MARC Congestion Management Process Policy

Adopted by the MARC Board of Directors on _____

12-11-2023 DRAFT FOR TTPC AND BOARD APPROVALS

1. PURPOSE AND SCOPE

In accordance with federal transportation legislation (23 CFR 450.320), the transportation planning process in the Kansas City Transportation Management Area (TMA)[1] addresses 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. The development of the congestion management process results in multimodal system performance measures and strategies that are reflected in the metropolitan transportation plan and TIP.

This Congestion Management Process (CMP) Policy supports the goal in the region's current Metropolitan Transportation Plan (MTP), Connected KC 2050, to maintain a multimodal transportation system that supports the efficient movement of people and goods and promotes economic development. A well-maintained system provides consistent and reliable travel times for commuters as well as freight traveling to and through the region as reliable schedules are critical for goods movement.

The primary participants of the CMP, and the intended audience for this policy, includes the Federal Highway Administration (FHWA), state DOTs, agencies/project sponsors, and MARC staff. Sections 2 through 5 of this policy include background information and key terms related to the CMP, the steps of the MARC CMP, required analyses for projects that add SOV capacity, exemptions to the SOV capacity analysis, and the CMP review and update process. The last section of this policy describes how the MARC CMP is integrated with the region's MTP, TIP, and corridor studies.

2. BACKGROUND AND KEY TERMS

Based on the 2021 Highway Statistics compiled by FHWA[2], the Kansas City urbanized area has the highest ratio of freeway miles to population compared to all urbanized areas with population over 500,000 in the United States. This level of existing capacity contributes to the relatively low levels of traffic congestion the Kansas City region experiences compared to areas of similar population and economic activity. Despite these low levels of congestion, traffic monitoring services such as KC Scout and Operation Green Light (OGL) indicate that some areas do experience peak period congestion, most often during rush hour, in certain locations throughout the region.

[1] The Kansas City metropolitan area is classified as a TMA because its population is greater than 200,000.

[2] FHWA Office of Highway Policy Information, "Highway Statistics 2021," Highway Statistics Series Publications, 2021, accessed September 2023, https://www.fhwa.dot.gov/policyinformation/statistics/2021/

Under current federal policy, Transportation Management Areas (TMAs) that are in non-attainment for ozone or carbon monoxide (CO) standards, federal funds may not be advanced for any new project that will significantly increase the carrying capacity for single-occupant vehicles (SOVs) other than projects that address bottlenecks or safety needs unless the project results from a CMP. While the region is currently in attainment, area design values for ground level ozone are very close to the current National Ambient Air Quality Standards (NAAQS) and therefore the risk remains of becoming a non-attainment area in the future.

The following terms and concepts pertain to this policy:

Congestion:

In the transportation industry, congestion can be generally defined as a condition where the volume of users or vehicles on a transportation facility approaches or exceeds the capacity of that facility (i.e., volume-to-capacity ratio). A higher volume-to-capacity ratio is often associated with lower levels of service. Congestion is characterized by reduced travel speeds ,as compared to conditions under higher levels of service, and increased travel times and delay which can lead to uncertainty, frustration, discomfort and dissatisfaction of transportation system users.

However, one of the key principles promoted by FHWA is that the measures used to track congestion should be based on the travel time experienced by users of the highway system. While FHWA acknowledges that the transportation profession has used many other types of measures to track congestion (such as "level of service"), travel time is a more direct measure of how congestion affects users.

Thus, MARC measures congestion on the Congestion Management Network (CMN) by primarily using the following:

- For recurring congestion, MARC uses the Travel Time Index (TTI), the ratio of the average travel time to the free-flow travel time of a roadway segment. If a roadway segment has a TTI of 1.50, it takes 50 percent more time to travel across that segment than it would in free-flow traffic.
- For non-recurring congestion, MARC uses the Planning Time Index (PTI), the ratio of the 95th percentile travel time to the free-flow travel time for a roadway segment. This means, for a PTI of 2.00, a motorist should plan on scheduling twice the free-flow travel time to cross the segment to arrive on time.

MARC uses additional travel time measures (i.e., Level of Travel Time Reliability (LOTTR) and the Truck Travel Time Reliability (TTTR) Index) to measure congestion and system reliability on the National Highway System in accordance with federal requirements. The National Highway System is a component of the Congestion Management Network.

Single-Occupant Vehicle Capacity Project:

For the Kansas City TMA, a project that adds significant SOV capacity is currently defined as adding one or more through travel lanes, turn lanes or auxiliary lanes for a continuous distance of one-half mile or more on a facility classified as minor

collector or higher on the FHWA functional classification system. (Some of these projects are exempt from undergoing an SOV capacity analysis. See Section 4.1)

Auxiliary Lane:

The portion of the roadway adjoining the traveled way for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic movement.

Traffic Bottleneck:

FHWA defines a traffic bottleneck as a localized section of highway that experiences reduced speeds and inherent delays due to a recurring operational influence or a nonrecurring impacting event.

The intended outcome of this policy is not to eradicate congestion, but to manage congestion levels within the Kansas City TMA to minimize direct adverse impacts of congestion (e.g., reduced travel speeds, increased travel times and delay) as well as secondary impacts. Some secondary impacts of congestion include decreased productivity and increased greenhouse gas emissions.

However, to support additional goals of the MTP, such as providing a range of transportation options and prioritizing investments that reduce pollution and greenhouse gas emissions, the region should focus on addressing recurring and non-recurring congestion using a wide range of strategies before adding lanes for single-occupant vehicle use.

3. MARC CONGESTION MANAGEMENT PROCESS

The MARC CMP applies to the roadway and highway network within the Kansas City TMA. The CMP is a systematic way of monitoring, measuring and diagnosing the causes of current and future congestion on the region's multi-modal transportation system; evaluating and recommending alternative strategies to manage current and future regional congestion; and monitoring and evaluating the performance of strategies implemented to manage congestion.

The FHWA and FTA Guidebook, *Advancing Metropolitan Planning for Operations,* outlines an 8-step framework for the development of a CMP.

1. Develop Congestion Management Objectives
2. Identify Area of Application
3. Define System/Network of Interest
4. Develop Performance Measures
5. Institute System Performance Monitoring Plan
6. Identify and Evaluate Strategies
7. Implement Selected Strategies and Manage Transportation System
8. Monitor Strategy Effectiveness

In accordance with this guidance MARC has developed a cyclical eight-step approach within this policy, shown in **Figure 1** and detailed in **Table 1**. To advance steps 1 through 6 and step

8, MARC staff works in coordination with state DOTs, local jurisdictions and agencies, MARC committees, stakeholders and/or the public. Step 7, Implement Selected Strategies and Manage Transportation System, also involves project sponsors seeking federal funding in the Kansas City TMA.

Figure 1: 8-Step Congestion Management Process

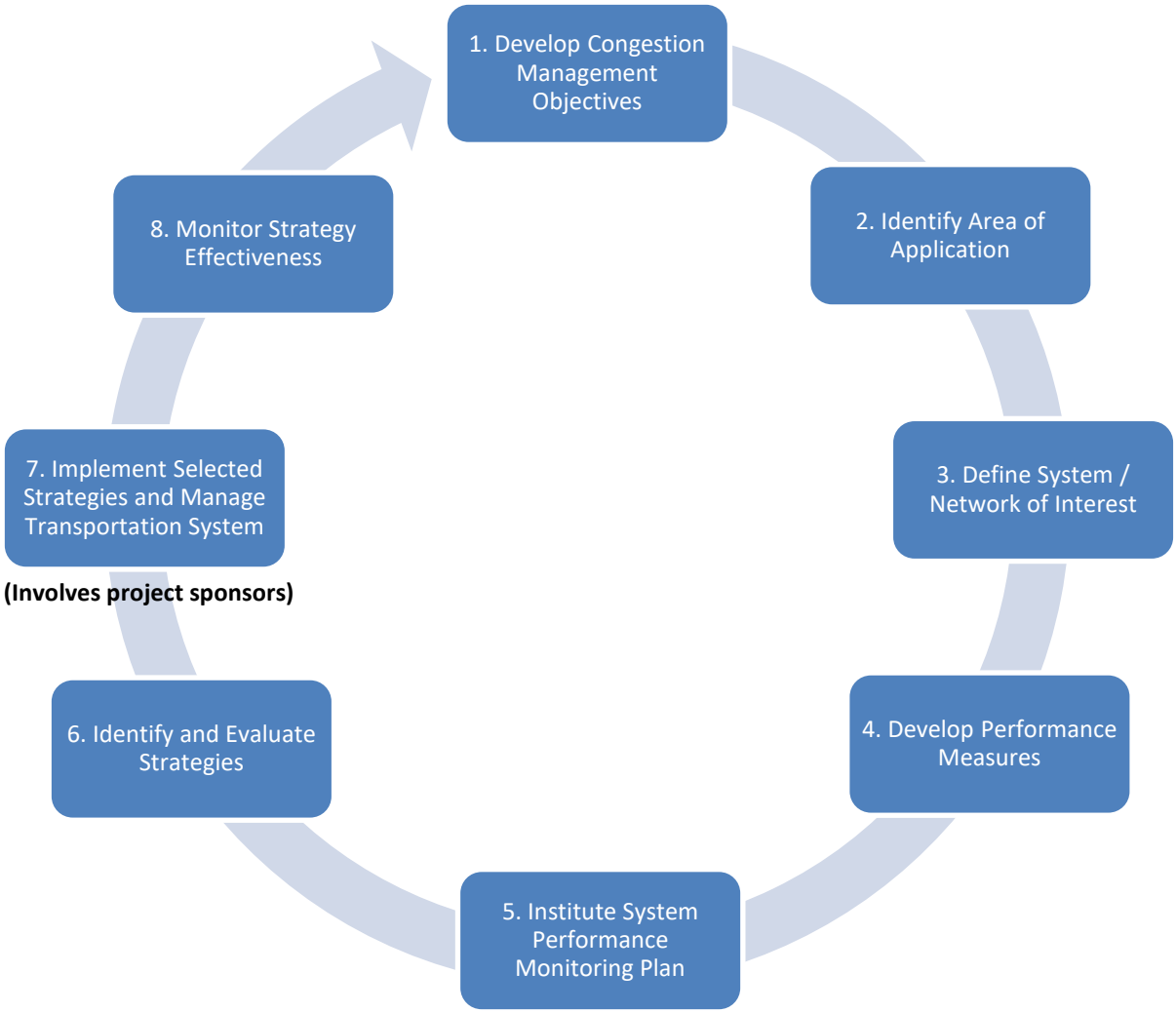


Table 1: 8-Step Congestion Management Process

Step	Description	Involved Agencies
1	*Develop Congestion Management Objectives* The CMP is an objectives-driven, performance-based approach to managing congestion. The development of congestion management objectives allows stakeholders to focus on specific aspects of congestion and provides a way to measure the effectiveness of congestion management strategies. The region's MTP includes specific system performance and congestion performance measures and associated strategies in addition to a broader range of regional transportation objectives. Each objective is supported with specific transportation system performance measures which establish a desired trend for each measure over the timeframe of the plan. As congestion management objectives and measures are developed and refined in future updates to the MTP, the CMP will reflect those changes.	MARC staff in coordination with local jurisdictions, MARC committees, stakeholders and the public through the development of the MTP
2	*Identify Area of Application* The CMP applies to the geographic area defined by the MARC Metropolitan Planning Area (MPA) boundary, including the counties of Johnson, Leavenworth, Miami and Wyandotte in Kansas, and Cass, Clay, Jackson and Platte in Missouri. This area corresponds to the area covered by the Kansas City Regional ITS Architecture and the MARC regional travel demand model.	MARC staff
3	*Define System/Network of Interest* For the purposes of data collection and system monitoring, MARC has identified a subset of the regional street and highway network as the Congestion Management Network (CMN). These facilities include: • All National Highway System routes; • All routes with average daily mid-block traffic volumes of 25,000 or more for segments of 2 miles or more in length; and • All routes with high levels[3] of transit service. MARC will maintain a map of the CMN, which will be reviewed and updated as necessary at least every five years with the development of the MTP.	MARC staff in coordination with state DOTs and local transit agencies
4	*Develop Performance Measures* System performance measures used for the CMP are derived from requirements outlined in federal planning rules and support the congestion management objectives established in the MTP. These measures allow MARC to identify the location, duration, extent, and causes of recurring and non-recurring congestion. Through the CMP, congestion related performance measures will be tracked over time, allowing MARC to	MARC staff in coordination with state DOTs, local transit agencies, and MARC transportation committees, and with local jurisdictions,

[3] The level of transit service depends on such factors as ridership and frequency and hours of service. MARC will consult with transit providers in the region to ensure that appropriate transit routes are considered when designating and updating the congestion management network.

Step	Description	Involved Agencies
	monitor progress towards meeting the congestion management objectives. Additional details about performance measures are provided in the MTP document.	stakeholders and public through the development of the MTP
5	*Institute System Performance Monitoring Plan* The MARC CMP currently incorporates the following data collection and system monitoring activities for the CMN. • MARC will analyze and report relevant transportation performance measures-related data collected from the U.S. Census Bureau's Decennial Census and American Community Survey (ACS). • Observed traffic volumes are collected by the State Departments of Transportation and several local units of government on an annual basis. MARC will update and analyze traffic volume data on the CMN annually, or as often as the data are made available. • A variety of data will be used by MARC to calculate congestion related performance measures. MARC will conduct a regional travel time study at least every 4 years. Speed data is continually collected on the KC Scout system and is made available to MARC for analysis. • Incident clearance time data for crashes is collected by Kansas City Scout (on the Scout system) and law enforcement agencies. MARC will incorporate the annual average incident clearance times for crashes occurring on the KC Scout system within its travel time studies as that data is made available. • Crash data are collected and reported by the State Departments of Transportation. MARC will update crash data on the CMN annually. • MARC will develop, apply, and maintain the regional travel demand model. The model outputs will allow MARC to forecast system performance measures on the CMN. The model network will be updated in advance of each MTP update. • Transit ridership and bus route performance data are collected by two local transit agencies (KCATA and Johnson County Transit), as well as the National Transit Database. MARC will obtain and analyze transit performance data from these sources. • MARC periodically surveys registered users of WAY TO GO (previously Regional Rideshare program and RideshareKC) to estimate participation levels and associated benefits to the transportation system. MARC will compile and report this data as part of its travel time studies, based on the availability of data. The information and data collected through the system performance monitoring plan will be compiled and analyzed in advance of regular sub-allocated calls for projects, based on the availability of data. As new, additional sources and types of data become available, MARC will incorporate them into its system performance monitoring plan.	MARC staff in coordination with state DOTs, Kansas City Scout, local transit agencies, WAY TO GO, and MARC transportation committees

Step	Description	Involved Agencies
	The Performance Measures and Congestion Management Reports will identify the location, duration, extent, and causes of congestion on the CMN, and will summarize the various performance measures used by the CMP.	
6	*Identify and Evaluate Strategies* The information and data contained in the Performance Measurement Report will be used to identify appropriate congestion management strategies for the MARC region. The identification and selection of strategies for a particular segment or corridor should be tailored to the specific cause or causes of congestion. MARC will work collaboratively with its transportation planning partners to identify and advance appropriate strategies for managing congestion. The MARC CMP provides information about a wide range of congestion management strategies applicable to the Kansas City region. These strategies are detailed in the CMP Toolbox. The intent of the CMP Toolbox is to provide a reference for the development of alternative strategies for consideration in corridor studies and NEPA documents, which may be conducted and developed within the context of the Kansas City metropolitan transportation planning process. Congestion reduction strategies will be evaluated for the purposes of developing the MTP, TIP, NEPA documents, and corridor studies. Evaluation of implemented CMP strategies may be conducted as "before and after" studies for individual projects, through modeling exercises or through literature reviews of the benefits and costs of project types, as appropriate. These evaluations may be conducted by MARC or by individual project sponsors. However, at a minimum, the network for the regional travel demand forecasting model will be updated in advance of each MTP update, to incorporate implemented CMP strategies involving highway or fixed guideway transit capacity into the existing network.	MARC staff in coordination with MARC transportation committees
7	*Implement Selected Strategies and Manage Transportation System* Information developed through the CMP will be applied to establish priorities for the MARC transportation planning products, thereby facilitating the implementation of the CMP. During the development of the MTP and TIP, congestion management objectives and performance measures will be used to rank and select strategies. For the purpose of scoring project applications for both the MTP and TIP, MARC awards points to projects that: • Facilitate alternative modes of transportation • Implement strategies from the CMP Toolbox • Address congested segments on the CMN • Support adopted local land use objectives that align with the regional strategy in the MTP to focus	MARC staff in coordination with: • Project sponsors for projects seeking federal funding within the Kansas City TMA • State DOTs

Step	Description	Involved Agencies
	energy on key activity centers and corridors The TIP and Annual Listing of Projects will allow MARC to track implementation of congestion management strategies at the system-wide level. Projects that add SOV capacity to roadway segments that have not been identified through the system monitoring plan described above and otherwise do not demonstrate congestion through independent studies are not considered aligned with this policy. *(See Section 5, Single Occupant Vehicle Capacity Projects below)*	
8	*Monitor Strategy Effectiveness* The CMP is an iterative process, and MARC will work closely with operating agencies to monitor the effectiveness of congestion reduction strategies implemented in the Kansas City region. Data collected through the System Performance Monitoring Plan (see Step 5 above), as well as data reported by operating agencies such as KC SCOUT and the State DOTs will provide performance measures that can be used to evaluate the effectiveness of implemented strategies. This information will be incorporated into the Performance Measures Report and Congestion Management Report that will be prepared by MARC on a regular basis, providing feedback that will be used to update and refine the CMP. Information on the effectiveness of congestion management strategies over time will also inform revisions and updates to the CMP Toolbox. As strategies are implemented and monitored, the benefits or impacts to congestion will be incorporated into the Toolbox to inform the selection and prioritization of future strategies.	MARC staff in coordination with MARC transportation committees

4. SINGLE OCCUPANT VEHICLE (SOV) CAPACITY PROJECTS

This section of the Congestion Management Process Policy focuses on an element within Step 7 of the Congestion Management Process, *Implement Selected Strategies and Manage Transportation System*, that applies to project sponsors. Projects that add SOV capacity to roadway segments that have not been identified through the system monitoring plan and otherwise do not demonstrate ***current or reasonably anticipated*** congestion through independent studies ***or do not include complementary strategies or other provisions to maintain acceptable performance of new SOV capacity over time*** are not considered aligned with this policy.

In TMAs designated as nonattainment areas 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 single-occupant vehicles (SOVs), unless the project is addressed through a CMP. While the Kansas City region is not currently designated as a nonattainment area, it is prudent to identify projects that may be subject to these provisions should this status change in the future. For the CMP, the definition of a regionally significant capacity project is consistent with the definition used for the purposes of air quality conformity analysis and should remain consistent with that definition over time. For the MARC TMA, a project that adds significant SOV capacity is currently defined as adding one or more through travel lanes, turn lanes or auxiliary lanes for a distance of one-half mile or more on a facility classified as minor collector or higher on the FHWA functional classification system.

In the MARC TMA, in order to justify the addition of SOV capacity for a project seeking federal funds, a project sponsor shall conduct and document a congestion mitigation analysis during the planning stage of project development showing that additional SOV capacity is necessary to manage congestion, as detailed below:

1. Sponsors should refer to *MARC's Transportation Congestion and Reliability in Kansas City* report on the MARC Congestion Management webpage as a resource to determine if existing congestion/unreliability has been identified as an area of concern along the project corridor. Alternatively, a project sponsor may provide a study which documents that congestion/system unreliability (as defined in MARC's report) is occurring or anticipated to occur given development or related transportation projects recently completed or under construction.
2. The analysis should include consideration of non-capacity strategies such as travel demand management (TDM) and transportation system management (TSM). Furthermore, the documentation must indicate how the capacity project includes management and operations strategies.
3. If the analysis demonstrates that travel demand reduction and operational management strategies alone cannot provide an acceptable level of mobility and additional SOV capacity is warranted, then the CMP shall identify all reasonable strategies to manage the facility safely and effectively. An acceptable level of mobility is defined by the project sponsor based on agency standards and practices.
4. All identified reasonable travel demand reduction and operational management strategies must be incorporated into the SOV capacity project or committed to by the project sponsor for implementation.

5. MARC will include a report that documents and summarizes the congestion mitigation analyses with MTP and TIP planning documents.

If the project proposes to add SOV capacity and is seeking federal funds, project sponsors shall coordinate with MARC staff to provide required information consistent with questions on the SOV Capacity Analysis Worksheet (**Appendix A**).

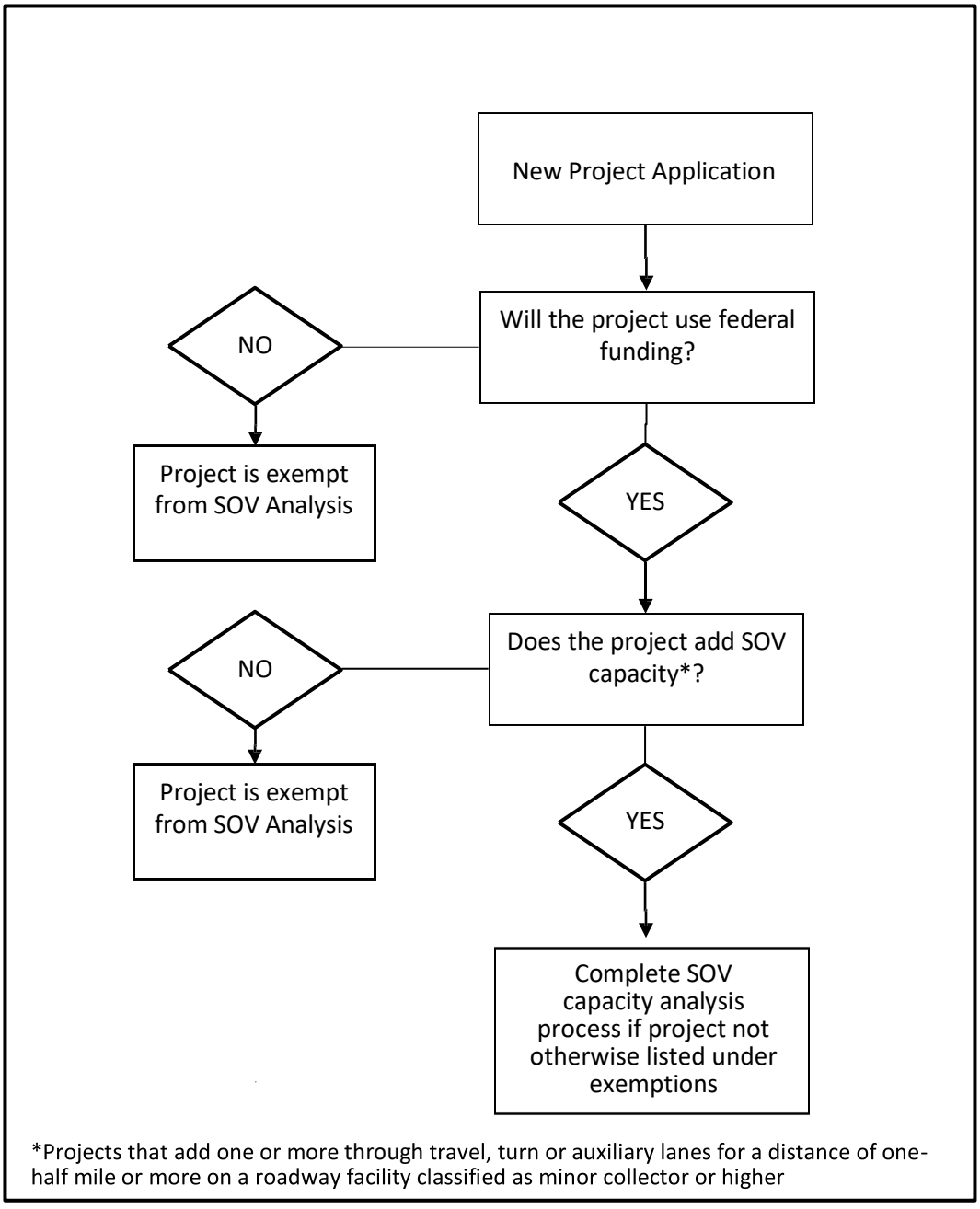
4.1 PROJECTS EXEMPT FROM THE SOV CAPACITY ANALYSIS

The following projects are exempt from completing the SOV capacity analysis:

- Projects that will not use federal funding.
- Projects that do not add SOV capacity (i.e., bike lanes and transit priority lanes) and are intended to improve mobility for non-single occupant vehicle users.
- Projects that add SOV capacity, but are otherwise exempt as they would:
    - Address identified traffic bottlenecks on the Congestion Management Network.
    - Add turn lanes, auxiliary lanes, or similar improvements to address ***a specific*** safety need that aligns with strategies within the MARC 2022-2027 Transportation Safety Plan. To be considered exempt, project sponsors must document how the addition of turn lanes or auxiliary lanes would increase safety. It is MARC's expectation that these projects will also comply with the regional Complete Streets Policy.

The flowchart in **Figure 2** describes the screening process MARC will use to determine which projects must be addressed by the CMP.

Figure 2. MARC CMP SOV Analysis Screening Process



5. CMP REVIEW AND UPDATE PROCESS

All elements of the MARC CMP will be reviewed and updated periodically to reflect changes to the region's transportation goals and objectives and transportation system.

At a minimum:

- Congestion management objectives will be reviewed and revised as necessary in coordination with updates to the Metropolitan Transportation Plan;
- The CMN will be reviewed and updated as necessary every five years, with the development of the MTP. Changes to the CMN will be approved by the MARC Highway Committee;
- Travel time data will be collected and analyzed every four years by MARC, in advance of each update to the MTP;
- CMN performance will be updated and analyzed on a cycle consistent with the availability of current, supporting data.
- A Performance Measurement Report will be updated and published regularly by MARC, based on available data.
- The regional travel demand forecasting model network will be updated in advance of each update to the MTP;
- Observed traffic volumes will be incorporated into the transportation database as they are made available to MARC;
- In collaboration with the MARC Highway Committee the CMP Toolbox will be reviewed and updated by MARC at least every four years;
- Policies and procedures governing the CMP will be reviewed and revised as necessary to address changes to regional transportation goals and/or federal rules and requirements; and
- These and other elements of the CMP may be reviewed and updated on a case-by-case basis in consultation with the MARC Highway Committee.

6. INTEGRATION WITH METROPOLITAN TRANSPORTATION PLANNING

The MARC CMP, as described in Sections 1 through 5, is one component of the metropolitan planning process. It is integrated with the MTP, Transportation Improvement Program (TIP) and corridor studies, including those being conducted in accordance with the National Environmental Policy Act (NEPA), through its data and analysis functions as well as through the CMP Toolbox. These relationships are summarized below.

Relationship to the Metropolitan Transportation Plan (MTP)

The MARC CMP is related to the regional MTP in four ways:

- The MTP provides a set of congestion management related strategies and performance measures that are applied through the CMP;
- The MTP development process includes an evaluation and prioritization of transportation projects and strategies structured around advancing these identified CMP objectives and measures;
- The MTP provides system performance information in support of the CMP which is used by MARC and its planning partners to identify corridors or segments for detailed analysis in corridor or other special studies, as recommended by the MTP; and

- The CMP Toolbox provides alternative congestion management strategies for consideration in corridor and other studies, which ultimately are reflected in project design and are incorporated into the MTP's fiscally constrained project listing.

Relationship to the Transportation Improvement Program (TIP)

The MARC CMP is related to the development of the regional Transportation Improvement Program in four ways:

- The CMP provides system performance information for use by MARC in evaluating projects nominated for inclusion in the TIP;
- The CMP provides system performance information for project sponsors, which may influence their recommended projects for incorporation in the TIP;
- The CMP provides information about alternative congestion management strategies considered for SOV capacity projects to be advanced using federal funds; and
- The CMP objectives are integrated with the application scoring process used to select and prioritize projects in the TIP.

Relationship to Corridor Studies

The MARC CMP is related to the development of corridor studies and related NEPA documents in two ways:

- The CMP provides system performance information which is used by MARC to identify corridors or segments for detailed analysis in corridor or NEPA studies; and
- The CMP Toolbox provides alternative congestion management strategies for consideration in corridor studies and related NEPA documents. When traffic congestion is referenced in the Purpose and Need statement for an Environmental Assessment (EA), Environmental Impact Statement (EIS), or Planning and Environmental Linkages (PEL) the EA/EIS/PEL shall consider the congestion management strategies included in the MARC CMP Toolbox as a starting point for the development of alternative strategies. This does not preclude the EA/EIS/PEL from considering other strategies that may not be in the CMP Toolbox, nor does it require that the EA/EIS/PEL select a strategy from the CMP Toolbox as the preferred alternative. However, the EA/EIS/PEL document must include a discussion of how the CMP Toolbox strategies were addressed.

Relationship to the Regional Intelligent Transportation Systems (ITS) Architecture

All ITS strategies implemented from the CMP Toolbox will be consistent with the Regional ITS Architecture. MARC will ensure that both the Regional ITS Architecture and the CMP Toolbox are reviewed for consistency and reconciled as necessary when either is updated.

APPENDIX A
SOV CAPACITY ANALYSIS WORKSHEET

Mid-America Regional Council

Congestion Management Process
Single-Occupant Vehicle (SOV)
Capacity Analysis Worksheet

FOR MARC USE ONLY

LRTP #00000

TIP #00000

Basic Project Information

Primary Sponsor: Click here to enter text.

Project Title: Click here to enter text.

Facility: Click here to enter text.

From: Click here to enter text.

To: Click here to enter text.

Does the project add one or more travel lanes, turn lanes or auxiliary lanes for one-half mile or more on a facility classified as minor collector or higher on the FHWA functional classification system?

☐ YES ☐ NO

Exemptions

The following projects are exempt from completing the SOV capacity analysis:

☐ Projects that address identified bottlenecks on the Congestion Management Network.

☐ Projects that add turn lanes, auxiliary lanes, or similar improvements to address a specific safety need that aligns with strategies within the MARC 2022-2027 Transportation Safety Plan. To be considered exempt, project sponsors must describe how the addition of turn lanes or auxiliary lanes would increase safety. It is MARC's expectation that these projects will also comply with the regional Complete Streets Policy.

If your project falls under one of the above categories, check the appropriate box and complete this Exemptions section of the SOV Capacity Analysis Worksheet ONLY. If your project does not fall under one of the above categories, proceed to the next section, Background Information.

Describe the project and how the addition of turn lanes, auxiliary lanes, or similar improvements would address ***a specific*** safety need that aligns with strategies within the MARC 2022-2027 Transportation Safety Plan. If not applicable, note "N/A."

Click here to enter text.

Describe the project and how the project would address identified bottlenecks on the Congestion Management Network. If not applicable, note "N/A."

Click here to enter text.

If project addresses a specific safety need or an identified bottleneck on the CMN, and the applicant clearly explains how, the remainder of this form is not required. If the project does not fall under one of the above categories, proceed to the next section, Background Information.

Background Information

Is the project/corridor on the Congestion Management Network?

☐ YES ☐ NO

Are one or more segments of the corridor congested/unreliable in MARC's Transportation Congestion and Reliability in Kansas City report?

☐ YES ☐ NO

SOV Capacity Analysis

If the project is not on the Congestion Management Network, or is on the network but is not reported as congested/unreliable, you may provide a study that documents that congestion/system unreliability (as defined in MARC's report) is occurring or anticipated to occur given development or related transportation projects recently completed or under construction. In this case, please provide a study which documents system congestion/unreliability.

Please provide a congestion mitigation analysis demonstrating that additional capacity is necessary to mitigate the congestion specified. This analysis should include information related to the causes and severity of current congestion and reasonable travel demand reduction and operational management strategies for the corridor.

Does analysis include consideration of non-capacity strategies such as travel demand management and transportation system management?

☐ YES ☐ NO

Does analysis demonstrate that travel demand reduction and operational management strategies alone cannot provide an acceptable level of mobility?

☐ YES ☐ NO

Does analysis demonstrate that additional SOV capacity is warranted?

☐ YES ☐ NO

Does the project scope include appropriate travel demand reduction and operational strategies from the Congestion Management Toolbox previously identified through the project's congestion mitigation analysis?

☐ YES ☐ NO ☐ Project is too early in the planning process to have incorporated strategies from the CMP Toolbox. Project sponsor commits to considering strategies from the CMP Toolbox in development of project scope.

Are you committed to implementing these strategies?

☐ YES ☐ NO

What travel demand reduction and operational strategies are in use in the project corridor or will be implemented as part of this project? For each category, please indicate which, if any, strategies from the Congestion Management Toolbox are currently implemented in the project location/corridor and provide a brief description of each strategy. For more information on the Toolbox, visit the MARC Congestion Management Process page.

Select the Access Management Strategies that your plan addresses.

- ☐ Left Turn Restrictions; Curb Cut and Driveway Restrictions
- ☐ Roadway Restrictions
- ☐ Turn Lanes and New or Relocated Driveways and Exit Ramps
- ☐ Access Control to Available Development Sites
- ☐ Interchange Modifications
- ☐ Intersection Turn Lanes
- ☐ Minimum Intersection/Interchange Spacing
- ☐ Roundabout Intersections
- ☐ Frontage Roads and Collector-Distributor Roads
- ☐ New Grade-Separated Intersections

Select the Active Transportation Strategies that your plan addresses.

- ☐ New Pedestrian and Bicycle Facilities
- ☐ Exclusive Non-Motorized Rights-of-Way
- ☐ Improved Bicycle Facilities at Transit Stations and Other Trip Destinations
- ☐ Bike Sharing Programs
- ☐ Design Guidelines for Pedestrian-Oriented Development
- ☐ Promoting Bicycle and Pedestrian Use Through Education and Information Dissemination

☐ Improved Safety of Existing Bicycle and Pedestrian Facilities

☐ Adopting and Implementing a Complete Streets Policy

Select the Highway Strategies that your plan addresses.

☐ Increasing Number of Lanes without Highway Widening

☐ Geometric Design Improvements

☐ HOV Lanes

☐ Super Street Arterials

☐ Highway Widening by Adding Lanes

☐ Acceleration/Deceleration lanes

☐ Hill Climbing Lanes

☐ Grade separated railroad crossings

☐ New Freeways

☐ New Arterial Streets

☐ New Collectors and Local Streets

Select the Land Use Strategies that your plan addresses.

☐ Mixed-Use Development

☐ Infill and Densification

☐ Transit-Oriented Development

☐ Trip Reduction Strategies

☐ Transportation Management Associations

☐ Last-Mile Delivery/Fulfillment Centers

Select the Parking Strategies that your plan addresses.

☐ On-Street Parking and Standing Restrictions

☐ Employer/Landlord Parking Agreements

☐ Preferential or Free Parking for HOVs and Parking Management

☐ Location-Specific Parking Ordinances

☐ Park and Ride Lots

☐ Advanced Parking Systems

☐ Local and Regional Excise Taxes

☐ Parking Facility Management Information Signs

Select the Regulatory Strategies that your plan addresses.

☐ Trip Reduction Ordinance

☐ Congestion Pricing

☐ Auto Restriction Zones (Pedestrian Malls)

☐ Truck Restrictions

☐ Arterial Access Management

☐ Carbon Pricing/Motor Fuel Tax

☐ Emissions-based vehicle registration fees

☐ VMT fee

☐ Traffic Impact Fee

☐ Pay-As-You-Drive (PAYD) Insurance (state level)

Select the TDM Strategies that your plan addresses.

- ☐ Alternative Work Hours
- ☐ Telecommuting
- ☐ Ridesharing
- ☐ Guaranteed Ride Home Policies
- ☐ Alternative Travel Mode Events and Assistance
- ☐ Public Education Campaigns
- ☐ Traditional Toll Roads
- ☐ Non-traditional Toll Roads
- ☐ Car Sharing
- ☐ Alternative Truck Freight Delivery Hours

Select the Transit Strategies that your plan addresses.

- ☐ Reducing Transit Fares
- ☐ Increasing Bus Route Coverage or Frequencies
- ☐ Park-and-Ride Lots
- ☐ Light, Heavy, and Commuter Rail
- ☐ Employer Incentive Programs
- ☐ Electronic Payment Systems and Universal Farecards
- ☐ Realigned Transit Service Schedules and Stop Locations
- ☐ Intelligent Transit Stops
- ☐ Transit intersection Queue Jump Lanes and Signal Priority
- ☐ Enhanced Transit Amenities
- ☐ Dedicated Rights-of-Way for Transit
- ☐ Bus Rapid Transit (BRT)
- ☐ Express Bus Service
- ☐ Local Circulator

Select the Transportation Operations and Management Strategies that your plan addresses.

- ☐ Traffic Signal Coordination and Modernization
- ☐ Reversible Traffic Lanes
- ☐ Freeway Incident Detection and Management Systems
- ☐ Ramp Metering
- ☐ Highway Information Systems
- ☐ Advanced Traveler Information Systems
- ☐ Service Patrols
- ☐ Restricting Turns at Key Intersections
- ☐Converting Streets to One-Way Operations
- ☐ Targeted and Sustained Enforcement of Traffic Regulations
- ☐ Special Events and Work Zone Management
- ☐ Road Weather Management
- ☐ Traffic Surveillance and Control Systems
- ☐ Electronic Toll Collection (ETC)
- ☐ Cordon Area Congestion Fees
- ☐ Roadway Signage Improvements
- ☐ Communications Networks and Roadway Surveillance Coverage
- ☐ Transit Vehicle Travel Information

Describe how each of the selected strategies will address the documented congestion.

Click here to enter text.

Has an Environmental Assessment or Environmental Impact Statement been completed for the project?

☐ YES ☐ NO

Please describe how strategies from the Congestion Management Toolbox were considered in the environmental study.

Click here to enter text.