146 WB US 25 to I-26 | 1.25 | 1.32 | 1.34 | 1.42 | 1.61 | 1.56 | 0.17 | 0.29 | 0.22 |
| M7 WB | US 70 WB BRP to I-240 | 1.16 | 1.1 | 1.34 | 1.36 | 1.18 | 1.42 | 0.2 | 0.08 | 0.08 |
| M20 SB | US 276 SB US 19 to Main | 1.26 | 1.17 | 1.33 | 1.31 | 1.16 | 1.31 | 0.05 | -0.01 | -0.02 |
| M14 SB | NC 112 SB US 1923 to NC 191 | 1.19 | 1.26 | 1.31 | 1.38 | 1.46 | 1.53 | 0.19 | 0.2 | 0.22 |
| M18 EB | US 64 EB Brickyard to Blythe | 1.18 | 1.23 | 1.31 | 1.11 | 1.11 | 1.12 | -0.07 | -0.12 | -0.19 |
| M6 NB | US 25 NB Beaverdam to New Stock | 1.15 | 1.08 | 1.3 | 1.26 | 1.15 | 1.39 | 0.11 | 0.07 | 0.09 |
| M15 NB | NC 280 NB 191 to Butler Bridge | 1.15 | 1.13 | 1.27 | 1.38 | 1.35 | 1.46 | 0.23 | 0.22 | 0.19 |
| M3 SB | US 74A SB I-40 to Old Fort | 1.11 | 1.27 | 1.24 | 1.06 | 1.11 | 1.09 | -0.05 | -0.16 | -0.15 |
| M18 WB | US 64 WB Blythe to Brickyard | 1.16 | 1.14 | 1.24 | 1.12 | 1.12 | 1.14 | -0.04 | -0.02 | -0.1 |
| M7 EB | US 70 EB I-240 to BRP | 1.13 | 1.06 | 1.23 | 1.11 | 1.07 | 1.18 | -0.02 | 0.01 | -0.05 |
| M3 NB | US 74A NB Old Fort to I-40 | 1.08 | 1.4 | 1.2 | 1 | 1.11 | 0.98 | -0.08 | -0.29 | -0.22 |
| M6 SB | US 25 SB New Stock to Beaverdam | 1.07 | 1.11 | 1.17 | 1.15 | 1.12 | 1.2 | 0.08 | 0.01 | 0.03 |
| M19 SB | US 25B SB Butler Bridge to 191 | 1.07 | 1.08 | 1.15 | 1.15 | 1.16 | 1.2 | 0.08 | 0.08 | 0.05 |
| M19 NB | US 25B NB 191 to Butler Bridge | 1.06 | 1.11 | 1.14 | 1.2 | 1.35 | 1.24 | 0.14 | 0.24 | 0.1 |
| M16 SB | NC 191 SB 280 to Blythe | 1.03 | 1.3 | 1.09 | 1.5 | 1.4 | 1.61 | 0.47 | 0.1 | 0.52 |
| M4 SB | NC 63 SB Newfound to US 19/23 | 1.03 | 1.06 | 1.09 | 1.23 | 1.23 | 1.16 | 0.2 | 0.17 | 0.07 |
| M4 NB | NC 63 NB US 19/23 to Newfound | 1.01 | 0.98 | 1.06 | 1.06 | 1.03 | 1.06 | 0.05 | 0.05 | 0 |
| M16 NB | NC 191 NB Blythe to NC 280 | 0.99 | 1.27 | 1.04 | 1.38 | 1.35 | 1.46 | 0.39 | 0.08 | 0.42 |
| M22 NB | NC 209 NB US 23/74 to I-40 | 1 | 0.99 | 1.04 | 1.34 | 1.29 | 1.35 | 0.34 | 0.3 | 0.31 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| M22 SB | NC 209 SB I-40 to US 23/74 | 1 | 0.97 | 1.02 | 1.03 | 1 | 1.03 | 0.03 | 0.03 | 0.01 |
| M23 NB | US 19 NB Main to Wiggins | 0.98 | 0.92 | 1.04 | 0.98 | 0.95 | 1 | 0 | 0.03 | -0.04 |
| M23 SB | US 19 SB Wiggins to Main | 1 | 1 | 1.02 | 1 | 1 | 1.02 | 0 | 0 | 0 |

## Destination Corridors

|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| D1 SB | US 25 SB Lodge to BRP | 1.67 | 1.56 | 2.48 | 1.33 | 1.22 | 2.39 | -0.34 | -0.34 | -0.09 |
| D10 NB | US 25A NB I-40 to US 25 | 1.7 | 1.45 | 2.38 | 1.96 | 1.52 | 2.01 | 0.26 | 0.07 | -0.37 |
| D1 NB | US 25 NB BRP to Lodge | 1.67 | 1.45 | 2.03 | 1.39 | 1.32 | 1.52 | -0.28 | -0.13 | -0.51 |
| D11 SB | Patton SB I-240 to Haywood | 1.56 | 1.4 | 1.96 | 2.18 | 1.6 | 2.83 | 0.62 | 0.2 | 0.87 |
| D3 SB | Haywood SB Patton to I-240 | 1.3 | 1.04 | 1.88 | 1.58 | 1.35 | 1.82 | 0.28 | 0.31 | -0.06 |
| D7 EB | Weaver EB from I-26 to Main | 1.61 | 1.32 | 1.76 | 1.93 | 1.71 | 2.09 | 0.32 | 0.39 | 0.33 |
| D7 WB | Weaver WB from Main to I-26 | 1.54 | 1.31 | 1.74 | 1.86 | 1.45 | 2.17 | 0.32 | 0.14 | 0.43 |
| D8 WB | S Tunnel from NC 81 to Tunnel | 1.42 | 1.13 | 1.67 | 1.47 | 1.24 | 1.57 | 0.05 | 0.11 | -0.1 |
| D11 NB | Patton NB Haywood to I-240 | 1.37 | 1.39 | 1.6 | 1.87 | 1.82 | 2.01 | 0.5 | 0.43 | 0.41 |
| D3 NB | Haywood NB I-240 to Patton | 1.19 | 0.99 | 1.46 | 1.16 | 1.09 | 1.18 | -0.03 | 0.1 | -0.28 |
| D19 NB | N Main NB Pigeon to Walnut | 1.38 | 1.12 | 1.45 | 1.84 | 1.59 | 1.65 | 0.46 | 0.47 | 0.2 |
| D10 SB | US 25A SB US 25 to I-40 | 1.35 | 1.26 | 1.45 | 1.32 | 1.25 | 1.42 | -0.03 | -0.01 | -0.03 |
| D13 EB | US 64 EB Blythe to King | 1.38 | 1.36 | 1.44 | 1.75 | 1.56 | 1.65 | 0.37 | 0.2 | 0.21 |
| D8 EB | S Tunnel from Tunnel to NC 81 | 1.33 | 1.03 | 1.43 | 1.33 | 1.15 | 1.34 | 0 | 0.12 | -0.09 |
| D14 NB | NC 225 NB Highland Lake to US 176 | 1.25 | 1.13 | 1.31 | 1.37 | 1.16 | 1.37 | 0.12 | 0.03 | 0.06 |
| D19 SB | N Main SB Walnut to Pigeon | 1.31 | 1.03 | 1.31 | 1.56 | 1.36 | 1.36 | 0.25 | 0.33 | 0.05 |
| D6 NB | US 25 NB I-240 to Beaverdam | 1.23 | 1.08 | 1.3 | 1.41 | 1.28 | 1.47 | 0.18 | 0.2 | 0.17 |
| D6 SB | US 25 SB Beaverdam to I-240 | 1.18 | 0.98 | 1.29 | 1.45 | 1.22 | 1.55 | 0.27 | 0.24 | 0.26 |
| D13 WB | US 64 WB King to Blythe | 1.28 | 1.36 | 1.28 | 1.47 | 1.53 | 1.41 | 0.19 | 0.17 | 0.13 |
| D5 SB | NC 81 SB US 70 to Biltmore | 1.15 | 1.07 | 1.25 | 1.45 | 1.22 | 1.55 | 0.3 | 0.15 | 0.3 |
| D15 WB | US 176 WB Brooklyn to 225 | 1.18 | 1.08 | 1.24 | 1.44 | 1.44 | 1.63 | 0.26 | 0.36 | 0.39 |
| D17 SB | US 25 SB 191 to 176 | 0.99 | 0.9 | 1.19 | 1.29 | 1.1 | 1.41 | 0.3 | 0.2 | 0.22 |
| D18 SB | S Main SB Pigeon to Hyatt Creek | 1.08 | 1.04 | 1.16 | 1.25 | 1.09 | 1.29 | 0.17 | 0.05 | 0.13 |
| D15 EB | US 176 EB 225 to Brooklyn | 1.06 | 1.03 | 1.15 | 1.37 | 1.36 | 1.44 | 0.31 | 0.33 | 0.29 |


|  |  | 2021 |  |  | 2019 |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMP Code | Route | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM | PTI Day | PTI AM | PTI PM |
| D5 NB | NC 81 NB Biltmore to US 70 | 1.05 | 1.02 | 1.12 | 1.44 | 1.28 | 1.53 | 0.39 | 0.26 | 0.41 |
| D14 SB | NC 225 SB US 176 to Highland Lake | 1.09 | 1.06 | 1.12 | 1.23 | 1.19 | 1.26 | 0.14 | 0.13 | 0.14 |
| D18 NB | S Main NB Hyatt Creek to Pigeon | 1.05 | 0.96 | 1.11 | 1.24 | 1.11 | 1.27 | 0.19 | 0.15 | 0.16 |
| D2 NB | NC 191 NB US 25B to Blythe | 1 | 1.13 | 1.04 | 1.23 | 1.33 | 1.09 | 0.23 | 0.2 | 0.05 |
| D20 WB | NC 213 WB 26 to Main | 0.96 | 0.96 | 1.01 | 1.01 | 0.97 | 1.05 | 0.05 | 0.01 | 0.04 |
| D2 SB | NC 191 SB Blythe to US 25B | 0.93 | 0.93 | 1 | 1 | 0.93 | 1 | 0.07 | 0 | 0 |
| D20 EB | NC 213 EB Main to 26 | 0.89 | 0.89 | 0.93 | 0.96 | 0.96 | 0.96 | 0.07 | 0.07 | 0.03 |
| D4 EB | Amboy/Meadow EB I-240 to Biltmore |  |  |  |  |  |  |  |  |  |
| D4 WB | Amboy/Meadow WB Biltmore to I-240 |  |  |  |  |  |  |  |  |  |
| D21 | Biltmore Avenue |  |  |  |  |  |  |  |  |  |
| D21 | Biltmore Avenue |  |  |  |  |  |  |  |  |  |
| D9 | Charlotte Street |  |  |  |  |  |  |  |  |  |
| D9 | Charlotte Street |  |  |  |  |  |  |  |  |  |
| D12 | Elk Mountain |  |  |  |  |  |  |  |  |  |
| D12 | Elk Mountain |  |  |  |  |  |  |  |  |  |
| D16 NB | NC 110 |  |  |  |  |  |  |  |  |  |
| D16 SB | NC 110 |  |  |  |  |  |  |  |  |  |


[^0]:    1 https://www.bts.gov/content/travel-time-index
    2 https://www.bts.gov/archive/publications/passenger_travel_2016/tables/fig3_3

