Final MM2045 Implementation Strategies

1. Prioritizing Safety

1.1 Promote safe behaviors.

- Through public awareness campaigns, education, and enforcement techniques with proven safety benefits, encourage users, workers, and operators to stay focused on safe use and operation of Michigan's transportation network.

1.2 Prioritize infrastructure and facilities improvements with proven safety benefits.

- Improve research, collection, management, and integration of safety data.
- Leverage new sources of safety data to identify locations which may benefit from safety improvements.
- Integrate intelligent tools to analyze and quantify safety impacts and implement cost-effective, data-informed targeted and systemic safety countermeasures and mitigation strategies.
- Continue to include safety improvements in preservation projects where appropriate.
- Support local safety countermeasures.

1.3 Support and implement state-of-the-art safety technology solutions.

- Continue support for research, development, and integration of life-saving infrastructure and vehicle technology.
- Support the adoption of advanced driver-assistance systems (ADAS) and other safety technology in new and existing passenger and freight vehicles.

1.4 Collaborate with transportation partners and emergency medical and trauma services.

- Facilitate multimodal stakeholder and private sector outreach and collaboration to improve transportation safety and performance.
- Continue to improve and promote data sharing and collaboration between transportation partners, human services providers, police and first responders.

2. Managing Resources Responsibly

2.1 Advance Transportation Asset Management to optimize transportation investments.

- Prioritize preservation and maintenance of Michigan's transportation network.
- Research new materials and products and implement those with proven benefit to extend the life of assets.
- Enhance asset management planning and innovative maintenance strategies, accounting for long-term operational and financial considerations.
- Improve collaboration and coordination throughout the planning and development process to increase efficiency, maximize useful life of assets, and minimize public disruption to the extent practical.
- Provide education and share best practices to enable communities to develop and implement asset management plans and practices.

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- Develop methods to share real-time data between asset management systems to improve the accuracy and timeliness of data-informed decisions.

2.2 Streamline and improve data, data management systems, and processes.
- Invest in data, data collection, analytics, and information systems to advance data-informed decisions.
- Extend opportunities to share data and information for improved efficiency, accountability, and transparency across all of Michigan's transportation partners.
- Identify and assess data needs, keep necessary data up-to-date, and incorporate new sources of data.
- Where possible and appropriate, share data with partners and promote open data.

2.3 Right-size Michigan's transportation network and systems.
- Develop a right-sizing policy to manage/reduce life-cycle costs and achieve best and highest use of assets and revenues.
- Integrate right-sizing objectives and opportunities into existing business practices.
- Develop policy guidance to ensure agency, stakeholders, partners, and the public have a shared understanding of engagement and outcome expectations.

3. Providing Accessibility and Mobility for All

3.1 Improve the reliability of the transportation network and systems.
- Leverage technology and optimize operations to improve travel time reliability and reduce congestion while maintaining safety and accessibility for all users and population demographics.
- Expand the use of signal control and time optimization including signal priority, incident management programs such as the Michigan Traffic Incident Management Effort (Mi-TIME), safety technology, traveler information systems, work zone technology, and road weather management.
- Use traffic signal detection data to improve performance through active management.

3.2 Enhance the mobility of Michigan's residents and non-residents.
- Leverage technology to improve passenger transportation availability and services.
- Assess mobility needs to develop an appropriate mix of transportation options. Especially consider the mobility needs of low-income persons, persons of all abilities, and others who may have limited transportation options.
- Foster expanded equitable access to transportation options for small, rural and disadvantaged communities.
- Encourage and support integration of land use and transportation policies.
- Support enhanced transportation connections between Michigan communities as a part of an overall economic development strategy to increase employment, household incomes and property values because of increased accessibility, equity and mobility choices.
- Continue to improve connections and integration between the passenger transportation and active transportation networks, including first and last mile connections.

3.3 Pursue a statewide Mobility as a Service (MaaS) platform.

- Further integrate public and private transportation services into a mobility application that will allow the user to obtain current information about available transportation options in their area, and potentially access more advanced features, such as trip planning, online booking. and mobile payment.

3.4 Support the increased use of the passenger transportation system.

- Support public information campaigns.
- Identify grant opportunities and continue to support grant applications.
- Utilize new and existing sources of data and information to continue to ensure funding is appropriately and equitably distributed.
- Continue to provide technical support and funding to public transportation agencies, and facilitate collaboration among regional, and local planning organizations.

3.5 Define, measure, and improve equitable access.

- In collaboration with stakeholder groups, gather input on accessibility and equity issues and identify access- and equity-related objectives. This could include identifying populations of interest, choosing relevant destinations or services (points of interest such as jobs, healthcare, food, businesses, tourist centers, etc.), and selecting an appropriate accessibility measure.
- Identify and collect data needed to calculate accessibility measures.
- Incorporate accessibility and equity into project selection criteria and consider equity when making transportation and investment decisions.

3.6 Develop projects that equitably meet community mobility needs.

- Continue to promote Context Sensitive Solutions stakeholder engagement process to incorporate community needs and desires early in the project planning and development process.
- Utilize complete streets principles where feasible to design projects that meet the needs of all users.
- Expand internal multi-modal development and delivery processes (M2D2) to ensure that MDOT's guidelines and processes encourage complete streets and multimodal transportation.
- Encourage integration of health into local community development and revitalization strategies.

4. Supporting Michigan's Health

4.1 Participate in and contribute to initiatives to improve air quality and reduce emissions.

- Collaborate and coordinate with other public agencies, utilities, the private sector, and neighboring states/provinces to support strategic expansion of electric and low-emissions vehicle infrastructure.
- Continue to support efforts to expand the use of electric public transportation vehicles, including through public private partnerships and collaboration with other Michigan agencies.
- Encourage and enable the adoption of high efficiency/low emission vehicles.
- Reduce the proportion of single occupancy passenger vehicle trips by enabling alternative modes of travel that are convenient, comfortable, affordable.

4.2 Support and implement approaches that preserve Michigan's natural resources.

- Promote pollinator habitats within available and appropriate transportation right-of-way.
- Implement updated Stormwater Management Program Improvements to improve water quality and lessen the impact of transportation projects and infrastructure.

4.3 Foster collaboration between local transportation providers and public health interests.

- Continue support for innovative transit services that provide equitable access to medical and health-related destinations, including expanding transit's role in non-emergency medical transportation.

4.4 Encourage healthy lifestyles.

- Encourage equitable expansion of a connected active transportation network to promote more active lifestyles across diverse communities.
- Establish methods and approaches for assessing network needs, identifying gaps, and targeting improvements to encourage more walking and bicycling.
- Provide support for planning and design decisions to promote the attractiveness, safety, and ease of mobility and access for persons of all abilities.
- Regularly review and update policies and guidance to recognize the needs of pedestrians and bicyclists and ensure accommodations are considered at all stages of project development.

5. Building Resilience

5.1 Identify and address risks to Michigan's transportation network.

- Conduct a statewide vulnerability assessment.
- Incorporate vulnerability data and information into asset management plans and practices.
- Integrate risk-related data into the Michigan Geographic Framework.
- Develop methods to incorporate risk and resiliency considerations into planning, programming, and project development, especially on multimodal corridors and key supply chain routes.
- Strategically improve infrastructure with targeted betterments to advance the resilience and security of the transportation network.

5.2 Promote and research an implementation plan for transportation infrastructure protection, security, and emergency management.

- Provide timely and accurate information to decision-makers, responders, and community members so they can take informed action to reduce risk and increase resilience.
- Identify and prioritize cyber-dependent critical infrastructure and systems.
- Ensure Michigan transportation data and cyber-security dependent infrastructure is protected through best practice credentialing and cyber security measures, including tracking new security standards, and collaborating with stakeholders.

5.3 Improve organizational resiliency.

- Strategically recruit, develop, and promote a highly skilled diverse workforce with the capabilities, competencies, and professional leadership needed to advance the future of transportation in Michigan.

- Improve program performance by streamlining business processes, improving systems, and maximizing employee performance, development, and engagement.
- Pursue flexible and sustainable transportation funding sources by leveraging both public and private opportunities.

6. Working Together

6.1 Expand public sector partnerships and collaboration.
- Utilize corridor planning approaches, including improving regional access to passenger transportation.
- Encourage land use consideration in project selection and development.
- Support transit partnerships with the business community to provide transit services that meet workforce needs.
- Support coordination among transit agencies to improve regional connectivity.
- Increase public and agency understanding of Michigan's industries' freight needs, and freight industry understanding of Michigan's investment and policies that support it.
- Strengthen partnerships with State of Michigan agencies to help achieve statewide and MDOT goals and priorities.
- Promote collaborative planning and training to ensure a unified emergency and disaster level response and recovery to anticipated and unexpected events.
- Support and improve collaboration with peer states, regional initiatives, international partners and federal transportation partners and regulatory agencies.
- Continue to participate and lead in national organizations to set standards, contribute to research, share knowledge, and adopt best practices.
- Continue to communicate and strategize with partners to remain at the cutting edge of CAV development and deployment.

6.2 Improve and expand relationships with private and non-profit partners.
- Strengthen cross-sector collaboration in developing innovative transportation solutions, including leveraging private funding to achieve transportation objectives.
- Align public and private sector interest and incentivize the private sector to optimally perform through efficient risk-transfer.
- Continue to support existing rail programs and matching funds for federal grants.
- Support potential future freight partnerships or funding opportunities.

6.3 Ensure decision-makers and stakeholder groups reflect Michigan's character and integrity.
- Expand key stakeholder groups to address diversity challenges and opportunities.
- Establish an MDOT executive office to ensure unambiguous equity and inclusion across all business practices, policies, and procedures.

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7. Technology

7.1 Prepare for and enable widespread CAV adoption.

- Continue to advance CAV design and deployment standards, consider potential CAV needs in other projects, and plan for scalability.
- Update data standards with a focus on transparency and accessibility to ensure that new data streams can be used to improve decisions by MDOT and its transportation partners.
- Support ongoing and future efforts to deploy automated transit vehicles to improve safety, reliability, operating efficiency, and customer experience.
- Implement and expand real-time Transportation Infrastructure Data Exchange (TIDE) system to function as a centralized platform to support continuous exchange of transportation data among MDOT and other stakeholders.
- Identify opportunities to expand fiber optic, broadband, and 5G connections through coordination or partnerships.

7.2 Regularly evaluate new transportation technology and adopt those which best support Michigan's goals.

- Advance the integration of new transportation technologies and practices into transportation systems to improve safety and performance.
- Prioritize interoperability and standardization when adopting new technology to ensure that all modes and levels of planning can interact efficiently.
- Expand adoption of transit technology and continue to improve dispatching systems and other technology to increase mobility, reliability, and accessibility of transit services.

7.3 Promote standards-based approaches to network technology and deployment.

- Develop and implement specifications and standards that enable appropriate technology to be used on the transportation network and encourage competition among vendors.
- Ensure that diverse and representative stakeholders are included in the decision-making process.

8. Economic Vitality

8.1 Promote freight service, infrastructure improvements, and intermodal connectivity.

- Develop partnerships to improve freight infrastructure and multimodal connections to increase efficiency of freight service and lower transportation costs for Michigan businesses.
- Identify performance improvement opportunities that will strengthen Michigan's competitiveness.
- Improve the reliability of freight transportation on access routes to major freight generators and to gateways, airports, marine ports, and rail facilities by improving critical infrastructure and optimizing operations.
- Facilitate a portfolio of multimodal freight services to support businesses and their supply chains.
- Support upgrading rail corridors to enhance freight and passenger movements.
- Reduce the number and severity of freight bottlenecks on strategic multimodal corridors.
- Incorporate freight reliability and economic benefits as factors in project prioritization.

- Improve freight access in rural areas.

8.2 Continue to partner in transit-oriented development projects.
- Participate in transit-oriented development projects to improve access to economic opportunities and supporting the local community.

8.3 Continue to be a leader in innovative transportation technology and education partnerships.
- Create an environment which encourages entrepreneurship, academic leadership, and equitable growth to improve economic opportunities.