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A REGIONAL TRANSPORTATION PARTNERSHIP

Transportation Systems Management & Operations
Master Plan Steering Committee
AGENDA

June 29, 2022, 2:30 PM

TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS MASTER PLAN STEERING COMMITTEE MEETING #1

DATE & TIME: Wednesday, June 29, 2022 at 2:30 PM

LOCATION: MetroPlan Orlando Board Room – David L. Grovdahl Board Room
250 South Orange Avenue, Suite 200, Orlando, FL 32801

PUBLIC ACCESS: To join the meeting from your computer, tablet or smartphone, please use this link:
https://us02web.zoom.us/j/85930686056?pwd=HKaZoqpKcr6ZAPsNZMbrbW2IAY-z6T.1
Passcode: 235972

To dial in, please see the calendar item for this meeting:
https://metroplanorlando.org/meetings/tsmo-master-plan-steering-committee-meeting-06-29-22/

AGENDA

I. **Introductions**

II. **Public Comments**

General comments from the public will be heard. Public comments submitted in advance of the meeting, by email to Comment@MetroPlanOrlando.org or phone to 407-906-2347, will be read into the record by a meeting moderator. People wishing to speak during the virtual meeting should use the Raise Hand feature on the Zoom platform, and a meeting host will unmute your microphone to speak. Each speaker should state name and address for the record and is limited to two minutes.

III. **Master Plan Schedule**

- Proposed Steering Committee Schedule

IV. **Steering Committee Roles & Responsibilities** (Tab 1)

V. Scope of Work Overview (Tab 2)

- Task 1 – Goals and Objectives
- Task 2 – Existing Conditions/Infrastructure/Inventory
- Task 3 – TSM&O Needs
- Task 4 – Applicable Strategies and Funding Sources
- Task 5 – Regional Architecture (RITSA)
- Task 6 – Prioritization Support Matrix
- Task 7 – Agency and Public Participation
- Task 8 – Project Meetings and Board/Committee Presentations
- Task 9 – TSM&O Master Plan
- Task 10 – Project Administration

VI. Summary of Key Documents (Task 1) (Tab 2)

VII. Draft Vision, Goals and Objectives (Task 1) (Tab 3)

- Interactive Discussion

VIII. Next Steps and Action Items

- Future meeting dates

IX. Adjournment

Public participation is conducted without regard to race, color, national origin, sex, age, disability, religion, or family status. Persons wishing to express concerns, who require special assistance under the Americans with Disabilities Act, or who require language services (free of charge) should contact MetroPlan Orlando by phone at (407) 481- 5672 or by email at info@metroplanorlando.org at least three business days prior to the event.

La participación pública se lleva a cabo sin distinción de raza, color, origen nacional, sexo, edad, discapacidad, religión o estado familiar. Las personas que deseen expresar inquietudes, que requieran asistencia especial bajo la Ley de Americanos con Discapacidad (ADA) o que requieran servicios de traducción (sin cargo) deben ponerse en contacto con MetroPlan Orlando por teléfono (407) 481-5672 (marcar 0) o por correo electrónico info@metroplanorlando.org por lo menos tres días antes del evento.

TAB 1

Steering Committee Membership and Expectations

The Steering Committee for the MetroPlan Orlando Transportation Systems Management & Operations Master Plan was established to support plan development and ensure a high-level of collaborative coordination among MetroPlan Orlando and its partner agencies for this important planning effort. Membership consists of nine agency representatives.

STEERING COMMITTEE MEMBERS		
Agency	**Member**	**Email**
MetroPlan Orlando (Convening Agency)	Eric Hill	ehill@metroplanorlando.org
Central Florida Expressway Authority	Bryan Homayouni	bryan.homayouni@cfxway.com
City of Orlando	Akil Toussaint	akil.toussaint@cityoforlando.net
Florida Department of Transportation	Jeremy Dilmore	jeremy.dilmore@dot.state.fl.us
Florida's Turnpike Enterprise	Eric Gordin	Eric.Gordin@dot.state.fl.us
LYNX	Doug Jamison	djamison@golynx.com
Orange County	Hazem El-Assar	Hazem.El-Assar@ocfl.net
Osceola County	Steven Kane	steven.kane@osceola.org
Seminole County	Charlie Wetzel	cwetzel@seminolecountyfl.gov

Each Steering Committee member will attend and actively participate in six (6) meetings on behalf of their agency, or ensure that a designated alternate will participate in their place if they are unable to attend. The anticipated meetings are defined in the schedule below.

GENERAL STEERING COMMITTEE SCHEDULE		
Meeting	**Principal Topic**	**Date/Anticipated Timeframe**
#1	Input on Goals and Objectives	June 2022
#2	Input on TSM&O Needs	August/September 2022
#3	Input on Regional ITS Architecture (RITSA)	November/December 2022
#4	Input on Prioritization Support Matrix	February/March 2023
#5	Input on Proposed Priority Projects & Perf. Measures	May/June 2023
#6	Input on draft TSM&O Master Plan	August/September 2023

Roles and Responsibilities of Steering Committee Members

Roles and responsibilities to support Master Plan development will include the following:

- Provide existing conditions data, infrastructure locations, and inventory of ITS devices
- Provide signal system inventory data
- Provide current TSM&O strategies being implemented by each agency
- Identify and provide (if available) planned projects for ITS, TSM&O, and signal system improvements
- Identify and provide (if available) currently programmed projects for ITS, TSM&O, and signal system improvements
    - Include projects as prioritized, if necessary
- Identify and provide (if available) current planning efforts related to the funding and development of ITS, TSM&O, and signal system improvement projects
    - Include projects as prioritized, if necessary
- Provide list of applicable transportation committees, working groups, or other similar groups
- Provide task and project specific feedback throughout the master planning effort
- Provide responses, as needed, to questionnaires and surveys
- Provide timely review of all draft and final documents
- Provide general advisory support to MetroPlan Orlando and the Steering Committee

It is recognized that some functions are not applicable to all agencies. Nonetheless, it is envisioned that each Steering Committee Member will maximize its respective agency's support, as appropriate, to fulfill these needs.

Agency Support for Regional ITS Architecture (RITSA)

In addition to Steering Committee Roles and Responsibilities defined above for this Master Plan, partner agencies will provide or support **RITSA Inventory Elements, Projects, and Services** that are critical to document in the context of this planning effort. Below is a preliminary list of these items for each member agency.

Central Florida Expressway Authority (CFX)

- Inventory Elements
  - CFX CAV Field Equipment
  - CFX Construction and Maintenance Operations
  - CFX Expressway Management System
  - CFX Field Equipment
  - CFX Maintenance Vehicles
  - CFX Public Website
  - CFX Road Ranger Service Patrol Vehicles
  - CFX Toll Plazas
  - E-PASS Headquarters
  - E-PASS Service Center
  - E-PASS Tag
- Projects
  - CFX CAV
  - CFX CCTV/DMS/VDS/Tolling
  - CFX Data Analytics
  - CFX Wrong Way Driver Deployment
  - FDOT D5 Regional Integrated Corridor Management System
  - FDOT I-4 BtU Segments 1A/1B/2
  - FDOT I-4 BtU Segments 3/4
- Services/Responsibilities
  - Emergency Management
  - Highway Management
  - Incident Management (Traffic and Maintenance)
  - Information Dissemination
  - Maintenance and Construction

City of Orlando

- Inventory Elements
  - City of Orlando EMC
  - City of Orlando Field Equipment
  - City of Orlando TMC
- Projects
  - ATTAIN Central Florida
  - City of Orlando Airport Traveler Information
  - City of Orlando ATMS Upgrade
  - City of Orlando CCTV Expansion
  - City of Orlando DMS Expansion
  - City of Orlando Multimodal CV and Pedestrian Safety Solutions
  - City of Orlando Parking Management
  - City of Orlando Travel Time System
  - FDOT Active Arterial Management System (City of Orlando)
  - FDOT D5 Regional Integrated Corridor Management System

    - FDOT District 5 I-4 FRAME
    - Greater Orlando Signal Priority and Preemption
    - GreenWay Program
- Services/Responsibilities
    - Incident Management (Traffic and Maintenance)
    - Information Dissemination
    - Traffic Signal Control

FDOT District 5

- Inventory Elements
    - FDOT District 5 Construction and Maintenance
    - FDOT District 5 Emergency Operations Center
    - FDOT District 5 Field Equipment
    - FDOT District 5 Infrastructure Monitoring Equipment
    - FDOT District 5 Maintenance Vehicles
    - FDOT District 5 Road Ranger Service Patrol Vehicles
    - FDOT District 5 RTMC
    - SunStore
- Projects
    - ATTAIN Central Florida
    - City of Ocala Integration
    - City of Orlando Multimodal CV and Pedestrian Safety Solutions
    - City of Orlando Travel Time System
    - Daytona Area Detour and Event Management
    - FDOT Active Arterial Management System (Brevard County)
    - FDOT Active Arterial Management System (City of Melbourne)
    - FDOT Active Arterial Management System (City of Ocala)
    - FDOT Active Arterial Management System (City of Orlando)
    - FDOT Active Arterial Management System (Lake County)
    - FDOT Active Arterial Management System (Maitland / Winter Park / Sumter)
    - FDOT Active Arterial Management System (Marion County)
    - FDOT Active Arterial Management System (Orange County)
    - FDOT Active Arterial Management System (Osceola County)
    - FDOT Active Arterial Management System (Seminole County)
    - FDOT Active Arterial Management System (Volusia County)
    - FDOT Adaptive Traffic Signal System
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT Daytona Area DMS/BOS/VDS/CCTV
    - FDOT District 5 I-4 FRAME
    - FDOT District 5 I-75 FRAME Ocala
    - FDOT I-4 BtU Segments 1A/1B/2
    - FDOT I-4 BtU Segments 3/4
    - FDOT Lake Mary Blvd CV
    - FDOT SR 429 CCTV/DMS/VDS/Tolling
    - FDOT SR 520 Traffic Signal Upgrades
    - Greater Orlando Signal Priority and Preemption
    - GreenWay Program
    - LYNX TSP/CAV
    - PedSafe Program
    - R2CTPO TSMO Early Deployment
    - Seminole County DMS and CCTV Replacement

    - SunRail
- Services/Responsibilities
    - Archived Data Management
    - Commercial Vehicle Operations
    - Electronic Toll Collection
    - Emergency Management
    - Highway Management
    - Incident Management (Traffic and Maintenance)
    - Information Dissemination
    - Maintenance and Construction
    - Traffic Signal Control
    - Traveler Information

Florida's Turnpike Enterprise (FTE)

- Inventory Elements
    - Express Lanes Open Road Tolling Equipment
    - FTE Boca Data Center
    - FTE Data Dissemination Field Equipment
    - FTE Operations Center (Turkey Lake)
    - FTE Sunpass Toll Collection System
    - FTE Toll Plazas
    - SunPass Customer Service Center
    - SunPass Tag
- Projects
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT I-4 BtU Segments 1A/1B/2
    - FDOT I-4 BtU Segments 3/4
    - FDOT SR 429 CCTV/DMS/VDS/Tolling
- Services/Responsibilities
    - Electronic Toll Collection

LYNX

- Inventory Elements
    - LYNX CAV Field Equipment
    - LYNX Maintenance Center
    - LYNX Road Ranger Vehicles
    - LYNX Security Operations Center
    - LYNX Transit Autonomous Vehicle
    - LYNX Transit Vehicles
    - LYNX Transportation Center
    - LYNX Van Pool
    - LYNX Virtual Travel Planning Center
    - LYNX Website
    - Orlando Intermodal Center
    - Private Bike Share Equipment
- Projects
    - ATTAIN Central Florida
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT I-4 BtU Segments 1A/1B/2
    - FDOT I-4 BtU Segments 3/4
    - Greater Orlando Signal Priority and Preemption

    - GreenWay Program
    - LYNX AV Concept
    - LYNX Fare Integration
    - LYNX Trip Planning
    - LYNX TSP/CAV
    - LYNX Website Integration
    - PedSafe Program
    - SmartCommunity Program
- Services/Responsibilities
    - Transit Management
    - Traveler Information

Orange County

- Inventory Elements
    - Orange County Field Equipment
    - Orange County TMC
- Projects
    - ATTAIN Central Florida
    - FDOT Active Arterial Management System (Orange County)
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT District 5 I-4 FRAME
    - FDOT I-4 BtU Segments 1A/1B/2
    - Greater Orlando Signal Priority and Preemption
    - GreenWay Program
    - Orange County ATMS Phase 4
- Services/Responsibilities
    - Incident Management (Traffic and Maintenance)
    - Information Dissemination
    - Traffic Signal Control

Osceola County

- Inventory Elements
    - Osceola County Field Equipment
    - Osceola County Traffic Operations Center
- Projects
    - ATTAIN Central Florida
    - FDOT Active Arterial Management System (Osceola County)
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT District 5 I-4 FRAME
    - FDOT I-4 BtU Segments 1A/1B/2
    - Greater Orlando Signal Priority and Preemption
    - Osceola County ATMS Expansion
- Services/Responsibilities
    - Incident Management (Traffic and Maintenance)
    - Information Dissemination
    - Traffic Signal Control

Seminole County

- Inventory Elements
    - Seminole County Field Equipment

    - Seminole County TMC
- Projects
    - ATTAIN Central Florida
    - FDOT Active Arterial Management System (Seminole County)
    - FDOT D5 Regional Integrated Corridor Management System
    - FDOT I-4 BtU Segments 3/4
    - Greater Orlando Signal Priority and Preemption
    - Seminole County Adaptive Traffic Signal System
    - Seminole County Bluetooth Expansion
    - Seminole County DMS and CCTV Replacement
    - Seminole Countywide SPaT Deployment (Connected Vehicle Pilot on SR 434)
- Services/Responsibilities
    - Incident Management (Traffic and Maintenance)
    - Information Dissemination
    - Traffic Signal Control

TAB 2

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Transportation Systems Management and Operations (TSM&O) Master Plan

Scope of Work (04.05.22)

Purpose

The purpose of this scope of work is for Kimley-Horn (the Consultant) to provide a Transportation Systems Management and Operations (TSM&O) Master Plan (herein referred to as "the Plan") for the MetroPlan Orlando area. TSM&O is a performance driven approach for solving traffic related problems and minimizing congestion through the utilization of Intelligent Transportation Systems (ITS), signal system control, and other management and operational strategies to locate and correct the causes of congestion. The objective of the TSM&O program is to improve the efficiency of the existing transportation network through performance monitoring, active arterial management, and coordinating freeway and arterial management strategies, such as incident management. The TSM&O program also considers future technologies and the importance of improving the efficiency of a system.

The Plan will evaluate the current systems and programs in the planning area, determine future needs, formulate an implementation strategy for future deployment and maintenance, and identify a set of TSM&O projects to be included in the 2050 Metropolitan Transportation Plan (MTP). The Plan will ensure conformity with federal and state requirements and account for emerging technologies in vehicles and devices used in transportation infrastructure and communication systems. The Plan will: assess Orange, Osceola, and Seminole counties and their respective municipalities; conduct a similar evaluation for each of the modal agencies within the MetroPlan Orlando planning area; and provide a master plan that is coordinated, integrated and interoperable.

The Consultant will provide a final comprehensive report that will contain an inventory of existing TSM&O related infrastructure, policies and programs, and recommend an area-wide implementation methodology to provide the MetroPlan Orlando planning area with a world-class ITS and access to a robust array of solutions from the TSM&O toolbox. The Plan will contain sufficient detail to develop a sound basis for design and plans, specifications and estimates to phase implementation of the projects. The report shall contain all necessary background research, technical analysis, and coordination with local and regional agencies.

A detailed list of services is provided below. This task order will be funded under MetroPlan Orlando's UPWP Task 330 (FY 2021-2022)/150 (FY 2023-2024), Transportation Systems Management and Operations.

Task 1 – Develop TSM&O Vision, Goals and Objectives – Phase 1

The Consultant will develop a TSM&O Vision with Goals and Objectives for the region. The following documents will support development of this Task:

- MetroPlan Orlando 2045 Metropolitan Transportation Plan (MTP) Update
- MetroPlan Orlando 2045 MTP Update Technical Report: Managing Mobility – A Congestion Management Process
- MetroPlan Orlando Transportation Improvement Program (TIP)
- MetroPlan Orlando ITS Master Plan (adopted 2017)
- MetroPlan Orlando Connected and Automated Vehicle (CAV) Readiness Study (2019)
- Florida Department of Transportation (FDOT) Transportation System Management and Operation (TSMO) Plan (2017)
- FDOT District 5 TSM&O Implementation Plan (2017)
- FDOT Florida Transportation Plan (2020)
- FDOT Strategic Intermodal System (SIS) Policy Plan (2022)
- FDOT Statewide and District 5 ITS Architecture (2020)
- FDOT Statewide Systems Engineering Management Plan (SEMP) (Updated in 2019)
- MetroPlan Orlando Equity Audit findings and recommendations
- Infrastructure Investment and Jobs Act (IIJA) (2021)
- LYNX ITS Strategic Plan 2016;
- Central Florida Expressway (CFX) 2045 Master Plan (ongoing)
- Florida's Turnpike Enterprise TSM&O Strategic Plan (2019)
- Osceola County TSM&O Strategic Plan (2020)
- FDOT District 5 Transportation Systems Management & Operations Strategy Guide (2018)
- FDOT Statewide Arterial Management Program (STAMP) Action Plan (2021)
- FDOT Freight Mobility and Trade Plan Update (2020)
- Central Florida MPO Alliance (CFMPOA) TSM&O Framework
- Central Florida TIM Evacuation Plans
- Osceola, Orange and Seminole County CTST Meeting Minutes (as available)

Other documents or resource materials that are applicable to this Task will also be used.
As part of this task, the Consultant will work with MetroPlan Orlando staff to establish a Steering Committee for the project consisting of members of the Transportation Systems Management and Operations Advisory Committee (TSMOAC) and FDOT staff. The Consultant will schedule a meeting with staff and the Steering Committee to solicit their guidance in the development of the TSM&O Vision, Goals and Objectives. The TSM&O Vision, Goals and Objectives will include an update to what was developed for the MetroPlan Orlando ITS Master Plan and be supportive of the goals and objectives adopted within the MetroPlan Orlando 2045 MTP Update. They will also expand to incorporate other TSM&O strategies such as travel demand management (TDM), CAV deployment, special event management, and other TSM&O strategies as identified by the Federal Highway Administration (FHWA) and deemed appropriate for local implementation by the Project Steering Committee.

Task Product

The Consultant will submit a preliminary technical memorandum that summarizes information from the documents and resource materials described above and provides a Draft TSM&O Vision, Goals and Objectives to facilitate a discussion with the Steering Committee. The Final TSM&O Vision, Goals and Objectives will be finalized following incorporation of comments from the Project Steering Committee.

Task 2 – Document Existing Conditions/Infrastructure/Inventory – Phases 1 & 2

The Consultant will document the existing conditions of ITS related systems and networks and other TSM&O programs or infrastructure currently deployed and planned in the MetroPlan Orlando area. The Consultant will document and/or evaluate transportation systems that are relevant to the plan. Work will include:

- Evaluation of the Advanced Traffic Management System (ATMS) and Integrated Corridor Management System (ICMS) and the equipment currently in use; including evaluation of:
    - Services and management strategies being used
    - Systems being operated
    - Devices and system components
- Identification of major traffic generators;
- Identification of planned event traffic generators;
- Identification of park and ride facilities;
- Identification of inter-modal facilities;
- Identification of electric vehicle charging stations;
- Identification of evacuation routes.

The resulting data will be prepared in GIS format to be added to the MetroPlan Orlando data viewer. In addition, the Consultant will document:

- The communication systems and networks that are used by local municipalities and modal agencies. Systems may include traffic signal interconnections; wireless networks, radio systems and other potential communications networks;
- The availability of fiber and conduit in the infrastructure throughout the MetroPlan Orlando area. The Consultant will conduct a qualitative assessment of the adequacy of these different systems;
- The presence and type of sensors and radio equipment currently deployed to support connected and automated vehicles in the region;
- A brief summary of existing cybersecurity threats and industry-accepted safeguards to address them;
- Planned projects and ongoing planning efforts related to emerging technologies and congestion management systems including: EVTOLs, drones, curbside management, etc.
- The agreements, protocols and procedures for data collection and dissemination between the municipalities and modal agencies, including the ways that transportation related information is disseminated by information service providers (ISPs) to travelers. This documentation will identify the sources of information used by each of the ISPs;
- Where ITS is considered and included in recent transportation studies, such as in the MPO's 2045 MTP and other programmed construction projects that include ITS; and
- The existing TDM programs and practices currently in use in the region.

Additionally, the Consultant will report on the information flows associated with the identification and response to traffic incidents. This will include the nature of the information exchanged and the media that are used for the exchange of information among the following organizational units:

- 911/Communications Center
- Law Enforcement
- Fire Rescue
- Emergency Medical Services
- Public Works
- Emergency Management Department

- Florida Highway Patrol
- FDOT
- Other municipalities and multi-modal agencies including Central Florida Expressway (CFX), Orlando International Airport, Orlando-Sanford International Airport, Florida Turnpike Enterprise, Central Florida Transportation Authority (LYNX) and SunRail.

Task Product

The Consultant will document all existing traffic control and ITS ATMS devices, infrastructure and policies currently in use or planned in the MetroPlan Orlando area in an Existing Conditions Technical Memorandum. A full evaluation of the functional components of the transportation network and organizational units described above will be completed and documented. The Technical Memorandum will include maps, as applicable, to document the location and/or status of existing infrastructure and devices within the MetroPlan Orlando planning area.

Documentation will include the condition, capability, and operability with ITS standards. The documentation and evaluation will also inventory the different Geographic Information Systems (GIS) and schemes for data collection, management, reporting and archiving. This information will be used for conceptual planning. In addition to documenting the relevant transportation systems, the Consultant will also document the communication systems and networks that are used by local municipalities and the different modal agencies.

Task 3 – Identify TSM&O Needs – Phase 2

The Consultant will use a combination of *Task 1: TSM&O Vision, Goals and Objectives* and *Task 2: Existing Conditions/Infrastructure/Inventory* to identify deficiencies in the region's ITS systems and where there are other TSM&O related needs. The Consultant will utilize comments received from the Steering Committee and perform a thorough assessment of information provided by the agencies and municipalities describing the existing conditions. The Consultant will also conduct a high-level gap analysis through evaluation of identified needs in relation to available resources.

Task Product

The Consultant will document the findings of this task in a Technical Memorandum.

Phase 1:

A. Establish criteria for needs assessment (reliability, signal density, bottlenecks, vehicle/pedestrian delay, transit ridership, crash density, crash type, freight usage, etc.)
B. Request and compile relevant data based on identified needs
C. Compile, analyze, and classify needs data

Phase 2:

A. Continue to compile, analyze, and classify needs data
B. Develop needs standards and benchmark measures

Task 4 – Identification of Applicable Strategies and Funding Sources – Phases 2 & 3

The Consultant will review the transportation issues and needs identified in *Task 3: Identify TSM&O Needs*. This review will determine the nature and cause(s) of each issue or need and determine if there are improvements or strategies that can address or mitigate the issue or need. The Consultant will consider the potential for future technologies or programs and how they may be utilized to meet needs. Potential

transit, freight and active transportation related ITS strategies shall also be considered. Where possible, the anticipated benefits and life cycle cost of each candidate will be quantified to aid in comparison.

The Consultant will propose strategies to fulfill operations and maintenance needs, define performance requirements, and identify existing and future ATMS and ICM deployments on MetroPlan Orlando area arterial roadways. This task will determine the likely causes of each transportation issue and identify candidate TSM&O improvements or strategies to help improve traffic conditions and maximize safety.

This Consultant will also provide a high-level overview of potential local, state, federal and other funding sources and identify which funding options would be potentially applicable for each TSM&O strategy.

Task Product

The Consultant will submit a Technical Memorandum documenting the findings of this task.

Phase 1:

A. Identify existing TSM&O strategies
B. Identify mitigation & optimization strategies
C. Identify project specific strategies
D. Identify mode-specific strategies
E. Identify innovative strategies

Phase 2:

A. Continue to identify potential strategies
B. Establish agreed upon strategies
C. Establish strategy performance criteria
D. Identify candidate TSM&O improvements
E. Identify potential TSM&O funding sources

Task 5 – Regional Architecture (RITSA) – Phase 2

The Consultant will refer to the FDOT District 5 Regional Architecture in recommending implementation of improvements. The Regional Architecture helps define the elements of the ITS system and the standard information that is exchanged between these elements.

The Consultant will work with MPO staff and the Steering Committee to determine the capabilities that are relevant to the area's problems and needs, and to customize these capabilities to suit the area. The Consultant will work with the local governments and agencies to update the architecture to reflect their needs.

The Consultant will review both the existing National ITS Architecture for identification of any new applicable market packages as well as the existing Statewide Florida ITS Architecture (SITSA) as it applies to the MPO area. The State of Florida has an existing process for updating the SITSA through the Change Management Board (CMB), the Consultant will discuss with the Steering Committee the process by which any updates to the SITSA are considered by the CMB.

Task Product

The Consultant will provide a Technical Memorandum documenting the review and evaluation of the FDOT District 5 Regional ITS Architecture (RITSA).

Task 6 – Prioritization Support Matrix for TSM&O Projects – Phase 2

The Consultant will develop a TSM&O Prioritization Support Matrix that is based on the information obtained from Tasks 1 – 5 and on Steering Committee input. The intent of the Prioritization Support Matrix will be to allow MetroPlan Orlando staff and regional partners to identify appropriate/most likely funding strategies for each project (i.e., MTP Cost Feasible Plan vs. discretionary/competitive Federal grants vs. local funding). The matrix will catalog the existing ITS systems and other TSM&O-related projects programmed in the TIP – this will define the baseline condition.

Building on that baseline, the Consultant will use information collected from previous tasks to develop a list of potential TSM&O projects to address deficiencies in the existing and planned infrastructure consistent with the TSM&O Vision, Goals and Objectives from Task 1. The potential projects will take into consideration current systems found to operate with legacy equipment and found to be difficult to maintain or in need of replacement or modernization as well as new systems to address identified TSM&O needs.

To aid the future prioritization and implementation of the potential TSM&O projects, the Consultant will prepare a matrix that defines the scope and limits of each proposed project and that summarizes the disposition of each project with respect to the higher-level criteria currently used to qualify projects for the TSM&O portion of the MPO's TMA funds as well as criteria applicable to other likely funding sources including discretionary/competitive Federal grants. The screening criteria to be summarized within the matrix will be defined with the Steering Committee's input. The criteria may include factors such as:

- Project Cost and Type
- Mitigates an identified transportation problem
- Improves dissemination of traffic related information
- Reduces recurring and nonrecurring congestion
- Improves safety of the transportation network
- Sustainability
- Significance (Regional vs local impacts)
- Emerging technologies
- "Low Tech" vs "High Tech" solution
- Policy support/Need for agreements
- Implementing agency/Roles & Responsibilities
- Maintaining agency preference re: prioritization (high/medium/low)
- Data sharing and storage needs
- Modal Impacts (Transit, freight, micromobility, active transportation, etc.)
- Heavily constrained corridor (Yes/no)
- Premium Transit contemplated (Yes/no)
- Impacts to Traffic Incident Management and/or Evacuation
- Impacts on Freight Operations and/or Parking
- Safety and Security
- Eligibility for SIS funding

The Consultant will coordinate with the Project Steering Committee to review the proposed projects and get input to complete the Prioritization Support Matrix. For each project in the Plan, the Consultant will summarize information, including but not limited to: project sponsor; description; benefits; cost estimates; funding sources or cost sharing recommendations; and, if needed, level of SEMP required. The Consultant

will work with MPO staff and the Steering Committee to establish performance measures for projects and the Master Plan.

The Consultant will also provide an Implementation Plan in keeping with the requirements of the Code of Federal Regulations Title 23 (23 CFR). This Implementation Plan will incorporate the results of the work performed on this project, and other information provided by the MPO.

Task Product

The Consultant will document the Prioritization Support Matrix and implementation plan identified within this task as a Technical Memorandum. A thorough discussion and review of all elements described will be included with identification and justification for such actions. The Consultant will submit a shapefile of the projects represented in the matrix with the screening criteria summarized in the attribute table.

Task 7 – Agency and Public Participation – Phases 1, 2 & 3

Public Participation Plan: The consultant will develop a concise Public Participation Plan (PPP) that will define the public participation goals and objectives for development of the TSM&O Master Plan. The Master Plan PPP will be developed to be consistent with MetroPlan Orlando's PPP. It will outline outreach activities, provide an implementation timeline, and identify the target audiences to be reached through defined activities. The Master Plan PPP will also reference and consider the role of a Transportation Technology Event, to be developed through a separate task order, in the overall public participation effort,

Project Technical Steering Committee Meetings: At least six (6) project steering committees will be conducted, with one being a kick-off meeting to discuss project and receive input on tasks and a final meeting to present the findings and outcomes. The purpose of these meetings is to maintain clear communication, receive direction and input on documentation, and provide guidance on project selection and prioritization. The Consultant will prepare meeting agendas and prepare/distribute meeting notes following each of these meetings.

Public Outreach Video: The consultant will develop a short video designed to educate the traveling public about how technology and other TSM&O strategies (current, emerging, and future) will enable local travelers to be better informed and make safer, smarter and more efficient use of the Central Florida transportation system. The video will be positioned for use online, through social media, and as otherwise defined in the Master Plan PPP.

TSM&O Brochure: The consultant will prepare a concise brochure that effectively describes TSM&O in plain language and provides brief illustrative examples of technologies and strategies that are considered part of the TSM&O "toolkit". The brochure will be positioned for use online and as otherwise defined in the Master Plan PPP.

Web Page Supporting Materials: The consultant will prepare, in support of MetroPlan Orlando's Communications Team, digital information and materials for use on the MetroPlan Orlando website. The materials will be utilized to create and support a TSM&O Master Plan web page and will consist of: a plain language narrative summary about TSM&O and the purpose of the Master Plan; supporting graphic and image resources to facilitate understanding; the completed digital video and brochure deliverables defined in this scope; and other information as defined in the Master Plan PPP.

Deliverables:
All collateral meeting materials to support Project Technical Steering Committee Meetings [Phase 1, 2 and 3]
Master Plan Public Participation Plan in Word and PDF* formats [Phase 1]

Public Outreach Short Form Digital Video (up to 5 minutes in length) [Phase 2]
TSM&O Brochure – tri-fold letter size (8.5 x 11) and bi-fold tabloid size (11 x 17) in PDF* format [Phase 2]

*The Public Participation Plan and TSM&O brochure will meet the PDF accessibility requirements noted under Project Administration.

Task 8 – Project Meetings and Board/Committee Presentations – Phases 1, 2 & 3

Project Status Meetings: Up to two (2) members of the Consultant team will attend up to three (3) meetings with MPO staff to discuss project progress and receive input on tasks completed. The purpose of these meetings is to maintain clear communication between the TPO and the Consultant team. The Consultant will prepare a meeting agenda and prepare/distribute meeting notes following each of these meetings. Monthly coordination calls will also be conducted between the MPO and Consultant project managers.

Project Presentations: It is anticipated that the Consultant will make presentation at the conclusion of the project to the MetroPlan Orlando Board and applicable advisory committees (TSMOAC and TAC at minimum). The Consultant will be responsible for preparing the PowerPoint presentation and will coordinate with MPO staff on what will be included in the presentation.

Deliverables: Meeting summaries.

Phase 1:
A. Conduct no more than one (1) meeting with MPO staff

Phase 2:
A. Conduct at least two (2) meetings with MPO staff
B. Develop and present project presentations for the MetroPlan Orlando Board and applicable advisory committees (TSMOAC and TAC at minimum) at conclusion of the project

Task 9 – Final Deliverable – TSM&O Master Plan – Phases 2 & 3

The Consultant will compile the findings and recommendations from Tasks 1 - 8 into a final report that will serve as the TSM&O Master Plan. The results of each task will be compiled into a concise draft report to be submitted electronically for review and comment. After all comments have been received, the Consultant will prepare a final report and submit digital copies of the final report (in Adobe PDF format and meeting the PDF accessibility requirements noted under Project Administration) and all supporting documentation to the MPO.

Task 10 – Project Administration – Phases 1, 2 & 3

Quality Assurance/Quality Control (QA/QC): The Consultant team will designate appropriate senior staff to conduct QA/QC reviews of work products.

Accessible PDF Deliverables: PDF deliverables developed by the Consultant as part of this project that are to be published on the MetroPlan Orlando website will be designed and developed for accessibility and will pass the Adobe Acrobat PDF Accessibility Checker review upon delivery of the final document to MetroPlan Orlando. PDF documents must not contain any “Failed” checks when the Adobe Accessibility Checker is run. The “Needs Manual Check” alerts must be minimized and those which remain must be justifiable.

The Consultant will not be responsible for maintaining the PDF accessibility following the completion of the project. MetroPlan Orlando is responsible for the accessibility of the webpage itself.

Project Schedule: Within 30 days of Notice to Proceed, the Consultant will prepare and submit a detailed project schedule delineating major tasks with estimated timeframes for completion and defining the interrelationship of tasks. The Consultant is responsible for keeping the schedule up to date. The beginning date of the services will be the date of authorization for this work order. Any changes to the schedule necessitated by circumstances outside the Consultant's control will be coordinated with MPO staff.

MPO Responsibility

The MPO shall make available to the Consultant, upon request, any data available in the MPO's files pertaining to the work to be performed under this Task. MPO staff and/or members of the Steering Committee will review submittals, provide comments, and, where applicable, provide approval for any suggestions made by the Consultant for the completing the TSM&O Master Plan.

TAB 3

Vision, Goals, and Objectives

Charge: "Develop a TSM&O Vision with Goals and Objectives for the region."

Key Plans:

- MetroPlan Orlando 2045 Metropolitan Transportation Plan (MTP) Update
- MetroPlan Orlando Intelligent Transportation System (ITS) Master Plan
- FDOT D5 TSM&O Implementation Plan
- FDOT TSM&O Strategic Plan

(See Task 1 in Scope of Work for list of other related plans)

Considerations:

- Future strategies to be developed for:
  - Travel demand management (TDM)
  - Connected and automated vehicle (CAV) deployment
  - Special event management
- Interagency, interjurisdictional coordination
  - Steering Committee Member Agencies
  - Other Local Governments
  - Law Enforcement / Fire & Rescue
  - Community Traffic Safety Teams/Traffic Incident Management (TIM) partners
- Public outreach and messaging
- Workforce Development – TSM&O specific
- Key topics like equity and resiliency
- *Setting the stage for programmatic focus and project prioritization*

VISION – Statement of what we are striving to create

EXISTING PLAN VISIONS	DRAFT TSM&O Master Plan VISION
MetroPlan Orlando 2045 MTP – A regional transportation system that safely and efficiently moves people and goods through a variety of options that supports the region's vitality. MetroPlan Orlando ITS Master Plan – Maximize the transportation system performance by continually improving safety, efficiency, and reliability for all system users through the application of technology. **Other Visions** FDOT D5 TSM&O Implementation Plan – To operate our transportation system at the highest level of cost-effective performance. FDOT TSM&O Strategic Plan – To increase the delivery rate of fatality-free and congestion-free transportation systems supporting the FDOT vision and Florida Transportation Plan goals.	A regional multimodal transportation network that strategically leverages cost-effective technology and operations to maximize system performance and safety.

GOALS – Statements of purpose that provide direction for achieving the vision

EXISTING PLAN GOALS	DRAFT TSM&O MASTER PLAN GOALS
2045 MTP GOAL: SAFETY & SECURITY Provide a safe and secure transportation system for all users. *ITS Master Plan GOAL C: Enhance the safety and security of the transportation system.*	SAFETY & SECURITY: Provide a safe and secure transportation system for all users. [same as MTP]
2045 MTP GOAL: RELIABILITY & PERFORMANCE Leverage innovative solutions to optimize system performance. *ITS Master Plan GOAL A: Maximize the performance, efficiency, and reliability of the multimodal transportation system.*	RELIABILITY & PERFORMANCE: Leverage innovative solutions to optimize system performance, efficiency, and reliability. [merged MTP and ITS]
2045 MTP GOAL: INVESTMENT & ECONOMY Support economic prosperity through strategic transportation investment.	INVESTMENT & ECONOMY: Support economic prosperity through strategic transportation investment. [same as MTP]
2045 MTP GOAL: ACCESS & CONNECTIVITY Enhance communities and lives through improved access to opportunities. *ITS Master Plan GOAL B: Integrate information, communication, and technology to empower system users to make informed choices.*	ACCESS & CONNECTIVITY: Integrate information, communication, and technology to improve access to opportunities by empowering users to make informed choices. [merged MTP and ITS]
2045 MTP GOAL: HEALTH & ENVIRONMENT Protect and preserve our region's public health and environmentally sensitive areas. *ITS Master Plan GOAL D: Protect the environment and enhance the quality of life.*	HEALTH & ENVIRONMENT: Protect and preserve our region's public health, environment, and quality of life. [merged MTP and ITS]

OBJECTIVES – Statements of attainable or measurable actions to implement goals

SAFETY & SECURITY: Provide a safe and secure transportation system for all users.	
RELATED OBJECTIVES	**DRAFT TSM&O MASTER PLAN OBJECTIVES**
MTP Objective – Eliminate the rate and occurrence of transportation system fatalities, injuries, and crashes with emphasis on the most vulnerable users. MTP Objective – Provide infrastructure and services to help prepare for, respond to, and recover from emergencies. MTP Objective – Improve emergency response and incident clearance times. MTP Objective – Prevent and mitigate transportation-related security risks. MTP Objective – Increase the resiliency of infrastructure to risks, including extreme weather and environmental conditions. ITS MP Objective – Improve safety and security of the transportation system through ITS strategies and investments. ITS MP Objective – Support data sharing between transit agencies and law enforcement to ensure passenger safety and security. ITS MP Objective – Monitor crash records as it relates to infrastructure improvements to quantify benefits.	Eliminate the rate and occurrence of transportation system fatalities, injuries, and crashes with emphasis on the most vulnerable users. Increase transportation system resiliency through TSM&O solutions that improve emergency response and help prepare for, respond to, and recover from emergencies. Increase the resiliency of infrastructure to risks, including extreme weather and environmental conditions. Prevent and mitigate transportation-related security risks.

OBJECTIVES – Statements of attainable or measurable actions to implement goals

RELIABILITY & PERFORMANCE: Leverage innovative solutions to optimize system performance, efficiency, and reliability.	
RELATED OBJECTIVES	**DRAFT TSM&O MASTER PLAN OBJECTIVES**
MTP Objective – Improve travel time reliability on the transportation system. MTP Objective – Enhance and expand the region's ITS, adaptive and actively managed traffic systems. MTP Objective – Reduce travel time per capita (peak and off-peak travel times). MTP Objective – Adapt transportation infrastructure and technologies to meet changing traveler needs and desires. ITS MP Objective – Reduce delay and travel time on selected corridors for automobiles, commercial vehicles, transit, and bicycle/pedestrian facilities using TSM&O. ITS MP Objective – Improve the reliability and predictability of travel by monitoring the use of the transportation system and through the collection of pertinent data.	Enhance and expand the region's ITS, adaptive, and actively managed traffic systems to improve reliability. Improve the reliability and predictability of travel by monitoring the use of the transportation system and through the collection of pertinent data. Implement TSM&O solutions on priority corridors to reduce delay and travel time for automobiles, commercial vehicles, transit, and bicyclists/pedestrians. Adapt transportation infrastructure and technologies to enhance system performance to address evolving traveler needs and preferences.

OBJECTIVES – Statements of attainable or measurable actions to implement goals

INVESTMENT & ECONOMY: Support economic prosperity through strategic transportation investment.	
RELATED OBJECTIVES	**DRAFT TSM&O MASTER PLAN OBJECTIVES**
MTP Objective – Reduce per capita delay for residents, visitors, and businesses. MTP Objective – Improve transportation experience for visitors and supportive-industry workers. MTP Objective – Promote transportation system projects that expand and enhance economic prosperity. ITS MP Objective – Enhance safe and efficient freight delivery and transport. ITS MP Objective – Develop a business model to demonstrate to transportation officials and elected agency leadership the benefits of continued use of ITS.	Promote TSM&O projects that support, expand and enhance economic prosperity. Improve regional transportation efficiency and economic performance through the reduction of per capita delay for residents, visitors, and businesses. Utilize data and information to promote the business case for TSM&O to elected officials, the public, and industry groups such as freight and tourism. Implement TSM&O solutions to address identified freight movement needs and enhance efficient transport and delivery of goods.

OBJECTIVES – Statements of attainable or measurable actions to implement goals

ACCESS & CONNECTIVITY: Integrate information, communication, and technology to improve access and empower users to make informed choices.	
RELATED OBJECTIVES	**DRAFT TSM&O MASTER PLAN OBJECTIVES**
MTP Objective – Reduce per capita vehicle miles traveled (VMT). MTP Objective – Reduce the reliance on single-occupant vehicle travel. MTP Objective – Improve housing and employment access to high-frequency transit. MTP Objective – Improve access to essential services across all modes of transportation. ITS MP Objective – Provide real-time dynamic travel time and delay information to users. ITS MP Objective – Improve tourist access and mobility through the use of specialized traveler information systems. ITS MP Objective – Improve service for special traveler needs through the use of ITS applications.	Implement TSM&O strategies that reduce reliance on single-occupant vehicle travel through improved convenience of and access to all modes. Improve access to essential services across all modes of transportation. Improve service to underserved populations through TSM&O solutions that facilitate access to multimodal transportation options and information to empower choices. Strive to eliminate transportation-related disparities and improve equitable outcomes for individuals in historically marginalized communities, especially communities of color. Improve tourist access, mobility, and trip decision-making through the use of specialized traveler information systems.

OBJECTIVES – Statements of attainable or measurable actions to implement goals

HEALTH & ENVIRONMENT: Protect and preserve our region's public health, environment, and quality of life.	
RELATED OBJECTIVES	DRAFT TSM&O MASTER PLAN OBJECTIVES
MTP Objective – Reduce per capita related air quality pollutants and greenhouse gas emissions. MTP Objective – Reduce per capita vehicle miles traveled (VMT). ITS MP Objective – Improve air quality and reduce greenhouse gas emissions. ITS MP Objective – Reduce fuel consumption by balancing traffic volumes across the transportation network. ITS MP Objective – Increase in estimated number of passengers per vehicle mile mode.	Improve air quality and reduce greenhouse gas emissions. Reduce fuel consumption through TSM&O strategies that support effective management of traffic volumes across the transportation network. Encourage transit use and increase the number of passengers per vehicle mile through implementation of TSM&O solutions such as real-time dynamic travel information. Ensure that active transportation modes are meaningfully considered and incorporated in TSM&O planning and implementation. Leverage TSM&O projects, where appropriate, to minimize the physical capacity footprint and environmental impact of transportation infrastructure.

TAB 4

TSM&O
Master Plan
Steering Committee

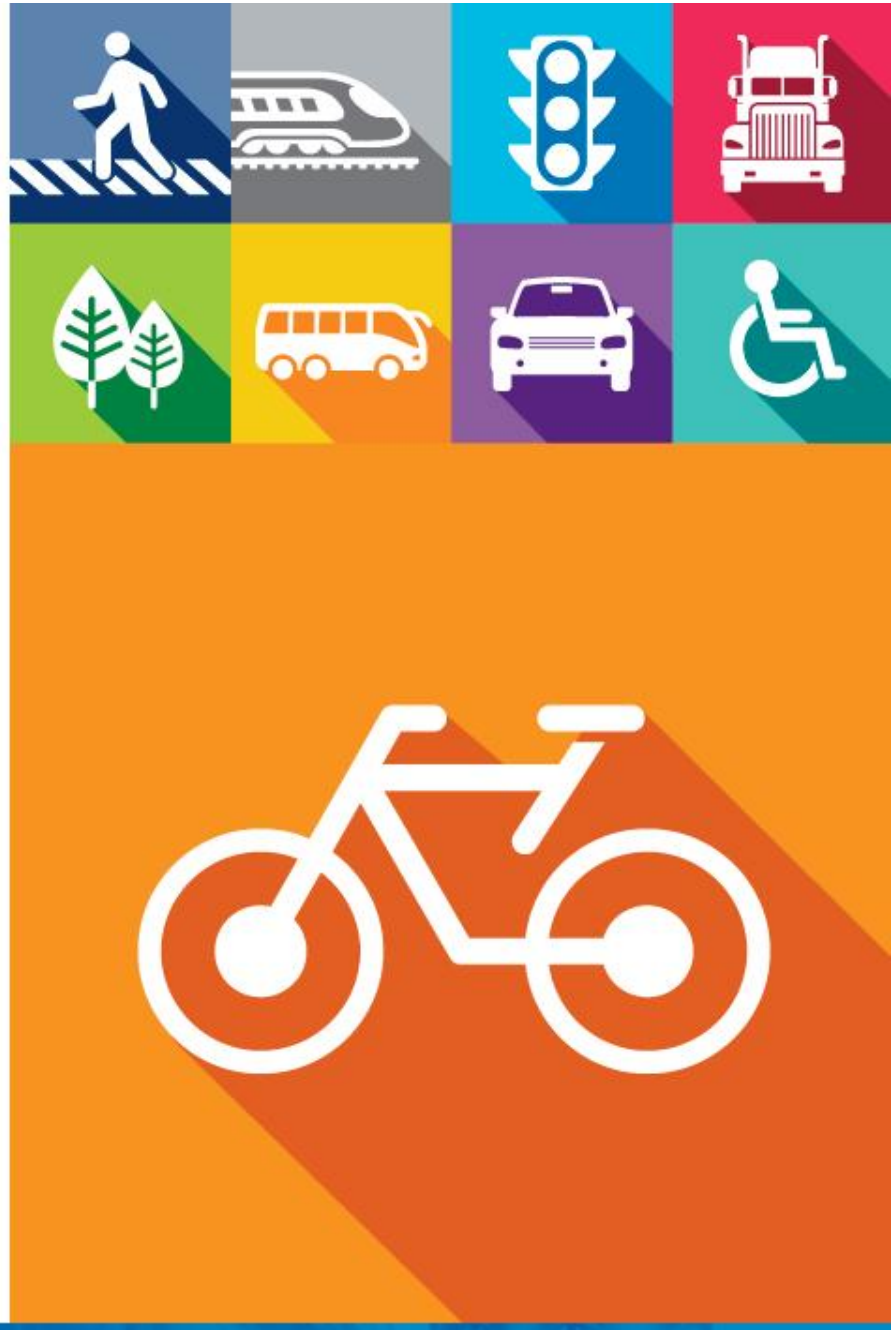
June 29, 2022

Meeting #1

Agenda

- Introductions
- Public Comments
- Master Plan Schedule
- Roles & Responsibilities
- Scope of Work
- Key Documents
- Vision, Goals & Objectives
- Next Steps

Introductions



Steering Committee Members

MetroPlan Orlando (Convening Agency)	Eric Hill
Central Florida Expressway Authority	Bryan Homayouni
City of Orlando	Akil Toussaint
Florida Department of Transportation	Jeremy Dilmore (Katie King – alternate today)
Florida's Turnpike Enterprise	Eric Gordin
LYNX	Doug Jamison
Orange County	Hazem El-Assar
Osceola County	Steven Kane
Seminole County	Charlie Wetzel

How to Make a Public Comment

- Use “Raise Hand” feature at appropriate time (Look under **Participants** tab for the raise hand button or dial *9 if on the phone)
- Wait to be recognized by chairperson, provide name and address when called
- You have 2 minutes to make your comment

Visit MetroPlanOrlando.org/VirtualMeetings to learn how to send in comments before the meetings.

Public Comment (General)

- Commenting Virtually: Use “Raise Hand” feature on Zoom toolbar (Dial *9 if on the phone)
- Commenting In-Person: Fill out electronic speaker card (MetroPlanOrlando.org/speakercard)
- Wait to be recognized by chairperson, provide name and address when called
- You have 2 minutes to make your comment

Virtual comments will be taken first, followed by in-person

Master Plan Schedule

	2022									2023									
	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Task 1 TSM&O Vision, Goals, Objectives																			
Task 2 Existing Conditions, Infra. Inventory																			
Task 3 Identify TSM&O Needs																			
Task 4 Applicable Strategies/Funding Sources																			
Task 5 Regional Architecture (RITSA)																			
Task 6 Prioritization Support Matrix																			
Task 7 Agency & Public Participation			☆		☆			☆			☆			☆			☆		
Task 8 Mtgs & Board/Committee Presentations																			
Task 9 TSM&O Master Plan																			
Task 10 Project Administration																			

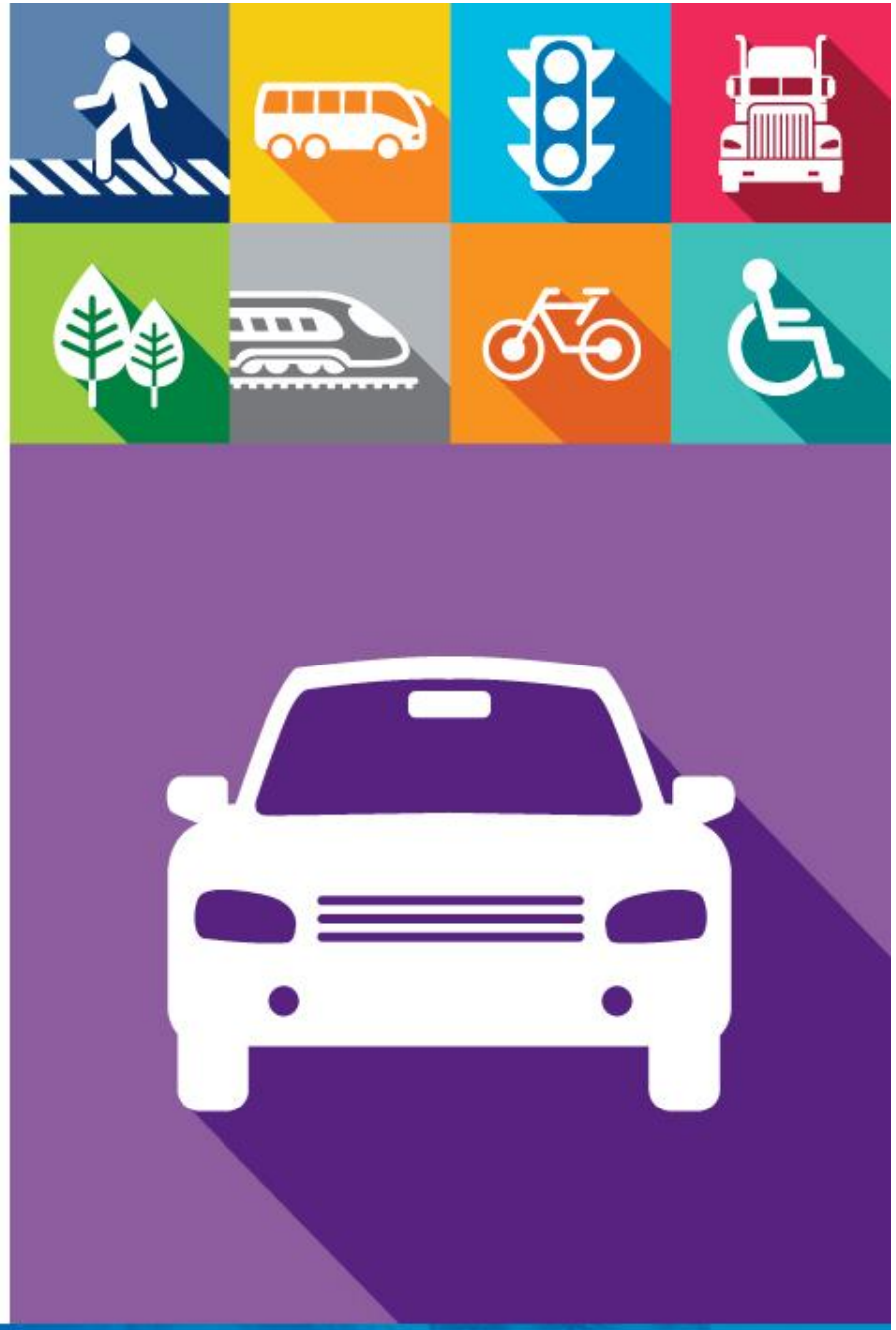
☆ Steering Committee Meeting

Master Plan Schedule

GENERAL STEERING COMMITTEE SCHEDULE		
Meeting	**Principal Topic**	**Date/Anticipated Timeframe**
#1	Input on Goals and Objectives	June 2022
#2	Input on TSM&O Needs	August/September 2022
#3	Input on Regional ITS Architecture (RITSA)	November/December 2022
#4	Input on Prioritization Support Matrix	February/March 2023
#5	Input on Proposed Priority Projects & Perf. Measures	May/June 2023
#6	Input on draft TSM&O Master Plan	August/September 2023

Roles & Responsibilities

Tab 1



Scope of Work

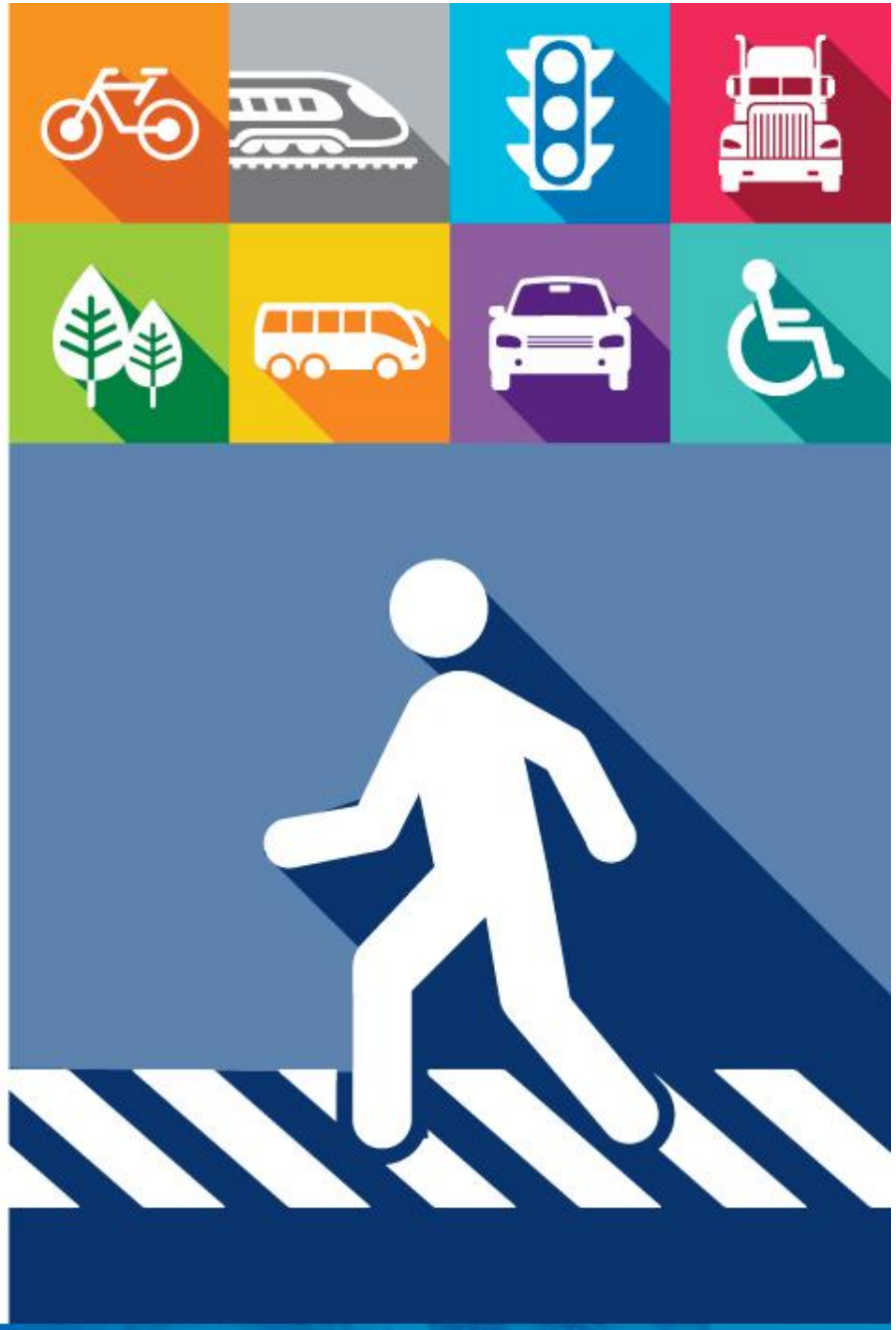
Tab 2

Key Documents

Tab 2

Vision, Goals & Objectives

Tab 3



Next Steps and Action Items

Thank You

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