Lake-Sumter MPO
Metropolitan Planning Organization

Congestion Management Process

POLICY AND PROCEDURES HANDBOOK

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CHAPTER 1

Overview

Overview

The Lake-Sumter MPO is required by Florida Law to develop Congestion Management Process (CMP) as part of its routine planning efforts. This handbook outlines the policies and procedures to address federal and state requirements.

Federal guidance includes an Eight-Step Congestion Management Process. These eight steps guide the contents of this document and are described at length in Chapter 2. The other chapters include information as follows:

Chapter 1 - Introduction

An overview of the handbook, an explanation of the purpose of the Congestion Management Process, and an introduction to the causes of congestion.

Chapter 2 - Congestion Management Process Overview

The Federal Eight-Step Congestion Management Process is described in Chapter 2, which also includes the schedule for the State of the System Report.

The following chapters in this handbook discuss specific steps from the Eight-Step Congestion Management Process.

Chapter 3 - Goals and Objectives

A series of CMP goals and objectives are developed to guide the process of monitoring congestion and improving the mobility of persons and goods in Lake County and Sumter County. The CMP goals and objectives will be used as a tool for selecting strategies and performance measures for strategy monitoring and evaluation.

Chapter 4 - Network Identification

The geographic area of application and the transportation network for the Lake-Sumter CMP is described.

Chapter 5 - Development of Performance Measures

Identifying the performance measures to monitor the effectiveness of the transportation system in the CMP.

Chapter 6 - System Performance Monitoring Plan

The development of an ongoing system of monitoring and reporting that relies primarily on data already collected or planned to be collected in the Counties.

Chapter 7 - Congested Corridor Selection and CMP Strategies

A summary of the implementation and management of the CMP strategies, including the process for selecting congested corridors for review and future projects for implementation, as well as an implementation schedule, responsibilities, costs, and possible funding sources for each strategy currently proposed for implementation.

Chapter 8 - Monitor Strategy Effectiveness

Describing provisions to monitor the performance of strategies implemented to address congestion to help determine whether operational or policy adjustments are needed to make the current strategies work better and provides information about how various strategies work in order to implement future approaches within the CMP study area.

CHAPTER 2
Introduction

Introduction

The Congestion Management Process (CMP) is a management system and process conducted by a Metropolitan Planning Organization (MPO) to improve safety and reliability of traffic operations by providing strategies to reduce travel demand on the roadway network or providing improvements to the overall transportation network.

Per the Federal Highway Administration (FHWA) the CMP is, "a systematic approach collaboratively developed and implemented throughout a metropolitan region, that provides for the safe and effective management and operation of new and existing transportation facilities through the use of demand reduction and operational management strategies."

The CMP is intended to provide benefit to the public by improving travel conditions with approaches that often may be implemented more quickly or at a lower cost than many capacity improvements such as adding travel lanes or creating new travel corridors. Longer-term solutions are also identified in the CMP with the intention that they will be considered in the MPO's Long Range Transportation Plan (LRTP), which is a document that plans for at least 20 years in the future.

A Transportation Management Area (TMA) is required to develop and implement a CMP as a part of the metropolitan planning process. A TMA is an urbanized area (UZA) with a population that exceeds 200,000 people, or any area where designation as a TMA has been requested. The area covered by the Lake-Sumter MPO is does not meet the criteria but has developed this CMP "to provide the information needed to make informed decisions regarding the proper allocation of transportation resources" as required by Florida law.

This CMP report updates the Lake-Sumter MPO Goals and Objectives and the development of a matrix of strategies that to be considered when evaluating corridors.

This Policy and Procedures Handbook is being updated to coincide with the development of the Lake-Sumter 2045 LRTP and intended to be updated with each successive LRTP.

A separate document known as the State of the System Report will summarize the performance of the existing transportation system as well as a comparison to prior year performance, identifies congested corridors, and may recommend specific improvements.

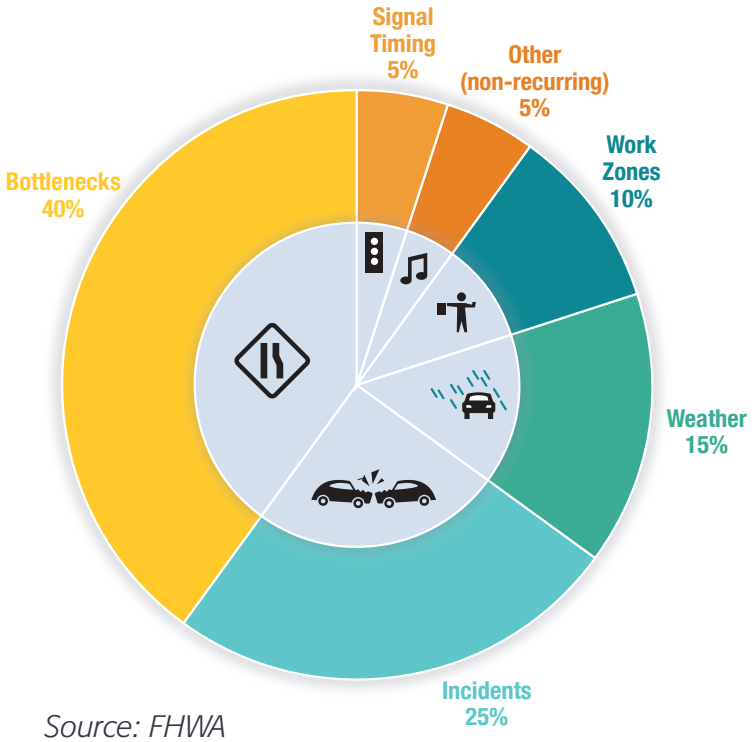
CAUSES OF CONGESTION

Congestion impacts nearly all aspects of a transportation system, which affects most of a community's residents and visitors. A study by FHWA identified six primary causes of congestion as is described below and depicted in **Figure 1**. This CMP uses these national data, which suggests that local causes are likely to be similar, with bottlenecks and traffic incidents typically being the top two causes of congestion.

- *Bottlenecks* often occur where roadways narrow or where vehicles stack up (often at traffic signals). These are most frequent source of congestion and characteristically cause a roadway to operate below its adopted level of service standards.
- *Traffic incidents* includes crashes, stalled vehicles, debris on the road, etc. Comprising 25% of congestion issues.
- *Poor weather* cannot be influenced by any agency.
- *Work zones* account for 10% of congestion causes and is attributed primarily to activities involved with network construction and maintenance.
- *Signal timing* may cause congestion when the operations of the signal are not timed appropriately for the volume of traffic.
- *Nonrecurring events* are considered those events that do not occur on a regular basis such as weekday rush hour. Events such as sporting events or concerts may cause unusually high traffic volumes and changes in traffic patterns in locations that typically do not experience them.

As shown in **Figure 1**, bottlenecks are the largest cause of congestion nationally, followed by traffic incidents and bad weather. Bad weather cannot be controlled, but policies and improvements can be implemented to control traffic incidents and bottlenecks.

Figure 1. FHWA Causes of Congestion



Source: FHWA

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CHAPTER 3
Federal Requirements

Federal Requirements

The initial federal requirements for congestion management were introduced by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and were continued under the successor law, the Transportation Equity Act for the 21st Century (TEA-21). The Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) passed into law in August 2005.

The requirements were further evolved under Moving Ahead for Progress in the 21st Century Act (MAP-21) signed into law on July 6, 2012. The Fixing America's Surface Transportation (FAST) Act of 2015 sustained these requirements and provides the guidelines and subsequent rule-making for this document.

NATIONAL GOALS

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism.

FEDERAL REGULATIONS

The following summarizes the requirements as per federal regulation codified as CMP in Transportation Management Areas (Section 450.322) - *Statewide Transportation Planning; Metropolitan Transportation Planning; Final Rule:*

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.
   - Cooperatively developed and implemented
   - Travel reduction strategies
   - Operational management strategies

b) The CMP should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the Transportation Improvement Plan (TIP).

c) Acceptable levels of service may vary from area to area. Consider strategies that:
   - Manage demand
   - Reduce single occupant vehicle travel
   - Improve transportation system management and operations
   - Improve efficient service integration within and across the following modes:
      i. Highway
      ii. Transit
      iii. Passenger and freight rail operations
      iv. Non-motorized transport
   - Where general purpose lanes are determined to be appropriate, must give explicit consideration to features that facilitate future demand management strategies.

d) The CMP shall be developed, established, and implemented in coordination with Transportation Systems Management (TSM) and operations activities. The CMP shall include:
   - Methods to monitor and evaluate the performance of the multimodal transportation system
      i. Identify the causes of congestion
      ii. Identify and evaluate alternative strategies
      iii. Provide information supporting the implementation of actions
      iv. Evaluate effectiveness of implemented actions
   - Definitions of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of strategies. Performance measures should be tailored to the specific needs of an area.
   - Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion. To the extent possible, this program should be coordinated with existing sources, including public transportation providers.
   - Identification and evaluation of the anticipated performance and expected benefits of congestion management strategies that will contribute to the more effective use and improved safety of the existing and future transportation system. Examples of strategies to consider include:
      i. Demand management measures, including growth management and congestion pricing
      ii. Traffic operational improvements
      iii. Public transit improvements
      iv. Intelligent Transportation Systems (ITS)
      v. Where necessary, additional system capacity
   - Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy
   - Implementation of a process for periodic assessment of the effectiveness of implemented strategies. Results of this assessment shall be provided to decision makers and the public to provide guidance on the selection of effective strategies for future implementation.

e) A TMA designated nonattainment for ozone or carbon monoxide may not program federal funds for any project that will result in a significant increase in the carrying capacity of single occupant vehicles (SOVs), with the exception of safety improvements or the elimination of bottlenecks (within the limits of the appropriate projects that can be implemented).

f) In TMAs designated nonattainment for ozone or carbon monoxide, the CMP shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for a corridor in which a project with a significant increase in SOV capacity is proposed to move forward with federal funds.

g) State laws, rules, and regulations pertaining to congestion management systems or programs may constitute the congestion management process, if FHWA and FTA find that these are consistent with the intent of this process.

h) Congestion management plan. An MPO serving a TMA may develop a plan that includes projects and strategies that will be considered in the TIP of such MPO. Such plan shall:

- Develop regional goals to reduce miles traveled during peak commuting hours and improve transportation connections between areas with high job concentration and areas with high concentrations of low-income households;
- Identify existing public transportation services, employer based commuter programs, and other existing transportation services that support access to jobs in the region; and
- Identify proposed projects and programs to reduce congestion and increase job access opportunities.

In developing the CMP, an MPO shall consult with employers, private and nonprofit providers of public transportation, transportation management organizations, and organizations that provide job access reverse commute projects or job-related services to low-income individuals.

CONGESTION MANAGEMENT PROCESS

As stated, the development and maintenance of a CMP is under Florida law for MPOs. Consistent with the guidance from the Final Rule on the CMP for Transportation Management Areas (23 CFR § 450.322) , as presented earlier in this report, the intent of the CMP Update is to "address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system."

Eight-Step Process

Eight distinct actions are the primary elements of a successful CMP. These actions provide a clear sequence of activities to provide a robust and thorough CMP.

1. **Develop Objectives for Congestion Management** – Goals and Objectives should be identified that help to accomplish the congestion management goals (Addressed in Chapter 3).
2. **Define Regional CMP Network** – Identify a well-defined area and the network components to which the CMP applies.
3. **Develop Multimodal Performance Measures** – Develop the measures by which local and regional congestion may be evaluated.
4. **Collect Data / Institute System Performance Monitoring Plan** – There must be a regularly-scheduled performance monitoring plan for assessing the state of the transportation network and evaluating the status of congestion.
5. **Analyze Congestion Problems & Needs** – The CMP must define how congestion issues will be analyzed, presented, and anticipated.
6. **Identify and Assess Strategies** – In collaboration with local and regional partners, the CMP should develop strategies to mitigate congestion.
7. **Program and Implement Strategies** – As a direct result of Action 6, determine when and how strategies will be implemented.
8. **Evaluate Strategy Effectiveness** – The effectiveness of the implemented efforts will be monitored and evaluated to guide future transportation planning decisions.

Figure 2 illustrates the federal Eight-Step Congestion Management Process. Each step of the congestion management process is described in additional detail in the remaining chapters of this handbook.

This CMP handbook outlines all eight actions of the federal process, and the State of the System Report focuses on Actions 4-8.

Figure 2. Federal Eight-Step Congestion Management Process

INCORPORATING TRAVEL-TIME RELIABILITY INTO THE CMP

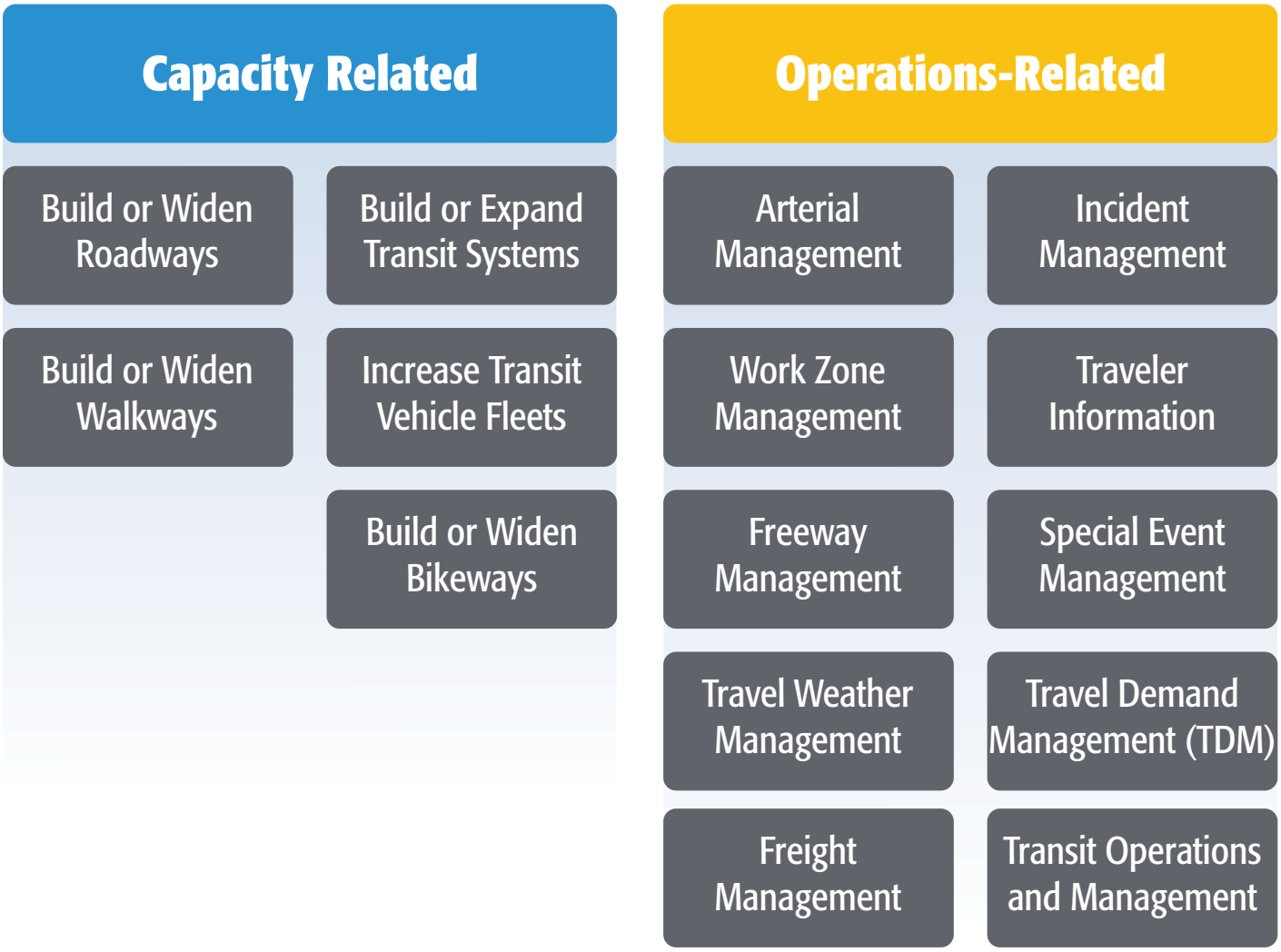
Travel-time reliability is defined as the consistency and dependability in travel times that are measured from day-to-day and/or across different times of the day. Travel-time reliability is significant to the CMP because it incorporates a systematic method to address the issue of traffic congestion caused by non-recurring events. Non-recurring events include:

Non-recurring events account for the majority of traffic congestion-related delay in the United States. Only recently were cost-effective data collection opportunities identified. In addition to more inexpensive travel-time monitoring technologies, there are three factors that have contributed to a greater focus on travel-time reliability in MPOs. These factors include:

- Constraints on Expansion of the Transportation System – New roadway construction and roadway expansion has largely ended in the United States due to high costs, the built-out nature of urbanized areas, and the community desire for multimodal streets.
- Expectations of the Traveling Public – Surveys have shown that the traveling public often values travel-time reliability more than speed.
- Federal Surface transportation Reauthorization Law – When MAP-21 was signed into law, a process that involved performance measurement, target setting, and transportation investment reporting was established and seven national goals were set. Three years later, the FAST Act was signed into law and included the same national goals. One of the seven goals is System reliability – *to improve the efficiency of the surface transportation system.*

Figure 3 lists strategies for travel time reliability which relate to and may be used in addressing congestion management.

Figure 3. Capacity and Operations Strategies for Travel Time Reliability



Source: FHWA

CHAPTER 4

CMP Overview

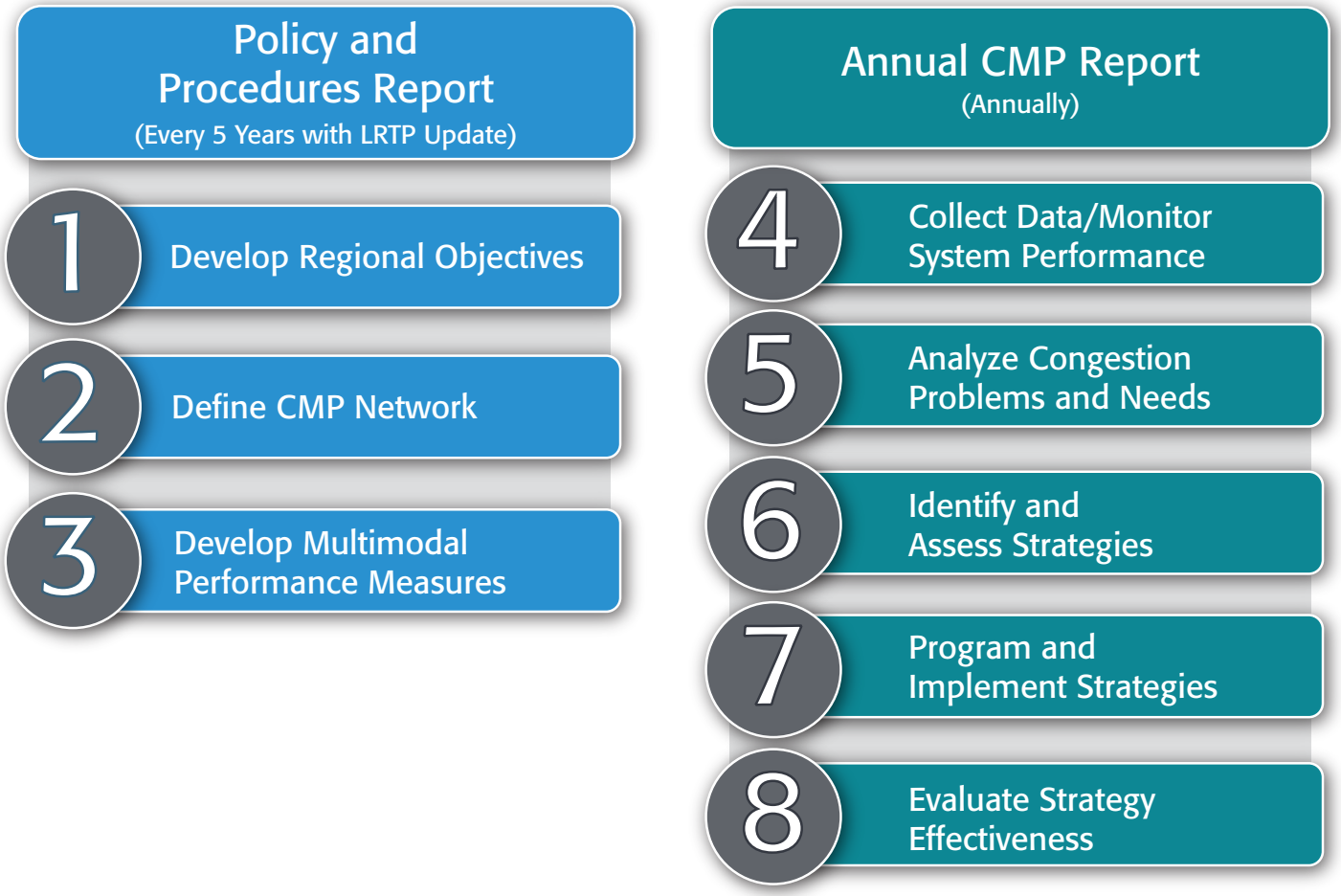
CMP Overview

LAKE-SUMTER MPO EIGHT-STEP CONGESTION MANAGEMENT PROCESS

This section documents the revised Congestion Management Process for the Lake-Sumter MPO that will be used to address the Federal requirements and unique local needs and opportunities of the communities in Lake and Sumter Counties. This process closely matches the Federal Eight-Step Process and includes additional detail in specific sections where appropriate.

Figure 4 demonstrates the Eight-Step Process that will be used by the Lake-Sumter MPO. As noted, the first three steps will typically be updated concurrent with each update of the Long Range Transportation Plan which takes place every four to five years. Steps 4 to 8 will potentially be updated on an annual basis. The remainder of this section details the eight steps and how they will be implemented.

Figure 4. Lake-Sumter MPO's Approach to the Federal Eight-Step Process



CMP IN METROPOLITAN PLANNING PROCESS

The CMP is a dynamic tool integrated into the steps the MPO will take when prioritizing projects in general and in the LRTP and Transportation Improvement Plan (TIP). The plan is objective-driven and performance-based, generating a strong evaluation process that leads to implementing appropriate and effective strategies.

Potential mitigation efforts, as identified in the CMP move into project development and into TIP programming for funding and implementation. Those projects that are executed are closely monitored to evaluate the effectiveness locally and regionally. In Lake County and Sumter County, CMP projects could be funded using boxed funds identified in the LRTP along with other local revenues . Funding the projects in this manner would enable the MPO to regularly add those of the highest priority and to expand funding levels as necessary to address local needs.

CMP COORDINATION WITH LOCAL GOVERNMENT CAPITAL PROGRAMS

As part of the CMP Process, Lake-Sumter MPO will identify and use information about congested corridors to guide the programming of capital projects, which is done annually by the MPO and local governments within Lake County and Sumter County. By coordinating the identification of congested corridors with the programming of capital spending, it is anticipated that operational and system improvements will address congestion in the near-term, delaying the need for additional travel lanes. This will decrease the overall cost of implementing transportation solutions included later in this report.

Coordination with local government occurs during the development of the initial Level of Service (LOS) evaluations. Coordination occurs again when the final LOS evaluations are produced, to identify longer-term congestion mitigation projects via Capital Improvements Plan (CIP) update. Action 6 of the CMP process will identify long-term recommendations would be made available for local government use.

PUBLIC INVOLVEMENT PROCESS

The purpose of CMP public involvement activities is to provide the public with information about congestion monitoring activities in place in Lake County and Sumter County and planned congestion-mitigation strategies. The continuing goal is to develop congested corridors and alternative transportation improvement strategies to alleviate congestion and enhance the mobility of persons and goods.

Federal regulations warrant involvement of the public during key stages of transportation projects. As such, Lake Sumter MPO will involve the public in key stages of transportation improvement projects within and beyond the CMP. Without the actively engaging the community, lack of public support and awareness may adversely impact the success of any potential transportation project.

Proposed CMP improvement projects/strategies will be presented to the citizens of Lake County and Sumter County through the MPO's regular planning process. The CMP public involvement process includes various activities to inform the public and gather input and is integrated with activities conducted throughout the LRTP planning process.

Key elements of the LRTP public involvement process include the following:

- Meetings with the Congestion Management Process Task Force (CMP Task Force)
- Meetings with the Technical Advisory Committee (TAC)
- Meetings with the Citizens Advisory Committee (CAC)
- Meetings with the Bicycle/Pedestrian Advisory Committee (BPAC)
- Coordination with Freight Goods Movement Stakeholders
- Presentations to MPO Board
- Information dissemination through various MPO public involvement opportunities such as postings to the website and newsletters

The MPO CMP Task Force serves as the advisory group for the CMP update. The list below reflects the jurisdictions/agencies most likely to participate in the Task Force.

- Lake County and Sumter County
- City of Clermont
- City of Eustis
- City of Leesburg
- City of Mount Dora
- The Villages
- LakeXpress Transit
- Sumter County Transit
- Florida DOT District 5
- Lake County School Board
- Sumter County School Board

Other stakeholders may be included on the Task Force as warranted. These stakeholders may include and are not limited to local law enforcement agencies, goods movement representatives, community traffic safety teams (CTST), etc. These additional members would generally serve on an ad hoc basis to address specific issues.

The Lake Sumter CMP Task Force typically convenes as the Technical Advisory Committee (TAC) for the MPO. This ensures that CMP related issues are routinely addressed as an ongoing activity of the MPO. Key contributions of the Lake-Sumter CMP Task Force are activities related to identifying, tracking, and evaluating potential congestion or safety related issues on the roadway network. The MPO tracks issues identified along with the status of each issue and the party responsible for resolving the issues, as well as identifying potential projects/solutions. This will allow congestion and safety issues to be identified and addressed which may not be otherwise identified through the formal screening process used by the CMP.

CMP ACTIONS/RECOMMENDATIONS

A list of recommendations and actions is presented to enhance the congestion management process and become more efficient in the overall MPO planning process. The actions/recommendations presented below will be reviewed and considered by MPO staff and the CMP Task Force for implementation as necessary.

- Update the CMP Procedures Handbook (CMP Steps 1 to 3) on a five-year cycle consistent with the update cycle of the LRTP. Timing of the completion of CMP updates in advance of finalizing the LRTP updates would benefit integration of CMP strategies into the LRTP. Additional updates may occur on a more frequent basis to comply with future changes in federal rules or local regulations.
- Develop a State of the System Report that documents the current conditions of the transportation system using performance measures, tracks the effectiveness of previously-implemented strategies, and evaluates trends and conditions for the multimodal transportation system in the CMP study area. The State of the System Report will include Actions 4 through 8 of the CMP which includes:
  - **Step 4:** Collect Data/Monitor System Performance
  - **Step 5:** Analyze Congestion Problems & Needs
  - **Step 6:** Identify and Assess Strategies
  - **Step 7:** Implement Selected Strategies
  - **Step 8:** Monitor Strategy Effectiveness (combined with Step 4)
- Implementation of the selected strategies may include programming in a local government's CIP, identification of corridor studies to be done through the MPO's Unified Planning Work Program (UPWP), or longer term projects that would be included in local governments' Capital Improvements Elements (CIE) or the MPO's Long Range Transportation Plan.
- Enhance coordination with agencies participating in the CMP by framing desirable strategy types and defining roles in implementation. This is essential, as most congestion and mobility strategies are formulated and implemented by other agencies.
- Projects from the CMP process may identify projects for inclusion in the LRTP either through the routine LRTP update cycle or through plan amendments.
- Identify and implement data collection recommendations on collecting key congestion data as well as closing any data gaps identified in this CMP.
- Perform outreach and education efforts to inform interested parties and stakeholders. These efforts may include:
  - Maintaining CMP information on the MPO Website.
  - Developing materials on the CMP and its benefits.
- Continue monitoring changes to federal CMP regulations and modify/update CMP to reflect new requirements.

The general schedule for the development of the CMP's State of the System Report is provided as follows. This schedule is flexible and can be changed from year-to-year as warranted. (For example, a congested corridor identified one year, may not be warrant further evaluation if improvements are already included in the TIP.) This schedule includes opportunities for coordinating the results of the federally required CMP with the local government process used in developing the annual CIP and the annual update of the CIE of the Comprehensive Plan.

STATE OF THE SYSTEM REPORT TENTATIVE SCHEDULE

January to May

- Update of roadway inventory data to support LOS analysis.
- Calculation of Non-Highway Systemwide Performance Monitoring
  - Public Transportation
  - Bicycle
  - Pedestrian
  - TDM
- Produce growth rates on county roadways using county traffic counts to perform initial LOS analysis (existing conditions +1 year and existing + 5 years)*.
- Produce preliminary growth rates on state roadways using older state traffic counts to perform initial LOS analysis (existing conditions and existing + 5 years)* .
- Provide initial LOS analysis for identifying congested corridors used to prioritize projects for funding. This analysis includes a combination of volumes based on growth rates and scheduled improvements to the transportation system.
- Existing volumes on existing network

May

- CMP Task Force meeting to review and identify potential operational issues that would not be identified through the technical screening process.
- Coordinate with goods movement stakeholders and providers to identify related needs (Note: May occur earlier).

May to June

- Receive FDOT traffic counts.
- Produce updated growth rates on state roadways using state traffic counts and revise initial LOS analysis (produced earlier in the year) based on the results of the LOS analysis.
- Screen corridors
- Select corridors for evaluation.

July

- Report to CMP Task Force and CAC the results of the corridor screening and selection.
- Report to the CMP Task Force and CAC the results from the Non-Highway System-wide Performance Monitoring (Public Transportation, Bicycle, Pedestrian, TDM, etc.).

July to August

- Identify strategies to be considered on selected corridors.
- Evaluate strategies where appropriate and make improvement or program recommendations for implementation.
- Report to the CMP Task Force and CAC the recommended strategies for implementation.
- Develop priority list of CMP recommendations for adoption by the MPO Board.

September

- Finalize technical recommendations on strategy implementation.
- Program improvement recommendations in the appropriate local government CIE and identify other priority projects or programs for the TIP.
- Finalize performance monitoring summary.
- Obtain endorsement from the CMP Task Force and CAC on the programmed projects in the CIE and priority projects or programs for the TIP.
- Adopt the CMP Project Priority List for use in developing the TIP during a Public Hearing of the MPO Board.

October to November

- Finalize the CMP State of the System Report.

**Note: Since FDOT state roadway traffic counts for the prior are typically released in May or June of the following year, it is necessary to use preliminary state traffic count data that is a year older for the preliminary analysis. Once the FDOT state roadway traffic count data is provided, growth rates and their associated traffic volumes are used to update the LOS analysis.*

CHAPTER 5

CMP Goals and Objectives

CMP Goals and Objectives

A series of CMP goals and objectives are developed to guide the process of monitoring congestion and improving the mobility of persons and goods in Lake County and Sumter County. These were compiled based on the goals and objectives established in the 2045 Lake-Sumter MPO Long Range Transportation Plan as well as CMP goals and objectives used by other communities in Florida and other states that would also be appropriate for the two-county area

The goals and objectives as established by the 2045 Long Range Transportation Plan are presented below. These CMP goals and objectives will be used as a tool for selecting strategies and performance measures for strategy monitoring and evaluation. The CMP goals and objectives are consistent with the Long Range Plan goals and will be evaluated with each update to the CMP.

CMP GOALS AND OBJECTIVES

Goal 1 – Support Economic Success and Community Values

OBJECTIVE 1.1 – Reduce congestion and improve travel reliability for the traveling public and freight users on highways and major arterials.

OBJECTIVE 1.2 – Enhance access to major employment centers.

OBJECTIVE 1.3 – Coordinate regional transportation planning efforts and local comprehensive planning efforts.

OBJECTIVE 1.4 – Minimize negative environmental impacts associated with transportation investments.

OBJECTIVE 1.5 – Address Environmental Justice (EJ) in all appropriate aspects of MPO planning.

Goal 2 – Promote Safety and Security

OBJECTIVE 2.1 – Prioritize investments to reduce crash related Fatalities for all modes of transportation.

OBJECTIVE 2.2 – Prioritize investments to reduce crash related Serious Injuries for all modes of transportation.

OBJECTIVE 2.3 – Prioritize investments to reduce Bicycle and Pedestrian crash related Fatalities and Serious Injuries.

OBJECTIVE 2.4 – Prioritize investment on evacuation routes.

OBJECTIVE 2.5 – Invest in Transit security.

Goal 3 – Improve Transportation Operations

OBJECTIVE 3.1 – Invest in Intelligent Transportation Systems (ITS).

OBJECTIVE 3.2 – Invest in Vehicle to Infrastructure Communication.

OBJECTIVE 3.3 – Invest in cost effective Congestion Management strategies.

Goal 4 – Improve Mobility

OBJECTIVE 4.1 – Improve transportation options available.

OBJECTIVE 4.2 – Invest in Bicycle and Pedestrian infrastructure.

OBJECTIVE 4.3 – Maintain or enhance Transit service.

OBJECTIVE 4.4 – Balance regional capacity needs with human scale accessibility needs (Complete Streets).

OBJECTIVE 4.5 – Invest in Context Sensitive/Complete Street investments in multimodal corridors

Goal 5 – System Preservation

OBJECTIVE 5.1 – Maintain Transportation infrastructure

OBJECTIVE 5.2 – Maintain Transit assets

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CHAPTER 6

Network Identification

Network Identification

This chapter of the CMP presents an overview of the geographic area of application and the transportation network for the Lake-Sumter CMP.

AREA OF APPLICATION

The CMP application area is inclusive of the Lake-Sumter MPO metropolitan planning area, Lake County and Sumter County, and includes the multimodal transportation system being evaluated and monitored to identify congestion management policies and strategies.

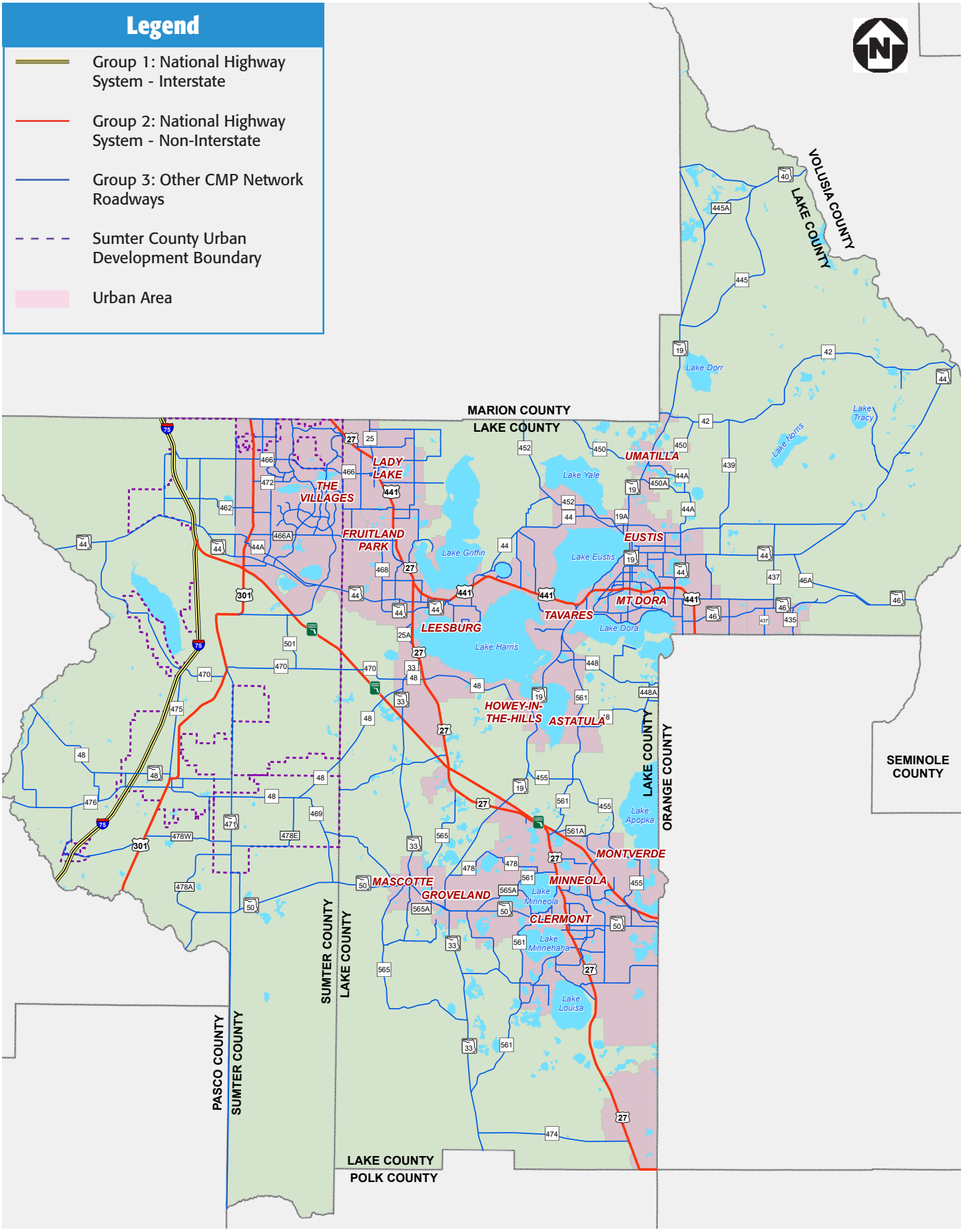
TRANSPORTATION NETWORK

Consistent with federal guidelines, the Lake-Sumter CMP covers a multimodal transportation network. In addition to evaluating congestion on the roadway network, the Lake-Sumter CMP evaluates appropriate transit, bicycle/pedestrian/multiuse path and freight movement networks within its designated area of application. The CMP roadway network is described below.

ROADWAY CMP NETWORK

The Lake-Sumter MPO roadway network includes all existing functionally classified roadways and roads with construction funded in the next five years, known as the existing-plus-committed (E+C) network. **Figure 5** illustrates the existing plus five-year committed roadway network and includes roadway projects through 2024 This map represents the study area and network for the Lake-Sumter CMP.

Figure 5. Lake-Sumter MPO CMP Network



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CHAPTER 7

Development of Performance Measures

Development of Performance Measures

Performance measures are used as tools to measure and monitor the effectiveness of the transportation system in the CMP. They assist in identifying, tracking and monitoring congestion. However, these measures are dependent upon the transportation network and the availability of data. They are typically used to measure the extent and severity of congestion and for the evaluation of the effectiveness of the implemented strategies.

As identified by FHWA, a set of good performance measures:

- Includes quantifiable data that is simple to present and interpret and has professional credibility;
- Describes existing conditions, can be used to identify problems and to predict changes;
- Can be calculated easily and with existing field data, techniques available for estimating the measure, achieves consistent results; and
- Applies to multiple modes, meaningful at varying scales and settings.

PERFORMANCE MEASURES

The performance measures for the Lake-Sumter CMP were selected to address the existing conditions for multi-modal transportation network in the area. The measures are also in compliance with the federal direction of using measures that cover multimodal networks. The measures are organized into seven major categories. These seven categories are

1. Safety
2. Roadway Capacity
3. Roadway Reliability
4. Public Transit
5. Bicycle/Pedestrian/Multiuse Trail Facilities
6. Goods Movement
7. Transportation Demand Management.

The CMP corresponding performance measures are listed on the following page.

Safety Performance Measures (Based on 5-Year Rolling Average)

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Non-motorized safety (number of non-motorized fatalities + serious injuries)

Roadway Capacity Performance Measures

- Percent of Roadway Miles by LOS Type
- Percent of Vehicle Miles Traveled by LOS Type
- V/C ratio
- V/MSV ratio

Reliable Travel Time Performance Measures

- Percent of the Interstate System providing for Reliable Travel Times
- Percent of the non-Interstate NHS providing for Reliable Travel Times
- Percent of the Interstate System where Peak Hour Travel Times meet expectations (Optional)
- Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations (Optional)

Public Transit Performance Measures

- Percent of congested roadway centerline miles with transit service
- Average peak service frequency
- On-time performance
- Passenger Trips (Annual Ridership)
- Passenger Trips per Revenue Hour

Bicycle/Pedestrian/Multiuse Path Facility Performance Measures

- Percent of Congested Roadway Centerline Miles with Bicycle Facilities
- Percent of Congested Roadway Centerline Miles with Sidewalk Facilities
- Miles of existing Multiuse Paths

Goods Movement Performance Measures

- Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes
- Number of Crashes Involving Heavy Vehicles

Transportation Demand Management Performance Measures

- Available information on registered vanpools/carpools and riders.

System Preservation (Optional – Non-CMP)

- Percent of pavements of the Interstate System in Good condition
- Percent of pavements of the non-Interstate NHS in Good condition
- Percent of pavements of the Interstate System in Poor condition
- Percent of pavements of the non-Interstate NHS in Poor condition
- Percent of NHS Bridges Classified as in “Good” Condition
- Percent of NHS Bridges Classified as in “Poor” Condition

These performance measures were identified based on numerous monitoring activities currently conducted and/or planned by various local and state agencies for Lake County and Sumter County. Detailed descriptions of each of these measures, together with an explanation of how the required data are or will be collected, are presented below. Developing additional performance measures resulting from implementation of MAP-21 and the FAST Act

Safety Performance Measures (5 Year Rolling Average)

Crashes at intersections and roadway segments are used as an indicator of congestion. Considered a measure of non-recurring congestion, this measure uses data that are widely available through the many local and state agencies that track them on an ongoing basis throughout the CMP application area. All data is collected and summarized in the form of a 5 year rolling average

Number of Fatalities

This is a summary of the number of fatalities from motor vehicle crashes. This is measured by the number of fatalities and not the number of fatality crashes.

Fatality Rate

This is a summary of the number of fatalities from motor vehicle crashes normalized by exposure in the form of vehicle miles of travel (100,000). This is measured by the number of fatalities and not the number of fatality crashes.

Serious Injuries

This is a summary of the number of incapacitating injuries from motor vehicle crashes. This is measured by the number of persons receiving incapacitating injuries and not the number of incapacitating injury crashes.

Serious Injury Rate

This is a summary of the number of incapacitating injuries from motor vehicle crashes normalized by exposure in the form of vehicle miles of travel (100,000). This is measured by the number of persons receiving incapacitating injuries and not the number of incapacitating injury crashes.

Non-Motorized Safety (Fatalities + Serious Injuries)

This is a summary of the number of fatalities and incapacitating injuries from motor vehicle crashes that involve pedestrians or bicyclists. This is measured by the sum of the number of fatalities and incapacitating injuries and not the number of fatality or incapacitating injury crashes.

Data Collection/Availability – Crash data in Lake and Sumter Counties are collected through various law enforcement Agencies. The data for fatality and incapacitating injury crashes are provided by the FDOT.

Additional Resources

In 2016 FDOT published an updated Strategic Highway Safety Plan (SHSP). This newest plan uses strategies called the "4 Es" to guide 13 Emphasis Areas. The 4 Es are as follows:

- Engineering
- Enforcement
- Education
- Emergency Response

These overarching strategies address the following 13 SHSP Emphasis Areas:

- Lane Departures
- Impaired Driving
- Pedestrians and Bicyclists
- Intersections
- Occupant Protection
- Motorcyclists
- Aging Road Users
- Commercial Motor Vehicles
- Speeding and Aggressive Driving
- Teen Drivers
- Distracted Driving
- Work Zones
- Traffic Records and Information Systems

Roadway Performance Measures

Percent of Vehicle Miles of Travel (VMT) and Roadway Miles Below the Adopted Level of Service (LOS) Standard

This measure summarizes the proportion of vehicle miles of travel and roadway miles below the adopted level of service standard to help quantify the level of congestion within the County.

Data Collection/Availability – The County/FDOT collects traffic volume and capacity data and performs LOS analysis on an annual basis for various planning purposes. LOS/MSV are generally based on FDOT Quality/Level of Service (Q/LOS) methodology.

V/C Ratio and V/MSV Ratio

The volume-to-capacity (V/C) ratio is used as the major tool in measuring roadway conditions and is a measure of the amount of traffic on a given roadway in relation to the amount of traffic the roadway was designed to handle. The volume to maximum service volume (V/MSV) is used to measure the amount of traffic on a roadway in relation to the adopted acceptable amount of traffic the roadway should be able to handle.

Data Collection/Availability – The County/FDOT collects traffic volume and capacity data and performs LOS analysis on an annual basis for various planning purposes based on the FDOT Q/LOS methodology. The County publishes the data into Geographic Information System (GIS) shape files, spreadsheets, and reports once the data are finalized.

Reliable Travel Time Performance Measures

FDOT has an established a Mobility Performance Measures Program based on a benchmarking technique and is referred to as the Florida Reliability Method. The Florida Reliability Method was derived from the Department's definition of reliability of a highway system as the percent of travel on a corridor that takes no longer than the expected travel time plus a certain acceptable additional time. In this context, it is necessary to define the three major components of reliability:

1. **Travel time** - The time it takes a typical commuter to move from the beginning to the end of a corridor. Since speed is determined along each segment as the traveler moves through the corridor, this travel time is a function of both time and distance. This is representative of the typical commuter's experience in the corridor.
2. **Expected travel time** - The median travel time across the corridor during the time-period being analyzed. The median is used rather than the mean so that the value of the expected travel time is not influenced by any unusual major incidents that may have occurred during the sampling period. These major incidents will be accounted for in the percentage of how often the travel takes longer than expected but will not change the baseline to which that unusually high travel time is being compared.
3. **Acceptable additional time** - The amount of additional time, beyond the expected travel time, that a commuter would find acceptable during a commute. The acceptable additional time is expressed as a percentage of the expected travel time during the period being analyzed.

Percent of the Interstate System providing for Reliable Travel Times

Percent of the Interstate System providing reliable travel times.

Percent of the non-Interstate NHS providing for Reliable Travel Times

Percent of the non-Interstate NHS System providing reliable travel times. This will typically only be measured on the State Highway system and a limited number of non-State Highway System facilities.

Percent of the Interstate System where Peak Hour Travel Times meet expectations (Optional)

Percent of the Interstate System providing reliable travel times during the peak hour relive to an established standard. This measure will likely only be required of urban areas over 1 million population and will likely not be required for the Lake-Sumter MPO.

Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations (Optional)

Percent of the Non-Interstate National Highway System providing reliable travel times during the peak hour relive to an established standard. This measure will likely only be required of urban areas over 1 million population and will likely not be required for the Lake-Sumter MPO.

Data Collection/Availability – Travel Time Reliability Data will be summarized by FDOT for the State Highway System. Data for non-state roadways will only be available on a limited number of roadway corridors and may be of limited quality.

Public Transit Performance Measures

Average Service Frequency and Number of Routes

This measure summarizes the number of routes in Lake County and in Sumter County (fixed-route local bus service), including the average service frequency.

Data Collection/Availability – Lake County's transit system, LakeXpress and Sumter County Transit (SCT) maintain databases of various transit service and operational data including route networks. This data is typically available in GIS or spreadsheet formats and used regularly by LakeXpress and SCT for service planning purposes.

Passenger Trips (Annual Ridership)

Annual ridership summarizes the total number of un-linked passenger trips from all transit routes that operates in the CMP application area in Lake County and Sumter County. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

Data Collection/Availability – The ridership data is considered one of the key performance indicators for any transit systems and are collected regularly. Transit ridership data is maintained and summarized in various transit and related documents.

Passenger Trips per Revenue Hour

Passenger Trips per Revenue Hour summarizes the total number of un-linked passenger trips from all transit routes that operates in the CMP application area in Lake County and Sumter County divided by the total revenue hours. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination. The total revenue hours are provided by the transit agencies.

Data Collection/Availability – LakeXpress and SCT regularly collects this data, which are reported in various day-to-day operations reports and annual reports such as the National Transit Database (NTD).

Bicycle/Pedestrian/Multiuse Path Facility Performance Measures

Percent of Congested CMP Roadway Centerline Miles with Bicycle Facilities

This measure identifies the proportion of congested CMP centerline miles, where some type of bicycle facility exists, as defined by the respective planning agencies. Some communities consider paved shoulders and wide curb lanes to be bicycle facilities, excepting interstates and toll facilities.

Data Collection/Availability – The data are regularly collected and maintained by Lake-Sumter MPO and summarized in various local plans.

Percent of Congested CMP Roadway Centerline Miles with Sidewalk Facilities

The proportion of congested CMP roadway network centerline miles on which a sidewalk is available is measured.

Data Collection/Availability – The data are regularly collected and maintained by Lake-Sumter MPO and summarized in various local plans.

Miles of Multiuse Paths

This measure summarizes the total number of miles of multiuse path facilities in Lake County and Sumter County. Multiuse path facilities usually are off-street facilities designated for the exclusive use of nonmotorized travel. They may be used by pedestrians, cyclists, wheelchair users, joggers, and other non-motorized users.

Data Collection/Availability – The data are regularly collected and maintained by Lake-Sumter MPO and summarized in various local plans.

Goods Movement Performance Measures

Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes

Measures the total vehicle miles of travel below the adopted LOS standard in Lake County and in Sumter County on designated truck routes. Designated truck routes from the latest LRTP will be used. The VMT for a roadway segment is calculated by multiplying the Annual Average Daily Traffic (AADT) of that segment by the length of the segment in miles.

Data Collection/Availability – The VMT performance data is calculated with the update of the State of the System Report.

Percent of the Interstate System Mileage providing for Reliable Truck Travel Times

Percent of the Interstate System providing reliable truck travel times.

Data Collection/Availability – Truck Travel Time Reliability Data will be summarized by FDOT for the Interstate System.

Percent of the Interstate System Mileage Uncongested

This measures the total vehicle miles of travel below the adopted LOS standard in Sumter County on Interstate 75.

Data Collection/Availability – Level of service performance data are updated annually by the MPO.

Number of Crashes Involving Heavy Vehicles

These crashes involve heavy vehicles. It is considered a measure of nonrecurring congestion that is often more significant when it involves heavy vehicles. This measure uses data that are widely available through the many local and state agencies that track these data on an ongoing basis throughout the CMP application area.

Data Collection/Availability – Crash data in Lake County and Sumter County are collected through various law enforcement agencies including the Florida Highway Patrol, Lake County Sheriff, Sumter County Sheriff, and the police departments of major cities in Lake County and Sumter County.

TDM Performance Measures

Number of Registered Carpools or Vanpools

TDM Performance Measures could include the annual number of registered carpools and vanpools in CMP application area. A carpool is defined as a group of two or more people who commute to work or other destinations together in a private vehicle, while a vanpool is typically a prearranged group of 5 to 15 people who share their commute to work.

Data Collection/Availability – FDOT's reThink Your Commute, through a contracted operator, provides carpool/vanpool services in Lake County and Sumter County and neighboring areas. reThink Your Commute maintains data on the number of carpools and vanpools operating in Lake County and Sumter County on an annual basis. The organization also maintains a list of registered carpool/vanpool users to match to carpools and vanpools.

System Preservation (Optional – Non-CMP)

Federal legislation (MAP-21 & FAST Act) requires the reporting of pavement conditions and bridge conditions on the National Highway System (NHS). While this is not a CMP related performance measure, it is appropriate to include these performance measures in the CMP Annual State of the System report.

- Percent of pavements of the Interstate System in Good condition
- Percent of pavements of the non-Interstate NHS in Good condition
- Percent of pavements of the Interstate System in Poor condition
- Percent of pavements of the non-Interstate NHS in Poor condition
- Percent of NHS Bridges Classified as in "Good" Condition
- Percent of NHS Bridges Classified as in "Poor" Condition

Data Collection/Availability – Pavement condition data for the Interstate and Non-Interstate National Highway System roadways will be provided by FDOT. Non-State NHS pavement condition data will need to be provided by the appropriate jurisdiction and data availability may be limited. Bridge condition information will be provided by the FDOT for all NHS bridges.

RELATIONSHIP OF PERFORMANCE MEASURES TO THE GOALS AND OBJECTIVES

Table 1 illustrates an example of the relationship between the performance measures identified above and the Goals and Objectives for the Congestion Management Process.

Table 1. Relationship of Goals and Objectives to Performance Measures

● Primary
○ Secondary

Performance Measure		GOAL 1 – SUPPORT ECONOMIC SUCCESS AND COMMUNITY VALUES					GOAL 2 – PROMOTE SAFETY AND SECURITY				
		OBJECTIVE 1.1 – Reduce congestion and improve travel reliability for the traveling public and freight users on highways and major arterials.	OBJECTIVE 1.2 – Enhance access to major employment centers.	OBJECTIVE 1.3 – Coordinate regional transportation planning efforts and local comprehensive planning efforts.	OBJECTIVE 1.4 – Minimize negative environmental impacts associated with transportation investments.	OBJECTIVE 1.5 – Address Environmental Justice (EJ) in all appropriate aspects of MPO planning.	OBJECTIVE 2.1 – Prioritize investments to reduce crash related Fatalities for all modes of transportation.	OBJECTIVE 2.2 – Prioritize investments to reduce crash related Serious Injuries for all modes of transportation.	OBJECTIVE 2.3 – Prioritize investments to reduce Bicycle and Pedestrian crash related Fatalities and Serious Injuries.	OBJECTIVE 2.4 – Prioritize investment on evacuation routes.	OBJECTIVE 2.5 – Invest in Transit Security.
Safety Performance Measures (% Year Rolling Average)	Number of Fatalities										
	Fatality Rate										
	Serious Injuries	○		○		○	●	●	●		
	Serious Injury Rate										
	Non-Motorized Safety (Fatalities + Serious Injuries)										
Roadway Capacity Performance Measures	Percent of VMT and Roadway Miles below adopted Level of Service Standard	●	○	○		○					
	V/C Ratio										
	V/MSV Ratio										
Travel Time Reliability Performance Measures	Percent of the Interstate System providing for Reliable Travel Times										
	Percent of the Non-Interstate NHS providing for Reliable Travel Times	●	○	○		○	○	○	○	○	
	Percent of the Interstate System where Peak Hour Travel Times meet expectations (Optional)										
	Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations (Optional)										
Goods Movement Performance Measures	Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes										
	Percent of the Interstate System Mileage Providing for Reliable Truck Travel Times	●	●	○		○	○	○			
	Percent of the Interstate System Mileage Uncongested										
	Number of Crashes Involving Heavy Vehicles										
Public Transit Performance Measures	Percent of Congested Roadway Centerline Miles with Transit Service										
	Passenger Trips per Revenue Hour										
	Average Peak Service Frequency	○	○	○		○					○
	On-Time Performance										
	Annual Ridership										
Bike/ Pedestrian/ Trail Facility Performance Measures	Percent of Congested Roadway Centerline Miles with Bicycle and/or Sidewalk Facilities										
	Miles of Multi-Use Trails			○		○			●		
TDM	Number of Registered Carpools or Vanpools	○	○	○							
System Preservation (Optional - Non-CMP)	Percent of Interstate & Non-Interstate NHS Pavement in Good/Poor Condition										
	Percent of NHS Bridges in Good/Poor Condition										

Table 1. Relationship of Goals and Objectives to Performance Measures (Continued)

● Primary
○ Secondary

Performance Measure		GOAL 3 – IMPROVE TRANSPORTATION OPERATIONS			GOAL 4 – IMPROVE MOBILITY					GOAL 5 – SYSTEM PRESERVATION	
		OBJECTIVE 3.1 – Invest in Intelligent Transportation Systems (ITS).	OBJECTIVE 3.2 – Invest in Vehicle to Infrastructure Communication.	OBJECTIVE 3.3 – Invest in Cost Effective Congestion Management Strategies.	OBJECTIVE 4.1 – Improve transportation options available.	OBJECTIVE 4.2 – Invest in Bicycle and Pedestrian Infrastructure.	OBJECTIVE 4.3 – Maintain or Enhance Transit Service.	OBJECTIVE 4.4 – Balance regional capacity needs with human scale accessibility needs (Complete Streets).	OBJECTIVE 4.5 – Invest in Context Sensitive/Complete Street investments in multimodal corridors	OBJECTIVE 5.1 – Maintain Transportation Infrastructure	OBJECTIVE 5.2 – Maintain Transit Assets
Safety Performance Measures (% Year Rolling Average)	Number of Fatalities	○	○	○		○		○	○	○	
	Fatality Rate										
	Serious Injuries										
	Serious Injury Rate										
	Non-Motorized Safety (Fatalities + Serious Injuries)										
Roadway Capacity Performance Measures	Percent of VMT and Roadway Miles below adopted Level of Service Standard	○	○	○	○		○	○	○	○	○
	V/C Ratio										
	V/MSV Ratio										
Travel Time Reliability Performance Measures	Percent of the Interstate System providing for Reliable Travel Times	○	○	○	○		○	○	○	○	○
	Percent of the Non-Interstate NHS providing for Reliable Travel Times										
	Percent of the Interstate System where Peak Hour Travel Times meet expectations (Optional)										
	Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations (Optional)										
Goods Movement Performance Measures	Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes	○	○	○	○		○	○	○	○	○
	Percent of the Interstate System Mileage Providing for Reliable Truck Travel Times										
	Percent of the Interstate System Mileage Uncongested										
	Number of Crashes Involving Heavy Vehicles										
Public Transit Performance Measures	Percent of Congested Roadway Centerline Miles with Transit Service	○	○	○	●						●
	Passenger Trips per Revenue Hour										
	Average Peak Service Frequency										
	On-Time Performance										
	Annual Ridership										
Bike/ Pedestrian/ Trail Facility Performance Measures	Percent of Congested Roadway Centerline Miles with Bicycle and/or Sidewalk Facilities			○	●	●					●
	Miles of Multi-Use Trails										
TDM	Number of Registered Carpools or Vanpools			●	●						
System Preservation (Optional - Non-CMP)	Percent of Interstate & Non-Interstate NHS Pavement in Good/Poor Condition									●	●
	Percent of NHS Bridges in Good/Poor Condition										

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CHAPTER 8

SYSTEM PERFORMANCE MONITORING PLAN

System Performance Monitoring Plan

The FHWA identifies congestion monitoring as just one of several aspects of transportation system performance that leads to more effective investment decisions for transportation improvements. Safety, physical condition, environmental quality, economic development, travel time reliability, quality of life, and customer satisfaction are among the aspects of performance that also require monitoring.

The Final Rule on Metropolitan Transportation Planning identifies the requirement for, "a coordinated program for data collection and system performance monitoring to assess the extent of congestion, to contribute in determining the causes of congestion, and evaluating the efficiency and effectiveness of implemented actions." In addition, it also indicates that, "to the extent possible, this data collection program should be coordinated with existing data sources and coordinated with operations managers in the metropolitan area."

As a result, the goal of the Lake-Sumter MPO CMP system monitoring plan, as presented in **Table 2**, is to develop an ongoing system of monitoring and reporting that relies primarily on data already collected or planned to be collected in the Counties.

The components of the monitoring plan include roadways, public transit/rideshare, bicycle/pedestrian/multiuse path, transportation demand management (TDM), and goods movement where:

- Roadways are monitored through annual LOS analysis using traffic counts and other related data constantly collected throughout the region;
- Crashes are monitored to help measure safety and nonrecurring congestion;
- Transit performance is monitored continuously through various operating and capital plans;
- Bicycle/pedestrian/multiuse path inventory data are monitored and updated in various city and county databases;
- TDM-related data monitoring is done primarily by the reThink Your Commute Commuter Assistance Program, which maintains an array of databases and coordinates programs to find alternatives for single occupant vehicle (SOV) trips in Lake County and Sumter County and other counties in Central Florida;
- Significant goods movement corridors are evaluated to address mobility needs of the goods movement providers.

The Lake-Sumter MPO CMP will make use of the above available sources to create the State of the System Report to document the performance of the transportation system as described in more detail in Chapter 8 of this report.

Table 2. System Performance Monitoring Plan

Category	Performance Measures	Monitoring Activity	Responsible Agency	Current Status	Geographic Area Covered
Level of Service	Percent of Miles/VMT by LOS Type	Level of Service Analysis	Lake-Sumter MPO	Ongoing	Lake-Sumter MPO Roadway Network
	V/C Ratio				
	V/MSV Ratio				
Safety	Total Crashes	Crash Data Analysis	Lake County and Sumter County Traffic Operations	Ongoing	FDOT, Lake County and Sumter County
	Crash Frequency				
	Crashes involving heavy vehicles				
Transit	Passenger Trips	National Transportation Database Report/ Transit Development Plan	Lake-Sumter MPO/Cities/ FDOT	Ongoing	Lake-Sumter MPO Roadway Network
	Passenger Trips per Revenue Hour				
	Number of Routes & Service				
Bicycle and Pedestrian	Miles of Multiuse Path Facilities	Bicycle/Pedestrian/ Multiuse Path Plans, LRTP and Databases	Lake-Sumter MPO	Ongoing	Lake County and Sumter County
	Percent Congested Miles on Ped. and Bike facilities				
Carpooling	Number of Registered Carpools or Vanpools	Annual Reports and Interim Summaries by reThink Your Commute	reThink Your Commute	Ongoing	Lake County and Sumter County
Truck Traffic	Percent of VMT on Designated Truck Route Corridors on congested roadways	Roadway Databases and LRTP	Lake-Sumter MPO / FDOT	Ongoing	Lake County and Sumter County

The Lake-Sumter MPO, as part of the system monitoring plan, will update the State of the System Report to coordinate with the LRTP, the Lake County and Sumter County Comprehensive Plans and Mobility Fee Update. Since traffic conditions typically do not change drastically from one year to the next, the MPO will update the State of the System Report to coincide with the adoption of the LRTP. It is anticipated that the State of the System Report would then be updated once each year.

CHAPTER 9

Congested Corridor Selectionand CMP Strategies

Congested Corridor Selection and CMP Strategies

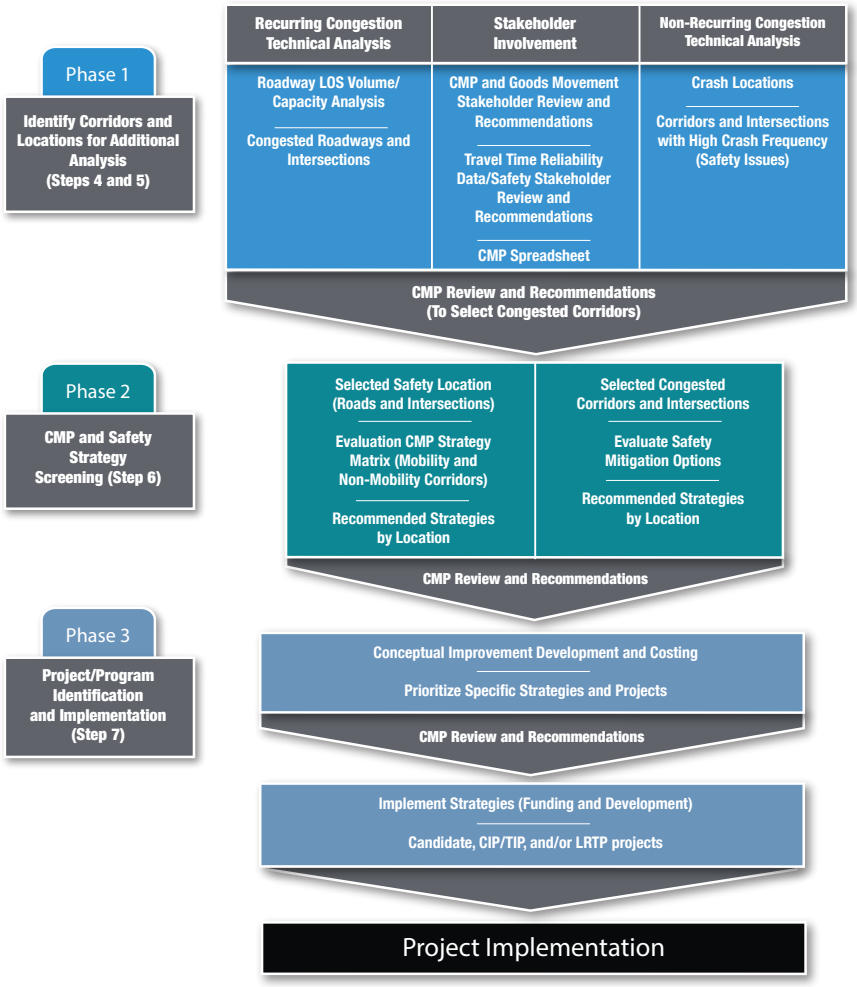
IMPLEMENTATION

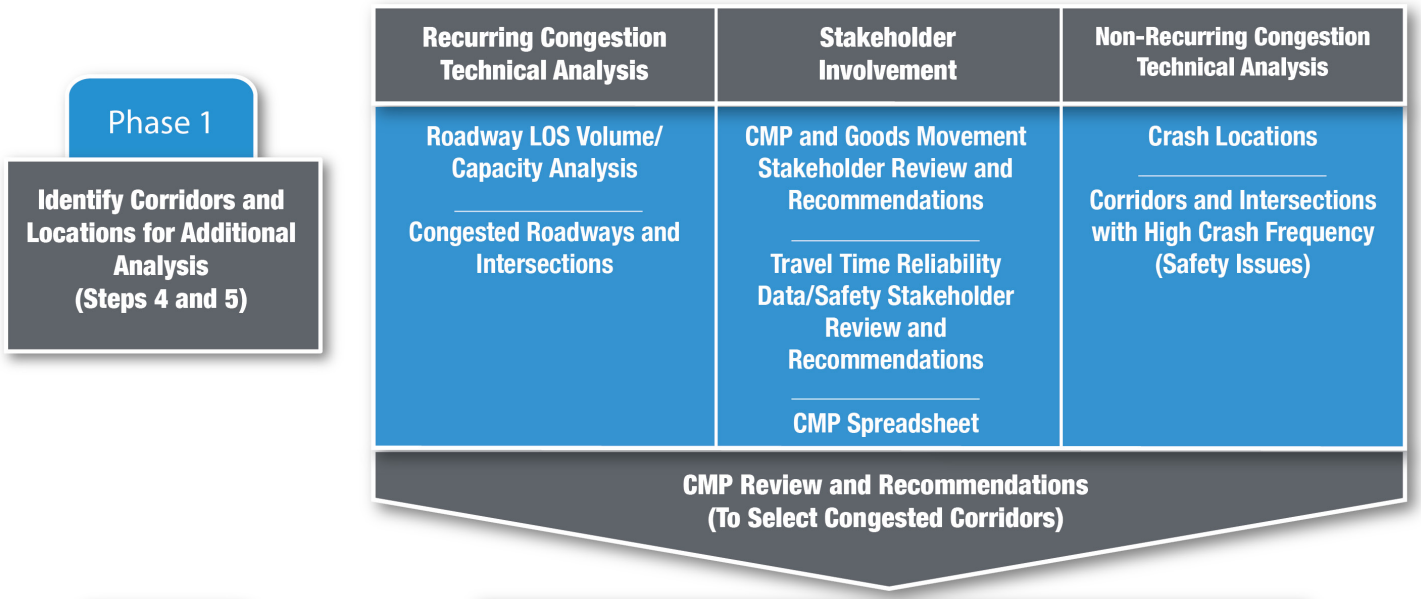
This section summarizes the identification of potential CMP strategies. This includes the process for selecting new corridors and future projects for implementation and may also include an implementation schedule, responsibilities, costs, and possible funding sources for each strategy currently proposed for implementation.

CONGESTED CORRIDOR SELECTION AND PROJECT SELECTION PROCESS

The purpose of the CMP is to identify implementable projects. The list of known congestion issues maintained by the MPO should continue to be used as a primary source in identifying opportunities. However, continued monitoring of the transportation system will provide additional information regarding new congestion where solutions will be needed. The 3-phase CMP process outlined below involves identifying and screening congested corridors to identify potential projects/programs that may be implemented. The process follows three phases as described below and complements the federal 8-Action process described in Chapter 2. Corridors to be evaluated are selected by coordinated efforts of BPAC, TAC, and the Mobility Task Force.

Figure 6. Corridor/Strategy Selection Process





Identify Congested Corridors and Locations for Review (Phase 1)

Monitoring efforts are used to review the level of service on the roadway network to identify recurring congestion. Roadways that are congested today or forecasted to be congested in five years are considered for review through the CMP screening process. The MPO uses a tiered approach in identifying potential projects for implementation in the CMP. This approach includes a series of conditions or criteria for evaluating congestion and identifying the appropriate solution.

- **Not Congested (currently or in five years without improvements):** Corridors that are not anticipated to operate below their adopted level of service standards in either the existing conditions or after committed improvements in the five-year program are implemented.
- **Approaching Congestion or Minimally Congested:** Corridors that are approaching congestion or are minimally congested based on one of the following three criteria (projects on these corridors may have the greatest impact):
  - **Approaching Congestion** – Corridors that are not congested but have segments that have traffic volumes that consume more than 90% of the roadway's capacity at the adopted level of service standard with either the existing conditions or forecasted five-year condition without improvement.
  - **Congested Today** – Existing corridors with traffic volumes that exceed the adopted level of service standard that do not exceed the physical capacity of the roadway.
  - **Congestion in 5 Years** – Corridors forecasted in five years to have traffic volumes that exceed the adopted level of service standard that do not exceed the physical capacity of the roadway.
- **Extremely Congested:** Roadways in the Existing + Committed (E+C) five-year network that have forecast volumes that are greater than the physical capacity (typically occurs when using detailed analysis and the volume-to-capacity ratio is 1.08 or greater) of the roadway and are considered severely congested.

Crash data management procedures also are used to identify corridors or intersections with a high frequency of crashes that result in non-recurring congestion. Safety improvements not only reduce the potential harm to persons in our communities but also can reduce congestion.

Generally, non-congested corridors do not need to be addressed by the CMP; however, the other two categories may require one or more congestion-relieving strategies. Extremely congested corridors typically will require either capacity improvements or a shift to other mobility strategies that rely significantly on public transportation or reductions in travel demand. In some cases, extremely congested corridors may respond favorably to the implementation of operational improvements; these would be considered on a case-by-case basis where appropriate. The corridors approaching congested or minimally congested will generally be the most responsive to CMP improvement strategies.

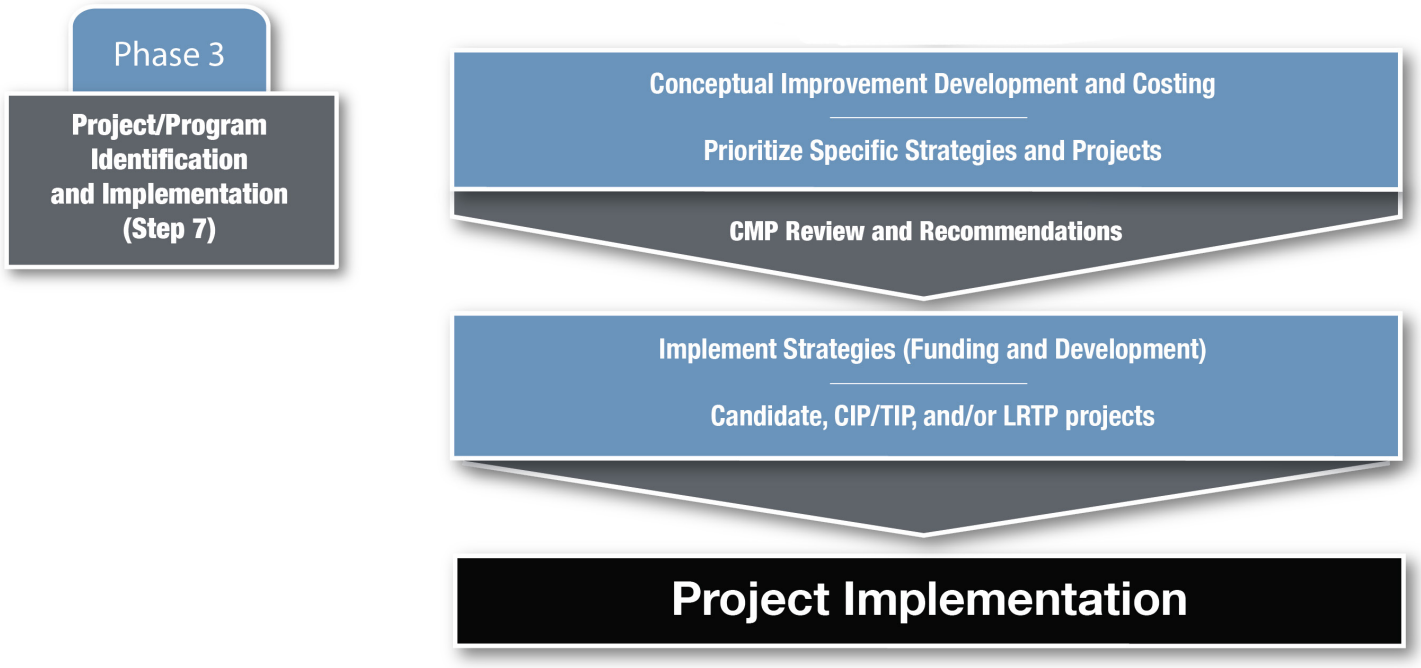
After the congested network and corridors have been identified, two to three corridors are selected for detailed analysis and project identification and implementation each year. The TAC reviews the selection of corridors. Once corridors are selected and evaluated, they will not be reevaluated for three to five years. Corridors typically are selected based on the following:

1. If they are not in the 5-year work program or identified as projects in the 10-year plan and the corridors are forecasted to operate below their adopted level of service standard.
2. Corridors that would receive the greatest mobility or operational benefit from the CMP process.
3. Roadways identified as Long-Term Concurrency Roadways using mobility strategies that would be strengthened through the implementation of mobility improvements

CMP and Safety Strategy Screening (Phase 2)

Once congested corridors are selected for review, they are screened to identify mitigation strategies to reduce congestion or improve safety and reduce crashes. The Congestion Mitigation Process Strategy Matrix (found in Appendix A) is used to address recurring congestion, and the Safety Mitigation Strategy Matrix (found in Appendix B) is used to address nonrecurring congestion. The matrix includes strategies in five tiers as identified in the Lake-Sumter CMP Strategy Toolbox, as illustrated later in this section. The CMP Strategy Matrix typically is used in a workshop setting to quickly review a corridor, and the Safety Mitigation Strategy Matrix is applied based on a review of crash data.

Because this phase is typically the most time-consuming and data-intensive, it is not always necessary to screen the congested corridors if previous analysis or evaluation has been conducted. In the case of the list maintained by the MPO, congestion issues may have already been identified or documented through citizen comment and observation making it simpler to identify the appropriate strategy to address the congestion issue.



Evaluate Project or Program for Implementation (Phase 3)

The congestion or safety mitigation strategies that are identified as having the greatest potential benefit are then evaluated in greater detail based on committee and/or technical recommendations. During this phase, additional analysis is performed on potential projects and programs to identify the specific improvement, implementation issues, and costs. Recommendations for implementation are then made for approved projects or programs. This may result in a need to refocus existing resources, such as existing rideshare programs or local maintenance crews where possible, programming improvements in the local agency capital improvement programs or transportation improvement program, or using boxed-funds controlled by the MPO, and finally may be identified as candidate projects for implementation in future LRTPs. This identification of projects and programs is coordinated with the CMP Task Force, and information is provided to the local government staff for future consideration during the capital budgeting process.

CONGESTION MANAGEMENT STRATEGIES

This section of the CMP Update identifies and evaluates the strategies intended for mitigating existing and future congestion in the Lake-Sumter roadway network. A *Toolbox of Strategies* is presented to help decision makers and planners in effectively using these congestion reduction strategies. The Final Rule on Statewide and Metropolitan Transportation Planning published on February 14, 2007, states that, "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 Transportation Improvement Program (TIP)."

A full range of potential strategies has been identified for the Lake County and Sumter County in its multimodal CMP network. These strategies are included in the Lake-Sumter CMP Toolbox of Strategies. The strategies may be grouped into one of the following broad categories as listed in **Figure 7**.

Figure 8 summarizes the demand and operational management strategies included in the Lake-Sumter MPO CMP Toolbox of Strategies, which is presented later in detail. A full range of demand and operational management strategies are identified in these tables for the MPO to assist in efforts to mitigating existing and future congestion.

Figure 7. Congestion Management Strategies

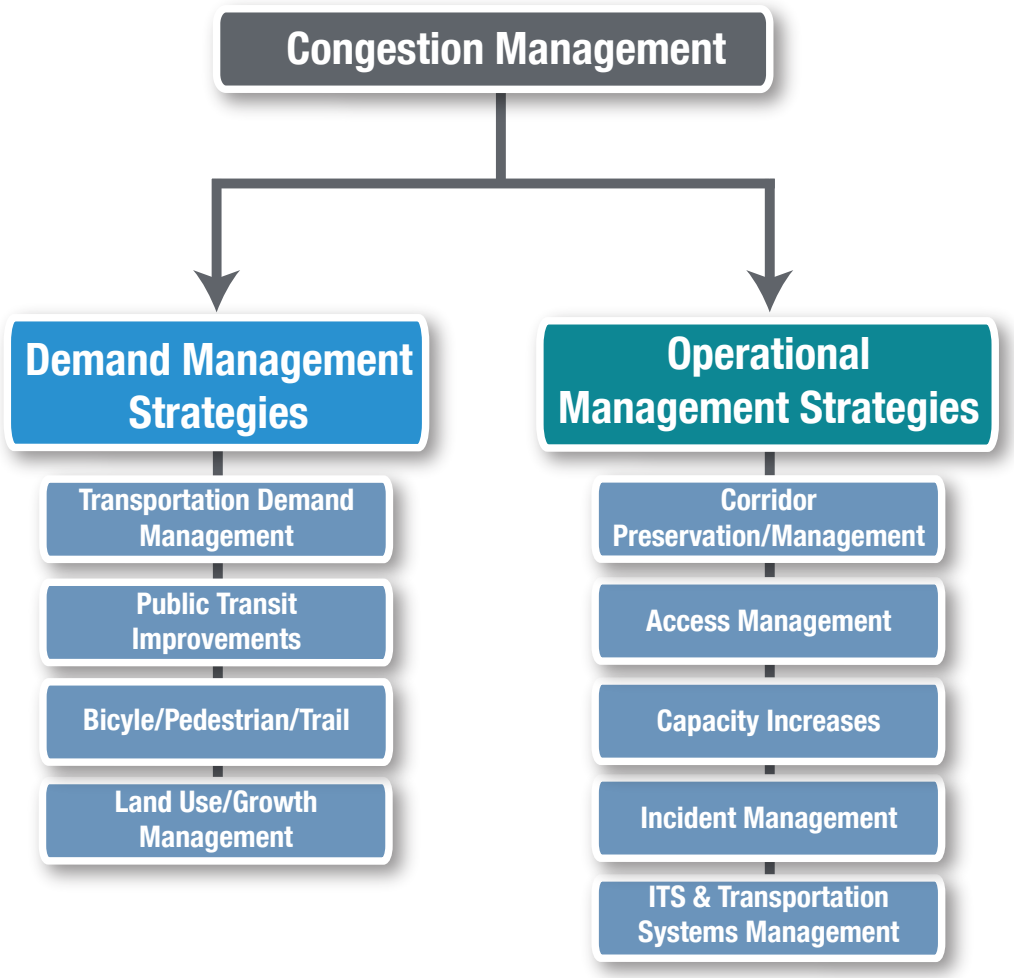
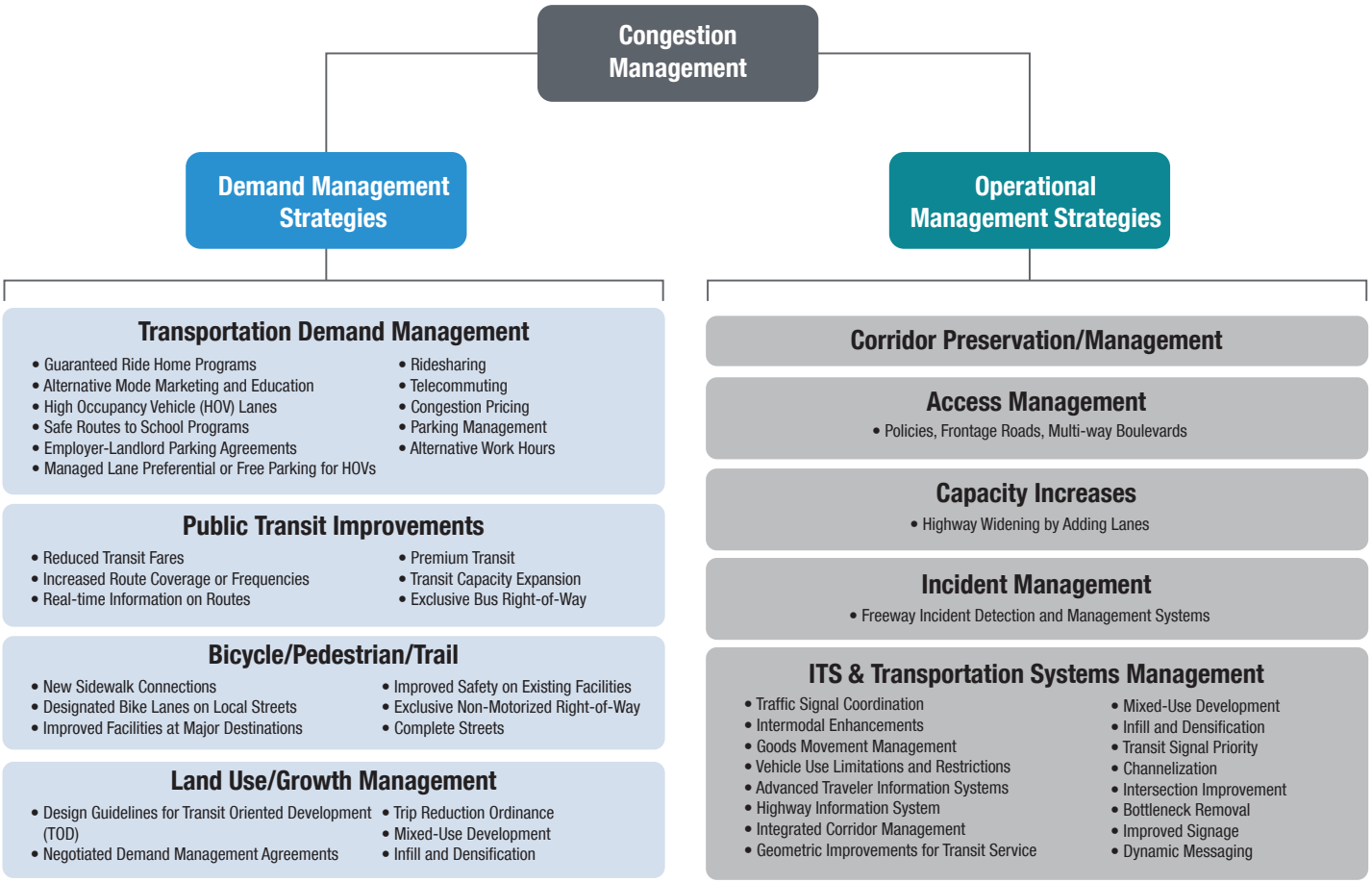


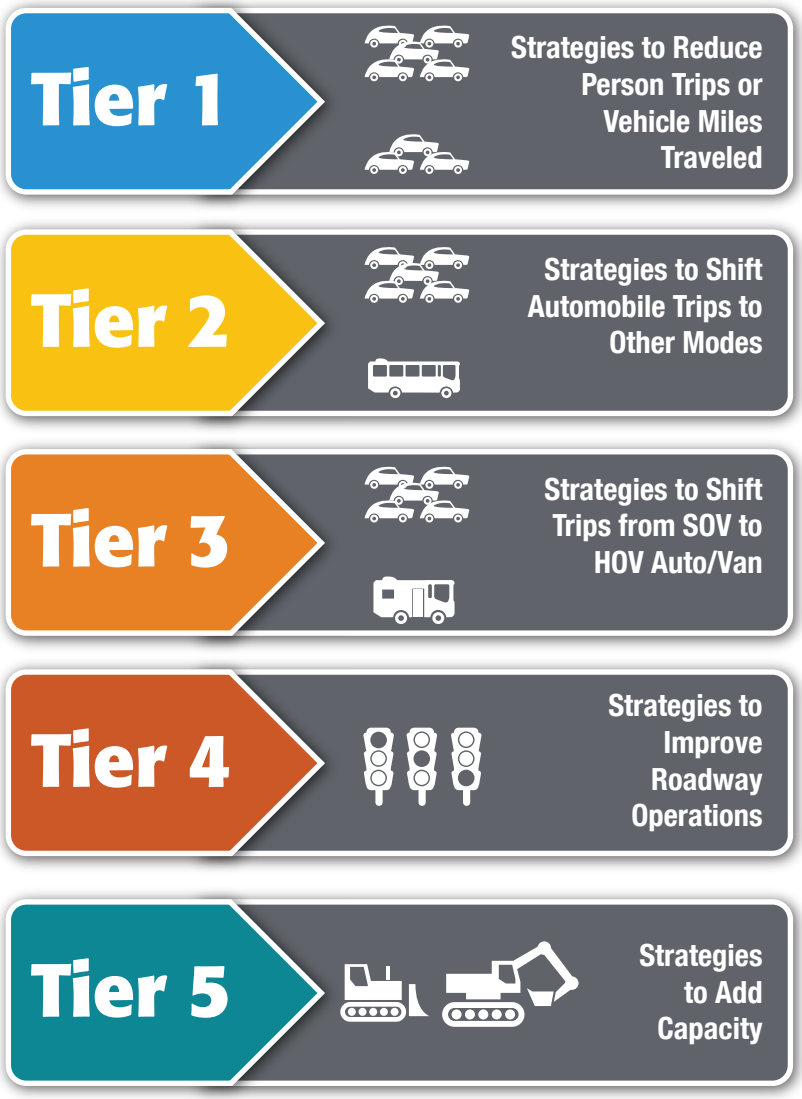
Figure 8. Demand and Operational Management Strategies



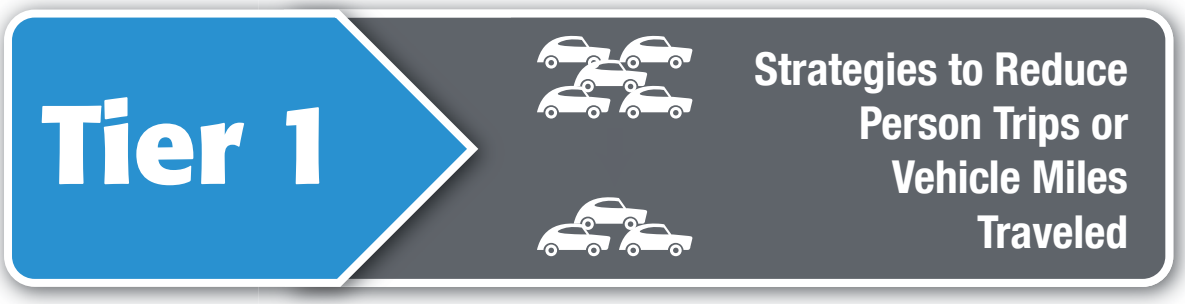
TOOLBOX OF STRATEGIES

The CMP uses a strategy toolbox with multiple tiers of strategies to support the congestion strategy or strategies for congested corridors. Following an approach used by other MPOs and promoted by FHWA, the toolbox of congestion mitigation strategies is arranged so that the measures at the top take precedence over those at the bottom. The toolbox is presented below in **Figure 9**.

Figure 9. Lake-Sumter MPO CMP Toolbox of Strategies



The "top-down" approach promotes the growing sentiment in today's transportation planning arena and follows FHWA's clear direction to consider all available solutions before recommending additional roadway capacity. The Lake-Sumter CMP toolbox of strategies is divided by tiers, strategies, and specific examples. The remainder of this section outlines the tiers and strategies while the specific examples have been included in Appendix C.



Transportation Demand Management Strategies

These strategies are used to reduce the use of single occupant motor vehicles, as the overall objective of TDM is to reduce the miles traveled by automobile. The following TDM strategies, not in any particular order, are available for consideration in the toolbox to potentially reduce travel in the peak hours.

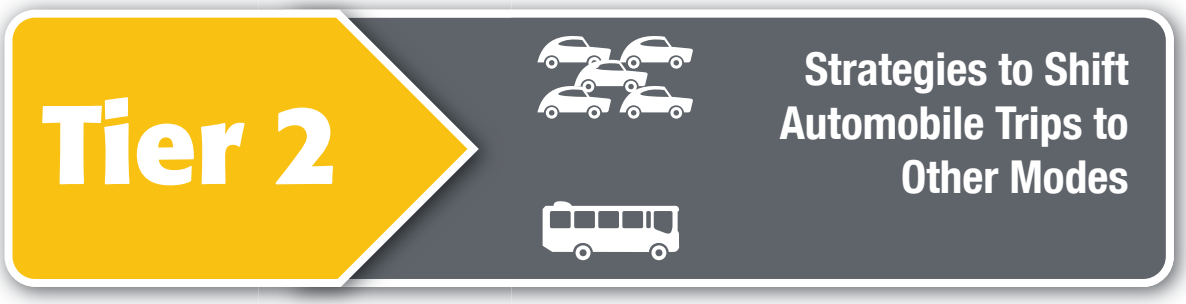
- **Congestion Pricing:** Congestion pricing can be implemented statically or dynamically. Static congestion pricing requires that tolls are higher during traditional peak periods. Dynamic congestion pricing allows toll rates to vary depending upon actual traffic conditions. The more congested the road, the higher the cost to travel on the road. Dynamic congestion pricing works best when coupled with real-time information on the availability of other routes.
- **Alternative Work Hours:** There are three main variations: staggered hours, flex-time, and compressed work weeks. Staggered hours require employees in different work groups to start at different times to spread out their arrival/departure times. Flex-time allows employees to arrive and leave outside of the traditional commute period. Compressed work weeks involve reducing the number of days per week worked while increasing the number of hours worked per day.
- **Telecommuting:** Telecommuting policies allow employees to work at home or a regional telecommute center instead of going into the office, all the time or only one or more days per week.
- **Guaranteed Ride Home Programs:** These programs provide a safety net to those people who carpool or use transit to work so that they can get to their destination if unexpected work demands or an emergency arises.
- **Alternative Mode Marketing and Education:** Providing education on alternative modes of transportation can be an effective way of increasing demand for alternative modes. This strategy can include mapping Websites that compute directions and travel times for multiple modes of travel.
- **Safe Routes to Schools Program:** This federally-funded program provides 100 percent funding to communities to invest in pedestrian and bicycle infrastructure surrounding schools.
- **Preferential or Free Parking for HOVs:** This program provides an incentive for employees to carpool with preferred of free-of-charge parking for HOVs.

Land Use/Growth Management Strategies

The strategies in this category include policies and regulations that would decrease the total number of auto trips and trip lengths while promoting transit and non-motorized transportation options.

- **Negotiated Demand Management Agreements:** As a condition of development approval, local governments require the private sector to contribute to traffic mitigation agreements. The agreements typically set a traffic reduction goal (often expressed as a minimum level of ridesharing participation or a stipulated reduction in the number of automobile trips).

- **Trip Reduction Ordinance:** These ordinances use a locality's regulatory authority to limit trip generation from a development. They spread the burden of reducing trip generation among existing and future developments better than Negotiated Demand Management Agreements.
- **Infill Developments:** This strategy takes advantage of infrastructure that already exists, rather than building new infrastructure on the fringes of the urban area.
- **Transit Oriented Developments:** This strategy clusters housing units and/or businesses near transit stations in walkable communities. By providing convenient access to alternative modes, auto dependence can be reduced.
- **Design Guidelines for Pedestrian-Oriented Development:** Maximum block lengths, building setback restrictions, and streetscape enhancements are examples of design guidelines that can be codified in zoning ordinances to encourage pedestrian activity.
- **Mixed-Use Development:** This strategy allows many trips to be made without automobiles. People can walk to restaurants and services rather than use their vehicles.



Public Transit Strategies

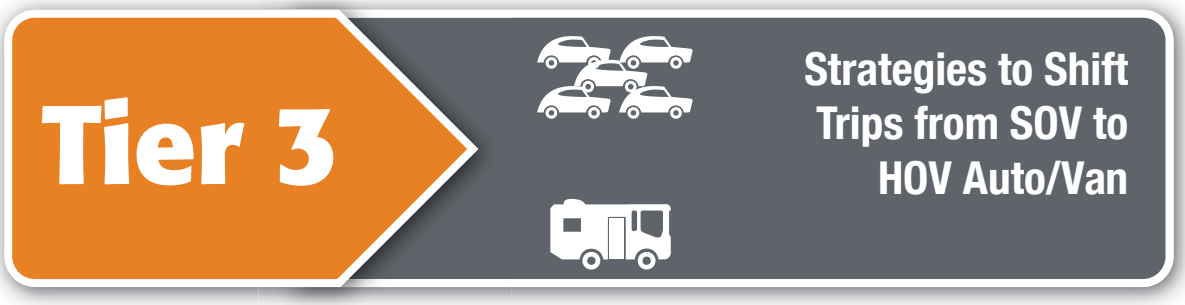
Two types of strategies, capital improvements and operating improvements, are used to enhance the attractiveness of public transit services to shift auto trips to transit. Transit capital improvements generally modernize the transit systems and improve their efficiency; operating improvements make transit more accessible and attractive.

- **Transit Capacity Expansion:** This strategy adds new vehicles to expand transit services.
- **Increasing Bus Route Coverage or Frequencies:** This strategy provides better accessibility to transit to a greater share of the population. Increasing frequency makes transit more attractive to use.
- **Implementing Regional Premium Transit:** Premium transit such as Bus Rapid Transit (BRT) best serves dense urban centers where travelers can walk to their destinations. Premium regional transit from suburban areas can sometimes be enhanced by providing park-and-ride lots.
- **Providing Real-Time Information on Transit Routes:** Providing real-time information on bus progress either at bus stops, terminals, and/or personal wireless devices makes bus travel more attractive.
- **Reducing Transit Fares:** This relatively easy-to-implement strategy encourages additional transit use, to the extent that high fares are a real barrier to transit. However, due to the direct financial impact on the transit system operating budgets, reductions in selected fare categories may be a more feasible strategy to implement.
- **Provide Exclusive Bus Right-Of-Way (ROW) :** Exclusive right-of-way includes bus ways, bus-only lanes, and bus bypass ramps. This strategy is applied to freeways and major highways that have routes with high ridership.

Non-Motorized Transportation Strategies

Non-motorized strategies include bicycle, pedestrian, and multiuse path facility improvements that encourage non-motorized modes of transportation instead of single-occupant vehicle trips.

- **New Sidewalk Connections:** Increasing sidewalk connectivity encourages pedestrian traffic for short trips.
- **Designated Bicycle Facilities on Local Streets:** Enhancing the visibility of bicycle facilities increases the perception of safety. In many cases, bicycle lanes can be added to existing roadways through restriping.
- **Improved Bicycle Facilities at Transit Stations and Other Trip Destinations:** Bicycle racks and bicycle lockers at transit stations and other trip destinations increase security. Additional amenities such as locker rooms with showers at workplaces provide further incentives for using bicycles.
- **Improved Safety of Existing Bicycle and Pedestrian Facilities:** Maintaining lighting, signage, striping, traffic control devices, and pavement quality and installing curb cuts, curb extensions, median refuges, and raised crosswalks can increase bicycle and pedestrian safety.
- **Exclusive Non-Motorized Right-of-Way:** Abandoned rail rights-of-way and existing parkland can be used for medium- to long-distance bicycle trails, improving safety and reducing travel times.
- **Complete Streets:** Routinely designing and operating the entire right-of-way can enable safe access for all users including pedestrians, bicyclists, motorists, and transit. Elements that may be found on a complete street include sidewalks, bike facilities, special bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, support for changing mobility technologies, and more.

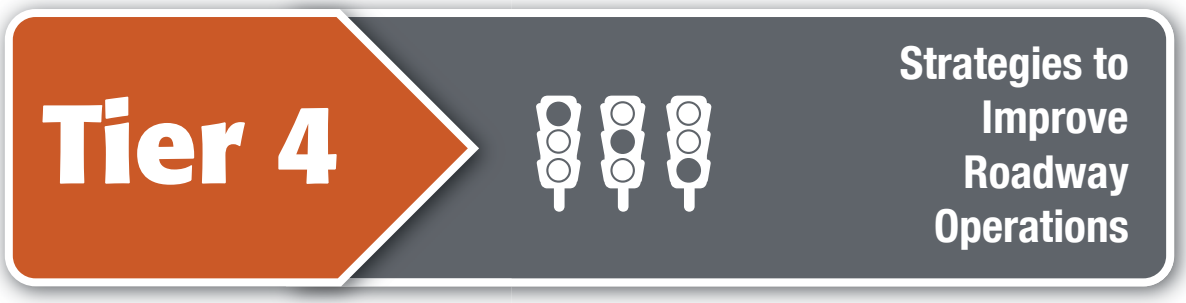


Transportation Demand Management Strategies

In addition to the TDM Strategies that are included in Tier 1, additional strategies are available in Tier 3 that encourage the use of ride-sharing and other forms of HOV implementation.

- **Ridesharing (Carpools & Vanpools):** In ridesharing programs, participants are matched with potential candidates for sharing rides. This typically is arranged/encouraged through employers or transportation management agencies that provide ride-matching services. These programs are more effective if combined with HOV lanes, parking management, guaranteed ride home policies, and employer-based incentive programs.
- **High Occupancy Vehicle Lanes:** This increases corridor capacity while, at the same time, providing an incentive for single-occupant drivers to shift to ridesharing. These lanes are most effective as part of a comprehensive effort to encourage HOVs, including publicity, outreach, park-and-ride lots, rideshare matching services, and employer incentives.

- **Park-and-Ride Lots:** These lots can be used in conjunction with HOV lanes and/or express bus services. They are particularly helpful when coupled with other commute alternatives such as carpool/vanpool programs, transit, and/or HOV lanes.
- **Employer-Landlord Parking Agreements:** Employers can negotiate leases so that they pay for parking spaces used only by employees. In turn, employers can pass along parking savings by purchasing transit passes or reimbursing nondriving employees with the cash equivalent of a parking space.
- **Parking Management:** This strategy reduces the instance of free parking to encourage other modes of transportation. Options include reducing the minimum number of parking spaces required per development, increasing the share of parking spaces for HOVs, introducing or raising parking fees, providing cash-out options for employees not using subsidized parking spaces, and expanding parking at transit stations or park-and-ride lots.
- **Managed Lanes:** FHWA defines managed lanes as highway facilities or a set of lanes in which operational strategies are implemented and managed (in real time) in response to changing conditions. Examples of managed lanes may include high-occupancy toll (HOT) lanes with tolls that vary based on demand, exclusive bus-only lanes, HOV and clean air and/or energy-efficient vehicle lanes, and HOV lanes that could be changed into HOT lanes in response to changing levels of traffic and roadway conditions.



Intelligent Transportation Systems (ITS) Strategies

The strategies in ITS use new and emerging technologies to mitigate congestion while improving safety and environmental impacts. Typically, these systems are made up of many components, including sensors, electronic signs, cameras, controls, and communication technologies. ITS strategies are sets of components working together to provide information and allow greater control of the operation of the transportation system.

- **Dynamic Messaging:** Dynamic messaging uses changeable message signs to warn motorists of downstream queues; it provides travel time estimates, alternate route information, and information on special events, weather, or accidents.
- **Advanced Traveler Information Systems (ATIS):** ATIS provide an extensive amount of data to travelers, such as real-time speed estimates on the Web or over wireless devices and transit vehicle schedule progress. It also provides information on alternative route options.
- **Integrated Corridor Management (ICM):** This strategy, built on an ITS platform, provides for the coordination of the individual network operations between parallel facilities creating an interconnected system. A coordinated effort between networks along a corridor can effectively manage the total capacity in a way that will result in reduced congestion.
- **Transit Signal Priority (TSP):** This strategy uses technology located onboard transit vehicles or at signalized intersections to temporarily extend green time, allowing the transit vehicle to proceed without stopping at a red light.

Transportation Systems Management Strategies

Transportation Systems Management (TSM) strategies identify operational improvements to enhance the capacity of the existing system. These strategies typically are used together with ITS technologies to better manage and operate existing transportation facilities.

- **Traffic Signal Coordination:** Signals can be pre-timed and isolated, pre-timed and synchronized, actuated by events (such as the arrival of a vehicle, pedestrian, bus or emergency vehicle), set to adopt one of several pre-defined phasing plans based on current traffic conditions, or set to calculate an optimal phasing plan based on current conditions.
- **Channelization:** This strategy is used to optimize the flow of traffic for making left or right turns usually using concrete islands or pavement markings.
- **Intersection Improvements:** Intersections can be widened and lanes restriped to increase intersection capacity and safety. This may include auxiliary turn lanes (right or left) and widened shoulders.
- **Bottleneck Removal:** This strategy removes or corrects short, isolated, and temporary lane reductions, substandard design elements, and other physical limitations that form a capacity constraint that results in a traffic bottleneck.
- **Vehicle Use Limitations and Restrictions:** This strategy includes all-day or selected time-of-day restrictions of vehicles, typically trucks, to increase roadway capacity.
- **Improved Signage:** Improving or removing signage to clearly communicate location and direction information can improve traffic flow.
- **Geometric Improvements for Transit:** This strategy includes providing for transit stop locations that do not affect the flow of traffic, improve sight lines, and improve merging and diverging of buses and cars.
- **Intermodal Enhancements:** Coordinating modes makes movement from one mode to the other easier. These enhancements typically include schedule modification to reduce layover time or increase the opportunity for transfers, creation of multimodal facilities, informational kiosks, and improved amenities at transfer locations.
- **Goods Movement Management:** This strategy restricts delivery or pickup of goods in certain areas to reduce congestion.

Freeway Incident Detection and Management Strategy

- **Freeway Incident Detection and Management Systems:** This strategy addresses primarily non-recurring congestion, typically includes video monitoring and dispatch systems, and may also include roving service patrol vehicles.

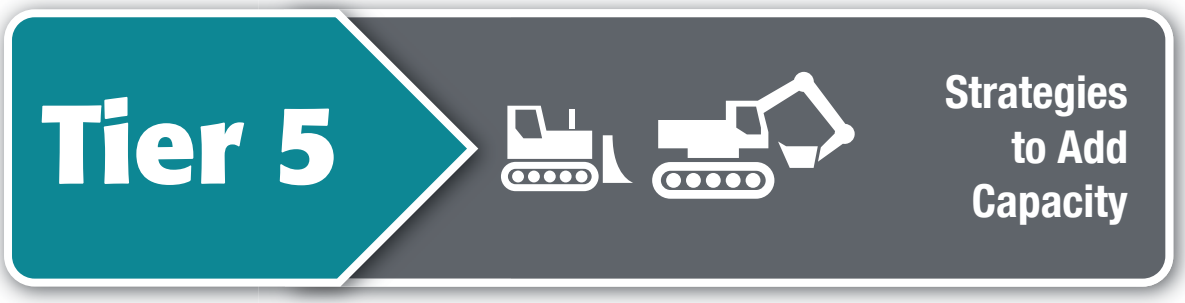
Access Management Strategy

- **Access Management Policies:** This strategy includes adoption of policies to regulate driveways and limit curb cuts and/or policies that require continuity of pedestrian, bicycle, and trail facilities.

Corridor Preservation/Management Strategies

- **Corridor Preservation:** This strategy includes implementing, where applicable, land acquisition techniques such as full title purchases of future rights-of-way and purchase of easements to plan proactively in anticipation of future roadway capacity demands.

- **Corridor Management:** This strategy is applicable primarily in moderate- to high-density areas and includes strategies to manage corridor rights-of-way. The strategies range from land-use regulations to landowner agreements such as subdivision reservations, which are mandatory dedications of portions of subdivided lots that lie in the future right-of-way.



Strategies to add capacity are the costliest and least desirable strategies and should be considered as last resort methods for reducing congestion. Strategies of cities that attempt to "build out of congestion" have not provided intended results. As such, capacity-adding strategies should be applied after determining the demand and operational management strategies identified earlier are not feasible solutions. The key strategy is to increase the capacity of congested roadways through additional general purpose travel lanes.

- Increase the capacity of congested roadways through additional general purpose travel lanes and/or managed lanes

CONGESTION MITIGATION MATRIX

The CMP Strategy Matrix is used to address recurring congestion. The matrix is included in **Appendix B**. The matrix includes strategies in five tiers as identified in the CMP Strategy Toolbox. The CMP Strategy Matrix typically is used in a workshop setting with agency stakeholders to quickly screen through the strategies to identify appropriate strategies that may provide a benefit within the corridor. Following the screening of a corridor using the matrix, strategies which were identified as having a high level of potential benefit or medium level of potential benefit are considered for additional analysis where appropriate. The CMP Strategy Matrix identifies the general level of applicability by mode given the different trip types as follows:

- **Regional Trips:** Long distance trips and/or pass-through trips through the county. Typically these trips are auto dependent unless served by premium transit modes.
- **Regional Access Trips:** Moderate distance trips that have at least one trip end (origin or destination) within the corridor. Typically, these trips are auto dependent unless served by a mix of premium or fixed route transit.
- **Local Access Trips:** These are shorter trips with at least one trip end within the corridor. Typically transit and bicycle modes can compete favorably with the auto modes of travel relative to travel time.
- **Local Circulation Trips:** These are very short trips where both trip ends likely occur within close proximity to the corridor. Typically, walking and bicycling have travel times comparable to auto usage. Public transportation is typically not viable in the absence of frequent local circulator transit service since walking times are of relatively short duration.

CMP SAFETY MITIGATION MATRIX

The Lake-Sumter MPO CMP process also includes a "CMP Safety Mitigation Matrix" for use in streamlining the identification of potential safety issues identified in the identification of congested corridors by making use of crash data produced by the FDOT's Crash Data Management System (CDMS). This system produces maps and reports by crash type or cause which can be used to identify safety issues on the major roadway network for both congested and non-congested roadways. Reducing the number of crashes that occur on major roadways can reduce nonrecurring congestion. While the delay incurred resulting from crashes cannot be determined easily, it is a significant contribution of delay on major roadways. To support the integration of crash reduction as a means to reduce non-reoccurring congestion, a CMP Safety Mitigation Matrix was developed.

The CMP Safety Migration Matrix is provided in **Appendix C**. This Matrix is similar to the CMP Strategy Matrix in that it should be used to screen and identify potential strategies that would reduce congestion caused by specific crash types. The Matrix identifies crash types and the typical strategies that could be implemented to improve safety and reduce these crashes for the Safety Emphasis Areas identified in the State of Florida Strategic Highway Safety Plan. In most cases, additional detailed study will be required to identify the specific safety strategy or strategies to be implemented for a specific location.

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CHAPTER 10

Monitor Strategy Effectiveness

Monitor Strategy Effectiveness

The FHWA guidelines call for CMPs to include provisions to monitor the performance of strategies implemented to address congestion. Regulations require, "a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures." This step of the process helps determine whether operational or policy adjustments are needed to make the current strategies work better and provides information about how various strategies work in order to implement future approaches within the CMP study area.

Data collection and performance monitoring are ongoing with the various periodic assessments of roadway, transit, bicycle/pedestrian/multiuse path, freight network performance in Lake County and Sumter County. However, this CMP also identifies the need for a process that supports tracking of the effectiveness of the implemented congestion mitigation strategies and the multimodal transportation system as a whole. This process is described in detail below.

ANNUAL STATE OF THE SYSTEM REPORT

As a key tool in the Lake-Sumter MPO CMP, a State of the System Report will be developed to track the effectiveness of the implemented strategies, to the extent possible with the available project level data, and conditions of the multimodal transportation system as a whole. The same set of quantifiable performance measures established for the Lake-Sumter CMP as described in Chapter 6 of this report will be used to measure system performance at corridor and system levels. The measures that will be utilized in the State of the System Report on Lake-Sumter CMP include:

- **Roadway Performance Measures** including percent of roadway miles and VMT by LOS Type as well as roadway traffic volume to capacity and volume to maximum service volume ratios.
- **Transit Performance Measures**, including passenger trips per revenue hour, passenger trips, and the number of routes.
- **Bicycle/Pedestrian/Multiuse Path Performance Measures**, including percent of congested CMP roadway centerline miles with bicycle facilities, percent of congested CMP roadway centerline miles with sidewalk facilities, and miles of multiuse paths.
- **TDM Performance Measures**, including the number of registered carpools or vanpools in the CMP study area
- **Goods Movement Performance Measures**, including the % of total VMT on truck routes on congested roadways.

The commitment and schedule for preparing an Annual State of the System Report will be determined by the Lake-Sumter MPO TAC.

Typically the Annual State of the System Report will be completed by the MPO during the years between LRTP updates and the report is contingent on available funding. In the future the Annual State of the System Report is anticipated to support the requirement of the Transportation Improvement Program (TIP) to the maximum extent practicable, provide a description of the anticipated effect of the TIP toward achieving the performance targets established in the Plan, and how the TIP links investment priorities to those performance targets.

APPENDIX A

Congested Corridors and Hot Spots

Congested Corridors and Hot Spots

Various criteria that primarily use traffic volume and capacity are used to select and categorize the congested corridors in Lake and Sumter Counties. The methodology using these criteria to select congested corridors within the CMP application area is presented below. Thereafter, criteria used to identify congestion hot spots, i.e. intersections with recurring or non-recurring congestion, are also summarized.

SELECTION METHODOLOGY

This methodology summarizes the steps used to identify the congested roadways for the Lake-Sumter CMP. As indicated earlier, the CMP road network includes all existing and committed roadway segments as identified by the 2040 LRTP.

The selection methodology consists of two main steps. First, five criteria are used to categorize the roadways into three sub-categories. The sub-categories and corresponding criteria are presented below.

Not Congested (currently or in five years without improvements) - The corridors in this category are selected based on applying the following criteria at road segment level:

$$\text{Not Congested Corridors} = \text{Existing or Existing + 5 Years Segments with} \left(\frac{\text{Segment}^{i}\text{ volume}}{\text{Segment}^{i}\text{ maximum service volume}} \right) < \text{Segment}^{i}\text{ maximum service volume x 0.90}$$

$$(i = 1, 2, 3, \ldots n)$$

Approaching Congestion or Minimally Congested – The corridors that are approaching congestion are analyzed at three levels. The criteria in each level of analysis are summarized below.

- Approaching Congestion: This includes corridors with segments that meet the following criteria, which are currently congested or congested in five years without improvements.

$$\text{Corridors Approaching Congestions} = \text{Existing or Existing + 5 Years Segments with } 1.00 > \left(\frac{\text{Segment}^{i}\text{ volume}}{\text{Segment}^{i}\text{ maximum service volume}} \right) > 0.90$$

$$(i = 1, 2, 3, \ldots n)$$

- Congested Today: As summarized below, this category uses two criteria to identify the corridors that are congested today.

$$\text{Corridors Congested Today} = \text{Existing Segments with } 1.08 > \left(\frac{\text{Segment}^{i}\text{ volume}}{\text{Segment}^{i}\text{ capacty}}\right) \& \left(\frac{\text{Segment}^{i}\text{ volume}}{\text{Segment}^{i}\text{ maximum service volume}}\right) > 1.00$$

$$(i = 1, 2, 3, \ldots n)$$

- Extremely Congested: This category includes roadways in the 2014 E+C network that meets the following criteria are considered severely congested.

$$\text{Extremely Congested Corridors} = \text{Existing or Existing + 5 Years Segments with } \left(\frac{\text{Segment}^{i}\text{ volume}}{\text{Segment}^{i}\text{ capacty}}\right) > 1.08$$

$$(i = 1, 2, 3, \ldots n)$$

In addition to the congested roadways selected using the criteria presented above, high crash locations identified in crash data analysis reports and Mobility Management Systems Task Force recommendations of congested intersections are used to identify the congestion "Hot Spots."

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APPENDIX B

Congestion Mitigation Strategies Matrix

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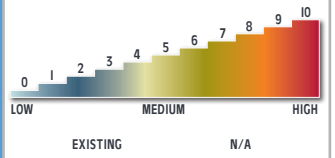
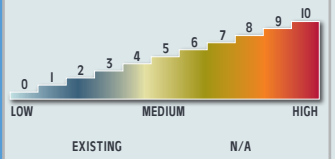
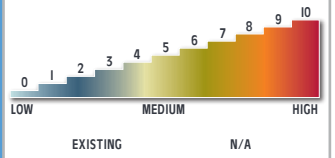
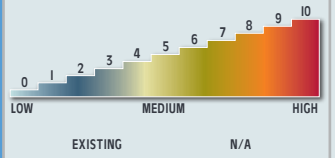
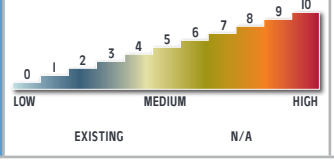
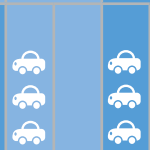
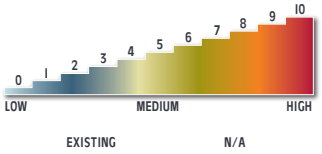
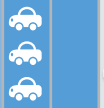
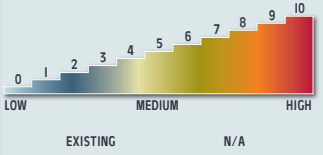
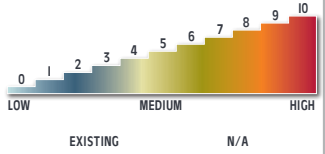
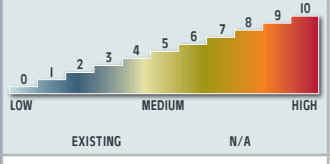
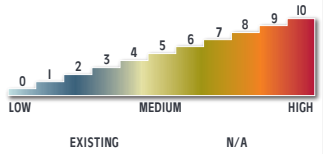
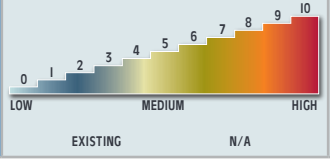
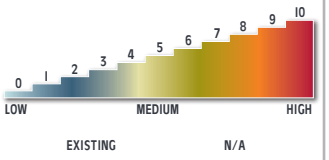
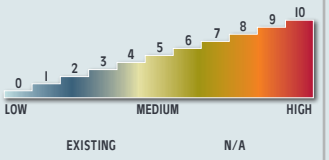
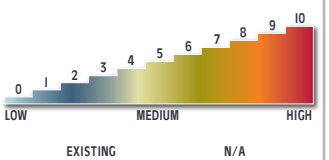
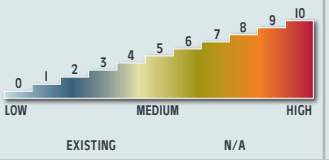
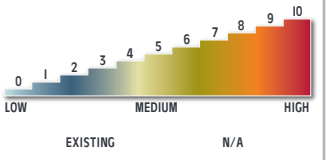
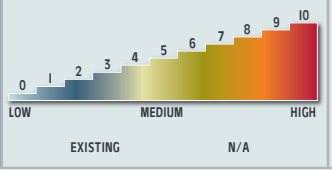
Corridor _____ From _____ To _____ Analyst _____ Date _____

Tier	Short-Term/ Long-Term	Congestion Mitigation Strategy	Applicability to LSMPO	Distribution of Trip Types: Regional Traffic	Distribution of Trip Types: Regional Access	Distribution of Trip Types: Local Access	Distribution of Trip Types: Local Circulation	Potential Effectiveness	Recommendations/ Comments
Tier 1: Strategies to Reduce Person Trips or Vehicle Miles Traveled	**LT**	**1.01 Congestion Pricing:** Congestion pricing can be implemented statically or dynamically. Static congestion pricing requires that tolls are higher during traditional peak periods. Dynamic congestion pricing allows toll rates to vary depending upon actual traffic conditions. The more congested the road, the higher the cost to travel on the road. Dynamic congestion pricing works best when coupled with real-time information on the availability of other routes.	**Low**						
	ST/LT	**1.02 Alternative Work Hours:** There are three main variations: staggered hours, flex-time, and compressed work weeks. Staggered hours require employees in different work groups to start at different times to spread out their arrival/departure times. Flex-time allows employees to arrive and leave outside of the traditional commute period. Compressed work weeks involve reducing the number of days per week worked while increasing the number of hours worked per day.	**Low**						
	ST/LT	**1.03 Telecommuting:** Telecommuting policies allow employees to work at home or a regional telecommute center instead of going into the office, all the time or only one or more days per week.	**Med**						
	ST/LT	**1.04 Emergency Ride Home Programs:** These programs provide a safety net to those people who carpool or use transit to work so that they can get to their destination if unexpected work demands or an emergency arises.	**Med**						
	ST/LT	**1.05 Alternative Mode Marketing and Education:** Providing education on alternative modes of transportation can be an effective way of increasing demand for alternative modes. This strategy can include mapping websites that compute directions and travel times for multiple modes of travel.	**Med**						

Tier	Short-Term/ Long-Term	Congestion Mitigation Strategy	Applicability to LSMPO	Distribution of Trip Types				Potential Effectiveness	Recommendations/ Comments
				Regional Traffic	Regional Access	Local Access	Local Circulation		
Tier 1: Strategies to Reduce Person Trips or Vehicle Miles Traveled	**ST/LT**	**1.06 Safe Routes to Schools Program:** This program provides funding to communities to invest in pedestrian and bicycle infrastructure surrounding schools.	**High**						
	ST/LT	**1.07 Preferential for Free Parking for HOVs:** This program provides an incentive for employees to carpool with preferred of free-of-charge parking for HOVs.	**Low**						
	ST/LT	**1.08 Negotiated Demand Management Agreements:** As a condition of development approval, local governments require the private sector to contribute to traffic mitigation agreements. The agreements typically set a traffic reduction goal (often expressed as a minimum level of ridesharing participation or a stipulated reduction in the number of automobile trips).	**Low**						
	ST/LT	**1.09 Trip Reduction Ordinance:** These ordinances use a locality's regulatory authority to limit trip generation from a development. They spread the burden of reducing trip generation among existing and future developments better than Negotiated Demand Management Agreements.	**Low**						
	ST	**1.10 Infill Developments:** This strategy takes advantage of infrastructure that already exists, rather than building new infrastructure on the fringes of the urban area.	**High**						
	ST/LT	**1.11 Design Guidelines for Pedestrian-Oriented Development:** Maximum block lengths, building setback restrictions, and streetscape enhancements are examples of design guidelines that can be codified in zoning ordinances to encourage pedestrian activity.	**High**						

Tier	Short-Term/ Long-Term	Congestion Mitigation Strategy	Applicability to LSMPO	Distribution of Trip Types				Potential Effectiveness	Recommendations/ Comments
				Regional Traffic	Regional Access	Local Access	Local Circulation		
Tier One	**ST/LT**	**1.12 Mixed-Use Development:** This strategy allows many trips to be made without automobiles. People can walk to restaurants and services rather than use their vehicles.	**High**						
Tier 2: Strategies to Shift Automobile Trips to Other Modes	**ST/LT**	**2.01 Transit Capacity Expansion:** This strategy adds new vehicles to expand transit services.	**Med**						
	ST/LT	**2.02 Increasing Bus Route Coverage or Frequencies:** This strategy provides better accessibility to transit to a greater share of the population. Increasing frequency makes transit more attractive to use.	**Med**						
	LT	**2.03 Implementing Regional Premium Transit:** Premium transit such as Bus Rapid Transit (BRT) best serves dense urban centers where travelers can walk to their destinations. Premium transit from suburban areas can sometimes be enhanced by providing park-and-ride lots.	**Low**						
	ST/LT	**2.04 Providing Real-Time Information on Transit Routes:** Providing real-time information on bus progress either at bus stops, terminals, and/or personal wireless devices makes bus travel more attractive.	**Low**						
	ST	**2.05 Reducing Transit Fares:** This relatively easy-to-implement strategy encourages additional transit use, to the extent that high fares are a real barrier to transit. However, due to the direct financial impact on the transit system operating budgets, reductions in selected fare categories may be a more feasible strategy to implement.	**Low**						

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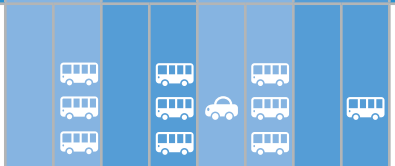
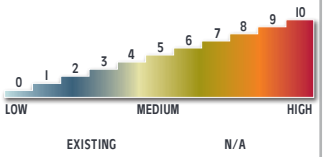
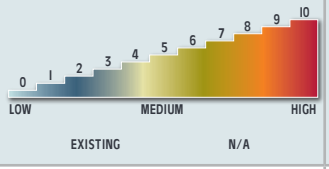
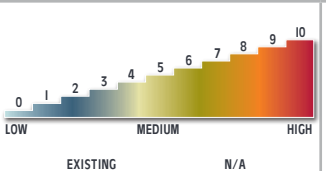
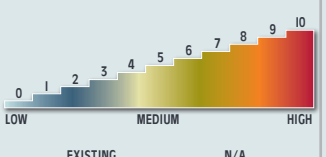
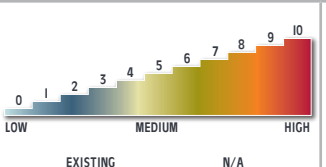
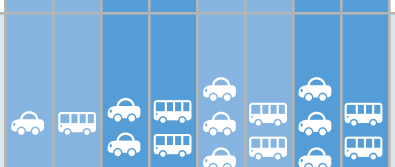
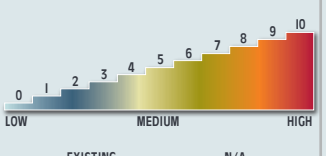
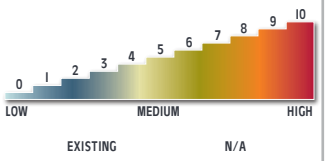
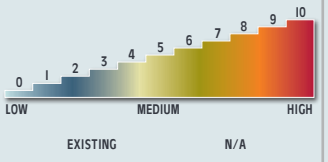
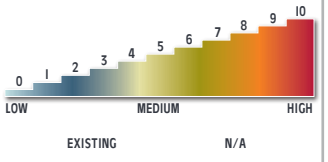
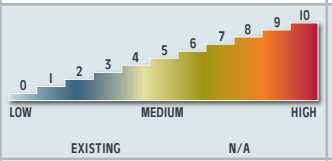
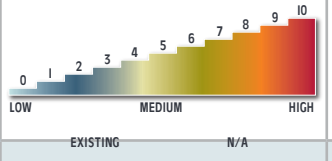
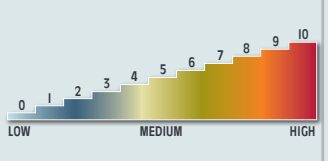
Tier 2: Strategies to Shift Automobile Trips to Other Modes	**LT**	**2.06 Provide Exclusive Bus Right-Of-Way:** Exclusive right-of-way includes bus ways, bus-only lanes, and bus bypass ramps. This strategy is applied to freeways and major highways that have routes with high ridership.	**Low**						
	ST/LT	**2.07 New Sidewalk Connections:** Increasing sidewalk connectivity encourages pedestrian traffic for short trips.	**Med**						
	ST/LT	**2.08 Designated Bicycle Lanes on Facilities or Routes:** Enhancing the visibility of bicycle facilities increases the perception of safety. In many cases, bicycle lanes can be added to existing roadways through restriping.	**Med**						
	ST	**2.09 Improved Bicycle Facilities at Transit Stations and Other Trip Destinations:** Bicycle racks and bicycle lockers at transit stations and other trip destinations increase security. Additional amenities such as locker rooms with showers at workplaces provide further incentives for using bicycles.	**Low**						
	ST	**2.10 Improved Safety of Existing Bicycle and Pedestrian Facilities:** Maintaining lighting, signage, striping, traffic control devices, and pavement quality and installing curb cuts, curb extensions, median refuges, and raised crosswalks can increase bicycle and pedestrian safety.	**High**						
	LT	**2.11 Exclusive Non-Motorized ROW:** Abandoned rail rights-of-way and existing parkland can be used for medium- to long-distance bicycle trails, improving safety and reducing travel times.	**Med**						

Tier	Short-Term/ Long-Term	Congestion Mitigation Strategy	Applicability to LSMPO	Distribution of Trip Types								Potential Effectiveness	Recommendations/ Comments
				Regional Traffic		Regional Access		Local Access		Local Circulation			
Tier 2	**ST/LT**	**2.12 Intermodal Enhancements:** Coordinating modes makes movement from one mode to the other easier. These enhancements typically includes schedule modification to reduce layover time or increase the opportunity for transfers, creation of multi-modal facilities, informational kiosks, and improved amenities at transfer locations.	**Med**										
Tier 3: Strategies to Increase Vehicle Occupancy	**LT**	**3.01 Ridesharing (Carpools, Vanpools, Lyft, Uber):** In ridesharing programs, participants are matched with potential candidates for sharing rides. This is typically arranged/ encouraged through employers or transportation management agencies, which provide ride-matching services. These programs are more effective if combined with HOV lanes, parking management, guaranteed ride home policies, and employer-based incentive programs.	**Med**										
	ST/LT	**3.02 High Occupancy Vehicle Lanes:** This increases corridor capacity while at the same time providing an incentive for single-occupant drivers to shift to ridesharing. These lanes are most effective as part of a comprehensive effort to encourage HOVs, including publicity, outreach, park-and-ride lots, rideshare matching services, and employer incentives.	**Low**										
	ST/LT	**3.03 Park-and-Ride Lots:** These lots can be used in conjunction with HOV lanes and/or express bus services. They are particularly helpful when coupled with other commute alternatives such as carpool/vanpool programs, transit, and/or HOV lanes.	**Low**										
	ST/LT	**3.04 Employer-Landlord Parking Agreements:** Employers can negotiate leases so that they pay only for parking spaces used by employees. In turn, employers can pass along parking savings by purchasing transit passes or reimbursing non-driving employees with the cash equivalent of a parking space.	**Low**										
	ST/LT	**3.05 Parking Management:** This strategy reduces the instance of free parking to encourage other modes of transportation. Options include reducing the minimum number of parking spaces required per development, increasing the share of parking spaces for HOVs, introducing or raising parking fees, providing cash-out options for employees not using subsidized parking spaces, and expanding parking at transit stations or park-and-ride lots.	**Low**										

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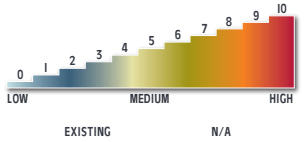
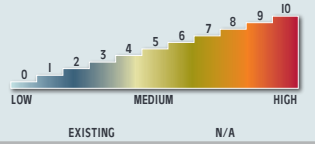
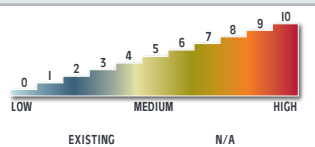
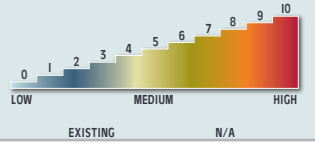
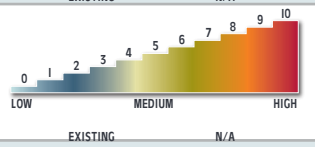
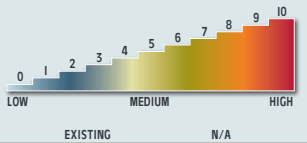
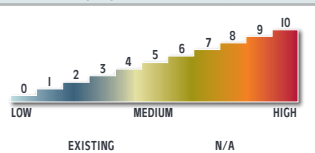
Tier 3	**LT**	**3.06 Managed Lanes:** The Federal Highway Administration (FHWA) defines managed lanes as highway facilities or a set of lanes in which operational strategies are implemented and managed (in real time) in response to changing conditions. Examples of managed lanes may include the following: high-occupancy toll (HOT) lanes with tolls that vary based on demand; exclusive bus-only lanes; HOV and clean air and/or energy-efficient vehicle lanes; and HOV lanes that could be changed into HOT lanes in response to changing levels of traffic and roadway conditions.	**Low**						
Tier 4: Strategies to Improve Roadway Operations	**ST/LT**	**4.01 Dynamic Messaging:** Dynamic messaging uses changeable message signs to warn motorists of downstream queues; it provides travel time estimates, alternate route information, and information on special events, weather, or accidents.	**High**						
	ST/LT	**4.02 Advanced Traveler Information Systems (ATIS):** ATIS provide an extensive amount of data to travelers, such as real-time speed estimates on the web or over wireless devices and transit vehicle schedule progress. It also provides information on alternative route options.	**High**						
	ST/LT	**4.03 Integrated Corridor Management (ICM):** This strategy, built on an ITS platform, provides for the coordination of the individual network operations between parallel facilities creating an interconnected system. A coordinated effort between networks along a corridor can effectively manage the total capacity in a way that will result in reduced congestion.	**High**						
	ST	**4.04 Transit Signal Priority (TSP):** This strategy uses technology located onboard transit vehicles or at signalized intersections to temporarily extend green time, allowing the transit vehicle to proceed without stopping at a red light.	**Low**						
	ST	**4.05 Truck Signal Priority:** This strategy gives priority to a traffic signal approach when trucks are detected. This can reduce truck travel times and potentially increases safety by reducing the number of trucks arriving at the end of the green phase, which may reduce red light running.	**Med**						
	ST	**4.06 Traffic Signal Coordination:** Signals can be pre-timed and isolated, pre-timed and synchronized, actuated by events (such as the arrival of a vehicle, pedestrian, bus or emergency vehicle), set to adopt one of several pre-defined phasing plans based on current traffic conditions, or set to calculate an optimal phasing plan based on current conditions.	**High**						

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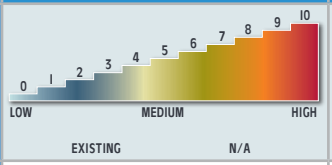
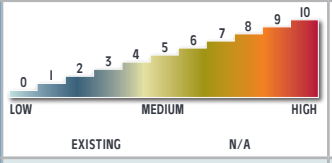
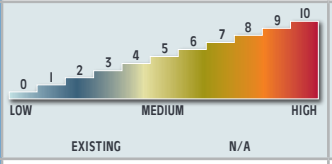
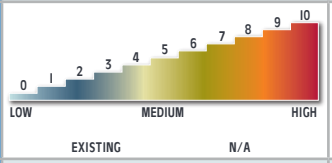
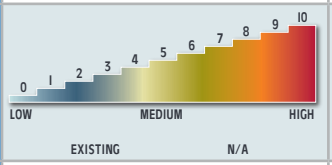
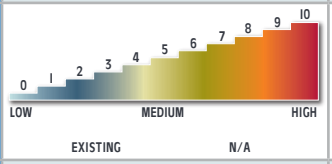
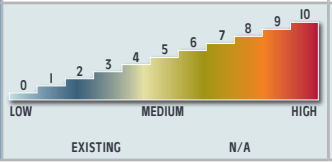
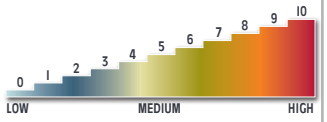
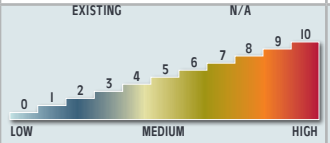
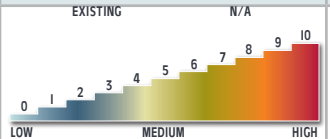
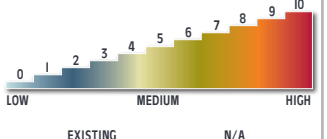
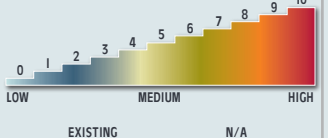
Tier 4: Strategies to Improve Roadway Operations	**ST/LT**	**4.07 Channelization:** This strategy is used to optimize the flow of traffic for making left or right turns usually using concrete islands or pavement markings.	**High**										
	ST/LT	**4.08 Intersection Improvements:** Intersections can be widened and lanes restriped to increase intersection capacity and safety. This may include auxiliary turn lanes (right or left) and widened shoulders.	**High**										
	ST/LT	**4.09 Bottleneck Removal:** This strategy removes or corrects short, isolated, and temporary lane reductions, substandard design elements, and other physical limitations that form a capacity constraint that results in a traffic bottleneck.	**High**										
	LT	**4.10 Vehicle Use Limitations and Restrictions:** This strategy includes all-day or selected time-of-day restrictions of vehicles, typically trucks, to increase roadway capacity.	**Low**										
	ST	**4.11 Improved Signage:** Improving or removing signage to clearly communicate location and direction information can improve traffic flow.	**Med**										
	ST/LT	**4.12 Geometric Improvements for Transit:** This strategy includes providing for transit stop locations that do not affect the flow of traffic, improve sight lines, and improve merging and diverging of buses and cars.	**Low**										
	ST/LT	**4.13 Goods Movement Management:** This strategy restricts delivery or pickup of goods in certain areas to reduce congestion.	**Low**										

Tier	Short-Term/ Long-Term	Congestion Mitigation Strategy	Applicability to LSMPO	Distribution of Trip Types				Potential Effectiveness	Recommendations/ Comments
				Regional Traffic	Regional Access	Local Access	Local Circulation		
Tier 4: Strategies to Improve Roadway Operations	**ST/LT**	**4.14 Freeway Incident Detection and Management Systems:** This strategy addresses primarily non-recurring congestion, typically includes video monitoring and dispatch systems, and may also include roving service patrol vehicles.	**N/A**						
	ST/LT	**4.15 Access Management Policies:** This strategy includes adoption of policies to regulate driveways and limit curb cuts and/or policies that require continuity of sidewalk, bicycle, and trail networks.	**High**						
	ST/LT	**4.16 Corridor Preservation:** This strategy includes implementing, where applicable, land acquisition techniques such as full title purchases of future rights-of-way and purchase of easements to plan proactively in anticipation of future roadway capacity demands.	**Med**						
	ST/LT	**4.17 Corridor Management:** This strategy is applicable primarily in moderate- to high-density areas and includes strategies to manage corridor rights-of-way. The strategies range from land-use regulations to landowner agreements such as subdivision reservations, which are mandatory dedications of portions of subdivided lots that lie in the future right-of-way.	**Med**						-
	ST/LT	**4.18 Complete Streets:** Routinely design and operate the entire right of way to enable safe access for all users including pedestrians, bicyclists, motorists, and transit Element that may be found on a complete street include sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more.	**High**						
Tier 5: Strategies to Add Capacity	**LT**	**5.01 Add General Purpose Travel Lanes:** Increase the capacity of congested roadways through additional general purpose travel lanes (or passing lanes on rural two-lane facilities).	**High**						

APPENDIX C

Safety Mitigation Matrix

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Key Safety Emphasis Areas for CMP Integration		
Intersection Crashes	**Vulnerable Road Users / Bicycles and Pedestrians**	**Vulnerable Road Users / Motorcycles**
Crashes which occur at or within 250 feet of signalized and unsignalized intersections are defined as intersection related.	This emphasis area includes bicycle and pedestrian crashes which represent a disproportionate share of fatal crashes.	The emphasis area addresses crashes involving motorcyclists.
Potential Strategies	**Potential Strategies**	**Potential Strategies**
• Increase safety of intersections for all users Identify systemic intersection safety improvements, update the Intersection Safety Plan, and encourage implementation at the local level • Promote improved access management at the State and local level • Consider including safety in the planning/ value engineering manual Update policies, guidelines, handbooks, and training based on the Highway Safety Manual (HSM) • Increase education programs designed to provide targeted information to drivers Increase targeted enforcement activities at high-crash locations and increase public education on intersection safety	• Increase awareness and understanding of safety issues related to Vulnerable Road Users • Increase compliance with traffic laws and regulations related to pedestrian and bicycle safety through education and enforcement Develop and use a systemic approach to identify locations and behaviors prone to pedestrian and bicycle crashes and implement multidisciplinary countermeasures Encourage adequate funding levels for effective pedestrian and bicycle safety programs and initiatives • Promote, plan, and implement built environments (urban, suburban, and rural) which encourage safe bicycling and walking • Support national, state, and local legislative initiatives and policies that promote bicycle and pedestrian safety	• Collect and analyze data on motorcycle crashes, injuries, and fatalities and provide local and state agencies with the best available data to make appropriate and timely decisions that improve motorcycle safety in Florida; Manage motorcycle safety activities in Florida as part of a comprehensive plan that includes centralized program planning, implementation, coordination, and evaluation to maximize the effectiveness of programs and reduce duplication of effort • Promote personal protective gear and its value in reducing motorcyclist injury levels and increasing rider conspicuity Ensure persons operating a motorcycle on public roadways hold an endorsement specifically authorizing motorcycle operation • Promote adequate rider training and preparation to new and experienced motorcycle riders by qualified instructors at state-approved training centers • Reduce the number of alcohol-, drug-, and speed-related motorcycle crashes in Florida • Support legislative initiatives that promote motorcycle-related traffic laws and regulations • Ensure state and local motorcycle safety programs include law enforcement and emergency services components Incorporate motorcycle-friendly policies and practices into roadway design, traffic control, construction, operation, and maintenance • Increase the visibility of motorcyclists by emphasizing rider conspicuity and motorist awareness of motorcycles Develop and implement communications strategies that target high-risk populations and improve public awareness of motorcycle crash problems and programs

Key Safety Emphasis Areas for CMP Integration (continued)			
Lane-Departure Crashes	**Traffic Records**	**Aggressive Driving**	**Impaired Driving**
These crashes include running off the road, crossing the center median into an oncoming lane of traffic, and sideswipe crashes. Running off the road may also involve a rollover or hitting a fixed object. Head-on collisions are related to crashes involving departure from the roadway. One of the most severe types of crashes occurs when a vehicle crosses into an opposing traffic lane and crashes head on with an oncoming vehicle.	This addresses Federal requirements and funding for traffic records. This emphasis area was meant to ensure traffic records aligned with the overall SHSP where possible and appropriate.	Aggressive driving, as defined by State Statute, requires inclusion of at least two of the following contributing causes: speeding, unsafe or improper lane change, following too closely, failure to yield right-of-way, improper passing, and failure to obey traffic control devices.	Originally focused on alcohol impaired driving only, the state has expanded the focus to include drug impaired driving due to its prevalence and close association to alcohol impairment.
Potential Strategies	**Potential Strategies**	**Potential Strategies**	**Potential Strategies**
• Improve engineering practices to reduce lane-departure crashes • Improve law enforcement practices to better capture data related to lane-departure crashes • Increase public education to reduce lane-departure crashes • Partner with emergency responders to reduce severity of lane-departure crashes	• Provide ongoing coordination in support of multi-agency initiatives and projects that improve traffic records information systems	• Support and promote effective law enforcement efforts to reduce aggressive driving Increase training and education on the problem of aggressive driving • Identify initiatives within engineering to reduce instances of aggressive driving	• Improve DUI enforcement Improve prosecution and adjudication of impaired driving cases • Improve the DUI administrative suspension process • Improve prevention, public education, and training Improve the treatment system (i.e., DUI programs, treatment providers, and healthcare providers) • Improve data collection and analysis • Enhance impaired driving legislation • Autonomous vehicles • Ride share programs

Other Safety Emphasis Areas for CMP Integration		
At-Risk Drivers / Aging Road Users	**At-Risk Drivers / Teen Drivers**	**Distracted Driving**
At-risk drivers, comprised of aging road users, is a new emphasis area for 2012. For data purposes in this emphasis area, aging road users are defined as 65-year-olds and older.	At-risk drivers, comprised of teen drivers, is a new emphasis area for 2012. For data purposes in this emphasis area, teen drivers are 15- to 19-year-olds.	Distracted driving occurs when a driver allows any mental or physical activity to take the driver's focus off the task of driving. There are three main types of distraction: manual – taking your hands off the wheel; visual – taking your eyes off the road; and cognitive – taking your mind off driving.
Potential Strategies	**Potential Strategies**	**Potential Strategies**
• Manage and evaluate aging road user safety, access, and mobility activities to maximize the effectiveness of programs and resources • Provide the best available data to assist with decisions that improve aging road user safety, access, and mobility; Provide information and resources regarding aging road user safety, access, and mobility • Inform public officials about the importance of and need to support national, state, regional, and local policy and program initiatives which promote and sustain aging road user safety, access, and mobility • Promote and encourage practices that support and enhance aging in place (i.e., improve the environment to better accommodate the safety, access, and mobility of aging road users) • Enhance aging road user safety and mobility through assessment, remediation, and rehabilitation • Promote safe driving and mobility for aging road users through licensing and enforcement • Promote the safe mobility of aging vulnerable road users (pedestrians, transit riders, bicyclists, and other non-motorized vehicles) • Promote the value of prevention strategies and early recognition of at-risk drivers to aging road users and stakeholders • Bridge the gap between driving retirement and mobility independence (i.e., alternative transportation mobility options, public transportation, and dementia-friendly transportation)	• Expand the network of concerned individuals to build recognition and awareness as it relates to teen driver safety and supports the Florida Teen Safe Driving Coalition • Create a safe driving culture for teen drivers through outreach and education Support initiatives that enhance safe teen driving-related traffic laws and regulations	• Increase public awareness and outreach programs on distracted driving • Encourage companies, state agencies, and local governments to adopt and enforce policies to reduce distracted driving in company and government vehicles • Support legislative initiatives that enhance distracted driving-related traffic laws and regulations • Support Graduated Driver's License (GDL) restrictions to reduce distracted driving behaviors in teen drivers • Increase law enforcement officer understanding of Florida traffic crash report distracted driving data collection • Educate law enforcement, judges, and magistrates on the existing laws that can be applied to distracted driving (careless driving) Deploy high-visibility enforcement mobilizations on distracted driving subject to appropriate/future legislation • Develop and maintain complete, accurate, uniform, and timely traffic records data • Provide the ability to link traffic records data Facilitate access to traffic records data Promote the use of traffic records data

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