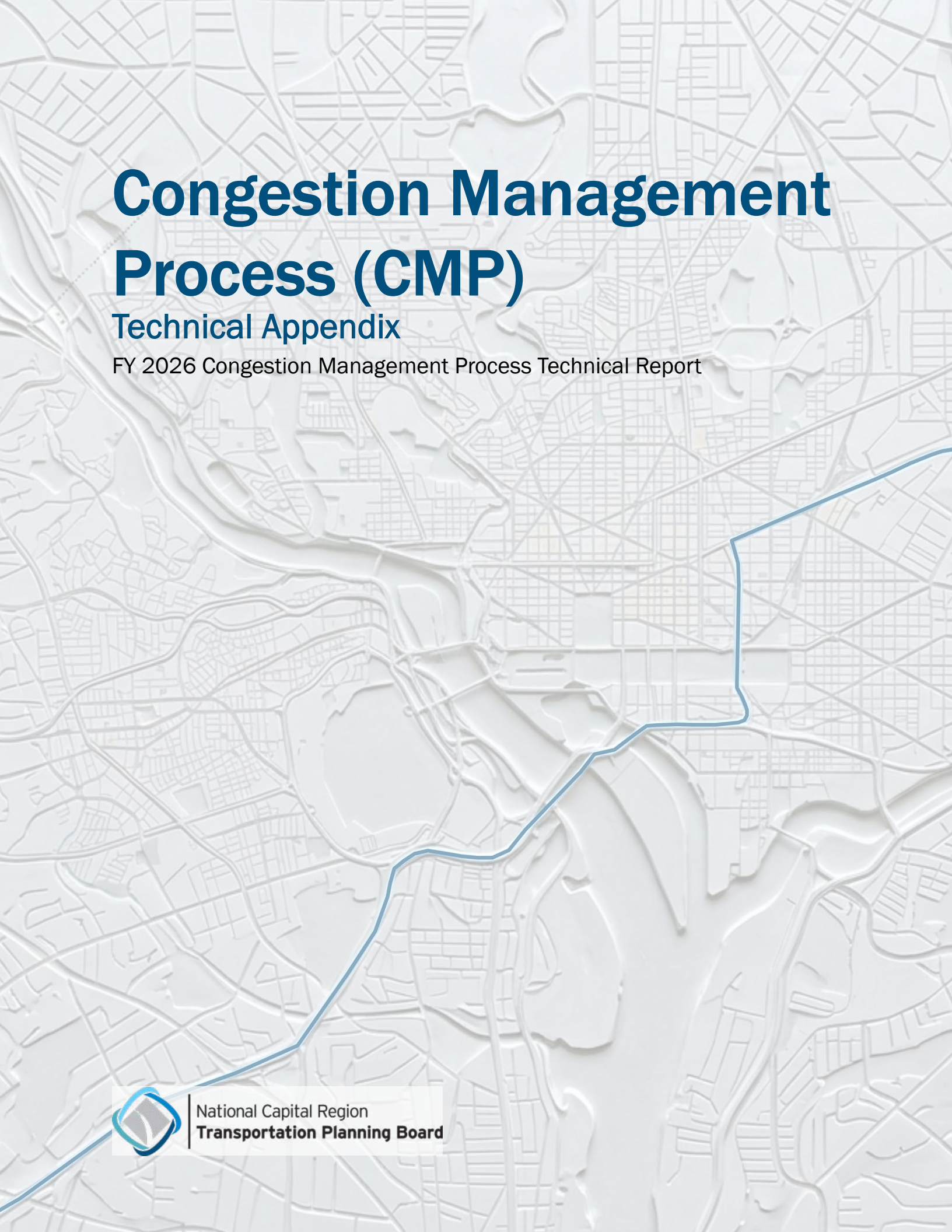
Congestion Management Process (CMP)

Technical Appendix

FY 2026 Congestion Management Process Technical Report



National Capital Region
Transportation Planning Board

THE TPB'S FY2026 CONGESTION MANAGEMENT PROCESS (CMP) TECHNICAL APPENDIX
Prepared on behalf of the Transportation Planning Board Technical Committee
June 2026

ABOUT THE TPB
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, 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
Primary Author: Ian Newman
Contributing Editors: Kanti Srikanth, Timothy Canan, Charlene Howard, Rachel Beyerle, Amanda Lau, Renee Ritchey, and Fabiha Rahman
Advised by: Mobility Analytics Subcommittee (MAS)
Design: Olga Perez

ACKNOWLEDGEMENTS
The preparation of this report was financially aided through grants from the District of Columbia Department of Transportation; Maryland Department of Transportation; Virginia Department of Transportation; the Virginia Department of Rail and Public Transportation; U.S. Department of Transportation, Federal Highway Administration; and the U.S. Department of Transportation, Federal Transit Administration. The report authors would like to acknowledge and thank all who provided input to this document.

ACCOMMODATIONS POLICY
Alternative formats of this document are available upon request. Visit www.mwcog.org/accommodations or call (202) 962-3300 or (202) 962-3213 (TDD).

TITLE VI NONDISCRIMINATION POLICY
The Metropolitan Washington Council of Governments (COG) operates its programs without regard to race, color, and national origin and fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations prohibiting discrimination in all programs and activities. For more information, to file a Title VI related complaint, or to obtain information in another language, visit www.mwcog.org/nondiscrimination or call (202) 962-3300 or (202) 962-3213.

El Consejo de Gobiernos del Área Metropolitana de Washington (COG) opera sus programas sin tener en cuenta la raza, el color, y el origen nacional y cumple con el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos y reglamentos relacionados que prohíben la discriminación en todos los programas y actividades. Para más información, presentar una queja relacionada con el Título VI, u obtener información en otro idioma, visite www.mwcog.org/nondiscrimination o llame al (202) 962-3300 o (202)962-3213.

Contents

Methodological Update

Percent of Congested Miles

In previous cycles, TPB Staff opted to use a Travel Time Index (TTI) > 1.3 to be the defining mechanism for defining a congested segment/congested mile, in deriving the Percent of Congested Miles (PCM) metric. However, TPB Staff have moved from this TTI > 1.3 to a measurement of speed < 60% of the posted speed limit/reference speed for that segment, to define if that segment is congested at the time window. This is because using the < 60% of the posted speed limit (PSL), is data-source agnostic, working clearly with the NPMRDS data set used for numerous measures throughout the TPB's CMP, and is more intuitive for the audiences of the CMP Technical Report. This threshold of speeds < 60% of the (PSL) equates to "this road is operating at conditions that are quite slow" as opposed to thinking through travel times to equate a 30% increase in travel times for TTI > 1.3. Furthermore, TTI can only be used during peak travel times, and incorporates debate on how Free-Flow Travel Time was calculated. Moving to a speed-based threshold for the (PCM) as opposed to a reliability threshold was deemed the more appropriate due to these reasons.

Due to data availability constraints, TPB Staff opted to utilize Reference Speed in lieu of the PSL. Reference Speed, as provided in the NPMRDS, represents a stable benchmark travel speed for each roadway segment under uncongested or near free-flow conditions. It is derived from observed probe data and is intended to reflect typical high-performance operating speeds for the segment. In the absence of posted speed limit (PSL) data within the downloaded dataset, reference speed serves as an appropriate and defensible comparator for identifying congestion. Because it is segment-specific and derived directly from observed conditions, it provides a consistent and data-driven baseline for evaluating when roadway performance falls substantially below typical operating speeds.

Additionally, TPB Staff decided that the segment must be experiencing these conditions at a minimum of 10% of the time during 12:00 AM – 11:59 PM on all weekdays. This threshold, paired with observed speeds falling below 60% of the reference speed, ensures that segments are identified as congested only when congestion occurs with meaningful frequency, rather than due to isolated or anomalous events.

Performance Based Planning and Programming

Metric Differentiation Explanation

Within TPB's FY2026 CMP Technical Report (CMPTR), there are certain metrics that are required by the FHWA. All these metrics are part of the Performance-Based Planning and Programming (PBPP) series of metrics, specifically in the Congestion Mitigation and Air Quality (CMAQ) area of PBPP metrics. There are, in some instances, conflicts with geographic, temporal, and roadway classification system examinations as it relates to these metrics and other, non-federally required metrics examined in the CMP Technical Report. This document is written to address these discrepancies in a cogent manner.

These PBPP metrics considered in the CMP include the following listed below, along with their respective geographic footprint, roadway classification system measured on, and the category of metrics that they belong to when it comes to the TPB FY2026 CMP Technical Report.

Metric	Abbreviation	Geographic Footprint of the Metric	Roadway Classification System	CMP Category of Metric	TPB Policy Framework Relevant Goal
Peak Hours of Excessive Delay per Capita	**PHED per capita**	Washington—Arlington, DC-VA-MD Urbanized Area	National Highway System (NHS)	**Congestion Intensity**	Efficient Systems Operations
Percentage of non-SOV Mode Share	**% non-SOV Mode Share**	Washington—Arlington, DC-VA-MD Urbanized Area	Not Applicable	**Congestion Intensity**	Efficient Systems Operations
Level of Travel Time Reliability – interstates only	**LOTTR - interstates**	National Capital Region	National Highway System (NHS)	**Travel Time Reliability**	(Improving) Travel Time Reliability
Level of Travel Time Reliability – non-interstates	**LOTTR – non-interstates**	National Capital Region	National Highway System (NHS)	**Travel Time Reliability**	(Improving) Travel Time Reliability
Truck Travel Time Reliability Index	**TTTR**	National Capital Region	National Highway System (NHS)	**Travel Time Reliability**	(Improving) Travel Time Reliability

Table 1 - Federally Required PBPP Metrics Found in the CMP Technical Report

The CMPTR considers numerous non-federally required metrics in addition to those that are PBPP metrics. A list of those metrics can be found in Table 2, below.

Metric	Abbreviation	Geographic Footprint of the Metric	Roadway Classification System	CMP Category of Metric
Planning Time Index	PTI	National Capital Region	TPB-CMN[1] and interstates-only	Travel Time Reliability
Travel Time Index	TTI	National Capital Region	TPB-CMN and interstates-only	Travel Time Reliability
Buffer Index	BI	National Capital Region	TPB-CMN and interstates-only	Travel Time Reliability
Vehicle Hours of Delay	VHD	National Capital Region	TPB-CMN and interstates-only	Congestion Intensity
[Weekday] Vehicle Miles Traveled	VMT	National Capital Region	Virginia /District/Maryland Departments of Transportation's 12 designated functional classes and TPB-CMN and interstates-only	System Usage
Percent of Congested Miles	PCM	National Capital Region	TPB-CMN and interstates-only	System Usage
Causes of Congestion	CoC	National Capital Region	TPB-CMN and interstates-only	Causes of Congestion

Table 2 - Non-Federally Required Metrics Found in the CMP Technical Report

1 The TPB-CMN is the Transportation Planning Board-Congestion Management Network which is comprised of the interstates, US routes, state routes, parkways, turnpikes and expressways' TMC segments with data provided from the CATT Lab's RITIS platform tools.

The CMPTR also expands upon those PBPP metrics with variations that are not federally required, as well. These can be seen in the bullet listing below, with the federal requirement shown as the main bullet and metric variances shown as sub-bullets.

- **PHED per capita in the Washington—Arlington, DC-VA-MD Metropolitan Statistical Area**
  - Urban Area Geography-Held Added Variations
    - Aggregated PHED
    - Median Highway Traffic Messaging Channel (TMC) Segment PHED
    - PHED per capita compared to other Metropolitan Statistical Areas' Urban Areas' PHED per capita.
  - NCR Geography Variations
    - PHED per capita.
    - Aggregated PHED.
    - Median Highway Traffic Messaging Channel (TMC) Segment PHED.
    - Aggregated PHED, and PHED per capita compared to other Metropolitan Planning Areas (MPAs).
- **(1) LOTTR – interstates and (2) LOTTR non-interstates (NHS) [Reported as % of person miles traveled that are reliable]**
  - Measurement Added Variation
    - Shown on the segment level in addition to being presented for the aggregated network level.
  - o Reporting Added Variation
    - Segment level showcases the decimal from the calculation as opposed to the aggregated TMC segments that sum for percentage of person miles traveled that are reliable.
- **TTTR**
  - Measurement Added Variation
    - Shown on the segment level in addition to being presented for the aggregated network level.

Within the Travel Time Reliability group/category of metrics, there are also some temporal differences between the PBPP required metrics and the non-federally required metrics. Concerning the federally required metrics, these temporal windows are nationally standardized and established by the FHWA in 23 C.F.R. Part 490[2]. These include the following listed below:

- Additional period of Weekday-Midday (10 A.M. – 4 P.M.)
- Differences in Weekday-PM Peak: (4 P.M. – 8 P.M. as opposed to 3 P.M. – 7 P.M.)
- Differences in Weekend travel period: (6 A.M. – 8 P.M. as opposed to 12 A.M. – 11:59 P.M.)
- (TTTR only) additional period of All Days – Overnight (8 P.M. – 6 A.M.)

The day/time periods used for PTI, TTI, and BI, as well as in the Causes of Congestion Category for the FY 2026 CMPTR were established internally by TPB staff. These day/time periods include the following:

- All Days – All Times (12 A.M. – 11:59 P.M.)
- Weekdays – All Times
- Weekdays – A.M. Peak = 6 A.M. – 10 A.M.
- Weekdays – P.M. Peak = 3 P.M. – 7 P.M.
- Weekends – All Times

There is significant potential to incorporate the Weekday-Midday period into the CMPTR as this is a living document that is designed to be continuously updated.

As it related to the use of a different Weekdays – P.M. Peak window that was utilized, regional relevance remained the key priority. This is because the A.M. and P.M. peak windows of 6 – 10 A.M. and 3 – 7 P.M., respectively, represent the actual commute and travel patterns observed in the NCR, specifically. This is the reason for why the PM Peak of 3 – 7 P.M. as opposed to 4 – 8 P.M. has been the traditionally used P.M. Peak window for weekdays across past CMP Technical Reports as well as other congestion monitoring analyses like the quarterly National Capital Region Congestion Reports (NCRCRs).

The combination of broader temporal windows such as the All Days, Weekdays, and Weekends All Times, time window, were utilized to help with practitioner utility and serve for high-level policy audiences and technical practitioners, alike. The peak windows allow users to dive deeper into more policy-relevant and commute heavy peak windows. The All Times day/time periods were designed to give a higher-level review of these conditions found throughout the non-federally required reliability metrics as well as the causes of congestion.

2 Federal Highway Administration, Department of Transportation. (2016, March 15; last amended 2026). National performance management measures, 23 C.F.R. Part 490. Electronic Code of Federal Regulations. https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-490

Federal Requirements Under 450.322

How the TPB is Meeting All Federal Requirements

The TPB is in full compliance with United States Code § 450.322, Congestion management process in transportation management areas, found under Title 23 - Highways, Chapter I – Federal Highway Administration, Department of Transportation, Subchapter E – Planning and Research, Part 450 – Planning Assistance and Standards, Subpart C – Metropolitan Transportation Planning and Programming, as was last amended on December 17, 2025. For the full regulation, please click here. This regulation is comprised of eight (8) sections that will be both summarized and discussed, concerning how the TPB addresses each section, below.

Section (a) of 23 CFR § 450.322 requires that the metropolitan transportation planning process within a Transportation Management Area (TMA) address congestion through a coordinated region-wide approach that emphasizes the safe and efficient operation of a multimodal transportation system. This includes the application of travel demand reduction strategies (demand-based strategies) job access initiatives, and operational management solutions, in combination with traditional infrastructure investments (supply-based strategies), to manage congestion on both existing and planned transportation facilities.

The TPB demonstrates compliance with this requirement by implementing a comprehensive, regionally coordinated approach to congestion management that prioritizes safety, system efficiency, and multimodal performance across the National Capital Region. In addition to traditional supply-side investments, the TPB integrates a robust portfolio of cooperative forecasting strategies aimed at jobs, housing and transportation investments in regional activity centers, and Transportation Demand Management (TDM) strategies, many of which advance job access and workforce mobility, with an aim to reduce reliance on single-occupancy vehicle (SOV) travel and improving overall system performance.

These strategies include, but are not limited to:

- Commuter Cash program
- Carpooling and ridesharing initiatives
- Telecommuting and flexible work schedules
- Public transit use
- Active transportation, including bicycling and walking
- Regional Bike to Work Day initiative
- Vanpooling program
- Guaranteed Ride Home (GRH) program

In parallel with demand-side strategies, the TPB plans for and programs operational management solutions through the Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP). These investments enhance traffic operations, system management, and reliability on a regionally coordinated scale, ensuring that congestion is addressed not solely through capital expansion but also through improved use and operation of the existing transportation network.
TIP FOCUS: The second section, Section (b), outlines how the development of a CMP ought to result in multimodal system performance measures and strategies reflected in the long-range transportation plan, also known as the Metropolitan Transportation Plan, and the Transportation Improvement Program (TIP).

The TPB satisfies this requirement by linking CMP performance measures on reliability and system performance, as a whole, to both the MTP and TIP. CMP outputs are also incorporated into the TIP development process, where performance-based considerations help guide the programming of projects that address identified congestion needs. These include operational improvements, multimodal strategies, and targeted capacity enhancements that are consistent with CMP-identified congestion trends and system performance shortcomings in targeted areas. Via embedding CMP-derived performance measures for long-range planning (MTP) and short-range programming (TIP), congestion management remains a performance-driven component of the comprehensive transportation planning process in the NCR.

Section (c) explains that acceptable levels of transportation system performance can differ by facility type, location, and time of day, and should be defined accordingly by state and local transportation officials. The section emphasizes prioritizing demand management, reduced single-occupancy vehicle travel, multimodal integration, and operational strategies, while ensuring that any added roadway capacity is designed to support future demand management and operational enhancements that preserve safety and system performance.

The TPB demonstrates compliance with this requirement by applying context-sensitive, multimodal performance measures that account for differences across facility types, corridors, and temporal conditions. Through the TPB's CMP and broader performance-based planning framework, reported on and discussed in the TPB's CMP Technical Report's interactive story map product, the TPB evaluates congestion and reliability across major roadway classifications such as all major highways (interstates, US routes, state routes, expressways, turnpikes, and parkways), as well as interstates-only, individual years, as well as time periods of all days – all times, weekdays – all times, weekdays – A.M. peaks, weekdays – P.M. peaks, and weekends – all times, for enhanced trend analyses. This is because the TPB recognizes that performance expectations differ between peak and off-peak conditions. Discussion on the impacts from transportation demand management strategies, alternative mode ridership, technology, and other key considerations that impact the state of congestion in the National Capital Region are further reviewed as part of the CMP. Future planning on analyzing reliability and system performance measures is currently underway on inner versus outer-I-495 conditions, as well as analyzing, visualizing, and discussing roadway classifications comparatively on their performance monitoring.

When roadway capacity investments are advanced, they are evaluated within a multimodal and operational context to ensure compatibility with future TDM strategies, managed lane operations, transit priority treatments, and system management enhancements. This evaluation is accomplished in the TIP form that ensures project sponsors must provide documentation/affirmation concerning the

evaluation of other modes for a project site, and that roadway capacity enhancement was deemed the only feasible option.

Section (d) outlines the requirements for developing and implementing the Congestion Management Process (CMP) as an integral part of the metropolitan transportation planning process, with close coordination across transportation system management and operations activities. The section establishes the need for systematic methods to monitor multimodal system performance, identify the causes of both recurring and non-recurring congestion, evaluate alternative strategies, and assess the effectiveness of implemented actions. The section emphasizes defining clear congestion management objectives and performance measures that reflect varying local conditions and are developed collaboratively among states, MPOs, local governments, and transportation operators. It also calls for a coordinated regionwide data collection and performance monitoring program that leverages existing data sources and operational systems to better understand congestion patterns and outcomes. Additionally, the CMP must evaluate the expected performance and benefits of congestion management strategies using established performance measures to guide decision-making. These strategies may include demand management, operational improvements, public transportation enhancements, intelligent transportation systems, and—where warranted— targeted additions to system capacity.

The TPB demonstrates compliance with this requirement by maintaining a comprehensive, data-driven CMP that is fully integrated into the regional planning framework. The TPB's CMP employs systematic, multimodal performance monitoring to track congestion, reliability, and system efficiency across roadway, transit, and freight networks, and distinguishes between recurring and non-recurring congestion types, with analyses centered around each one individually as well as aggregated. These analyses can be found in the CMP Technical Reports as well as the CMP quarterly congestion reports. The CMP is supported by a coordinated, regionwide data collection and performance monitoring program that leverages existing data sources, such as state DOTs, RITIS, StreetLight, and internal TPB data. These data are used to identify congestion patterns, diagnose underlying causes, and monitor trends over time, to ensure consistency and comparability across jurisdictions and facility types. In accordance with Section (d), the TPB evaluates a broad range of congestion management strategies using established performance measures to assess their expected effectiveness and benefits. These strategies include transportation demand management, operational and system management improvements, public transportation enhancements, intelligent transportation systems, and, where appropriate, targeted additions to system capacity.

TIP FOCUS: Section (e) states that TMAs designated as nonattainment for ozone or carbon monoxide, cannot use federal funding for projects that significantly increase single-occupancy vehicle capacity unless they are justified through a compliant CMP. It reinforces the CMP's role in ensuring that capacity-expanding projects, except for safety improvements or bottleneck removals, are evaluated within a broader strategy to manage congestion while supporting air quality goals.

The TPB demonstrates compliance with this requirement by using the CMP as a screening and evaluation framework for capacity-expanding projects proposed for inclusion in the MTP and TIP. Projects that add roadway capacity are reviewed in the context of CMP findings to ensure they are consistent with identified congestion needs, supported by performance-based analysis, and aligned with broader regional objectives related to system efficiency and air quality conformity.

In accordance with Section (e), the TPB emphasizes demand management, operational improvements, and multimodal strategies as preferred approaches to congestion mitigation. Capacity-expanding projects are advanced only where CMP analysis demonstrates that such investments are warranted, and where they complement—not undermine—strategies intended to reduce SOV travel, improve system operations, and support regional emissions reduction goals. By requiring a CMP-based justification for capacity-expanding projects in nonattainment areas, the TPB ensures that federally funded investments support a balanced, performance-driven congestion management strategy that addresses mobility needs while maintaining consistency with regional air quality objectives.

TIP FOCUSED - Section (f) requires that, in TMAs designated as nonattainment for ozone or carbon monoxide, the CMP evaluates reasonable multimodal travel demand reduction and operational strategies before advancing federally funded projects that would significantly increase single-occupancy vehicle capacity. If such strategies are insufficient, the CMP must justify the need for added capacity and ensure that all reasonable demand management and operational strategies are either incorporated into the project or formally committed to for implementation by the state and MPO.

The TPB is in compliance with Section (f) via applying a CMP evaluation framework to proposed capacity-expanding projects in nonattainment areas. When CMP analysis indicates that these strategies alone are insufficient to address observed or forecasted congestion, the TPB requires that the need for additional capacity be clearly documented and performance-based, with explicit consideration of how complementary demand management and operational strategies will be incorporated into the project scope or committed to through parallel actions by implementing agencies. This ensures that capacity investments function as part of a broader congestion management strategy rather than as standalone solutions.

Section (g) explains that state laws, rules, or regulations may satisfy the requirements of a Congestion Management Process if they are determined by the FHWA and the Federal Transit Administration (FTA) to be consistent with federal metropolitan planning statutes. It clarifies that such state frameworks must fully meet the intent and purposes of 23 U.S.C. 134 and 49 U.S.C. 5303 to be recognized as an acceptable CMP.

The TPB complies with this provision through implementing a CMP that is fully consistent with federal metropolitan planning requirements and subject to ongoing federal certification and oversight. Rather than relying on any state-substituted CMP framework, the TPB maintains and administers its own CMP as part of the federally required metropolitan planning process, ensuring direct alignment with statutory and regulatory expectations, and keeps regular communication channels open with both the FHWA and FTA.

The TPB's CMP is developed and maintained in coordination with State departments of transportation, transit agencies, and local jurisdictions, and is reviewed through established federal planning and certification processes administered by both the FHWA and FTA. This structure ensures that the TPB's CMP meets or exceeds the intent of applicable federal statutes and regulations governing congestion management in Transportation Management Areas.

Lastly, **Section (h)** allows an MPO serving a TMA to develop a congestion management plan that identifies projects and strategies for inclusion in the TIP, with a focus on reducing peak-period vehicle miles traveled and improving job access. It emphasizes coordination with employers, transportation

providers, transportation management organizations, and organizations serving low-income populations to ensure that congestion reduction and mobility strategies are regionally aligned.

The TPB demonstrates compliance with this requirement by using its CMP to identify and advance congestion management strategies that directly inform TIP programming. CMP findings are used to support the inclusion of projects and initiatives that reduce peak-period travel demand, improve multimodal access to employment centers, known internally as activity centers at TPB, and enhance system efficiency through operational and demand-side solutions.

In alignment with Section (h), the TPB coordinates closely with regional and local partners, including large employers, transit agencies, transportation management organizations, and agencies serving low-income and historically underserved populations, to ensure that congestion mitigation strategies support equitable access to jobs and essential services. These partnerships help align regional TDM initiatives, employer-based programs, and multimodal investments with broader congestion reduction and workforce mobility objectives.

By translating CMP strategies into TIP-programmed investments and coordinating with a diverse set of regional stakeholders, the TPB demonstrates compliance with Section (h) through a collaborative, implementation-oriented approach that reduces peak-period congestion, supports job access, and advances regionwide mobility and equity goals.

The Differences Between NPMRDS and non-NPMRDS Data

The National Performance Management Research Data Set (NPMRDS), powered by INRIX, represents the federally designated, standardized probe-based dataset for measuring roadway system performance in the United States. NPMRDS provides consistent historical travel time data by Traffic Message Channel (TMC) segment across the National Highway System (NHS), with clearly defined temporal groupings and long-term continuity. Because it is specifically designed to support federal performance management requirements under MAP-21 and the FAST Act, NPMRDS is uniquely well-suited for calculating travel time reliability metrics including, Buffer Index (BI), Travel Time Index (TTI), Planning Time Index (PTI), Level of Travel Time Reliability (LOTTR), and Truck Travel Time Reliability (TTTR). Its methodological consistency, transparent documentation, and alignment with FHWA definitions make it the most defensible dataset for reporting system performance trends over time.

While both NPMRDS and standalone INRIX data are derived from similar probe-based sources, NPMRDS offers a level of standardization that TPB staff believe to be essential for reliability analysis. Reliability metrics are highly sensitive to data completeness, temporal consistency, and segment stability. Even minor methodological differences can significantly affect percentile-based measures such as TTI, BI, PTI, TTTR, and LOTTR. NPMRDS addresses this by applying uniform processing rules, fixed TMC definitions, and consistent time-of-day and day-of-week classifications across years. This ensures that changes in reliability metrics reflect real changes in system performance rather than artifacts of shifting data coverage or processing logic. For this reason, using NPMRDS these reliability focused metrics provides greater analytical rigor, comparability across time periods, and defensibility.

Nevertheless, standalone INRIX data plays a critical and complementary role in numerous congestion diagnostics, particularly in tools from the RITIS-PDA suite that are explicitly designed to identify the where and why questions related to congestion, as opposed to the results of the congestion.

Within RITIS, INRIX data underpins the applications of the Bottleneck Ranking Tool and the Causes of Congestion Graphs. These tools leverage high-resolution speed profiles, shockwave detection, and event attribution. For example, bottleneck identification relies on pinpointing the head of congestion and measuring spatial-temporal propagation, while causes-of-congestion analyses require nuanced classification of incidents, weather, work zones, demand surges, and other non-recurring factors. In these contexts, the richness and analytical flexibility of INRIX data is a strength rather than a liability. NPMRDS data is, understandably, not available for these tools within the PDA suite; only TMC data from INRIX or HERE, in which TPB staff elected to use the former.

TPB staff found that the most intelligent and methodologically sound approach is to use NPMRDS INRIX data for system-level reliability metrics—where consistency, comparability, and federal alignment are the most important elements—while leveraging INRIX-based RITIS tools for congestion diagnosis and storytelling. Avoiding INRIX tools simply because they are not used for federal reliability reporting would unnecessarily discard valuable insights into congestion causes, bottleneck behavior, and operational challenges. Instead, TPB staff determined that the two datasets should be viewed

as complementary. NPMRDS answers the question of how reliable the system is, while INRIX-powered tools explain why congestion occurs and where interventions may be most effective. Using each dataset for what it does best results in a more comprehensive, credible, and actionable congestion management analysis.

List of CMP Acronyms and Meanings

Acronym	Meaning	Acronym	Meaning
AADT	Annual Average Daily Traffic	MPA	Metropolitan Planning Area
ACS	American Communities Survey	MTP	Metropolitan Transportation Plan
ART	Arlington Transit	MTA	Maryland Transit Administration
BI	Buffer Index	MWAA	Metropolitan Washington Airports Authority
CATT (Lab)	Center For Advanced Transportation Technology	MWCOG	Metropolitan Washington Council of Governments
CCTV	Closed-Circuit Television	NCR	National Capital Region
[TPB-] CMN	Congestion Management Network	NEPA	National Environmental Policy Act
CMP	Congestion Management Process	NHS	National Highway System
CMPTR	Congestion Management Process Technical Report	NPMRDS	National Performance Management Research Data Set
COC	Commuter Operations Center	PBPP	Performance-Based Planning and Programming
CMAQ	Congestion Mitigation Air Quality	PCM	Percent of Congested Miles
CUE	City-University-Energysaver	PHED	Peak Hours of Excessive Delay
DASH	Driving Alexandrians Safely Home	PM	Performance Management
DCA	Ronald Reagan Washington National Airport	PRTC	Potomac and Rappahannock Transportation Commission

Acronym	Meaning	Acronym	Meaning
DDOT	District Department of Transportation	PTI	Planning Time Index
DOT	Department of Transportation	RITIS	Regional Integrated Transportation Information System
FAF	Freight Analysis Framework	RITIS-PDA	Regional Integrated Transportation Information System-Probe Data Analytics
FAST (act)	Fixing America's Surface Transportation	SOC	State of the Commute Survey
FFTT	Free-Flow Travel Time	SOV	Single Occupancy Vehicle
FHWA	Federal Highway Administration	TAZ	Traffic Analysis Zone
FTA	Federal Transit Administration	TDM	Transportation Demand Management
GPS	Geographic Positioning System	TIP	Transportation Improvement Program
GRH	Guaranteed Ride Home	TLC	Transportation/Land Use Connections
HOT	High Occupancy/Toll	TMA	Transportation Management Area
HOV	High Occupancy Vehicle	TMC	Traffic Message Channel
HPMS	Highway Performance Monitoring System	TOC	Transportation Operations Center
IAD	Washington Dulles International Airport	TOD	Transit-Oriented Development
IIJA	Infrastructure and Investment Jobs Act	TPB	Transportation Planning Board

Acronym	Meaning	Acronym	Meaning
IMR	Incident Management and Response	TTI	Travel Time Index
ITS	Intelligent Transportation Systems	TTTR	Truck Travel Time Reliability
LOS	Level of Service	UA/UZA	Urbanized Area
LOTTR	Level of Travel Time Reliability	VDOT	Virginia Department of Transportation
LRTP	Long Range Transportation Plan	VDRPT	Virginia Department of Rail and Public Transportation
MAP	Moving Ahead for Progress in the 21st Century Act	VHT	Vehicle Hours of Travel
MARC	Maryland Area Rail Commuter	VMT	Vehicle Miles of Travel
MAS	Mobility Analytics Subcommittee	VOC	Volatile Organic Compound
MATOC	Metropolitan Area Transportation Operations Coordination	V/C	Volume/Capacity
MDOT	Maryland Department of Transportation	VPL	Variably Priced Lane
MDSHA	Maryland State Highway Administration	VPP	Vehicle Probe Project
MNCPPC	Maryland – National Capital Park and Planning Commission	VRE	Virginia Railway Express
MPO	Metropolitan Planning Organization	WMATA	Washington Metropolitan Area Transit Authority

National Capital Region
Transportation Planning Board

Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002

mwcog.org/tpb