



PROGRAM, FINANCE AND ADMINISTRATION COMMITTEE

RESOLUTION #599

REVISION OF THE CONGESTION MANAGEMENT PROCESS OPERATING PROCEDURES

WHEREAS, the New York Metropolitan Transportation Council (NYMTC) is a regional council of governments which is the metropolitan planning organization (MPO) for New York City, Long Island and the Lower Hudson Valley; and

WHEREAS, pursuant to 23 CFR 450.322 NYMTC is responsible for conducting a Congestion Management Process (CMP); and

WHEREAS, Section III (e) of the NYMTC Compendium of Agreements and Operating Procedures defines the operating procedures for the CMP; and

WHEREAS, Section 3 of the operating procedures defines the performance measures (PMs) used for the CMP (Attachment 1); and

WHEREAS, the National Performance Management Research Data Set (NPMRDS) has been optimized to accurately calculate PMs for use in the CMP with increased granularity as the dataset has matured; and

WHEREAS, due to the higher confidence in data outputs resulting from this increased granularity, the PMs calculated from the NPMRDS are preferable for use in NYMTC's CMP.

NOW, THEREFORE, BE IT RESOLVED THAT PFAC revises Section 3 of the operating procedures for the CMP to reflect the changes to the PMs per Attachment 2.

This resolution shall take effect the twelfth day of June two thousand twenty-five.

ADOPTION: JUNE 12, 2025

"I hereby certify that the above is a true copy of Resolution #599, Revision of the Congestion Management Process Operating Procedures, and was motioned by Patrick Gerdin, representing the Mid-Hudson South Transportation Coordinating Committee, and seconded by Christopher Chatterton, representing the Nassau/Suffolk Transportation Coordinating Committee. This Resolution was adopted and passed unanimously."


Debra Nelson, PFAC Chair

Reso #599 Attachment 1

Congestion Management Process Operating Procedures

Section 3: Current

3. Technical Approach

To comply with these Federal regulatory requirements, NYMTC will:

- Evaluate current traffic congestion using the appropriate performance management data set (e.g., National Performance Management Research Data Set (NPMRDS) or subsequent accepted data set). Based on available data, NYMTC staff will assess current recurring and non-recurring congestion in the context of development trends, overarching travel markets and commodity flows, and crash data.
- Forecast future levels of traffic congestion using the current travel demand model for the region (e.g., NYMTC's New York Best Practice Model (NYBPM)) and related post-processor, as appropriate, to estimate future congestion at the county/borough and regional levels in the context of the projects and programs contained in the Transportation Improvement Program (TIP) and the constrained element of the Regional Transportation Plan.

A series of performance metrics that are established cooperatively at the time will be provided in each CMP Status Report. Current (2022) specific performance measures to be included, based on available data, are:

Indicators of Current Conditions That Can Be Derived From NPMRDS

- **Level of Travel Time Reliability (LOTR)** represents the consistency or dependability of travel times from day-to-day or across different times of day. LOTR is calculated by dividing the 80th percentile travel time for a segment of road during peak travel times by the 50th percentile travel time.
- **Truck Travel Time Reliability (TTTR)** represents the consistency or dependability of truck travel times from day to day or across different times of day. TTTR is calculated by dividing the 95th percentile truck travel time for a segment of road during peak travel times by the 50th percentile truck travel time.
- **Travel Time Index (TTI)** is the ratio of peak period travel time to free-flow travel time. TTI represents the average additional time required during peak times compared to times of light traffic.
- **Planning Time Index (PTI)** represents the total travel time that should be planned when an adequate buffer time is included. The calculation includes typical and unexpected delays. Thus, PTI compares near-worst case travel time to a travel time in light or free-flow traffic. PTI is calculated with the 95th percentile cross-peak travel time divided by the free-flow travel time.

Indicators of Future Conditions Computed by the Post-Processor Software for CMP Based on NYBPM Outputs

- **Demand-to-Capacity (DC)** ratio is a measure that reflects the level of mobility and the quality of travel of a roadway or a section of a roadway. The DC ratio compares the roadway capacity with the estimated trip demand generated directly from the travel demand models. The capacity of a roadway is defined as the theoretical maximum volume that can be processed by that roadway during a specified time period.
- **Vehicle Hours of Delay (VHD)** is the sum total of delay experienced by all vehicles on the network. Delay is defined as the difference between estimated actual travel speed and freeflow travel speed.
- **Person Hours of Delay (PHD)** is calculated by multiplying VHD by the average vehicle occupancy rate. Because vehicle occupancy differs from place to place, the following rates are used: 1.48 for New York City counties, 1.75 for Nassau and Suffolk counties, and 1.44 for Westchester, Rockland, and Putnam counties.
- **Average Travel Speed (ATS)** is the calculation for a weighted average of speed. The weighted average speed considers varying length of each segment of the road system.
- **Lane Miles of Congestion (LMC)** measures the road space that functions at less than free-flow speeds during the peak period and compares actual roadway volume with maximum acceptable volume for the roadway. It reflects the mobility of a roadway or section of a roadway, indicating the proportion that is congested. LMC can easily be aggregated from facility to corridors to subregional to region. For purposes of this performance measure, a roadway is defined as congested if the volume is greater than or equal to 85 percent of the maximum acceptable volume for that roadway (essentially the level of service E volume).
- **Vehicle Miles Traveled (VMT)** is another performance measure developed by the post processor. VMT is the sum of distances traveled by all motor vehicles in a specified region. Travel demand forecasting is used to generate the average trip lengths for a region. The average trip length measure is then used to estimate VMT, which in turn is used in estimating gasoline usage or mobile source emissions of air pollutants.

NYMTC maintains a program of data collection and survey research in support of the currently accepted travel demand model (e.g., NYBPM) to ensure its validity as a calibrated forecasting tool. Data collected for this purpose may include traffic counts, vehicle occupancy rates, vehicle speed, transit services and commodity flows.

Reso #599 Attachment 2

Congestion Management Process Operating Procedures

Section 3: For Adoption

Changes marked in footnotes

3. Technical Approach

To comply with these Federal regulatory requirements, NYMTC will:

- Evaluate current traffic congestion using the appropriate performance management data set (e.g., National Performance Management Research Data Set (NPMRDS) or subsequent accepted data set). Based on available data, NYMTC staff will assess current recurring and non-recurring congestion in the context of development trends, overarching travel markets and commodity flows, and crash data.
- Forecast future levels of traffic congestion using the current travel demand model for the region (e.g., NYMTC's New York Best Practice Model (NYBPM)) and related post-processor, as appropriate, to estimate future congestion at the county/borough and regional levels in the context of the projects and programs contained in the Transportation Improvement Program (TIP) and the constrained element of the Regional Transportation Plan.

A series of performance metrics that are established cooperatively at the time will be provided in each CMP Status Report. Current (2025) specific performance measures to be included, based on available data, are:

Indicators of Current Conditions That Can Be Derived From NPMRDS¹

- **Level of Travel Time Reliability (LOTTR)** represents the consistency or dependability of travel times from day-to-day or across different times of day. LOTTR is calculated by dividing the 80th percentile travel time for a segment of road during peak travel times by the 50th percentile travel time.
- **Truck Travel Time Reliability (TTTR)** represents the consistency or dependability of truck travel times from day to day or across different times of day. TTTR is calculated by dividing the 95th percentile truck travel time for a segment of road during peak travel times by the 50th percentile truck travel time.
- **Peak Hours of Excessive Delay (PHED)** represents the extra amount of time spent in congested conditions during peak hours defined by speed thresholds that are lower than a normal delay threshold times by traffic estimates for each segment to determine vehicle hours times the average vehicle occupancy rate for person hours.

¹ Adds PHED to Current Conditions derived from NPMRDS

- **Travel Time Index (TTI)** is the ratio of peak period travel time to free-flow travel time. TTI represents the average additional time required during peak times compared to times of light traffic.
- **Planning Time Index (PTI)** represents the total travel time that should be planned when an adequate buffer time is included. The calculation includes typical and unexpected delays. Thus, PTI compares near-worst case travel time to a travel time in light or free-flow traffic. PTI is calculated with the 95th percentile cross-peak travel time divided by the free-flow travel time.
- **Planning Time Index (PTI)** is the ratio of the 95th percent peak period travel time to the free flow travel time.

Indicators of Future Conditions Computed by the Post-Processor Software for CMP Based on NYBPM Outputs²

- **Vehicle Hours Traveled (VHT)** is the sum total of time experienced by all vehicles on the network. VHT is defined as the travel time on a link multiplied by the link volume.
- **Vehicle Miles Traveled (VMT)** is another performance measure developed by the post processor. VMT is the sum of distances traveled by all motor vehicles in a specified region. Travel demand forecasting is used to generate the average trip lengths for a region. The average trip length measure is then used to estimate VMT, which in turn is used in estimating gasoline usage or mobile source emissions of air pollutants.

NYMTC maintains a program of data collection and survey research in support of the currently accepted travel demand model (e.g., NYBPM) to ensure its validity as a calibrated forecasting tool. Data collected for this purpose may include traffic counts, vehicle occupancy rates, vehicle speed, transit services and commodity flows.

² Adds VHT to Indications of Future Conditions Computed by the Post-Processor Software for the CMP based on NYBPM Outputs and removes DC, VHD, PHD, ATS and LMC