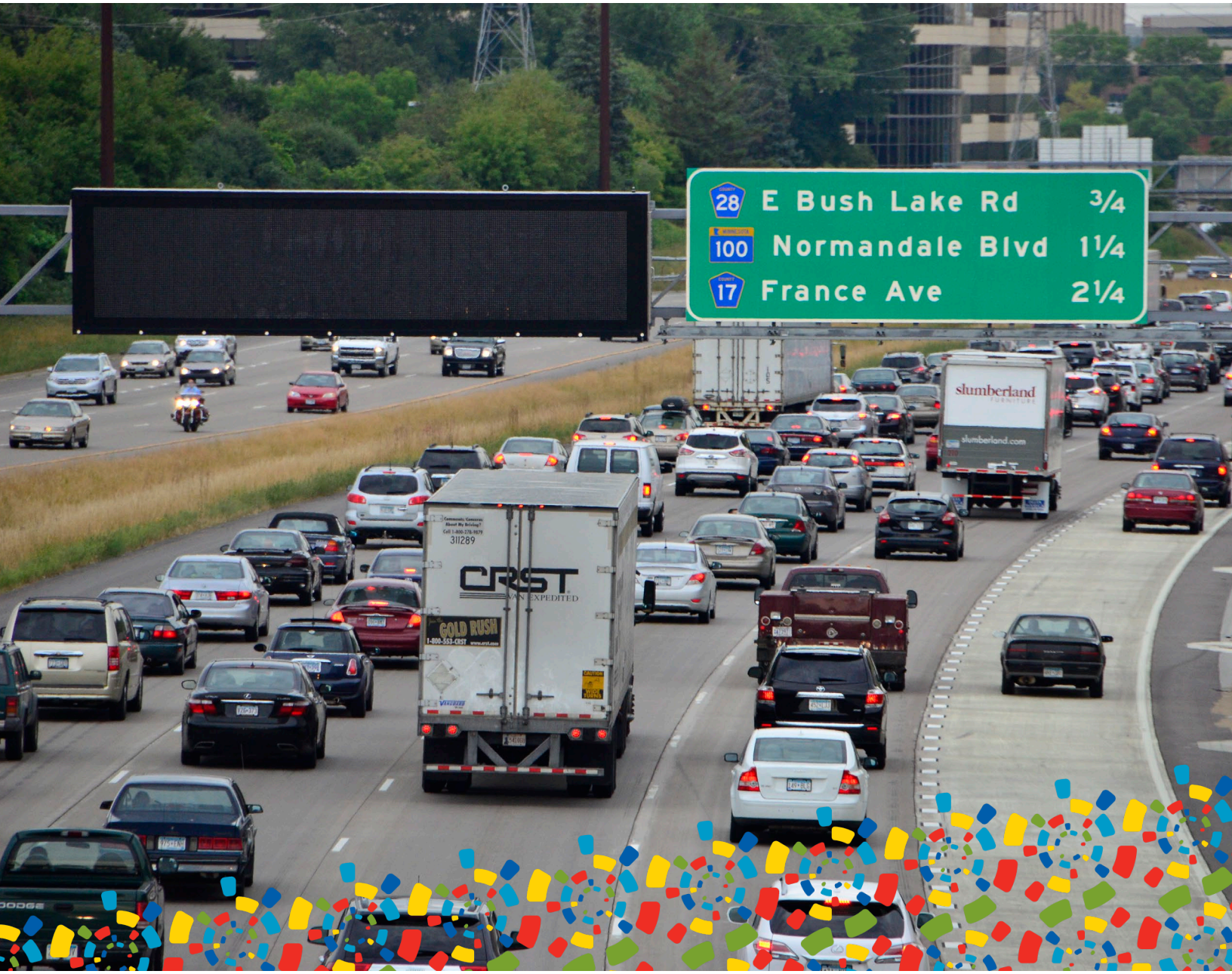
CONGESTION MANAGEMENT PROCESS



IMAGINE 2050
transportation policy plan

Regional vision

A prosperous, equitable, and resilient region with abundant opportunities for all to live, work, play, and thrive.

Regional core values

Equity | Leadership | Accountability | Stewardship

Regional goals

Our region is equitable and inclusive
Racial inequities and injustices experienced by historically marginalized communities have been eliminated; and all people feel welcome, included, and empowered.

Our communities are healthy and safe
All our region's residents live healthy and rewarding lives with a sense of dignity and wellbeing.

Our region is dynamic and resilient
Our region meets the opportunities and challenges faced by our communities and economy including issues of choice, access, and affordability.

We lead on addressing climate change
We have mitigated greenhouse gas emissions and have adapted to ensure our communities and systems are resilient to climate impacts.

We protect and restore natural systems
We protect, integrate, and restore natural systems to protect habitat and ensure a high quality of life for the people of our region.

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Introduction

The Congestion Management Process is a systematic, data-driven, and regionally accepted approach that aims to improve the performance of the transportation network by mitigating congestion and ensuring the reliable movement of people and goods. The Congestion Management Process evaluates transportation system congestion and includes identification, application, and evaluation of many strategies used to achieve regional congestion management objectives. This process is a valuable tool to maximize transportation system performance through cost-effective and easy-to-implement solutions. The solutions and strategies identified in this process are implemented by the Metropolitan Council, the Minnesota Department of Transportation (MnDOT), transit providers, transportation management organizations, cities, and counties as they fund and implement projects and as they operate their systems.

A congestion management process is required for all transportation management areas, which are metropolitan areas with a population exceeding 200,000. These are continuous processes that include coordination and data sharing between regional transportation partners, including the Met Council, MnDOT, transit providers, transportation management organizations, cities, and counties. This process provides a framework that guides collective decision-making among these partners to increase transportation system efficiency and reduce vehicle use by providing options beyond driving alone. This process helps ensure that congestion impacts are mitigated while balancing quality of life and promoting travel demand management strategies. This process is continuously monitored and evaluated, which allows adjustment, elimination, or new adoption of strategies based on effectiveness.

Given the plan's focus on excessive highway delay and the need to consider other plan objectives, the existing highway system must be managed and optimized to the greatest extent possible rather than expanded. Thus, the Congestion Management Process prioritizes strategies that manage system demand, improve the operation of the existing system, and provide multimodal travel options.

This document summarizes the region's Congestion Management Process. It includes an overview of links between the Imagine 2050 Transportation Policy Plan and Congestion Management Process, a summary of recent process-related activities, and an outline of future activities and areas that need further refinement.

Overview of the Congestion Management Process

The Congestion Management Process (CMP) is an ongoing process consisting of the following eight action steps that are described in more detail in the CMP Policies and Procedures Handbook and Corridor Analysis Handbook [placeholder for link when available]:

1. Develop regional objectives for congestion management
2. Define the Congestion Management Process network
3. Develop multimodal performance measures
4. Collect data and monitor system performance
5. Analyze congestion problems and needs
6. Identify and assess strategies
7. Program and implement strategies
8. Evaluate strategy effectiveness

Framework for the Congestion Management Process

The Imagine 2050 Transportation Policy Plan policies and actions state the intent and approach to regional issues and define the specific activities to implement regional goals and transportation objectives. Many of these policies are linked to actions related to congestion mitigation and are eflected

in the strategies outlined in the CMP Policies and Procedures Handbook. These policies and actions serve as the framework for defining the direction of the Congestion Management Process and form the basis for the implementation of a coordinated regional approach to mitigating congestion.

The CMP handbook defines the goals and objectives identified by the Congestion Management Process Advisory Committee in more detail, and specifically structured congestion management process objectives using SMART (specific, measurable, achievable, realistic, and time-bound) performance-based planning approaches. The handbook was finalized in 2020, prior to adoption of the Imagine 2050 Transportation Policy Plan, and identifies the following goals for the region:

- Goal 1: Increase access to destinations
- Goal 2: Support a competitive economy
- Goal 3: Promote safety and security

CMP objectives are organized into six major topical areas. The objectives are as follows:

- Safety
    - Manage annual number of fatalities
    - Manage annual number of serious injuries
- Travel time reliability
    - Manage travel-time reliability
    - Limit annual number of peak-hour excessive delay
    - Manage delay associated with traffic incidents
    - Manage peak-period congestion
    - Manage recurring congestion
    - Maintain a signal retiming program
- Goods movement
    - Maintain truck travel-time reliability
    - Manage over-capacity roadway miles on truck routes
    - Manage freight bottlenecks
- Roadway capacity
    - Limit congested roadway miles
- Public transit (only performance indicators identified in current handbook)
- Travel demand management (only performance indicators identified in current handbook)

Met Council staff, along with the CMP Advisory Committee, will review the current goals and objectives of the Policies and Procedures Handbook and assess the degree to which they match CMP-related actions included in the Imagine 2050 Transportation Policy Plan. The handbook will then be updated to ensure the Imagine 2050 TPP goals, objectives, policies, and actions are reflected and consistency between the two documents is maintained. The goals and objectives of the CMP were a reflection of the 2040 Transportation Policy Plan; the region's approach to congestion has changed since that plan was completed. As such, the Policies and Procedures Handbook's objectives and associated performance measures are not fully consistent with the 2050 TPP and will need to be updated to ensure consistency.

Many Imagine 2050 Transportation Policy Plan policies and actions impact the region's Congestion Management Process. The following actions will be integrated into and inform the updated CMP goals and objectives:

- Action 1G. Maintain, review, and update as needed, the preliminary interchange approval (Appendix F), metro freeway project approval, and congestion management processes for the

regional highway system to ensure proposed interchange and freeway investments are consistent with regional policy.

- Action 13C. Emphasize travel demand management strategies on unhealthy air quality days to reduce emissions from single-occupant-vehicle travel that contribute to poor air quality and health impacts.
- Action 21A. Provide incentives for trip reductions by single-occupancy-vehicle travel. Work directly with employers to establish travel demand management programs, performance targets, and technical support, as needed. Create and implement a framework for other incentive and pricing strategies.
- Action 21C. Implement development-based trip reduction programs and ordinances. Use regional funding to prioritize developments that address travel demand management. Provide technical support to cities and developers on travel demand management ordinance development and implementation.
- Action 21D. Prioritize investments in travel demand management that improve highway reliability. Use travel demand management strategies to spread highway travel demand across less congested hours of the day.
- Action 24A. Update the Freight Bottleneck Report every other year to identify impacts of highway congestion on freight movements, including congestion at MnDOT-identified truck freight bottlenecks, and identify cost-effective mitigation.
- Action 25A. Use the Congestion Management Process Handbook during project planning and development to evaluate lower-cost mobility solutions that can provide options and more reliable travel. Provide technical assistance and training on Congestion Management Process analysis processes. Incorporate requirements or scoring measures in funding processes that prioritize use of the Congestion Management Process Handbook for roadway expansion projects.
- Action 25C. Implement a managed-lane system to provide reliable travel for transit, carpool travel, and those willing to pay.
- Action 25D. Consider using MnDOT highway mobility funding on roadway improvements that also support bus rapid transit, transit advantages, and managed-lane improvements on corridors that have transit travel-time reliability issues.
- Action 25E. Provide an interconnected network of transit advantages on roadways between regional destinations. Identify opportunities to implement transit advantages on roadways and prioritize them based on travel time benefits and number of affected users.
- Action 25F. Research congestion-pricing options, including travel demand management incentives and general pricing, and their impact on travel patterns.
- Action 26B. Target corridor-level regional highway system mobility investments only where there is poor reliability caused by excessive delay. Excessive delay is defined by a travel time index greater than 1.25 for more than 2 hours. Projects should follow the mobility hierarchy to identify investment opportunities. Target regionally significant intersection to interchange conversion projects based on high priorities in the Intersection Mobility and Safety Study.
- Action 26E. Identify, prioritize, and fund corridors for traffic technologies that would most effectively mitigate impacts from recurring and nonrecurring congestion.
- Action 26F. Update the Congestion Management Safety Plan to identify congestion- and safety-related problem locations and potential solutions on state highways.

- Action 31G. Build better understanding of the shared benefits of vehicle-miles-traveled reduction on climate mitigation, congestion, and safety.

Met Council Activities that Support the Process

This section highlights some of the recent and ongoing efforts undertaken by the Met Council that directly support the Congestion Management Process.

Continued review of peer agencies' congestion management processes

Since updating our region's Congestion Management Process in 2017, Met Council staff has continued to participate in national technical working groups to learn from peer regions' congestion management processes, mostly facilitated by the Association of Metropolitan Planning Organizations. These discussions include:

- Performance measures used to identify congested corridors and measure effectiveness of implemented congestion management projects
- Investment strategies and programs used to mitigate congestion on key corridors
- Datasets and data collection processes
- Methods for implementing congestion management strategies and prioritizing projects for funding
- Visualization techniques

Congestion Management Process Advisory Committee

The Met Council established a Congestion Management Process Advisory Committee in 2017. This committee is comprised of technical experts and other stakeholders representing the entire metropolitan planning area. The committee ensures the Met Council is meeting the Congestion Management Process objectives and serves as a critical resource for:

- Identifying corridors of concern.
- Refining the regional Congestion Management Process network.
- Steering the direction of regional performance measures.
- Coordinating a regional data collection and sharing program.
- Assessing and refining specific Congestion Management Process strategies.

The Congestion Management Process Advisory Committee was instrumental in the development of the CMP Policies and Procedures Handbook and continues to meet on a quarterly basis. In addition, and consistent with regional transportation objectives and federal requirements, the Congestion Management Process Advisory Committee serves as the body that guides the region's Congestion Management Process long-term. The committee directs the Congestion Management Process and carries out various roles in order to implement and adjust Congestion Management Process objectives and strategies.

Creation of the Congestion Management Process Corridor Assessment Handbook

After the completion of the Congestion Management Process Policies and Procedures Handbook, the Met Council wanted to provide the region with specific, step-by-step guidance on how to conduct a corridor analysis. This document, the Corridor Assessment Handbook, was completed in 2022 and uses strategies in the policies and procedures document to guide users to appropriate Congestion Management Process corridor solutions. The handbook promotes collaboration between stakeholder agencies and the Met Council, and it simplifies and standardizes the corridor assessment process.

The handbook emphasizes multimodal, travel demand management, and traffic management technology strategies, with capacity expansion only considered as a last resort. It also guides users to consider the corridor context and the people who live in and around the corridor. It was validated with three test corridors, which provide examples and help ensure that the guidance applies to corridors of different length, geographic, and land use contexts. It includes a strategy review matrix that guides the practitioner to assess the effectiveness of various strategies along a corridor. As a living document, it will be updated to reflect any changes in the Congestion Management Process and its policies and procedures document.

Performance-based planning program efforts

The Imagine 2050 Transportation Policy Plan includes a number of policies and actions aimed at reducing vehicle miles travelled during peak periods and improving accessibility to areas with a high concentration of jobs. The Congestion Management Process Policies and Procedures Handbook clarifies how these Imagine 2050 Transportation Policy Plan policies and actions reflected in the planning and programming process, through the following work:

- Develop performance measures to define the three major dimensions of congestion: intensity, duration, and extent. Variability of congestion is developed only for the National Highway System roadways.
- Further refine regional strategies to reduce vehicle miles traveled during peak commuting hours, and improve connections between areas with high concentrations of jobs and low-income households.
- Identify programs and services that support access to jobs within the region.
- Identify projects and programs that mitigate congestion to the greatest extent feasible and increase accessibility to jobs.

These efforts will be formalized through development of multimodal performance measures and targets, as well as a data collection and sharing plan. These performance measures will be used to:

- Track progress towards meeting regional congestion-related objectives.
- Identify specific corridors which require additional data collection and analytical efforts.
- Assess congestion mitigation strategies, programs, and projects.
- Better communicate system performance using visualization techniques that are understandable to policymakers, the public, and partner agencies.

All of the performance measures under development will meet federal requirements, local priorities, and use a SMART. (**s**pecific, **m**easurable, **a**chievable, **r**elevant, and **t**ime-bound) approach to performance-based planning. These measures will be used to evaluate the performance of investment strategies towards achieving regional objectives. These strategies will be integrated into the Congestion Management Process, and the connection between these strategies and the planning and programming processes will be made more transparent.

The Met Council has historically tracked several performance measures that are related to system congestion and reliability. These were reported, in part, in previous iterations of the Transportation Policy Plan and the Transportation System Performance Evaluation. While the Met Council intends to continue to track many of these measures, all previous performance measures will be evaluated and vetted through the Congestion Management Process Advisory Committee, and, if selected, evolve into Congestion Management Process objectives using a SMART approach. The Congestion Management Process Policies and Procedures Handbook outlined these new performance measures, which will continue to be tracked, monitored, and reported upon on a regular basis.

Recent supporting studies and ongoing strategies

Intersection Mobility and Safety Study

The Met Council and MnDOT worked with local agencies to analyze and prioritize at-grade intersections on the principal arterial system within the Minneapolis-St. Paul Metropolitan Planning Area. This study serves as an update to the 2017 Principal Arterial Intersection Conversion Study. There are 89 intersections across the region that exhibit needs in the high tier, indicating that investments on the scale of grade separation may be justified ($22 million and over). Nine of these locations already have projects that are under construction or fully funded. There are an additional 117 locations in the medium tier where needs suggest substantial investment ($11 million to $22 million) could be cost effective. The remaining 312 locations in the low tier are candidates for at-grade projects, several warranting considerable attention and potential investment based on their degree of needs ($1 million to $11 million).

Travel Demand Management Action Plan

The Travel Demand Management (TDM) Action Plan identified areas of expansion opportunity for TDM. The Imagine 2050 Transportation Policy Plan has several related policies and actions and the expansion opportunities are described in more detail in the Travel Demand Management Investment Plan. The Travel Demand Management Action Plan identified a specific objective and actions specific to "…reduce the need for investments in additional roadway capacity" with a reference to also review and update the Congestion Management Process accordingly. While some actions were identified, the action plan was not intended to create the detailed guidance necessary for implementation. As a result, the Transportation Policy Plan includes a work program item to create methodologies and guidance on how to integrate Travel Demand Management activities into highway planning and project development processes. Once complete, this will inform future updates of the Congestion Management Process.

Travel Behavior Inventory

The Travel Behavior Inventory is a program of travel behavior research and transportation model improvement. The program includes a biennial regional household travel survey, which will enable tracking of person-based performance measures, including mode share. Future improvements to the regional model will be targeted to improve the ability to forecast key Congestion Management Process performance measures.

Highway systems management

Highway systems management describes the infrastructure and traffic operation technologies used to improve mobility and reduce congestion. This includes a freeway management system and an arterial traffic management system, which are important to maximize safety and mobility benefits from large capital highway investments.

A freeway management system can include monitoring traffic conditions, relaying real-time information to travelers, and more direct action on highway efficiency. Traffic monitoring often uses cameras and various automated measurement tools. Real-time information can be provided to travelers through dynamic signs, websites, and in-vehicle alerts. Direct actions to improve the efficiency of highways can include tools such as ramp meters, emergency response capabilities, coordinating information and activities with various emergency responders, and planning work zone activities with traffic demands in mind.

An arterial traffic management system might use similar traffic monitoring and relaying of real-time information to travelers. However, direct actions that aid efficiency differ in some ways. Similarly work zone planning, emergency response, and coordinating with first responders can be effective, but

coordinating traffic signals is fundamental on arterials. The newest technologies support constant monitoring and almost constant updates to signal timing for maximum efficiency at all times.

Next steps and future Met Council-led activities

While much of this document is informed by cooperative work with regional partners through the Congestion Management Process Advisory Committee, other improvements were developed within the Met Council and communicated with greater transparency and detail in the Congestion Management Process Policies and Procedures document and other future documents. This section outlines specific steps the Met Council will take in the near-term to develop a more comprehensive and robust Congestion Management Process.

Congestion Management Process pilot corridor analysis

This study, set to begin in 2024, will have a consultant team work directly with both Met Council staff and regional stakeholders to pilot a number of corridor studies and assist in demonstrating how the guidance from the Corridor Analysis Handbook applies to the variety of corridors that are present within the metro area. The corridors will be of varying lengths, have different surrounding land use, and be used for different purposes. The consultant and Met Council staff will work closely with regional partners to assess the handbook's effectiveness in achieving the desired Congestion Management Process outcomes.

This effort will also directly tie into the MnDOT Corridor Planning and Prioritization Handbook to ensure that the Congestion Management Process performance measures are used to assess and prioritize MnDOT corridors. It will also provide recommendations for improvement to the handbook and explore how to integrate Complete Streets concepts into the Congestion Management Process.

Assess Congestion Management Process strategies

In order to more effectively manage congestion and optimize solutions, the Met Council needs to more thoroughly evaluate whether the region's Congestion Management Process strategies have had the intended congestion management effect. This includes an analysis of not only project-level impacts of strategies, but also an evaluation of whether alternative strategies could have had a greater impact and/or a better benefit-to-cost ratio. The Met Council, via the Congestion Management Process and its Policies and Procedures handbook, developed a data-driven mechanism to quantify and better assess strategy effectiveness. The Met Council also recognizes that the Congestion Management Process strategies need to be more effectively communicated with regional stakeholders and the public, which will be accomplished via the Congestion Management Process Advisory Committee and Congestion Management Process documents.

Incorporate Travel Demand Management practices into highway planning and programming

The Met Council has committed to developing a plan to incorporate Travel Demand Management strategies into the highway planning and corridor planning processes. The plan will investigate and provide detailed guidance on how the lead implementing agency should consider and prioritize Travel Demand Management when assessing congestion strategies in problem areas. This plan will be built off of existing Congestion Management Process guidance and developed in conjunction with the MnDOT and county corridor-planning processes.

Integrating Congestion Management Process activities into project prioritization and selection processes

While the Met Council has traditionally integrated congestion management into the project selection process, more transparency is needed to show how the Congestion Management Process factors into project selection, in particular through Regional Solicitation projects. The Met Council recently included a number of criteria that will specifically prioritize projects with process elements within the Regional

Solicitation, but more work is required to fully incorporate the Congestion Management Process into the Regional Solicitation. The specific link between projects that directly support congestion mitigation and how these projects are programmed is not currently clearly defined. This will be a key topic of the Regional Solicitation evaluation and will be addressed in detail in future Congestion Management Process documentation.

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