

National Capital Region Transportation Planning Board

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MEMORANDUM

TO: TPB Travel Forecasting Subcommittee

FROM: Andrew J. Meese, AICP
Systems Management Planning Director

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DATE: January 11, 2008

SUBJECT: Congestion Management Process (CMP) Components and Development

Please find attached the following information on the Congestion Management Process (CMP), a new requirement of SAFETEA-LU for metropolitan transportation planning processes. This information will provide the basis for CMP discussion at the January 18, 2008 Travel Forecasting Subcommittee meeting.

1. An Internet Web print-out of the CMP component of the Constrained Long-Range Plan (CLRP), which provides an overview and background information for the topic. This information can also be viewed at <http://www.mwcog.org/clrp/elements/cmp/default.asp>
2. Excerpts from the February 14, 2007 Final Rule addressing the CMP, showing the emphasis that has been placed on the CMP requirements in the new law and regulations.

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WHAT IS THE CMP?

The Congestion Management Process (CMP) is a systematic process in Transportation Management Areas (TMAs) that provides for safe and effective integrated management and operation of the multimodal transportation system. The process is based on a cooperatively developed metropolitan-wide strategy of new and existing transportation facilities.

Congestion is the level at which transportation performance is no longer acceptable due to traffic interference resulting in decreased speeds and increased travel times. As our region continues to experience dynamic economic and demographic growth, congestion remains a primary focus of the TPB.

What Are the Major Components of and Considerations for the CMP?

The CMP requires a systematic approach. The TPB's CMP is part of the regional transportation plan and includes the following:

- Methods to monitor and evaluate system performance
- Objectives and performance measures
- Data collection and analysis
- Identification and evaluation of anticipated performance and expected benefits of Congestion Management strategies, including demand management, traffic operational improvements, public transportation improvements, ITS technologies, and additional system capacity, (where necessary)
- Assessment of the effectiveness of previously implemented strategies

Proposed single-occupant vehicle (SOV) capacity-increasing projects must show that congestion management strategies have been considered. In addition, the regional transportation plan will consider the **results of the CMP**.

The Need for a CMP

Congestion Management as a Goal of the TPB

As the Washington region continues to grow, congestion management will remain a primary goal of the TPB. Over the years the TPB has implemented a number of demand and operational management strategies to address congestion. The TPB is committed to documenting these strategies in an enhanced structured process to get maximum benefit from new and existing transportation systems.

Federal Requirements

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted August 10, 2005, requires that metropolitan transportation planning processes include a CMP, similar to the Congestion Management System (CMS) requirements under previous federal transportation bills. In addition, the March 2006 Federal certification of the TPB process suggested that the region's CMP be enhanced. The TPB develops the CMP in concert with long-range transportation plan development.

The Transportation Planning Board (TPB) is committed to management of the existing and future transportation system through the use, where appropriate, of **demand management and**

operational management strategies. These strategies, when taken as a whole, form a large portion of the CMP.

The CMP addresses the SAFETEA-LU requirements, as laid out in the February 14, 2007 federal regulations (Source: §450.320(a), Metropolitan Transportation Planning, Final Rule, Federal Register, February 14, 2007). These regulations state that:

"The transportation planning process shall address congestion management ... through a process that provides for safe and effective integrated management and operation of the multimodal transportation system ... based on a cooperatively developed and implemented metropolitan-wide strategy ... of new and existing transportation facilities ... through the use of travel demand reduction and operational management strategies."

The CMP is important to the Washington region for many reasons. First, it provides for safe and effective integrated management and operation of the multimodal transportation system. Compiling information on congestion throughout the region can help determine priorities for regional transportation projects. The CMP takes a metropolitan-wide, systematic approach, in that congestion is examined over the entire metropolitan region, and the process is integrated into the Long Range Transportation Plan.

Both new and existing transportation infrastructure is part of the CMP. This is important in determining what existing facilities could be improved upon to reduce congestion, and what congestion management strategies are appropriate for new facilities. Travel demand reduction strategies, such as alternative commute programs, growth management, and HOV facilities and value pricing, as well as operational management strategies such as identifying non-recurring congestion, ITS technologies, and capacity increases (where necessary), are potential strategies the CMP considers for new and existing facilities.

The CMP is important when considering single-occupant vehicle (SOV) capacity-increasing projects in the Long-Range Plan. Capacity increasing projects are sometimes necessary to eliminate bottlenecks, make safety improvements, and implement traffic operational improvements. However, in many instances, travel demand management or operational demand management strategies can be implemented in lieu of, or in conjunction with, capacity increase. Capacity-increasing projects are considered as a metropolitan-wide strategy, for new and existing transportation facilities.

The results of the CMP are important to the long-range planning process. The CMP, including the locations and extent of congestion, along with which strategies are most successful, helps guide decision makers to prioritize areas for current and future projects. The CMP is important to long-range planning to help determine priorities for implementation and funding.

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 Addressing the Congestion Management Program

ADDRESSING THE CMP IN THE REGIONAL PLANNING PROCESS

Integrating CMP Components into the CLRP

Four major **CMP components** are integrated into the region's CLRP. Each component reflects the federal law and regulations.

The components consist of:

- Monitoring and evaluating transportation system performance
- Defining and analyzing strategies
- Implementing strategies
- Compiling project-specific congestion management information

Interactions with Supporting Committees and Program Areas

Program or Committee	CMP - Related Activities
TPB Technical Committee	Long-range plan; interaction with necessary subcommittees - CMP lead
Travel Monitoring Program (in conjunction with the Travel Forecasting Subcommittee)	Travel monitoring and forecasting of future recurring congestion
Travel Management Program	Strategy identification and analysis
Management, Operations, and Intelligent Transportation Systems (MOITS) Program	Non-recurring congestion, traffic management, ITS technologies
Commuter Connections Program	Implementation and assessment of regional demand management alternatives
Regional Bus Planning Program	Public transportation issues

Frequency, Timing, Schedule, and TPB Approval

The initial CMP process focuses on developing and documenting components of the CMP. This component identifies congestion in the region, through available data such as the Freeway Monitoring Program. Ongoing congestion management strategies are documented and help form the CMP process.

The CMP is a living document addressing the region's congestion. It is updated as information becomes available. The results are incorporated into the CLRP when the CLRP is updated. A major update of the CLRP occurs every four years, with other significant updates occurring annually. The CMP can be updated at times that major new data or information become available.

The process itself can also be modified and enhanced as new information becomes available and additional strategies are considered.

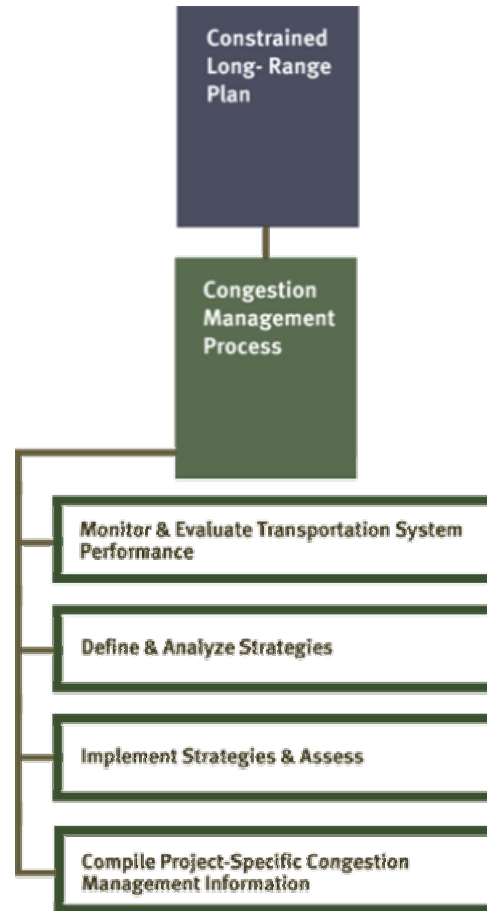
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MAJOR CMP COMPONENTS



Monitoring and Evaluating Transportation System Performance

Freeway Monitoring Program

Freeways comprise the critical backbone of the region's roadway system, and provide the most important indicator of our overall system. This is the portion of the region's roadway system for which the most comprehensive data set is available.

The TPB's regional freeway monitoring program is based upon comprehensive aerial photography of the region's freeways. Peak period congestion is monitored on a once-every-three-years cycle during the am and pm peak periods, and off-peak congestion is monitored once every five years during weekday mid-day and weekend mid-day. It provides a comprehensive data set of the region's freeway conditions and congestion.

The program and analysis provide the following information on the region's freeways:

This component involves **identifying existing and potential strategies** by the TPB Technical Committee, subcommittees, and staff. The TPB considers a number of demand management and operational management strategies.<<hyperlink>>

To define and analyze CMP strategies, the TPB's efforts consist of compiling and analyzing information for each of the following strategies:

- Committees and staff identifying and advising the TPB on the analysis, methods, criteria, and performance measures used to analyze CMP strategies.
- Compiling information on how and where a particular CMP strategy has been implemented.
- Identifying a strategy as regional, corridor-wide, or local.
- Performing qualitative or, if possible, quantitative analysis of the potential impacts of CMP strategies
- Compiling information on potential impacts of strategies into summaries such as a "short list" and "long list."

Implementing Strategies

This TPB effort is to focus on compiling information on strategies that have been implemented, particularly on a region-level basis. Also, the TPB is exploring how to assess previously implemented strategies. Feedback from the process is beneficial when it comes to updating the CMP and considering additional strategies and technical methods.

TPB currently reports on results of regional strategies implemented through the **Commuter Connections Program**.

Compiling Project-Specific Congestion Management Information

Pursuant to Federal regulations, the TPB encourages consideration and inclusion of congestion management strategies in all SOV capacity-increasing projects. This involves compiling and analyzing information in the Call for Projects documentation forms, which are submitted from regional agencies when the CLRP is developed.

The Call for Projects documentation requests any project-specific information available on congestion that necessitates or impacts the proposed project. Agencies compile this information from various sources, including TPB-published congestion information (if available), internal or other directly measured information, or by conducting engineering estimates of the Level of Service (LOS). TPB compiles and analyzes this submitted information, along with information from other CMP sources.

Specifically for SOV capacity-increasing projects, the TPB requests documentation that the implementing agency considered all appropriate systems and demand management alternatives to the SOV capacity. In the Call for Projects documentation a special set of SOV questions is completed by implementing agencies and the TPB compiles this information.

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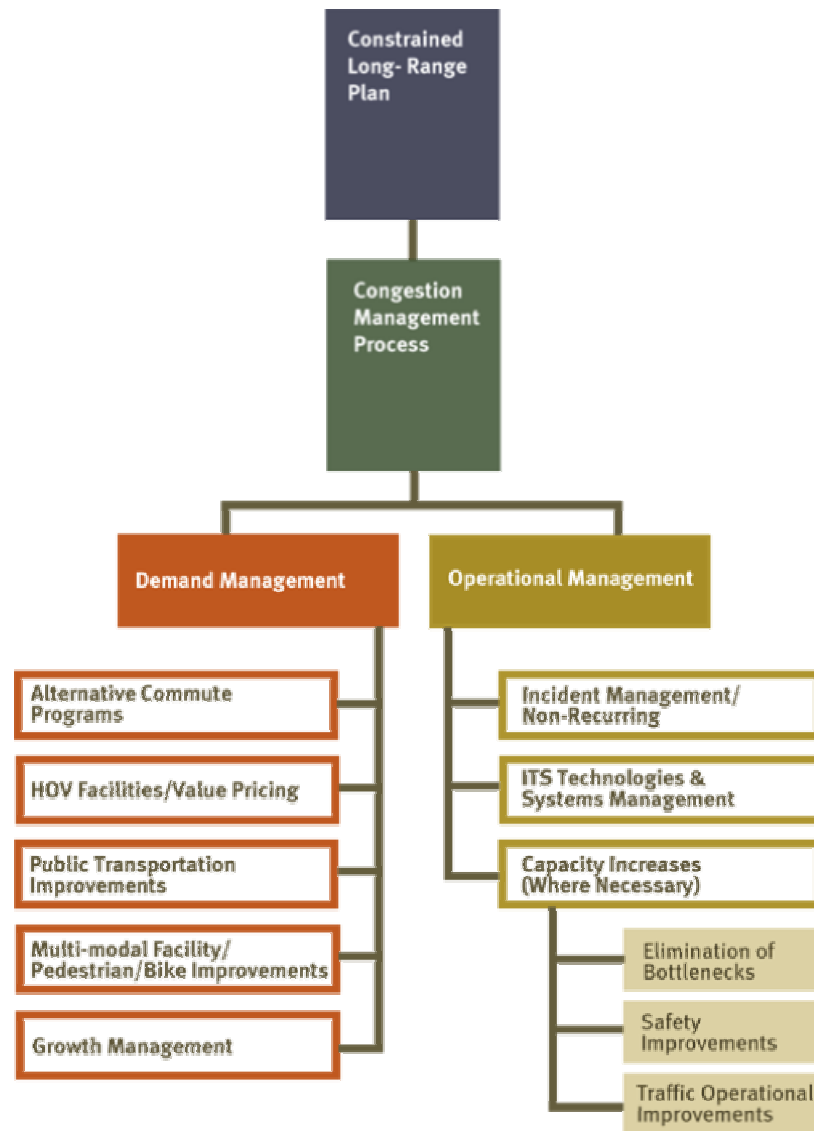
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MAJOR CMP STRATEGIES

The TPB undertakes a wide range of congestion management strategies. These strategies generally fall into two categories – demand management strategies and operational management strategies.



Demand Management aims at influencing travelers' behavior for the purpose of redistributing or reducing travel demand. Examples of TPB's demand management strategies include alternative commute programs, HOV facilities and value pricing, public transportation improvements, multimodal facility/bicycle/pedestrian improvements, and growth management.

Further demand management strategies and their impacts on the CMP are defined by coordinating with various subcommittees, including the Commuter Connections program, which provides information on alternative commute programs.

Operational management focuses on improvements made to the existing transportation system to keep it functioning effectively. Examples of TPB's operational management strategies include incident management/nonrecurring congestion strategies, ITS technologies and system management, and capacity increases (where necessary).

Further operational management strategies and their impacts on the CMP are defined by coordinating with various subcommittees, including **Management, Operations, and Intelligent Transportation Systems (MOITS)**, which provides information on incident management, ITS technologies, and system management.

TPB incorporates demand and operational management strategies into the CMP by:

- Compiling existing information and data.
- Considering how these strategies are important to congestion management.
- Analyzing this information to help define congested conditions and locations in the region.
- Considering the results strategies once implemented.

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 Congestion Management Program - Demand Management Strategies

DEMAND MANAGEMENT STRATEGIES

The TPB's CMP effort focuses on defining the existing demand management strategies that contribute to the more effective use and improved safety of existing and future transportation systems. The TPB is committed to a number of ongoing demand management strategies, such as:

Alternative Commute Programs

TPB's **Commuter Connections program** encourages a number of alternative commute programs with an overall goal of taking more cars off the road, which is important to the CMP. These programs include:

- **Carpooling** is a popular commuting option of two or more employees sharing the ride to work in a private automobile. TPB provides the public with tips on carpooling, ridesharing applications, and regional maps of park-and-ride lot locations.
- **Vanpooling** is when groups of commuters travel to work together in an owner-operated, third-party, or employer-operated van. Examples include vanpool incentive programs, such as VanStart and VanSave in Maryland and Virginia .
- **Telecommuting** , when employees work at their home or at a telework center near their home one or more days a week, is an effort to replace work-related travel.TPB provides information on telecommuting to both employees and employers.
- **Transit** , consisting of buses and rail, is a popular option available to commuters in the District, Maryland , and Virginia . TPB encourages the use of electronic transit payment systems such as Metrochek and SmarTrip.
- **Guaranteed Ride Home** encompasses all of the above commuting programs. It helps alleviate commuters concerns of using alternative commute methods by offering those who carpool, vanpool, bike, walk, or ride transit to work a free ride home incase an unexpected situation would arise.
- With **bicycling to work** , employers are encouraged to set up programs to facilitate employees the option to bike to work by providing showers/lockers, subsidies for purchasing bicycles, etc.
- **Employer Outreach/Mass Marketing** are two types of marketing programs the region uses to market all of the above alternative commute programs.

HOV Facilities and Value Pricing

TPB conducts analysis and documentation of HOV facilities in the region. These studies give the TPB, decision makers, and the public insight into the number of commuters using the HOV systems during peak hours and peak periods. Recent HOV studies include a 2004 analysis of regional HOV facilities in the Washington Region, and a study of the AM Peak Period Travel along the I-66 and I-95/I-395 corridors.

In addition, the TPB is studying the concept of "pricing" under a grant awarded to the TPB by the FHWA. Congestion pricing is a demand management strategy, as it gives drivers a choice of time to travel or travel route.

Public Transportation Improvements

Public transportation offers a popular alternative to driving, and is important in reducing our region's congestion. The TPB commits to improvements that maintain a safe and effective transit system for the large amount of riders that use it. The TPB compiles and analyzes information collected on local transportation systems including:

- Local and regional rail agencies Amtrak, MARC, Virginia Railway Express (VRE), and Metrorail
- Local bus systems such as the District's Downtown Circulator, Georgetown Metro Connection, Metrobus, Maryland Transit Administration (MTA), county bus systems, and private bus companies that work with **Commuter Connections**.

Compiling existing information and data will allow the TPB to identify the needs and locations for public transportation improvements. Improving the region's public transportation system maintains and increases transit ridership, which is an important congestion management strategy. Public transportation strategies can also be discussed in conjunction with the **Regional Bus Subcommittee**.

Multi-modal Facility/Pedestrian/Bicycle Improvements

The TPB recognizes the benefit the Washington region's many bicycle and pedestrian facilities have on congestion management. Maintaining, updating, and implementing new facilities is important to increase multi-modal usage. The TPB compiles information on existing facilities and explores additional multi-modal improvements in our region.

- The ***Bicycle and Pedestrian Plan for the National Capital Region*** includes approximately 350 bicycle and pedestrian facility improvement projects from across the region, including two new bicycle and pedestrian crossings over the Potomac, the addition of locks and bike racks, and improvements to enhance the safety of pedestrians and cyclists.
- Carsharing/short-term car rental programs are beneficial to congestion management in that they provide a convenient and cost-effective mobility option for those that typically do not have a need to own a car.

Growth Management

The TPB recognizes the importance of integrating land use and transportation planning at a regional level, and encourages the provision and availability of a variety of transit and commuting options as the region grows. The TPB views growth management as a beneficial congestion management tool, and analyzes data from the following programs for inclusion in the CMP:

- ***Regional Activity Centers***, help coordinate transportation and land use planning in specific areas in the Washington region experiencing and anticipating growth. Focusing growth in Regional Activity Centers is important to congestion management, where transportation options for those who live and work there can be provided.
- ***Transportation-Land Use Connection (TLC) Program***, providing support and assistance to local governments in the Washington region as they implement their own strategies to improve coordination between transportation and land use.
- ***Live Near Your Work***, striving to bridge the gap between work and home. The TPB's ***2006 Regional Mobility and Accessibility Study*** concludes that locating jobs and housing closer together can provide alternative commuting options that may not have been options otherwise.

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 Congestion Management Program - Operational Management Strategies

OPERATIONAL MANAGEMENT STRATEGIES

The TPB's CMP effort focuses on defining the existing operational management strategies that contribute to the more effective use and improved safety of existing and future transportation systems. The TPB is committed to a number of ongoing operational management strategies, such as:

Incident Management/Non-Recurring Congestion Strategies

According to the Federal Highway Administration, an estimated 50% of congestion is associated with incidents such as crashes, disabled vehicles, and traffic associated with special events. The TPB minimizes the impact these events have on the transportation network and traveler safety. If an incident disrupts traffic, it is important for congestion that normal flow resumes quickly. The TPB compiles and analyzes data associated with these incident management programs.

- **DDOT's emergency incident plan** provides information on many incident management areas, including updating and protecting communication network, deployment of evacuation dynamic message signs, emergency public address system, evacuation plans, and deployment of CCTV cameras.
- **Maryland's Coordinated Highways Action Response Team (CHART) program** provides TPB with information such as distribution of incidents and disabled vehicles by location; number and type of incidents responded to; reduction in secondary incidents; percent of incidents occurring on weekdays versus weekends; and roadway segments with highest number of incidents.
- **VDOT's Smart Traffic Control Center in Northern Virginia** collects data from loop detectors and pavement sensors embedded in the roadways to prompt an automatic incident detection system which alerts the traffic control center when there is an accident, complete with speed and occupancy data. In addition, VDOT alerts drivers of unexpected conditions with variable message signs and an AM radio station, such as for the Springfield Interchange and Woodrow Wilson Bridge projects.
- **The Metropolitan Area Transportation Operations Coordination (MATOC) program**, comprised of DDOT, MDOT, VDOT, and WMATA, is a regional program to enhance the availability of real-time transportation information and strengthen coordination among transportation agencies.

ITS Technologies and Systems Management

The TPB works with the region's jurisdictions and local transportation agencies to implement these ITS technologies, from which the TPB compiles and analyzes operational management data.

- **Advanced Traffic Signal Systems** apply computer and communications technologies to the operations of traffic signals in order to maximize safety and efficiency. Components of such systems include interconnection of groups of signals to facilitate timing and coordination among them, and countdown signals for pedestrians to bolster safety and walkability.
- **Electronic Payment Systems** use cards or transponders carried by the user that electronically communicate with devices maintained by a transportation agency to conduct and record payment transactions. Examples include WMATA's SmarTrip card, for uses on bus, rail, and WMATA parking lots, as well as the E-Z Pass toll system.
- **Service Patrols** involve specialized trucks or vans traveling the highways and rendering assistance where needed, such as pushing disabled vehicles off the road, providing gasoline, or changing tires. DDOT, MDOT, and VDOT all implement service patrols on roadways. Also, Montgomery County is the first local jurisdiction in the area to have patrols (since 2006), primarily on arterials.
- **Advanced Traveler Information Systems (ATIS)** are technology-based means of compiling and disseminating transportation system information on a real-time or near-real-time basis prior to or during tripmaking. Examples include the Virginia 511 system.
- **Transit Information Systems** provide information to riders after their trips have started,

including arrival and departure times, information on transfers and connections, and related services like park and ride availability. Metrorail implements passenger information on platform displays, on the web, and via mobile phone.

Capacity Increases (Where Necessary)

Federal law and regulations list capacity increases as another possible component of operational management strategies, for consideration in cases of:

- **Elimination of bottlenecks**, where a modest increase of capacity at a critical chokepoint can relieve congestion affecting a facility or facilities well beyond the chokepoint location. Widening the ramp from I-495 Capital Beltway Outer Loop to westbound VA 267 (Dulles Toll Road) relieved miles of regularly occurring backups on the Beltway and across the American Legion Bridge .
- **Safety improvements**, where safety issues may be worsening congestion, such as at high-crash locations, mitigating the safety issues may help alleviate congestion associated with those locations.
- **Traffic operational improvements**, including adding or lengthening left turn, right turn, or merge lanes or reconfiguring the engineering design of intersections to aid traffic flow while maintaining safety.

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congestion in the region, and helps set the stage for agencies to implement CMP strategies, including those integrated into capacity-increasing roadway projects.

Considering the Impacts of Implemented CMP Strategies

Each strategy is assessed in the post-implementation phase. This determines the success each strategy has at reducing congestion. Considering the impacts and results becomes especially important when updating the CMP and considering adding new strategies to the process.

Considering CMP Components of Major Projects

For planned (CLRP) or programmed (TIP) projects, the locations of planned or programmed improvements on freeways are able to be noted with the locations of congestion. The level of correlation is shown between projects and congestion. This helps guide decision makers as to prioritize areas for current and future projects.

For the 2007 CLRP, the correlation between congested locations as shown in the CMP and planned or programmed projects was high. Most planned or programmed projects were in locations where significant congestion is being experienced.

Future Outlook for Maintaining and Enhancing the CMP

The CMP is to be a living document, and an ongoing and developing process. Congestion information will be updated as it becomes available. The process itself will be updated as is determined to be necessary. Addressing congestion and meeting regional goals is an integral part of the TPB's metropolitan planning process. As the Washington region continues to grow, congestion management will remain a primary goal of the TPB.

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Federal Register

Wednesday,
February 14, 2007

Part III

Department of Transportation

Federal Highway Administration
23 CFR Parts 450 and 500

Federal Transit Administration
49 CFR Part 613

**Statewide Transportation Planning;
Metropolitan Transportation Planning;
Final Rule**

Section 450.320 Congestion Management Process in Transportation Management Areas

The docket included more than 25 documents that contained almost 30 comments on this section with about one-third from State DOTs, one-fifth from national and regional advocacy organizations, half from MPOs and COGs, and the rest from transit operators.

On May 16, 2006, the U.S. Secretary of Transportation announced a national initiative to address congestion related to highway, freight and aviation.¹³ The intent of the "National Strategy to Reduce Congestion on America's Transportation Network" is to provide a blueprint for Federal, State and local officials to tackle congestion. USDOT encourages the States and MPO(s) to seek Urban Partnership Agreements with a handful of communities willing to demonstrate new congestion relief strategies and encourages states to pass legislation giving the private sector a broader opportunity to invest in transportation. It calls for more widespread deployment of new operational technologies and practices that end traffic tie-ups, designates new interstate "corridors of the future,"

¹³ Speaking before the National Retail Federation's annual conference on May 16, 2006, in Washington, DC, former U.S. Transportation Secretary Norman Mineta unveiled a new plan to reduce congestion plaguing America's roads, rails and airports. The National Strategy to Reduce Congestion on America's Transportation Network includes a number of initiatives designed to reduce transportation congestion. The transcript of these remarks is available at the following URL: <http://www.dot.gov/affairs/minetasp051606.htm>.

targets port and border congestion, and expands aviation capacity.

U.S. DOT encourages State DOTs and MPOs to consider and implement strategies, specifically related to highway and transit operations and expansion, freight, transportation pricing, other vehicle-based charges techniques, congestion pricing, electronic toll collection, quick crash removal, etc. The mechanism that the State DOTs and MPOs employ to explore these strategies is within their discretion. The USDOT will focus its resources, funding, staff and technology to cut traffic jams and relieve freight bottlenecks.

A few commenters reiterated that the congestion management process (CMP) should result in multimodal system performance measures and strategies. The FHWA and the FTA note that existing language reflects the multimodal nature of the CMP. Existing language (§ 450.320(a)(2)) specifically allows for the appropriate performance measures for the CMP to be determined cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area.

Most of the comments pointed out that the provisions of § 450.320(e) pertaining to projects that add significant new carrying capacity for Single Occupant Vehicles (SOVs) applies in "Carbon Monoxide (CO) and Ozone Nonattainment TMAs," but does not apply to TMAs in air quality maintenance areas. The FHWA and the FTA agree and have clarified the language in paragraph (e). We also clarified that this provision applies to projects "to be advanced with Federal funds."

Several commenters asked for a clarification regarding what CMP requirements apply in air quality maintenance and attainment areas, as opposed to the requirements in air quality nonattainment areas. The CMP requirements for all TMA areas (attainment, maintenance and nonattainment) are identified in § 450.320(a), § 450.320(b), § 450.320(c), and § 450.320(f). Additional CMP requirements that apply only to nonattainment TMA areas (for ozone and carbon monoxide) are identified in § 450.320(d) and § 450.320(e).

Another commenter asked for clarification regarding the exact requirements for a CMP and how the CMP is integrated with the metropolitan transportation plan. As noted above, the specific CMP requirements for all TMAs, regardless of air quality status, are identified in this section. The CMP

in this section is not described as, nor intended to be, a stand-alone process, but an integral element of the transportation planning process. To reinforce the integration of the CMP and the metropolitan transportation plan, § 450.322(f)(4) requires that the metropolitan transportation plan shall include "consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for carbon monoxide or ozone."

One commenter asked for examples of the reasonable travel demand reduction and operational management strategies as required in § 450.320(e). Examples of such strategies include, but are not limited to: Transportation demand management measures such as car and vanpooling, flexible work hours compressed work weeks and telecommuting; Roadway system operational improvements, such as improved traffic signal coordination, pavement markings and intersection improvements, and incident management programs; Public transit system capital and operational improvements; Access management program; New or improved sidewalks and designated bicycle lanes; and Land use policies/regulations to encourage more efficient patterns of commercial or residential development in defined growth areas.

23 CFR Part 500*Section 500.109 Congestion Management Systems*

Few docket documents specifically referenced this section. However, the docket included more than 25 documents that contained almost 30 comments on § 450.320 (Congestion management process in transportation management areas) which is relevant to this section.

As was mentioned, on May 16, 2006, the U.S. Secretary of Transportation announced a national initiative to address congestion related to highway, freight and aviation. The intent of the "National Strategy to Reduce Congestion on America's Transportation

Network" is to provide a blueprint for Federal, State and local officials to tackle congestion. The States and MPO(s) are encouraged to seek Urban Partnership Agreements with a handful of communities willing to demonstrate new congestion relief strategies and encourages States to pass legislation giving the private sector a broader opportunity to invest in transportation. It calls for more widespread deployment of new operational technologies and practices that end traffic tie ups, designates new interstate "corridors of the future," targets port and border congestion, and expands aviation capacity.

U.S. DOT encourages the State DOTs and MPOs to consider and implement strategies, specifically related to highway and transit operations and expansion, freight, transportation pricing, other vehicle-based charges techniques, etc. The mechanism that the State DOTs and MPOs employ to explore these strategies is within their discretion. The U.S. DOT will focus its resources, funding, staff and technology to cut traffic jams and relieve freight bottlenecks.

A few comments were received reiterating that the CMP should result in multimodal system performance measures and strategies. The FHWA and the FTA note that existing language reflects the multimodal nature of the CMP. Specifically, § 450.320(a)(2) allows for the appropriate performance measures for the CMP to be determined cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area.

Several commenters asked for a clarification with regards to what CMP requirements apply in air quality attainment areas, as opposed to the requirements in air quality nonattainment areas. The CMP requirements for all TMA areas (attainment and nonattainment) are identified in §§ 450.320(a), 450.320(b), 450.320(c), and 450.320(f). Additional CMP requirements that apply only to nonattainment TMA areas (for CO and ozone) are identified in § 450.320(d) and § 450.320(e).

Congestion management process means a systematic approach required in transportation management areas (TMAs) that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C., and title 49 U.S.C., through the use of operational management strategies.

Consideration means that one or more

acceptable by State and local transportation officials may vary by type of transportation facility, geographic location (metropolitan area or subarea), and/or time of day. In addition, consideration should be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity and safety of those lanes.

(c) The congestion management process shall be developed, established, and implemented as part of the metropolitan transportation planning process that includes coordination with transportation system management and operations activities. The congestion management process shall include:

(1) Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the effectiveness of implemented actions;

(2) Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures should be tailored to the specific needs of the area and established cooperatively by the State(s), affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;

(3) Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area;

CONGESTION MANAGEMENT

§ 450.320 Congestion management process in transportation management areas.

(a) The transportation planning process in a TMA shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction and operational management strategies.

(b) The development of a congestion management process should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the TIP. The level of system performance deemed

(4) Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, are some examples of what should be appropriately considered for each area:

- (i) Demand management measures, including growth management and congestion pricing;
- (ii) Traffic operational improvements;
- (iii) Public transportation improvements;
- (iv) ITS technologies as related to the regional ITS architecture; and
- (v) Where necessary, additional system capacity;

(5) Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and

(6) Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decisionmakers and the public to provide guidance on selection of effective strategies for future implementation.

(d) In a TMA designated as nonattainment area for ozone or carbon monoxide pursuant to the Clean Air Act, Federal funds may not be programmed for any project that will result in a significant increase in the carrying capacity for SOVs (i.e., a new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks), unless the project is addressed through a congestion management process meeting the requirements of this section.

(e) In TMAs designated as nonattainment for ozone or carbon monoxide, the congestion management process shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs (as described in paragraph (d) of this section) is proposed to be advanced with Federal funds. If the analysis demonstrates that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor and

additional SOV capacity is warranted, then the congestion management process shall identify all reasonable strategies to manage the SOV facility safely and effectively (or to facilitate its management in the future). Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself, shall also be identified through the congestion management process. All identified reasonable travel demand reduction and operational management strategies shall be incorporated into the SOV project or committed to by the State and MPO for implementation.

(f) State laws, rules, or regulations pertaining to congestion management systems or programs may constitute the congestion management process, if the FHWA and the FTA find that the State laws, rules, or regulations are consistent with, and fulfill the intent of, the purposes of 23 U.S.C. 134 and 49 U.S.C. 5303.

§ 450.322 Development and content of the metropolitan transportation plan.

(a) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In nonattainment and maintenance areas, the effective date of the transportation plan shall be the date of a conformity determination issued by the FHWA and the FTA. In attainment areas, the effective date of the transportation plan shall be its date of adoption by the MPO.

(b) The transportation plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.

(c) The MPO shall review and update the transportation plan at least every four years in air quality nonattainment and maintenance areas and at least every five years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon. In addition, the MPO may revise the transportation plan at any time using the procedures in this section without a requirement to extend the horizon year. The transportation plan (and any revisions) shall be approved by the MPO and submitted for information purposes to the Governor.

Copies of any updated or revised transportation plans must be provided to the FHWA and the FTA.

(d) In metropolitan areas that are in nonattainment for ozone or carbon monoxide, the MPO shall coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP).

(e) The MPO, the State(s), and the public transportation operator(s) shall validate data utilized in preparing other existing modal plans for providing input to the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.

(f) The metropolitan transportation plan shall, at a minimum, include:

(1) The projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan;

(2) Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan. In addition, the locally preferred alternative selected from an Alternatives Analysis under the FTA's Capital Investment Grant program (49 U.S.C. 5309 and 49 CFR part 611) needs to be adopted as part of the metropolitan transportation plan as a condition for funding under 49 U.S.C. 5309;

(3) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods;

(4) Consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are nonattainment for ozone or carbon monoxide;

(5) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation

movement of people and goods in a region. A congestion management system or process is a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system operations and performance and assesses alternative strategies for congestion management that meet State and local needs.

(b) The development of a congestion management system or process should result in performance measures and strategies that can be integrated into transportation plans and programs. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea and/or non-metropolitan area), and/or time of day. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity of those lanes.

PART 500—MANAGEMENT AND MONITORING SYSTEMS

- 2. Revise the authority citation for part 500 to read as follows:

Authority: 23 U.S.C. 134, 135, 303, and 315; 49 U.S.C. 5303–5305; 23 CFR 1.32; and 49 CFR 1.48 and 1.51.

- 3. Revise § 500.109 to read as follows:

§ 500.109 CMS.

(a) For purposes of this part, congestion means the level at which transportation system performance is unacceptable due to excessive travel times and delays. Congestion management means the application of strategies to improve system performance and reliability by reducing the adverse impacts of congestion on the