Traverse Transportation Coordinating Initiative (TTCI) 2050 Metropolitan Transportation Plan (MTP)

Approved by TTCI Policy Board on XX/XX/2025

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Acknowledgement

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The TTCI 2050 Metropolitan Transportation Plan was adopted by the TTCI Policy Board on June 25, 2025 (Resolution #25-03). The minutes from the June 25, 2025 Policy Board meeting, including discussion and approval of the MTP, are included in the Appendix of this document.

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EXECUTIVE SUMMARY

Purpose of the Plan

The Traverse Transportation Coordinating Initiative (TTCI) 2050 Metropolitan Transportation Plan (MTP) serves as the region's long-range blueprint for guiding future transportation investment decisions across the Traverse City-Garfield Urbanized Area. As the first federally required MTP for this newly designated MPO, the document fulfills core requirements outlined in 23 USC § 134 and 49 USC § 5303. The MTP reflects local goals and federal performance expectations and sets the stage for regional project coordination, funding prioritization, and strategic implementation through 2050.

The plan also provides a strategic framework for transportation investment across Grand Traverse and Leelanau Counties, developed in compliance with 23 CFR 450 and the Infrastructure Investment and Jobs Act (IIJA). It establishes a financially constrained project list and guides TTCI's performance-based planning efforts over a 25-year horizon.

Vision of the Plan

The TTCI 2050 MTP is guided by the following vision:

"To support a transportation system that enhances quality of life, promotes safe and efficient movement for all users, strengthens economic opportunity, and respects the unique natural and built environment of the Traverse region."

This vision is supported by measurable goals and objectives that guide investments in safety, mobility, connectivity, system preservation, and accessibility for all users and travel modes.

Major Transportation Challenges and Opportunities

Stakeholder engagement and technical analysis revealed several pressing transportation challenges facing the region:

- **Aging Infrastructure:** Pavement and bridges require sustained reinvestment to maintain system integrity.
- **Seasonal Congestion:** Traffic volumes spike in summer months, stressing key corridors and access points.
- **Safety Risks:** High-crash corridors and limited pedestrian infrastructure present ongoing safety concerns.

- **Multimodal Gaps:** Many areas lack safe and connected non-motorized and transit options.
- **Rapid Growth:** Housing and development pressures are outpacing infrastructure capacity in several townships.
- **Funding Constraints:** TTCI must prioritize limited federal and state dollars to address the highest needs.

At the same time, the region has meaningful opportunities to leverage its growing active transportation culture, its collaborative planning network, and its vibrant tourism and economic base to implement transformative mobility strategies.

Summary of Goals and Objectives

The MTP outlines eight interrelated goals, each supported by a set of measurable objectives and strategies that will guide future project selection and policy development:

1. **Improve Transportation Safety** Identify and address high-crash areas and promote safer infrastructure for all users.
2. **Preserve and Maintain Existing Infrastructure** Extend the life of transportation assets through coordinated maintenance and rehabilitation.
3. **Enhance Multimodal Connectivity** Close gaps in pedestrian, bicycle, and transit infrastructure to ensure seamless mobility.
4. **Support Economic Vitality and Land Use Integration** Align investments with regional growth patterns, housing, and workforce development needs.
5. **Foster Resilient and Reliable Systems** Plan for system redundancy, environmental conditions, and emergency access.
6. **Promote Efficient and Effective Operations** Use technology and data to improve traffic flow and corridor functionality.
7. **Expand Access to Mobility Options** Address the needs of transit-dependent residents and promote inclusive mobility.
8. **Coordinate Regional Transportation Planning** Build consensus through interagency collaboration and align with state and federal plans.

Each goal is supported by specific strategies such as Complete Network development, traffic calming, signal modernization, and strategic asset management, ensuring the MTP supports both vision and action.

Public Involvement Highlights

Public engagement has been central to the development of the TTCI 2050 MTP. Key outreach efforts included:

- A series of public input sessions held throughout 2023–2025.
- Coordination with the North Region Active Transportation Plan (NRATP), which generated feedback from over 440 residents and stakeholders across 21 counties, with specific attention to conditions in Grand Traverse and Leelanau Counties.
- An online stakeholder survey conducted from March 6 to May 2, 2025, which gathered input from regional leaders and TTCI Policy Board and Technical Committee members.
- MPO committee meetings where recurring themes such as safety, network connectivity, infrastructure resilience, and seasonal congestion shaped the plan's goals and investment strategies.

The MTP reflects the concerns and priorities of residents, transit users, bicyclists, local officials, and partner agencies—ensuring a plan built on both professional expertise and community values.

Performance-Based Planning and Plan Evaluation Summary

The TTCI 2050 MTP is grounded in a performance-based planning and programming framework required by federal law under 23 CFR 450. This framework ensures that TTCI's transportation investments are strategic, data-driven, and outcome-focused. TTCI has adopted federally defined performance measures in five core areas: Safety (PM1), Pavement and Bridge Condition (PM2), System Performance and Freight (PM3), Transit Asset Management (TAM), and the Public Transportation Agency Safety Plan (PTASP).

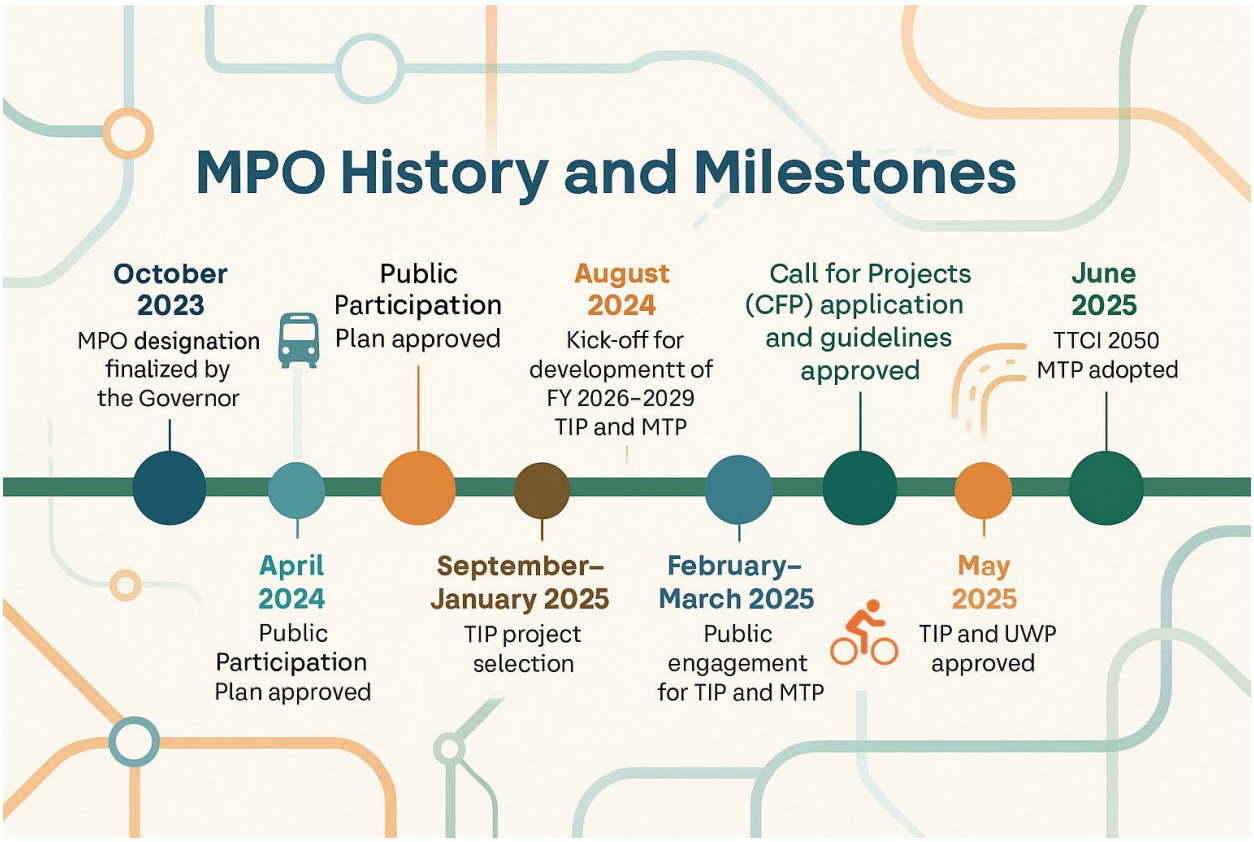
As a newly designated MPO, TTCI has chosen to support performance targets set by the Michigan Department of Transportation (MDOT) and the Bay Area Transportation Authority (BATA). These targets guide TTCI's investment decisions and are embedded into its Transportation Improvement Program (TIP) and long-range planning activities. Project selection within the MTP and TIP is shaped by how well proposed investments support regional progress toward these targets.

Plan evaluation is supported by an iterative performance monitoring cycle. TTCI regularly reviews system performance using tools such as MDOT dashboards, crash data, transit asset inventories, and regional travel data. These insights are paired with implementation tracking, stakeholder feedback, and project delivery reviews to assess whether TTCI is

meeting its stated goals. This evaluation process ensures that TTCI's priorities remain responsive to evolving community needs and that transportation investments continue to reflect federal performance expectations and regional objectives.

MPO Milestones

- February–April 2023: MPO designation presentations to local governments
- May–June 2023: Public meeting for local governments to discuss MPO establishment process
- August 2023: Intergovernmental Agreement adopted
- October 2023: MPO designation finalized by the Governor
- November–December 2023: Interim Project list developed for transition from Rural to Small Urban program
- January 2024: MPO Program Manager hired
- April 2024: Public Participation Plan approved
- May 2024: Unified Work Plan (UWP) adopted
- July 2024: TIP development process approved
- August 2024: Kick-off for development of FY 2026–2029 TIP and MTP
- September 2024: Call for Projects (CFP) application and guidelines approved
- November 2024: CFP closes
- December 2024–January 2025: TIP project selection
- February–March 2025: Public engagement for TIP and MTP
- April 2025: TIP and UWP reviewed for public input
- May 2025: TIP and UWP approved
- June 2025: TTCI 2050 MTP adopted



Next Steps

TTCI will implement this plan through TIP programming, continued agency coordination, and performance monitoring. The plan will be updated intermittently between the time of adoption and the next major plan update which is expected in 2030.

CHAPTER 1: INTRODUCTION

The Role of a Metropolitan Planning Organizations

A Metropolitan Planning Organization (MPO) is a federally mandated transportation policy-making body established for urbanized areas (UZAs) with populations over 50,000. Created by the Federal-Aid Highway Act of 1962, MPOs are designed to ensure that federal transportation funds are spent based on a Continuing, Cooperative, and Comprehensive ("3C") planning process. MPOs bring together local elected officials, transit operators, state departments of transportation, and the public to plan for regional transportation needs.

The five core functions of an MPO are:

1. Establishing a fair and impartial decision-making setting.
2. Evaluating transportation alternatives appropriate to the region.
3. Developing a fiscally constrained Metropolitan Transportation Plan (MTP) with at least a 20-year planning horizon.
4. Creating a fiscally constrained Transportation Improvement Program (TIP).
5. Involving the public and interested stakeholders throughout the planning process

Benefits of a Metropolitan Planning Organization (MPO)

The establishment of a Metropolitan Planning Organization (MPO) brings substantial benefits to the region by providing a structured, collaborative, and federally recognized framework for transportation planning and investment. As the designated MPO for the Traverse City-Garfield Urbanized Area, the Traverse Transportation Coordinating Initiative (TTCI) plays a vital role in ensuring that transportation decisions are coordinated across jurisdictions, data-driven, and responsive to regional needs.

One of the primary benefits of an MPO is its ability to access and administer federal transportation funding. Only projects that are included in an MPO's approved Transportation Improvement Program (TIP) and Metropolitan Transportation Plan (MTP) are eligible to receive certain categories of federal-aid highway and transit funds. This ensures that public resources are allocated efficiently and with regional consensus.

An MPO also facilitates intergovernmental cooperation, bringing together local units of government, transit agencies, road commissions, and state transportation officials to identify shared priorities and coordinate infrastructure improvements. Through this process, the MPO helps avoid fragmented decision-making and supports investments that serve broader economic, mobility, and system performance goals.

MPOs play a critical role in implementing long-range plans by facilitating collaboration across jurisdictions, identifying regional priorities, and aligning transportation strategies with available resources and evolving community needs. By developing data-informed forecasts and engaging the public and stakeholders, MPOs ensure that long-term investments are guided by objective analysis and community input.

Finally, MPOs serve as a neutral forum for discussing regional transportation issues. TTCI provides technical expertise, planning support, and a transparent decision-making structure that enhances public accountability and fosters alignment between local needs and state and federal transportation objectives.

History of the Traverse Transportation Coordinating Initiative (TTCI)

The Traverse Transportation Coordinating Initiative (TTCI) represents the evolution of regional transportation planning efforts in the Traverse City area, building on a long-standing tradition of intergovernmental collaboration. TTCI's roots date back to 1990 with the formation of TC-TALUS, or the Traverse City Transportation and Land Use Study. TC-TALUS was created as an informal planning partnership to coordinate transportation and land use efforts across jurisdictional boundaries in the Traverse City area.

Throughout its existence, TC-TALUS brought together local governments, planning agencies, the Michigan Department of Transportation (MDOT), and other stakeholders to address regional growth, traffic congestion, and land development pressures. Although TC-TALUS lacked the formal powers and federal recognition of an MPO, it laid a critical foundation for data sharing, multi-jurisdictional coordination, and forward-thinking planning in Northwest Lower Michigan.

In the early 2000s, TC-TALUS produced key planning documents such as corridor studies, land use policy reviews, and early non-motorized network plans. These efforts were instrumental in shaping regional priorities and improving communication among city, township, and county entities.

However, as the region's population grew—and with Traverse City's urbanized area eventually surpassing the 50,000-person threshold set by the U.S. Census—it became clear that a formal MPO would be required to meet federal transportation planning requirements and access federal surface transportation funds.

Between 2020 and 2023, local and regional leaders, in coordination with MDOT and the Federal Highway Administration (FHWA), undertook the steps necessary to establish a new MPO. This included defining a Metropolitan Planning Area (MPA), developing a Unified Planning Work Program (UWP), and formalizing a governance structure.

The culmination of this work occurred in October 2023, when the Governor of Michigan signed the TTCI UWP, and the Federal Highway Administration formally recognized TTCI as an MPO. With this designation, TTCI assumed responsibility for long-range multimodal transportation planning, performance-based investment decision-making, and maintaining a fiscally constrained Transportation Improvement Program (TIP) and Metropolitan Transportation Plan (MTP) for the region.

TTCI is now staffed by Networks Northwest and operates under a Policy Board structure composed of representatives from local jurisdictions and transportation agencies. It builds upon the collaborative legacy of TC-TALUS while meeting the federally defined responsibilities of an MPO.

Overview of the TTCI Metropolitan Planning Area

The Traverse Transportation Coordinating Initiative (TTCI) Metropolitan Planning Area (MPA) centers on the Traverse City-Garfield Urbanized Area, which was formally recognized in the 2020 U.S. Census as having a population exceeding 50,000. This designation triggered the requirement to establish a new Metropolitan Planning Organization (MPO) to conduct federally compliant regional transportation planning.

Following designation, the Michigan Department of Transportation (MDOT), in collaboration with local governments and the Governor's Office, defined the MPO boundary based on federal guidance provided in 23 CFR 450.312. The boundary includes both the core urbanized area and adjacent jurisdictions anticipated to urbanize within the next 20 years.

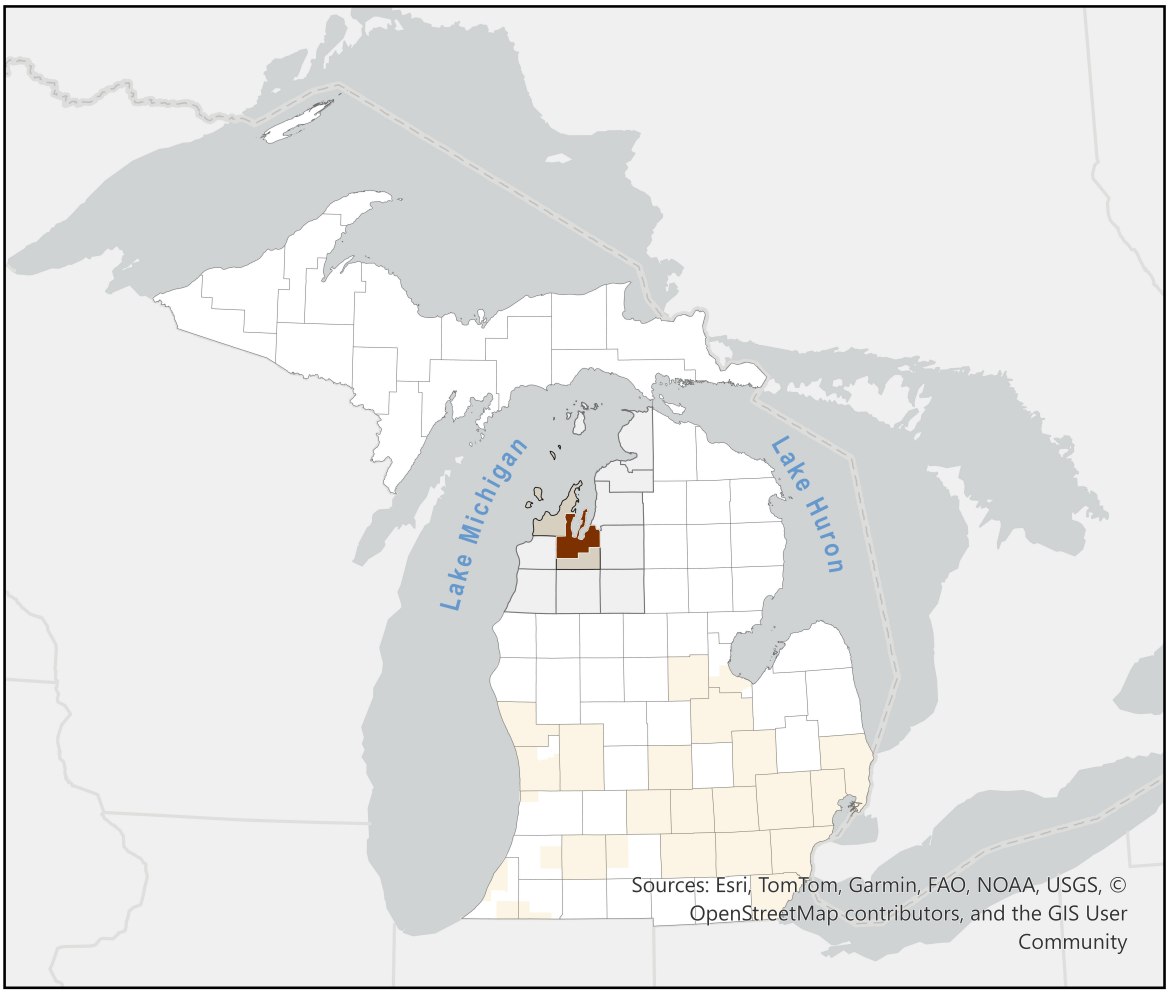
Geographic Scope

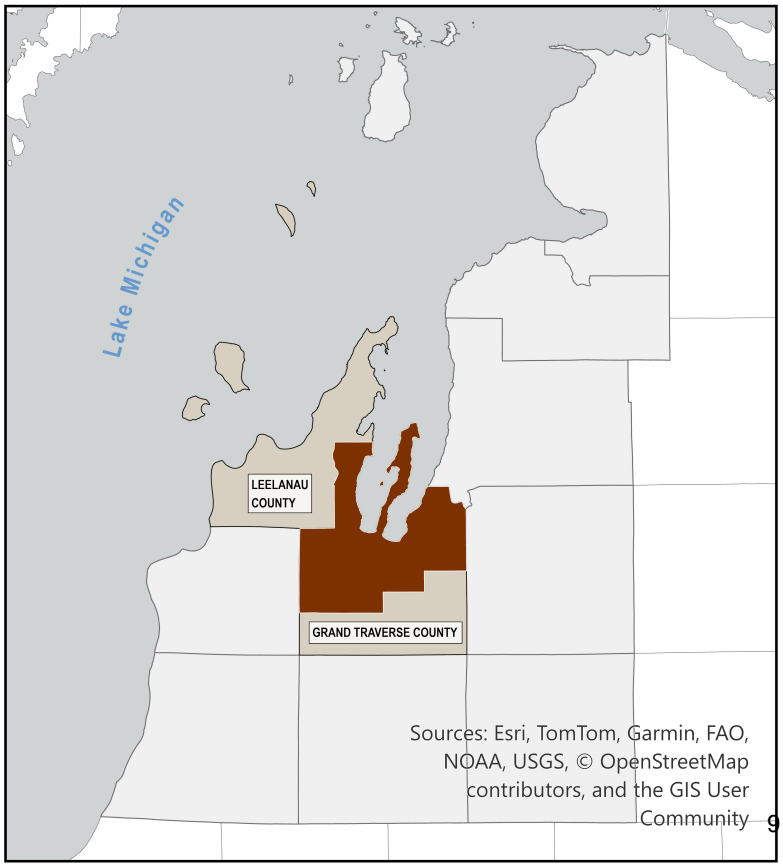
The TTCI MPA includes parts of Grand Traverse and Leelanau Counties, forming a diverse region that encompasses urban, suburban, and rural areas. The MPO boundary was established based on commuting and travel behavior patterns, existing and anticipated development activity, and transportation system connectivity across jurisdictions.

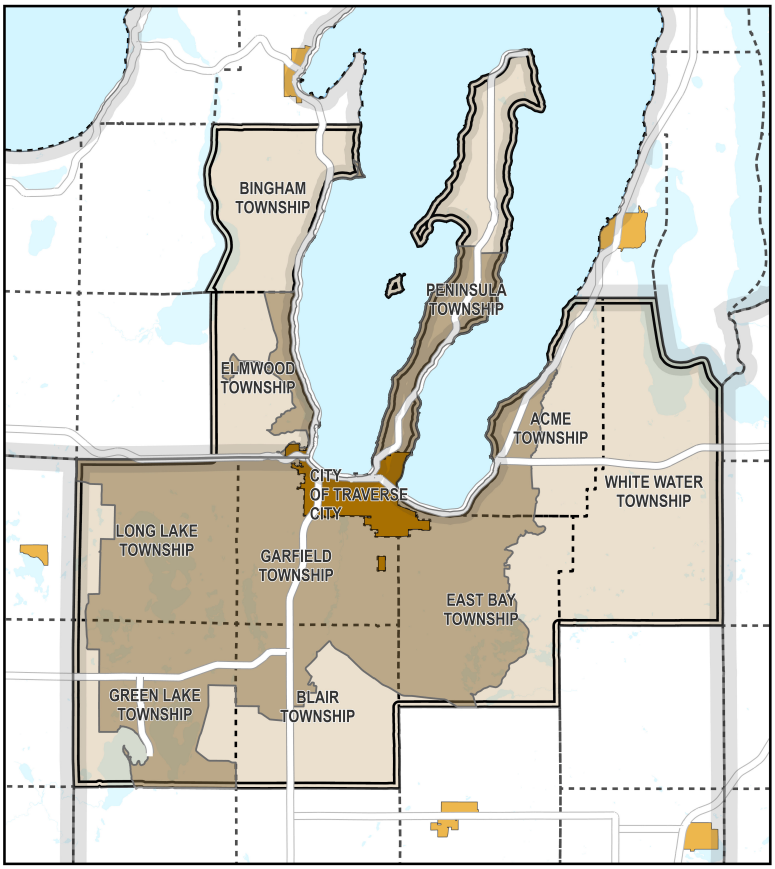
Communities within the TTCI MPA

The jurisdictions within the TTCI planning area include the City of Traverse City, along with the Charter Townships of Garfield, East Bay, Elmwood, and Long Lake. Additional townships that fall within the MPA boundary include the General Law Townships of Acme, Blair, Peninsula, Green Lake, Bingham, and Whitewater. These communities form a geographically and functionally interconnected region that shares a transportation network supporting employment, education, services, and recreation. The population within this area depends on coordinated planning to manage roadway investments, transit services, and active transportation facilities.

TRAVERSE TRANSPORTATION COORDINATING INITIATIVE (TTCI)
REGIONAL SETTING







Functional Characteristics

The TTCI planning area contains a range of development contexts, from dense urban centers to open rural landscapes. Traverse City and Garfield Township represent the urban core, with the highest concentrations of housing, employment, and public services. Surrounding communities such as East Bay and Long Lake reflect transitional suburban environments, where development pressures continue to shape transportation demand. Farther out, townships like Bingham, Peninsula, and Whitewater retain a more rural character, with agricultural uses, natural features, and lower-intensity development. The natural setting—including Grand Traverse Bay, the Boardman River, and extensive forest and wetland systems—introduces physical constraints that must be considered when planning and implementing transportation improvements.

Transportation System Highlights

The TTCI planning area supports a multimodal transportation network that plays a vital role in the region's economy and daily life:

- Highways: Major corridors include US-31, M-72, M-22, and M-37, linking communities within and beyond the region.
- Transit: The Bay Area Transportation Authority (BATA) offers fixed-route and demand-response transit, enhancing mobility for residents without access to personal vehicles.
- Non-Motorized Travel: A network of trails and bike lanes, including those managed by TART Trails, connects neighborhoods, downtown areas, schools, and recreational destinations.
- Aviation: Cherry Capital Airport (TVC) provides regional air service and supports tourism and business travel.

Key Planning Considerations

As the regional hub of Northwest Lower Michigan, the TTCI planning area experiences unique challenges and opportunities in transportation planning. Seasonal variation in traffic volumes, especially during summer tourism peaks, places strain on the existing road network and increases demand on infrastructure. At the same time, local development pressures continue to influence travel behavior, often outpacing roadway capacity in certain corridors. Geographic limitations, such as the bayfront and river crossings, reduce redundancy in the system and limit options for parallel routing. Finally, coordinating infrastructure investment among numerous jurisdictions with varied goals and capacities

remains an ongoing challenge, underscoring the importance of a unified and forward-looking planning process.

Federal and State Planning Requirements

TTCI, as a federally designated MPO, conducts its transportation planning activities in accordance with a comprehensive set of federal and state requirements. These frameworks are designed to ensure that transportation investments are developed through a performance-based, multimodal, and cooperative process that reflects both local priorities and national objectives.

Federal law requires MPOs to carry out a continuing, cooperative, and comprehensive ("3C") transportation planning process. This process is codified under Title 23 U.S.C. § 134 for highways and Title 49 U.S.C. § 5303 for public transportation. These statutes are implemented through joint regulations issued by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), found in 23 CFR Part 450, which establish roles, responsibilities, and coordination requirements for MPOs and their planning partners.

The current federal surface transportation law, the Infrastructure Investment and Jobs Act (IIJA)—also known as the Bipartisan Infrastructure Law (BIL)—was enacted in November 2021. The IIJA builds on the planning emphasis areas of previous legislation such as the FAST Act, placing renewed emphasis on a data-driven, performance-based approach. It reinforces integration between land use and transportation strategies and emphasizes infrastructure asset management, system resilience, and enhanced coordination across transportation modes and jurisdictions.

In accordance with these requirements, MPOs must incorporate a defined set of ten federally mandated planning factors into their planning processes. These factors, identified in federal statute, are intended to guide regional transportation plans and programs toward achieving measurable, outcome-based objectives.

Federally Required Planning Factors

The TTCI 2050 MTP integrates the following ten federally required planning factors throughout its goals, strategies, and project prioritization efforts:

1. **Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.** TTCI promotes economic growth by improving transportation access to employment centers, freight routes, and tourism destinations vital to the region's economy.

2. **Increase the safety of the transportation system for motorized and non-motorized users.** This plan identifies strategies to reduce crash rates, improve pedestrian and bicycle infrastructure, and align regional investments with established federal and state safety targets.
3. **Increase the security of the transportation system for motorized and non-motorized users.** TTCI collaborates with local, regional, and state agencies to enhance emergency preparedness, infrastructure security, and system redundancy.
4. **Increase the accessibility and mobility of people and freight.** The MTP includes projects that expand transit service, enhance trail and bike networks, and support freight movement across key corridors.
5. **Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.** TTCI advances investments that minimize impacts to natural resources and align with master plans and land use strategies across the region.
6. **Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.** The MTP supports improved coordination between BATA transit service, regional trails, highway networks, and airport access.
7. **Promote efficient system management and operation.** TTCI prioritizes operational improvements such as signal optimization, access management, and emerging transportation technologies.
8. **Emphasize the preservation of the existing transportation system.** A focus on asset management ensures resources are directed toward maintaining and improving pavement and bridge conditions.
9. **Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.** The MTP encourages resilient design standards and mitigation strategies to manage stormwater and environmental site constraints.
10. **Enhance travel and tourism.** Recognizing the region's seasonal population fluctuations and economic dependence on tourism, the MTP includes projects that improve access to waterfronts, trailheads, scenic corridors, and community centers.

These ten planning factors are not addressed in isolation but are integrated throughout TTCI's performance-based planning approach. They are reflected in project selection criteria, regional performance measure tracking, public input processes, and coordination efforts with local, state, and federal partners.

Additionally, TTCI collaborates with the Michigan Department of Transportation (MDOT) to align its planning efforts with statewide objectives, including the goals of the Michigan Mobility 2045 (MM2045) long-range transportation plan. MDOT also provides guidance on integrating TTCI's Transportation Improvement Program (TIP) into the Statewide Transportation Improvement Program (STIP), reviewing MPO planning processes annually, and ensuring public access and compliance with Title VI of the Civil Rights Act and related federal requirements.

State of Michigan Requirements

At the state level, TTCI works in close partnership with the Michigan Department of Transportation (MDOT) to align its planning efforts with Michigan's broader transportation objectives, including those outlined in the Michigan Mobility 2050 (MM2050) Long-Range Transportation Plan. MDOT plays a critical coordination role by ensuring that regional projects developed by MPOs are appropriately prioritized, fiscally constrained, and eligible for federal funding.

In addition to technical and financial oversight, MDOT provides support to MPOs in meeting key regulatory and procedural requirements. This includes integration of each MPO's Transportation Improvement Program (TIP) into the federally required Statewide Transportation Improvement Program (STIP). MDOT also facilitates the annual review and certification of each MPO's planning process to ensure compliance with federal laws and alignment with state planning standards.

MDOT assists MPOs in meeting federally required public notification and access provisions, including adherence to Title VI of the Civil Rights Act of 1964 and related statutes that ensure consistent access to transportation planning information.

In addition to these core functions, MDOT coordinates with TTCI on a range of evolving transportation topics. These include traffic safety analysis, long-term asset management planning, and the incorporation of freight movement and intermodal connectivity into regional planning strategies.

CHAPTER 2: PLANNING CONTEXT

Purpose of the Metropolitan Transportation Plan

The MTP is a federally required, long-range blueprint for the region's transportation system, developed by the Metropolitan Planning Organization (MPO) in coordination with local governments, agencies, and the public. For the Traverse Transportation Coordinating Initiative (TTCI), the MTP guides transportation decision-making across the Traverse City-Garfield Urbanized Area and surrounding jurisdictions.

The MTP serves as a strategic framework for regional investments in highways, transit, non-motorized travel, and freight movement. It reflects a 20-year planning horizon and is updated at least every five years to respond to changing needs, priorities, and federal requirements. The MTP is both a policy guide and an implementation tool—it identifies current and future transportation needs, proposes strategies to address them, and prioritizes projects that are eligible for federal and state funding.

Development of the MTP is grounded in a continuing, cooperative, and comprehensive ("3C") planning process, as outlined in federal law and supported by regulations in the Infrastructure Investment and Jobs Act (IIJA). The planning process is performance-based, with specific attention given to key national goal areas such as safety, congestion reduction, system reliability, infrastructure condition, freight mobility, and transit asset management.

In addition to satisfying federal mandates, the MTP is designed to be practical, implementable, and responsive to the region's unique characteristics. It connects transportation planning with land use, economic development, housing, and infrastructure investment. In this way, the MTP supports informed decisions that reflect local values and regional priorities.

Before the formal designation of TTCI as an MPO in 2023, long-range transportation coordination among jurisdictions in the region was limited. With the establishment of TTCI, the region now benefits from a structured, collaborative approach to planning that strengthens intergovernmental coordination and improves access to funding.

While the MTP ultimately results in a plan document, the process itself is cyclical and iterative. Goals and strategies are continually revisited, evaluated, and adjusted to account for system performance, public feedback, and new opportunities. This dynamic approach ensures the plan remains relevant and forward-looking.

The MTP also aligns, where appropriate, with statewide planning efforts, including Michigan Mobility 2050 (MM2050)—the State of Michigan's long-range transportation plan.

Although different in scale and scope, both documents were developed using consistent principles and methods to ensure coordination between regional and statewide objectives.

Throughout this document, the terms Metropolitan Transportation Plan (MTP), Long Range Transportation Plan (LRTP), and Long Range Plan (LRP) may be used interchangeably to describe this comprehensive, future-focused planning effort.

Geography and Setting of the TTCI Region

The TTCI region is located in the northwestern portion of Michigan's Lower Peninsula, centered around the Traverse City-Garfield Urbanized Area. This area, situated along the southern shore of Grand Traverse Bay, is known for its unique blend of urban infrastructure, rural landscapes, and natural features that strongly influence the development and performance of the regional transportation system.

The region encompasses parts of Grand Traverse and Leelanau Counties and includes a variety of community types ranging from a dense downtown to suburbanizing townships and rural townships. These communities are interconnected by a network of state highways, county roads, transit routes, and non-motorized facilities, all of which must respond to the area's diverse geography and land use patterns.

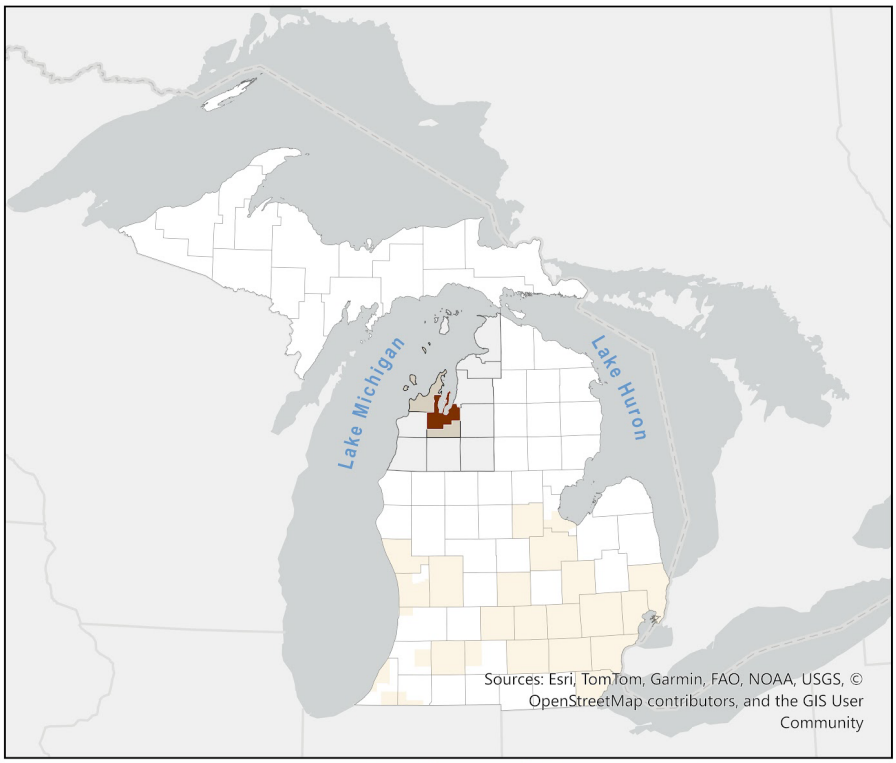
Natural features dominate the setting and are central to the region's identity. Grand Traverse Bay, an arm of Lake Michigan, defines the northern boundary of the urbanized area and supports recreational boating, tourism, and waterfront development. Inland, the Boardman River, Boardman Lake, and several smaller lakes and streams contribute to both the aesthetic appeal and planning constraints of the region. Rolling glacial terrain, hardwood forests, wetlands, and agricultural lands create a scenic backdrop that is highly valued by residents and visitors alike.

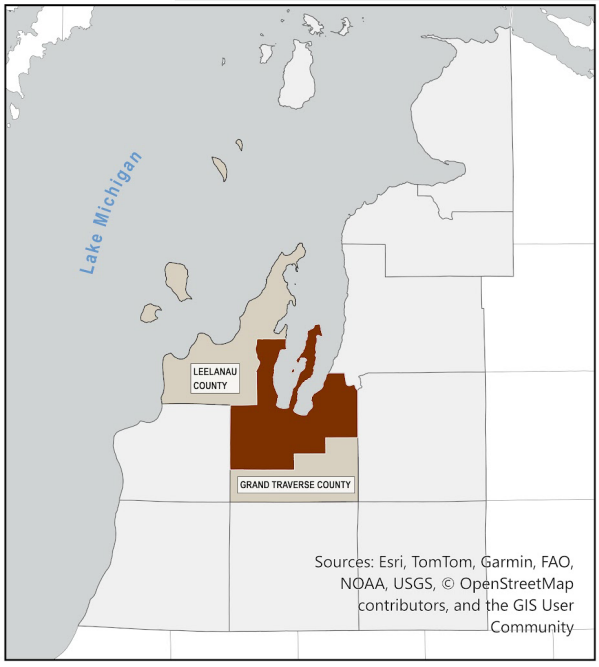
The regional economy is closely tied to its geography. Traverse City serves as a major destination for tourism, healthcare, education, and seasonal recreation, while the surrounding rural townships support agriculture, viticulture, and outdoor industries. The area's popularity as a four-season destination leads to sharp seasonal fluctuations in population and traffic volumes, particularly in summer and during festivals and major events.

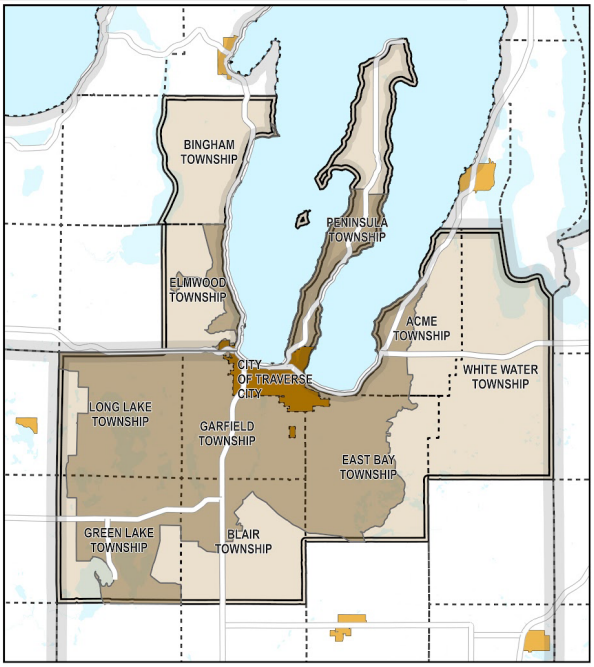
Transportation planning in the TTCI region must also account for infrastructure resiliency and the challenges of balancing growth management with the protection of natural resources and rural character. The setting includes key transportation assets such as Cherry Capital Airport (TVC), the US-31 and M-72 corridors, and a growing network of non-motorized trails, which collectively serve the region's year-round mobility needs.

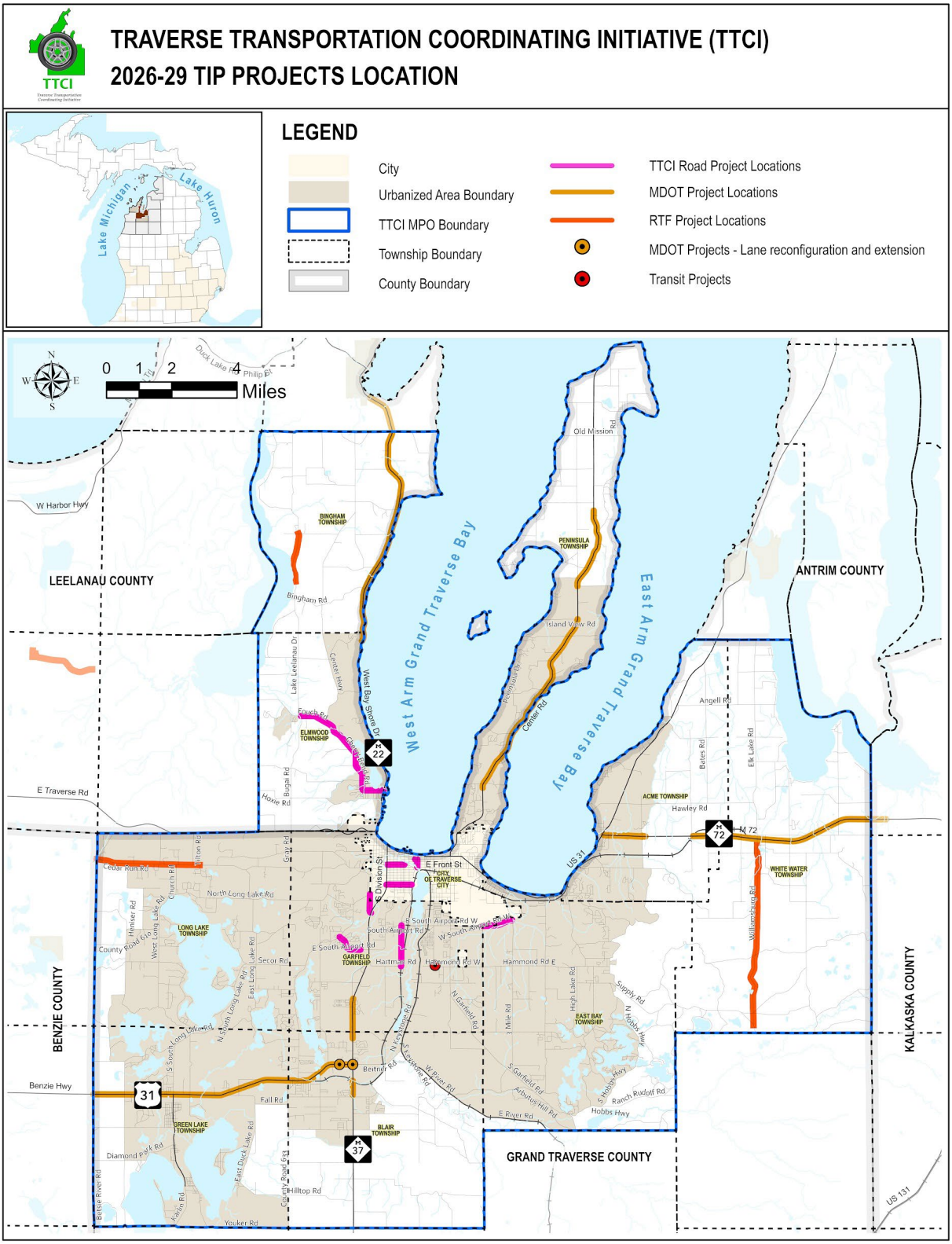
The TTCI region's geography creates both opportunities and constraints for transportation development. Its combination of scenic natural assets, active land use change, and regional economic significance makes coordinated, context-sensitive planning essential for achieving long-term transportation goals.

TRAVERSE TRANSPORTATION COORDINATING INITIATIVE (TTCI)
REGIONAL SETTING








TRAVERSE TRANSPORTATION COORDINATING INITIATIVE (TTCI)
2026-29 TIP PROJECTS LOCATION
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TTCI MPO Boundary
Township Boundary
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Transit Projects
Lake Michigan
Lake Huron
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West Arm Grand Traverse Bay
East Arm Grand Traverse Bay
BINGHAM TOWNSHIP
PENINSULA TOWNSHIP
ELMWOOD TOWNSHIP
ACME TOWNSHIP
WHITE WATER TOWNSHIP
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GREEN LAKE TOWNSHIP
BLAIR TOWNSHIP
CITY OF TRAVERSE CITY
W Harbor Hwy
Bingham Rd
Old Mission
Island View Rd
Peninsula Dr
Center Rd
Angell Rd
Bates Rd
Elk Lake Rd
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Cedar Run Rd
North Long Lake Rd
Hammond Rd E
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Hartman Rd
Supply Rd
N Mobbs Hwy
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Diamond Point Rd
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E River Rd
US 131
22
31
37
72

Development, Structure, and Process

The development of the TTCI 2050 MTP follows a structured, collaborative process spanning multiple years and involving input from regional stakeholders, technical experts, public agencies, and the general public. The MTP serves not only as a long-range vision for transportation investment but also as a strategic framework to guide decision-making and policy coordination throughout the Traverse City-Garfield Urbanized Area.

The process began with the establishment of a shared regional vision and a set of goals and objectives aligned with federally required planning factors. These foundational elements informed subsequent phases of work, including a comprehensive inventory of existing transportation infrastructure, analysis of regional demographic and land use trends, and scenario-based modeling of future travel demand.

A central analytical component of the plan involved identifying current and anticipated roadway capacity constraints using the Travel Demand Forecast Model (TDFM). Developed in partnership with the Michigan Department of Transportation (MDOT), the model was calibrated using observed traffic counts and regional socio-economic projections. TTCI and MDOT used the TDFM to evaluate both base-year and forecast-year conditions, identifying areas of congestion, growth impacts, and system performance deficiencies. The resulting outputs were reviewed with local stakeholders and technical committees, providing a data-driven foundation for prioritizing projects within both the fiscally constrained and illustrative investment lists.

Consistent with federal MPO requirements, the TTCI planning framework adheres to principles of fiscal constraint, performance-based evaluation, and public transparency. The MTP outlines a prioritized list of financially achievable investments grounded in regional consensus and anticipated revenue sources. Additional detail on near-term investments can be found in the current Transportation Improvement Program (TIP), available on TTCI's website.

The TTCI 2050 MTP is intended to be a living document. Although it establishes a planning horizon through the year 2050, the plan will be updated at least every five years, ensuring continued alignment with evolving conditions, emerging technologies, and shifting regional priorities.

Aligned with best practices in metropolitan planning, the TTCI MTP emphasizes coordination with local land use policies, state and regional transportation initiatives such as MDOT's Michigan Mobility 2050, and implementation partners across jurisdictions. This coordinated approach supports well-integrated transportation solutions that advance the economic, mobility, and infrastructure goals of Northwest Michigan.

CHAPTER 3: EXISTING TRANSPORTATION SYSTEM AND PLANS

Existing Roadway Network

The Traverse Transportation Coordinating Initiative (TTCI) area supports a robust multimodal transportation system that is vital to the region's economy and quality of life. This includes a network of highways, public transit services, non-motorized facilities, and air travel infrastructure. (Refer Map above for existing motorized transportation network)

Major Highways in the TTCI Area

The state trunkline network in the TTCI region provides crucial north-south and east-west mobility, serving as the primary infrastructure for passenger and freight travel. Key corridors such as US-31, M-22, M-37, and M-72 serve as the backbone of the road network, linking population centers, business districts, and rural areas within and beyond the region.

US-31: US-31 is one of northern Michigan's most heavily traveled corridors and serves as the primary north–south arterial through the TTCI region. It traverses a diverse range of communities, beginning in Petoskey and continuing south through Charlevoix and Antrim Counties, entering the Traverse City area and extending through Benzie and Manistee Counties. In the TTCI area, US-31 shifts direction frequently, weaving through Traverse City in both north–south and east–west alignments. It is a critical route for regional connectivity, economic activity, and tourism.

M-22: M-22 is a scenic highway that follows the Lake Michigan shoreline. Within the TTCI area, M-22 enters Leelanau County near Empire and travels north through Glen Arbor and Leland to Northport before turning south again through Omena and Suttons Bay. It terminates at US-31/M-37 in Traverse City. Known for its stunning views and proximity to recreational destinations, M-22 is not only a functional corridor but also a popular tourist route.

M-37: M-37 is the longest highway in Grand Traverse County and provides north–south access between the tip of Old Mission Peninsula and southern parts of the county. It begins at Mission Point Lighthouse and runs through Traverse City, continuing south through Buckley and Mesick. Beyond the region, M-37 connects to Baldwin, Grand Rapids, and Battle Creek, forming a major north–south spine in western Michigan.

M-72: M-72 provides key east–west connectivity across the region. It starts in the Village of Empire in Leelanau County and passes through Traverse City before heading southeast into Kalkaska County. It connects Williamsburg and the Village of Kalkaska before

terminating in Harrisville on the Lake Huron shore. The corridor links Lake Michigan to Lake Huron and supports both local and regional travel.

Cherry Capital Airport (TVC)

Located just southeast of downtown Traverse City, Cherry Capital Airport (TVC) is the region's primary airport and a critical element of the transportation network. TVC offers more than 20 non-stop flight destinations across the U.S., served by major carriers including Allegiant, American, Avelo, Delta, JetBlue, Sun Country, and United. Frequent flights connect northern Michigan to Chicago, Detroit, Minneapolis, Denver, Dallas, Atlanta, New York, Boston, Orlando, and more. The airport plays a central role in supporting tourism, commerce, and business travel throughout the Grand Traverse region.

Public Transit – Bay Area Transportation Authority (BATA)

The Bay Area Transportation Authority (BATA) provides a variety of fixed-route and on-demand transit services, connecting residents and visitors to jobs, education, health care, and recreation. BATA provides essential public transportation service across Grand Traverse and Leelanau Counties. It supports both local and regional mobility, especially for those without access to private vehicles. Services include:

- City Loop Routes: Fixed routes that serve destinations within Traverse City.
- Bayline Route: A free, high-frequency route serving the Grand Traverse Bay corridor, connecting downtown, hotels, college campuses, and retail centers.
- Village Loop Routes: Connects Traverse City to surrounding towns such as Suttons Bay, Interlochen, Kingsley, Acme, and Williamsburg.
- School Routes: Seasonal routes for students to local schools.
- BATA Link: On-demand, door-to-door service for areas beyond fixed routes.
- Park-n-Ride: Riders can park at designated lots and transfer to bus routes, including locations at Meijer (US-31), MDOT Park-n-Ride (Holiday Rd.), Acme Meijer (M-72), and new park-n-ride lots off LaFranier Road.

BATA also supports active transportation with bike racks on all buses and a Bike-n-Ride service on the Leelanau Trail. A dedicated early morning airport shuttle provides service to TVC from across Traverse City with advance booking. BATA services are ADA-compliant and tailored to meet the needs of all riders.

Figure 3.1 – Existing Motorized Transportation MPO Area

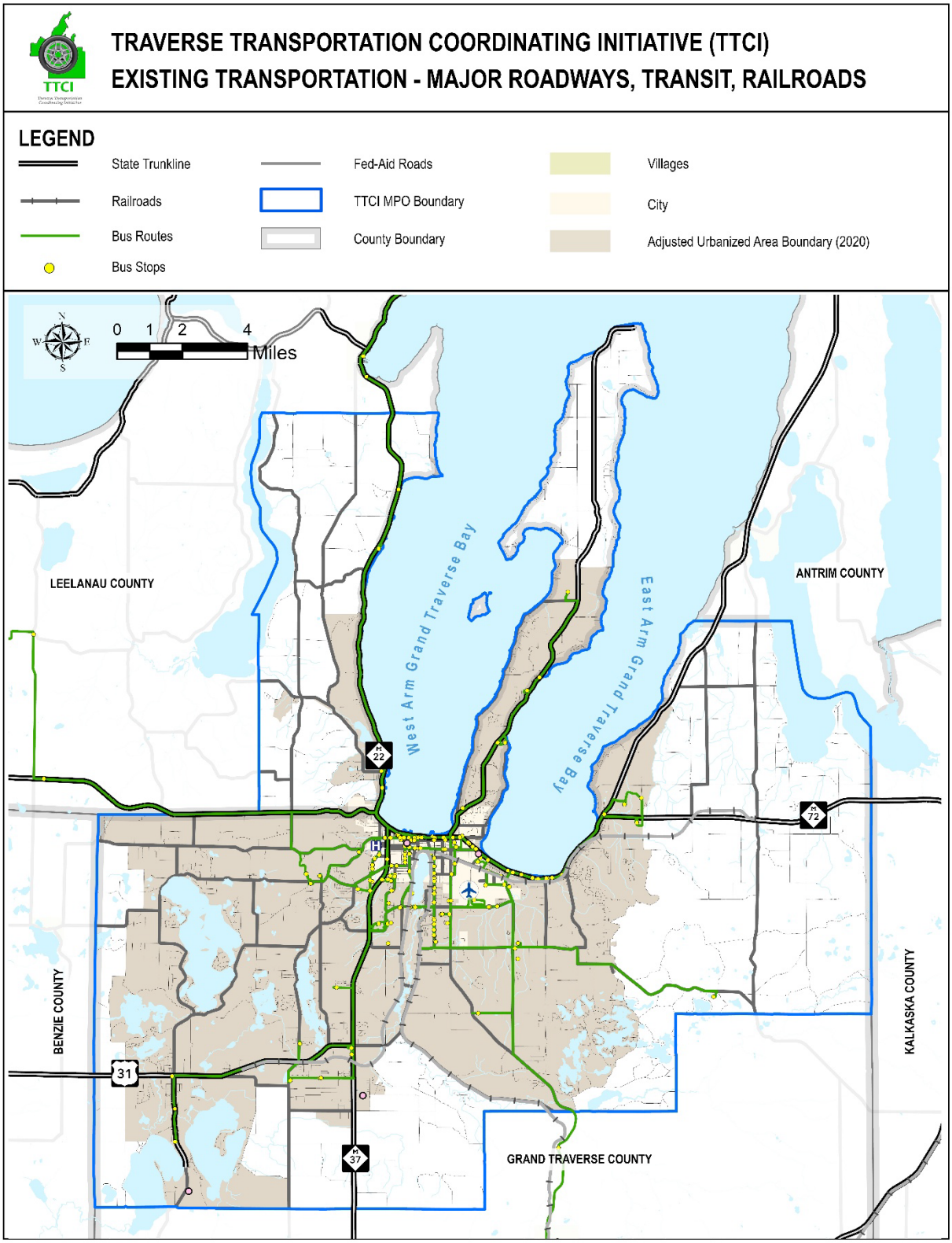
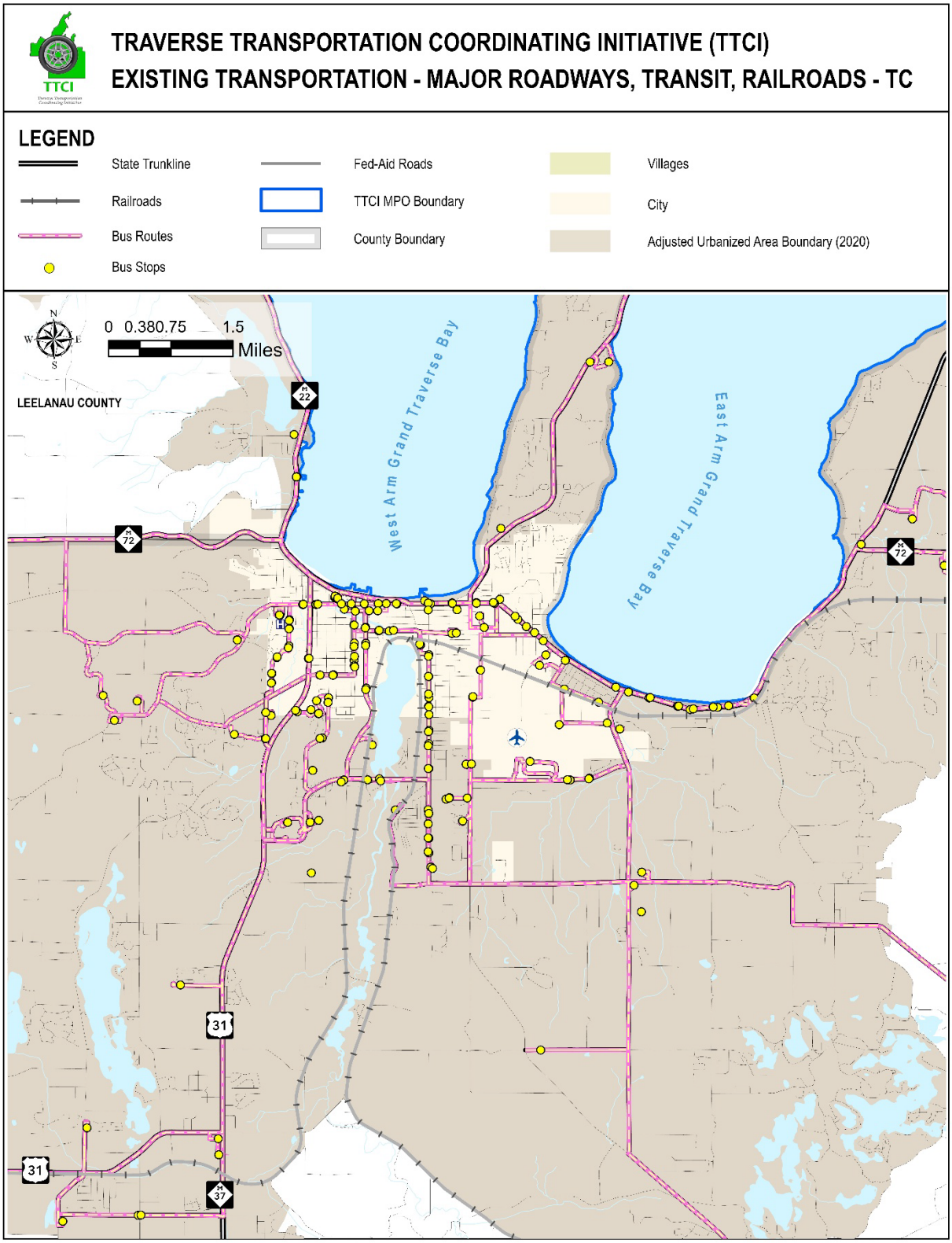


Figure 3.2 – Existing Motorized Transportation Traverse City-Garfield Urbanized Area



Existing Non-Motorized Network – Trails and Bicycle Routes

The TTCI region supports active transportation through a growing non-motorized network of bike lanes, sidewalks, and trails, including segments of U.S. Bicycle Route 35. The broader network of shared-use paths, sidewalks, and trails—many developed and maintained by TART Trails and regional partners—connects neighborhoods, schools, commercial areas, and recreation destinations, enhancing safety and accessibility for cyclists and pedestrians alike. (Refer Map below for existing TART network along with other non-motorised local and regional trail connections)

U.S. Bicycle Route 35 (USBR 35) is a nationally designated route that stretches over 500 miles from Indiana to Sault Ste. Marie, following Michigan's west coast and the eastern Upper Peninsula. Within the TTCI area, USBR 35 follows a scenic route that weaves through Grand Traverse and Antrim Counties, including segments along the TART Trail and East Bay corridor. The route enables long-distance cycling connections between Traverse City and Petoskey to the north, and Cadillac and Ludington to the south. USBR 35's alignment overlaps with several existing trails and roads, providing cyclists with a mixture of separated paths and on-road segments. While portions are signed, riders are advised to use maps for complete navigation.

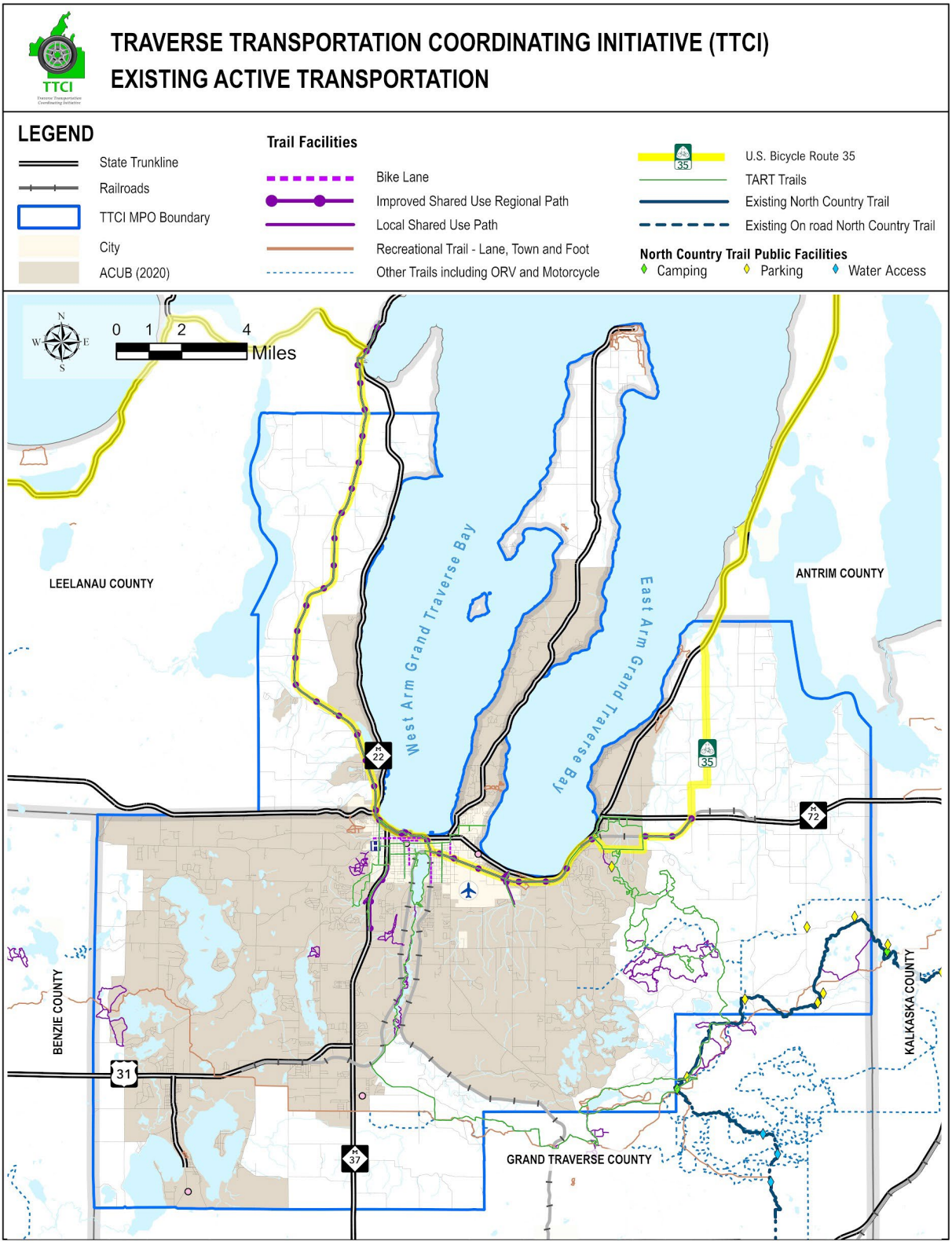
The region's broader non-motorized network includes a mix of improved shared-use paths, local loop trails, and long-distance hiking routes:

- **TART Trails Network**: The Traverse Area Recreation and Transportation (TART) system is the foundation of the region's active transportation infrastructure. Currently, the TART Trails network encompasses multi-use trails spanning across Grand Traverse and Leelanau counties along with a designated cross-town bike route that offers diverse outdoor and active transportation opportunities. Active Projects include the Buffalo Ridge Trail Project, Deepwater Connector Trail, Leelanau Trail updates, Nakwema Trail, TART Bayfront and Extension Project, Three Mile Trail Project, Traverse Ridge Trail, and VASA Trail Improvements.
- **North Country National Scenic Trail (NCT):** The NCT is a national long-distance hiking trail that crosses the southern portion of Grand Traverse County, extending through Blair Township and into Kalkaska County. Within the TTCI boundary, the trail primarily serves recreational hikers and intersects with natural areas and public land.
- Additional facilities include marked bike lanes along segments of Garfield Road and 3 Mile Road, as well as local shared-use paths that connect subdivisions, schools,

and retail centers. Dotted throughout the region are recreational trails open to walking, biking, and other uses, along with ORV routes in more rural areas.

Many trail enhancements within the TTCI area are still in the conceptual or planning stages. These proposed projects are outlined in the North Region Active Transportation Plan, developed with extensive stakeholder and community engagement which informed many planned as well as desired connections. At the current stage, many of these projects are at the feasibility or concept stage. Ongoing planning efforts will evaluate alignment options, land ownership, environmental constraints, and engineering requirements. Public engagement will remain a key driver in prioritizing projects and selecting preferred routes.

Figure 3.3 – Existing Active Transportation



System Condition and Asset management

Asset Management is a strategic and systematic process of maintaining, upgrading, and operating physical assets cost-effectively. It helps transportation agencies make informed investment decisions to maximize the condition and longevity of infrastructure with limited resources.

The Michigan Department of Transportation (MDOT) applies Asset Management principles to evaluate the condition of roadways and strategically direct funding and maintenance efforts. This proactive approach ensures that transportation assets are preserved and improved efficiently over time.

At the regional level, Networks Northwest Community Development staff support MDOT's Asset Management efforts by coordinating several key components of the program.

The primary tool used for assessing pavement condition is the Pavement Surface Evaluation and Rating (PASER) system, which is applied to all Federal-Aid eligible roads. PASER ratings range from 1 (very poor) to 10 (excellent), based on visual inspection of pavement surface conditions. These ratings are collected annually through a collaborative effort involving staff from the local County Road Commission, the regional MDOT office, and Networks Northwest.

2024 PASER Ratings within the TTCI MPO Boundary

The table below summarizes the PASER condition ratings for the 294.52 total Federal-Aid eligible miles within the Traverse Transportation Coordinating Initiative (TTCI) MPO boundary for the year 2024:

Table 3.1 – 2024 PASER Data

PASER Rating DATA 2024 within TTCI MPO Boundary (Miles)										
	Poor				Fair			Good		
Total Fed-Aid Miles within MPO	PASER 1	PASER 2	PASER 3	PASER 4	PASER 5	PASER 6	PASER 7	PASER 8	PASER 9	PASER 10
Percentage of Road Miles	0.00%	4.33%	4.76%	9.07%	6.81%	13.09%	14.98%	26.72%	18.07%	2.17%
294.522	0	12.759	14.013	26.721	20.065	38.544	44.119	78.69	53.22	6.391

A combined 18.16% of the road network is in poor condition (PASER 1–4) and may require structural improvements or full reconstruction. Approximately 34.88% of the network is rated fair (PASER 5–7), indicating a need for routine maintenance or minor rehabilitation. The remaining 46.96% is rated good to excellent (PASER 8–10), reflecting a well-maintained system with a strong foundation for ongoing preservation and asset management strategies. The maps attached below provide a spatial overview of PASER ratings within the TTCI MPO area along with Transportation Improvement Program (TIP) projects planned or programmed within the area.

Figure 3.4 – Existing Active Transportation MPO Area

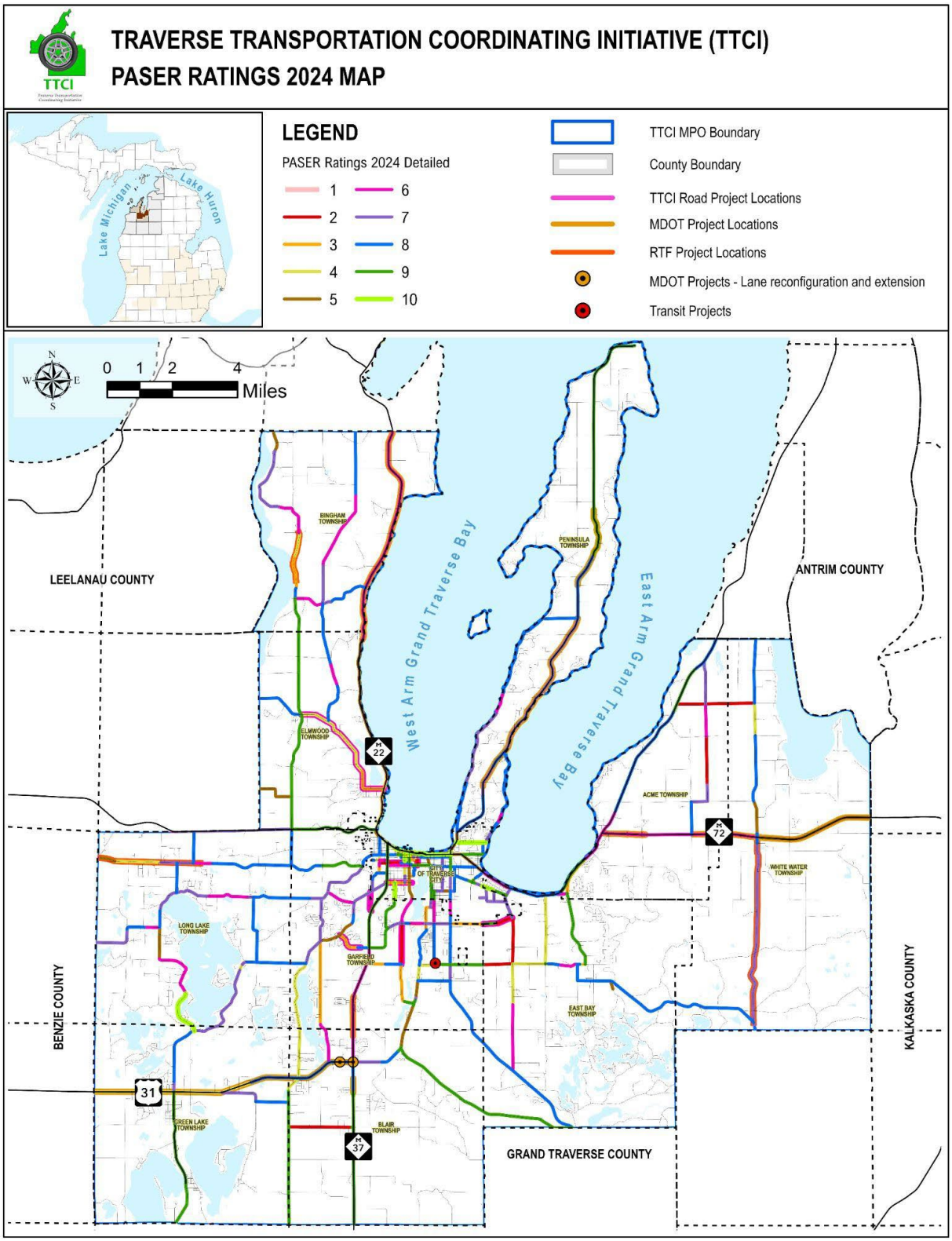
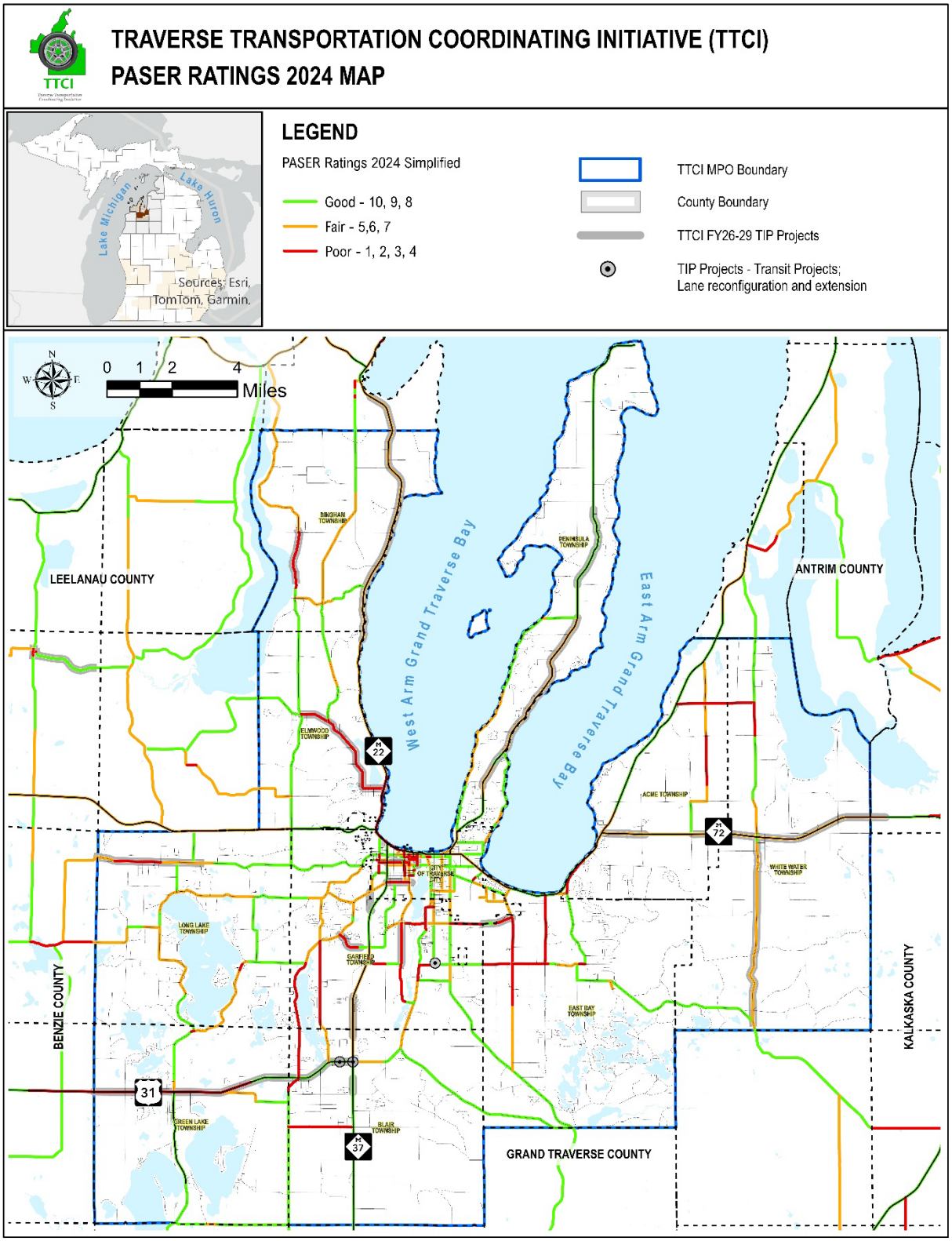


Figure 3.5 – Existing Active Transportation Traverse City-Garfield Urbanized Area



Existing Transportation Plans

Grand Traverse County

East-West Corridor Transportation Study - Hammond Road

Based on recommendations from the East-West Corridor Transportation Study, East Bay Township and the Grand Traverse Road Commission worked to develop a new roundabout at 4 Mile and Hammond Road. This project also includes community-focused elements such as safe pedestrian crossings and pedestrian scale street lighting. Moving forward East Bay Township will continue to engage with Grand Traverse Road Commission and Garfield Charter Township to develop corridor improvements that support the Township's future land use vision as well as multimodal transportation and placemaking.

Michigan Department of Transportation - Rebuilding US-31

The Michigan Department of Transportation plans to rebuild 7.8 miles of US-31 from Sullivan Road in Green Lake Township to Reynolds Road in Inland Township, Benzie County, in 2025 and 2026. The project will include rebuilding and widening the roadway as well as safety improvements such as the addition of center left turn lanes, widened paved shoulders, and rumble strips. Additionally, the intersection of South Long Lake Road and J. Maddy Parkway in Green Lake Township will be rebuilt as a roundabout.

North Region Active Transportation Plan

The North Region Active Transportation Plan discusses numerous projects that are proposed or conceptualized to take place in Grand Traverse County. These projects are set to link communities on a regional scale as well as improve and expand existing local trails such as:

- Buffalo Ridge
- Blair Township Trail
- Three Mile Trail
- TART Bayfront Improvement and Extension

Safe Routes to School

East Bay Township has secured a conditional commitment of $1.5 million from the Michigan Department of Transportation and $800,000 from the Michigan Economic Development Corporation (MEDC) for infrastructure improvements through the Safe Routes to School initiative. The project focuses on improving pedestrian and bicycle access to four local schools. In addition to improving safety and access for students, this

initiative supports broader regional trail connectivity goals in coordination with TART Trails, the Grand Traverse Regional Land Conservancy, and Notre Youth Cycling.

TART Trails

Additional projects that TART Trails are currently working on that were not outlined in the North Region Active Transportation Plan include the Nakwema Trailway, which was developed between TART Trails and the Top of Michigan Trails Council networks to connect multiple communities and more than 25 protected natural areas over more than 415 miles throughout three counties, as well as the TART Transformation 3.0 of Five Mile, which will improve the trails safety and accessibility through redesign and reconstruction.

Leelanau County

North Region Active Transportation Plan

Currently the Sleeping Bear Heritage Trail and TART Leelanau Trail are the primary trails within Leelanau County. There is also the Shore to Shore Trail, which runs into Benzie County. Future expansions in Leelanau County aim to expand the Sleeping Bear Heritage Trail, improve existing regional connections, and extend the Leelanau Trail. Other projects outlined in the North Region Active Transportation Plan include widening shoulders, completing extensions, and linking trails with Benzie County.

Freight Movement in Northwest Michigan

Freight transportation is integral to Northwest Michigan's economy, facilitating the movement of goods across various modes, including trucking, rail, marine, and air. The 2020 Northwest Michigan Freight Plan provides a comprehensive overview of the region's freight infrastructure and operations. All sources are from MDOT 2018 data.

Table 3.2 – Value and Tonnage of Commodities by Value and Mode

Value of Commodities by Mode		
	Value	Percent of Total
Air	N/A	-
Truck	$ 5,678,278,048.26	82%
Rail	$ 154,529,049.81	2%
Port	$ 1,117,846,892.97	16%
TOTAL	**$ 6,950,653,991.04**	**100%**

Tonnage of Commodities by Mode		
	Tonnage	Percent of Total
Air	1,563.21	0.02%
Truck	4,842,970.21	68%
Rail	436,240.00	6%
Port	1,822,069.00	26%
TOTAL	**7,102,842.42**	**100%**

Trucking

Trucking dominates freight movement in the region, accounting for approximately 82% of the total freight value and nearly 70% of the tonnage. The region encompasses over 2,800 miles of federal-aid highways, which are crucial for freight distribution. Key commodities transported by truck include transportation equipment, food products, and machinery. Notably, US-31, US-131, and M-72 are primary corridors facilitating truck freight.

Table 3.3 – Trucking Commodities by Tonnage and Value

Top Trucking Commodities by Tons		Top Trucking Commodities by Value	
Commodity	**Tons**	**Commodity**	**Value**
Farm Products	937,002	Transportation Equipment	$ 779,900,013
Nonmetallic Ores and Minerals	753,877	Food Products	$ 732,257,634
Food Products	551,368	Machinery	$ 638,121,797
Logs, Lumber, and Wood Products	484,155	Secondary Traffic	$ 490,601,183
Clay, Cement, Glass or Stone Products	433,389	Rubber and Plastics	$ 450,061,246
Secondary Traffic	393,838	Electrical Equipment	$ 413,248,974
Petroleum or Coal Products	334,740	Farm Products	$ 363,391,615
Waste or Scrap Material	228,668	Fabricated Metal Products	$ 341,813,524
Primary Metal Products	160,829	Primary Metal Products	$ 341,004,901
Rubber and Plastics	99,426	Logs, Lumber, and Wood Products	$ 222,010,041

Rail

Rail freight contributes significantly to the region's freight profile, moving around 436,000 tons of goods valued at over $150 million. Three rail companies operate in Northwest Michigan: Great Lakes Central Railroad, Huron and Eastern Railway, and Marquette Rail. These rail lines support the transportation of commodities such as nonmetallic ores, logs, and paper products. Transload facilities in Cadillac and Yuma enhance the flexibility of rail freight services.

Table 3.4 – Rail Commodities by Tonnage and Value

Rail Commodities by Ton		Rail Commodities by Value	
Commodity	**Tons**	**Commodity**	**Value**
Nonmetallic Ores and Minerals	143,200	Nonmetallic Ores and Minerals	$ 86,635,866
Logs, Lumber, and Wood Products	127,680	Logs, Lumber, and Wood Products	$ 47,422,879
Paper and Pulp Products	106,760	Paper and Pulp Products	$ 9,479,709
Chemical Products	35,960	Chemical Products	$ 6,120,403
Petroleum or Coal Products	13,840	Petroleum or Coal Products	$ 2,544,435
Clay, Cement, Glass or Stone Products	6,040	Clay, Cement, Glass or Stone Products	$ 1,428,758
Waste or Scrap Material	2,760	Waste or Scrap Material	$ 897,000
Total	**436,240**	**Total**	**$ 154,529,050**

Marine

The region's proximity to Lake Michigan enables marine freight operations through ports in Manistee, Charlevoix, and St. James (Beaver Island). In 2018, these ports handled nearly 2 million tons of cargo, including cement, limestone, and petroleum products, with a total value exceeding $1.1 billion. Charlevoix was responsible for the majority of tonnage, while Manistee accounted for the largest share of cargo value.

Table 3.5 – Port Commodities by Tonnage and Value

Cargo Port Commodities by Ton	
Commodity	**Tons**
Petroleum	19,150
Cement	1,400,000
Limestone, sand, gravel and Other	40,862
Slag	31,333
Coal	258,648
Uknkown Products	72,076
Total	**1,822,069**

Cargo Port Commodities by Value	
Commodity	**Value**
Petroleum	$ 2,467,703
Cement	$ 160,369,160
Limestone, sand, gravel and Other	$ 440,901
Slag	$ 21,528,607
Coal	$ 8,034,965
Uknkown Products	$ 925,005,558
Total	**$ 1,117,846,893**

Air

Air freight, though a smaller component, plays a role in transporting time-sensitive and high-value goods. Cherry Capital Airport in Traverse City and Pellston Regional Airport are the primary facilities handling air cargo. In 2018, these airports managed a combined total of approximately 1,563 tons of freight.

Table 3.6 – Air Commodities by Tonnage Moved

Air Cargo Tons Moved		
	Tons Deplaned	**Tons Enplaned**
Pellston	327.89	133.38
Traverse City	783.59	318.35
Total	**1,111**	**452**

Intermodal Connectivity

Intermodal connectors are vital for seamless freight movement between different transportation modes. In Northwest Michigan, the primary intermodal connector is located at Cherry Capital Airport, linking the airport to M-37/US-31 via Airport Access Road.

Table 3.7 – Intermodal Connectors

Intermodal Connectors			
Facility	**Type**	**Connector Description**	**Connector**
Traverse City, Cherry Capital Airport	Airport	Airport Access Road (entrance to US-31/M-	0.5

Challenges and Opportunities

The region faces several challenges in freight transportation, including geographical constraints due to large lakes, limited access to interstate highways, and infrastructure limitations on certain routes. Survey respondents identified regulation changes, energy costs, and evolving business dynamics as potential risks to freight movement. However, opportunities exist to enhance freight efficiency through infrastructure improvements, such as road and bridge upgrades, and by addressing truck parking shortages.

Understanding and addressing these factors are crucial for developing a resilient and efficient freight transportation system that supports the economic vitality of Northwest Michigan.

CHAPTER 4: DEMOGRAPHIC ANALYSIS AND FUTURE TRANSPORTATION NEEDS

Socio-Economic Conditions

For MDOT to develop the Travel Demand Forecast Model (TDFM or model) for the Traverse Transportation Coordination Initiative (TTCI) Metropolitan Planning Organization (MPO) roadway network, which estimates traffic volumes and travel behavior in the area, an analysis of the 2022 land use and socio-economic conditions, as well as a 2050 projection for these characteristics, was used. The 2050 socio-economic estimates were presented in the form of projections that describe the extent and location of growth likely to occur within TTCI Metropolitan Planning Area. The projections also help to predict potential travel problems which are important when considering priorities for transportation facility improvements.

Data on population, number of occupied housing units, and retail/non-retail employment for the base year 2022 and the horizon year 2050 have been distributed to the 208 Traffic Analysis Zones (TAZs) that comprise the model area. TAZs are geographic areas (polygons) that divide a planning region into similar areas of land use and travel activity and act as a simplification of origin and destination points within the community. TAZs are different in each community and can change in size over time. TAZs are established to obtain a meaningful representation of traffic behavior. A map with the TAZ's for the TTCI area is presented on the following page.

The base year SE data was obtained based on information from the 2020 Census, 2022 American Community Survey (ACS) 5-Year Estimate, and from the MDOT employment list (purchased from Data Axle) which contains the number of employees, the sector, and the geolocation of businesses residing within the TTCI MPO.

The SE data forecast for the model was obtained considering the Regional Economic Models, Incorporated, or REMI model as well as MDOT projections. Growth assumptions were also based on the TAZ's potential for increased development, and recent developments in the area that would encourage additional growth.

Socio-economic information for the base year and future years, including future year growth factors by TAZ, was provided to each governmental jurisdiction through memorandums, spreadsheets, and area-specific maps of the socio-economic data by analysis year for comment and review. After the review, the socio-economic data was adjusted where needed, sent for the approval of the TTCI Technical and Policy committees, and included in the model to develop base year and future year travel patterns.

Figure 4.1: Traffic Analysis Zones – TTCI Area Map

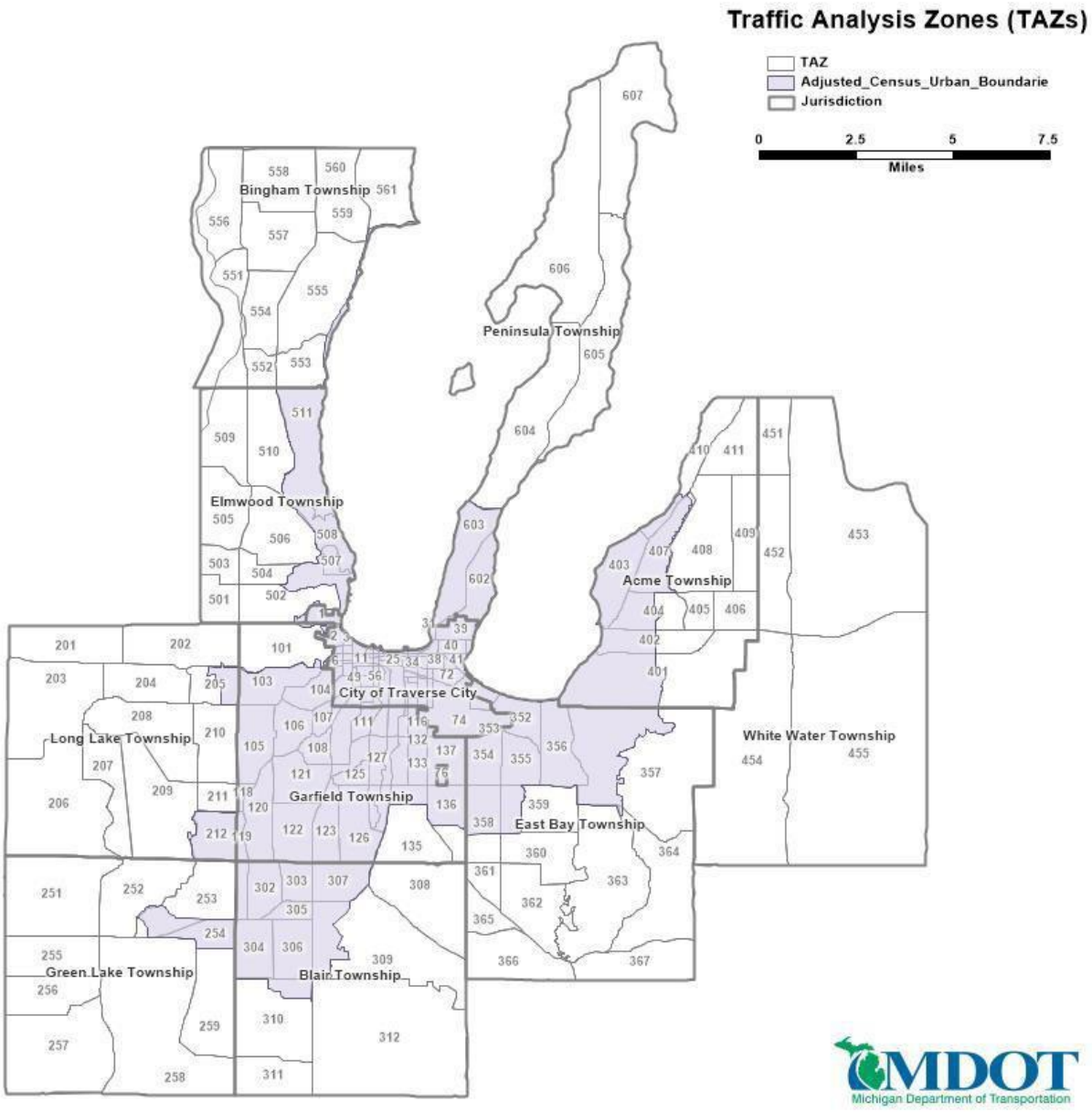
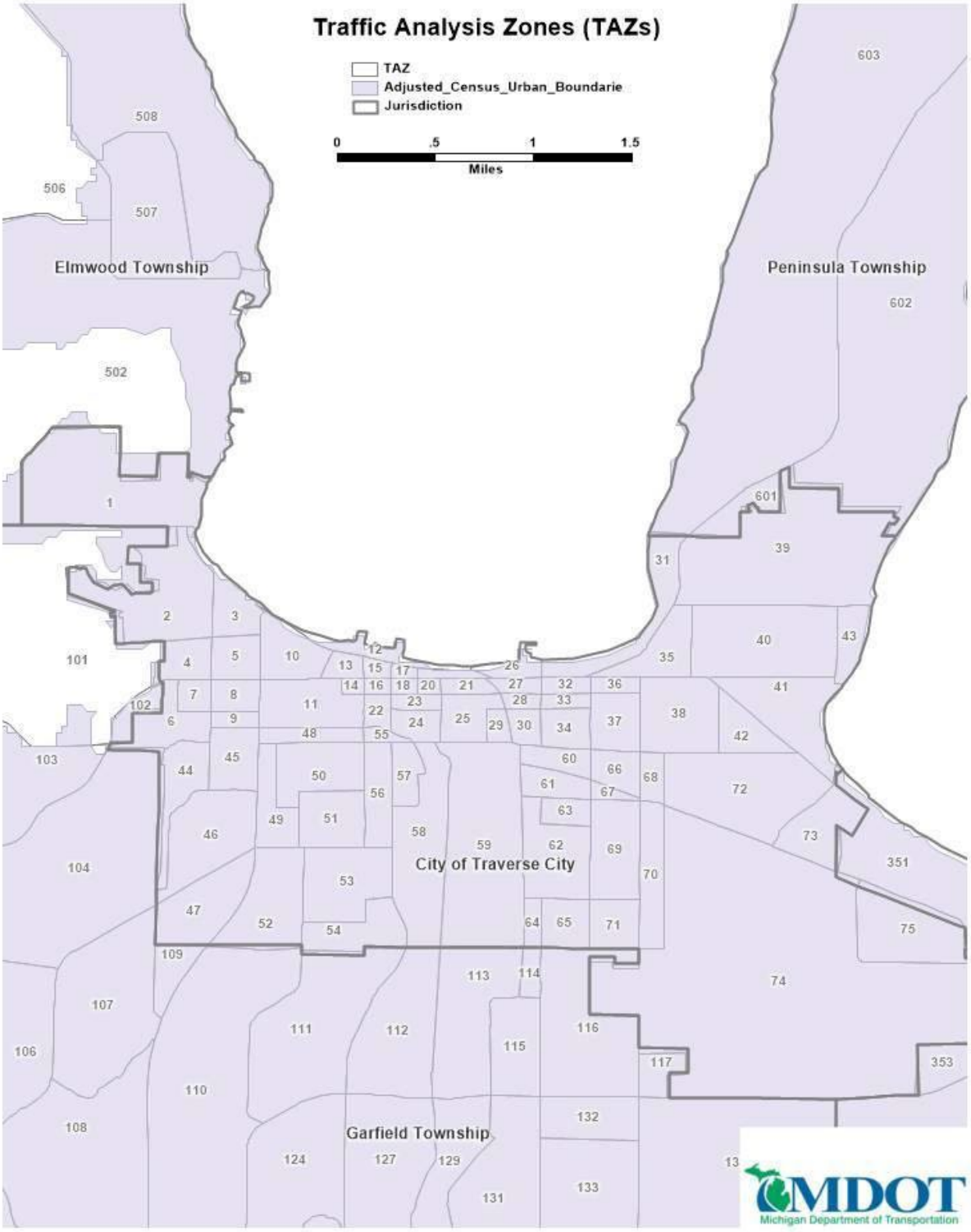


Figure 4.2 – Traffic Analysis Zones – City of TTCI & Environs Map



Population

The base year population for the plan was based on Census 2020 and 2022 ACS Estimates. The population projection for 2050 considered the REMI forecast data, MDOT SE data projections, and inputs from the local community. The population projections were developed for all jurisdictions within the Area and then broken down to the TAZ level.

Table 4.1 - Census 2020 Population and 2022 & 2050 Population Estimates by Local Unit of Government

Local Government	Census	2022	2050	% Change (22 - 50)
Acme Township	4456	4506	4531	0.6%
Bingham Township	2554	2617	2816	7.6%
Blair Township	8994	9094	10576	16.3%
East Bay Township	11562	11688	12600	7.8%
Elmwood Township	4915	5038	5629	11.7%
Garfield Township	19534	19744	21781	10.3%
Green Lake Township	6678	6748	7707	14.2%
Long Lake Township	9956	10066	11213	11.4%
Peninsula Township	6073	6139	6189	0.8%
Traverse City	15662	15823	15567	-1.6%
Whitewater Township	2688	2717	2852	5.0%
TTCI Area	**93072**	**94180**	**101461**	**7.73%**

The TTCI area approved data estimated for the 2022 base year indicated a population of 94,180, which is 1.19% higher than the Census 2020 total population of 93,072. Based on the estimates provided by MDOT the TTCI area population is projected to continue to grow and reach a total of 101,461 which would represent an increase of 9.01% from the Census 2020 data and of 7.73% from the 2022 approved data.

Occupied Housing Units

Occupied housing unit numbers for the base year are based on the Census 2020 and 2022 ACS estimates while the forecast numbers are based on REMI and MDOT projections as well as local agencies' comments and knowledge of recent developments in the area. Because of the high correlation between occupied housing units and population, the occupied housing unit projections are also used to estimate where increases or decreases in the population may potentially occur inside of the model area.

Table 4.2 - Census 2020 Households and 2022 & 2050 Households Estimates by Local Unit of Government

Local Government	Census 2020	2022	2050	% Change (18 - 50)
Acme Township	1886	1927	1969	2.18%
Bingham Township	1075	1111	1195	7.56%
Blair Township	3270	3342	4226	26.45%
East Bay Township	4854	4962	5665	14.17%
Elmwood Township	2086	2159	2419	12.04%
Garfield Township	8732	8930	9775	9.46%
Green Lake	2549	2606	2990	14.74%
Long Lake Township	3933	4020	4464	11.04%
Peninsula Township	2605	2663	2682	0.71%
Traverse City	7384	7548	7424	-1.64%
Whitewater	1068	1092	1146	4.95%
TTCI Area	**39442**	**40360**	**43955**	**8.91%**

The U.S. average household size has been steadily declining since 1970 when the number of persons per household was 3.14, falling to 2.76 in 1980, 2.63 in 1990, 2.59 in 2000, and 2.53 in 2020. The rate of decline is expected to continue over the next 30 years but at a slower rate. In the TTCI area, the average household size reflected the national decline, falling from 2.49 in 2000 to 2.39 in 2010 and continuing to decline to 2.36 persons per household in 2020 which is 1% higher than the 2.33 estimated by the approved 2022 population and occupied housing unit numbers. The average household size in TTCI is projected to align with the national trends and see a slight decrease to approximately 2.31 persons per household by the year 2050. Michigan is expected to see an increase in employment over the next 30 years which will encourage more people to remain or move to Michigan. TTCI area is expected to see an increase in population as a result of the positive economic changes which also create a demand for housing.

The 2022 model base year data estimates that there were 40,360 occupied housing units within the study area, which is above the Census 2020 number of 39,442 occupied housing units. By the year 2050, the projections estimate a total of 43,955 occupied housing units in TTCI area, which is an increase of 11.44% when compared to the Census 2020 numbers. The projected growth in occupied housing units was allocated to the TAZs by examining local land use plans and discussions with city, and township officials regarding current residential development trends. The trends indicate moderate growth in the urban and outlying townships.

Employment

Based on the MDOT employment list, 2022 employment for TTCI area was approximately 71,813, with a breakdown of 60,878 in non-retail (manufacturing, service, government-related, and others) and 10,935 in retail jobs.

Table 4.3 - 2018 & 2050 Employment Estimates by Local Unit of Government

Local Government	Retail 2022	Retail 2050	% Change (22-50)	Non-Retail 2022	Non-Retail 2050	% Change (22-50)	Total 2022	Total 2050	% Change (22-50)
Acme Township	633	645	1.90%	3275	3602	9.98%	3908	4247	8.67%
Bingham Township	761	765	0.53%	3081	3714	20.55%	3842	4479	16.58%
Blair Township	118	115	-2.54%	531	577	8.66%	649	692	6.63%
East Bay Township	438	452	3.20%	3824	4684	22.49%	4262	5136	20.51%
Elmwood Township	152	147	-3.29%	1955	2137	9.31%	2107	2284	8.40%
Garfield Township	5097	5104	0.14%	15661	18494	18.09%	2075	2359	13.68%
Green Lake Township	226	234	3.54%	1987	2455	23.55%	2213	2689	21.51%
Long Lake Township	155	164	5.81%	1723	1985	15.21%	1878	2149	14.43%
Peninsula Township	209	214	2.39%	1616	1760	8.91%	1825	1974	8.16%
Traverse City	3065	3118	1.73%	26021	30026	15.39%	2908	3314	13.95%
Whitewater Township	81	96	18.52%	1204	1320	9.63%	1285	1416	10.19%
TTCI Area	**10,935**	**11,054**	**1.09%**	**60878**	**70,754**	**16.22%**	**7181**	**8180**	**13.92%**

In the year 2050, the total labor force for the study area is projected to increase by 13.92% to a total of 81,808 workers with 70,754 workers in non-retail and 11,054 in retail jobs. The study area employment by type was applied to the 208 TAZs based on assumptions of growth, stabilization, and current trends for each employment sector.

Employment forecasting is the mixing of objective and subjective data. Judgment is required in selecting the type of forecast to be implemented, determining the procedures for making the forecast, and developing a process for reviewing population growth and employment factors. The influx or loss of a new employer or industry can have a considerable impact on an area's development.

Although socio-economic projections can be a helpful tool in planning for future growth and development, projections can be modified as time progresses to reflect actual development impacts. The projections used in the TTCI 2050 LRTP, summarized in Table 7-4, will be re-evaluated periodically to address changes in the population, occupied housing units, and employment that may occur.

Table 4.4 - 2022 & 2050 TTCI Area Totals

Year	Total Population	Occupied Households	Employment Retail	Employment Non-Retail	Employment Total
2022	94180	40360	10,935	60878	71813
2050	101461	43955	11,054	70,754	81808

Travel Demand Forecast Model

The Travel Demand Forecast Model (TDFM or "model") for this Metropolitan Transportation Plan was developed in cooperation between the Traverse Transportation Coordination Initiative (TTCI) and the Urban Travel Analysis unit within the MDOT. MDOT had the lead role in the development, calibration, validation, and application of the model. The TTCI MPO acted as the liaison among members of the public, local agencies, the TTCI Technical Committee, and the TTCI Policy Committee. TTCI and MDOT collaborated on the development of the model schedule, as well as on the dissemination and distribution of model input and output data for review, comment, and subsequent approval.

Travel Demand Forecast Models are used to identify and evaluate the capacity demands of a region's federal-aid road network. The TDFM results are useful in aiding the decision-making process as identification of roadway capacity deficiencies and analysis of the system as a whole, for the base year through and up to the horizon year of the plan, as well as to determine where future congestion is projected to occur are vital in the development of the plan.

The identification and analysis of congested corridors and links are intended to serve as the basis for forming decisions regarding system improvement, expansion, or other roadway capacity changes. However, in essence, the roadway congestion analysis, and the plan (prepared by the MPO with input from the MDOT) are "snapshots in time", reflecting the conditions and trends at the time of development. As economic conditions, transportation system trends, financial outlooks, and land use environments change, it is important that the plan be updated to reflect and account for these changes. The plan, following federal laws and regulations, is reevaluated and/or updated every five years to reassess the travel demands on the federal-aid transportation system. Along with the plan update, the TDFM is also redeveloped or updated to include the changes associated with the new plan. Socio-economic trends and forecasts are also re-examined, which alters travel behavior and demand on the federal-aid road network and may potentially change the strategies of the TTCI MPO.

This chapter describes the base, interim, and horizon years Travel Demand Forecast Model development process for the TTCI MTP 2050.

Model Process Description

Travel demand forecast models are computer simulations of current and future traffic conditions. The TTCI TDFM is a regional-level transportation planning model, developed by MDOT using the TransCAD Transportation Planning Software Package, provided by Caliper, and focusing on long-term transportation planning concerns and regional travel characteristics. Model results provide road link traffic volumes (known in the modeling tool as “traffic flow”) for AM Peak (7:00am – 9:00am), Mid-Day (9:00am – 3:00pm), PM Peak (3:00pm - 6:00pm), and Off Peak (6:00pm – 7:00am) periods as well as for the 24-hour time period. The traffic flows are then compared to the capacity allowance of the road links providing a volume-over-capacity ratio for each period which is used to calculate the level of relative congestion on the road links.

The urban TDFM development process for TTCI consists of the inter-related steps below. The traditional “Four-Step” trip-end based model structure consists of steps 2 through 5. The output from each step is used as the input in the following step.

- **Step 1. Data Development, Collection, and Organization**

  Regional socio-economic data (SE-data) and transportation system characteristics are collected. This step also includes the development of the model road network and the Travel Analysis Zone (TAZ or “zone”) structure.

- **Step 2. Trip Generation**

  Determines who is making trips, how many trips are being made, and why (for what purpose) are trips being made. It does this by calculating the number of trips produced in or attracted to a TAZ by trip purpose based on land use, household demographics, employment, and other SE-data characteristics.

- **Step 3. Trip Distribution**

  Determines where people are making trips by calculating how much travel occurs between TAZs, based on the "attractiveness" of the zones.

- **Step 4. Mode Choice and Time of Day**

  Determines how people are making trips (by what mode), and when they are making the trips (what time of day), by allocating trips across the model network into modes of travel such as auto, non-motorized (walk and bike), and transit. After the split into modes, the auto trips are distributed into one of the time periods.

- **Step 5. Traffic Assignment**

  Determines what specific routes people are taking for their trips based on the shortest travel time, by assigning auto trips between zones to a route/path in the transportation system.

- **Step 6. Model Calibration/Validation**

  Involves adjusting the model and verifying that the volumes simulated in traffic assignment replicate (as closely as possible) actual, observed traffic counts within a set of established validation criteria.

- **Step 7. System Analysis and Model Applications**

  Involves the use of the calibrated and validated model in the development of the metropolitan transportation plan, Air Quality conformity analysis, project identification and prioritization, and/or impact analysis.

The following sections present detailed information on how these steps were performed in the TTCI Travel Demand Model development.

Data Development, Collection, and Organization

There are two main modeling components that are required to be constructed prior to model development: model road network and traffic analysis zone.

The model road network includes various roadway attributes and generally contains links of the "collector" functional classification and higher. “Local” roads are included in the model network only to maintain continuity, for connectivity purposes, or if these links are regionally significant.

The traffic analysis zones (TAZ or “zones”) are geographic areas determined based on the similarity of land use and human activity, compatibility with jurisdictional boundaries, presence of physical boundaries, and the links that make up the road network. The TAZ layer contains SE and employment information for each one of the model zones.

The model road network and the TAZs are connected layers. Each TAZ is represented on the model road network as a node called centroid. The TAZ centroid is located at the center point of activity within the TAZ area. All trips that use the model road network start or end at a TAZ centroid. Trips “produced” in or “attracted” to each centroid are connected to the main road system via special model road links called “centroid connectors.” These “hypothetical” connections carry the trips produced in and/or attracted to the respective

TAZ. Special development criteria are used to ensure centroid connectors meet the main road network system at realistic locations.

Both TAZ and network files contain information required to run the model and were developed for the base year 2022, then for the interim years 2025, 2030, 2040, and the horizon year 2050. After the development, TAZ and network layers were provided to the TTCI MPO staff and TTCI Technical Advisory Committee members for review and comment.

Model Road Network

The model road network consists primarily of the federal-aid road system within TTCI MPO and was obtained from the Michigan Roads and Highways network. Aerial images, site visits, and old TTCI model networks were also used in the process when needed.

The network layer contains fields required for the model runs as well as informational fields such as Road Names, Federal-Aid Status, Facility Type Classification, Area Type, Number of Thru-Lanes, Road Direction, Posted Speed Limit, Lane Width, parking availability, Prohibited Turns, Center-Left Turn Lanes, link capacity, free-flow speed, traffic counts, among others.

The TTCI 2022 calibrated/validated network includes approximately 722 miles of roadway network (excluding centroid connectors) with the classifications in Table 8-1:

Table 4.5 – TDFM Network Mile Summary

	CBD	Urban	Suburban	Fringe	Rural	**Total**
Principal Arterial CLTL	0	0	11	45	22	**78**
Principal Arterial	1	8	5	17	20	**51**
One-way Minor Arterial	1	0	5	0	0	**6**
Minor Arterial with CLTL	0	0	15	19	0	**34**
Minor Arterial	1	2	17	110	54	**184**
One-way Collector	1	1	0	0	0	**2**
Collector with CLTL	0	0	6	3	0	**9**
Collector	1	7	18	159	161	**347**
Local Road with CLTL	0	0	0	1	0	**1**
Local Road	0	0	1	9	0	**10**
Total	**5**	**18**	**78**	**363**	**257**	**722**

The base network plus completed projects between 2022 and 2025 as well as the committed projects on the Transportation Improvement Plan (TIP) with capacity impacts were accounted for the development of interim and future-year model road networks.

Traffic Analysis Zones (TAZs)

Travel Analysis Zones (TAZ or "zone") are geographic divisions of the model area and provide the structure for housing the Socio-Economic data approved by the MPO. The SE data associated with each TAZ represents the activity within TAZ and is used to generate the trips that are modeled across the road network.

The 2022 TAZ structure development started by using the TAZ structure from the most recent TDFM, developed in 2018. Adjustments to the structure were made based on previous recommendations, changes in socio-economic conditions, and to account for changes in traffic loading to the model road network. The 2050 MTP TTCI TDFM has a total of 227 TAZs (208 within TTCI model area and 19 of which are used as External Stations containing information about trips coming from outside of the model area).

Socio-Economic Data

Socio-economic data (SE-data) is comprised of demographic and employment information. The SE datasets were collected and processed for the model base year of 2022, and then forecasted out to the MTP horizon year of 2050.

Other than the population, households, and employment data described earlier in this chapter, characteristics from the 2022 American Community Survey (ACS) 5-Year Estimate as the number of workers per household, the number of K12 students per household, vehicle availability, income levels, among others were used in the development of the model. Enrollment data were also used in the model and were collected from the Michigan School Data website.

As mentioned earlier in this chapter, after the initial collection of the base year SE data and the forecast SE data development, a thorough review by TTCI MPO staff and TTCI Technical Advisory Committee was conducted. Once reviewed, changes were incorporated into the population, occupied housing units, and employment dataset, and then formally provided to the various MPO committees for approval. TTCI MPO committees approved the base year SE-data and the future year forecast SE-data for inclusion into the TDFM in December 2023, May 2024, and October 2024.

The table below shows the approved totals for TTCI population, households, and employment by sectors for the base and horizon years.

Table 4.6 - TTCI Area SE Totals

Year	Total Population	Occupied Households	Employment		
			Retail	Non-Retail	Total
2022	94180	40360	10,935	60878	71813
2050	101461	43955	11,054	70,754	81808

Trip Generation

Trip generation is the first step of the four-step TDFM and it is the process by which the model translates the socio-economic data into numbers of person trips. In this step, internal person trip productions and attractions are calculated for each TAZ, for various trip purposes, based on the relative SE data available for the TAZ. Generally, households produce trips, and employment places attract trips. The five trip purposes used in the TTCI model are home-based work (HBW), home-based retail (HBR), home-based school (HBS), home-based other (HBO), and non-home based (NHB).

Several Trip Generation methods exist, each having its own strengths and weaknesses. In this model, cross-classification methods were used to develop the trip productions. Cross-classification is used to combine two different data variables, such as household size and household income for example, to develop the zonal trip production rates. Trip attractions for this model used regression equations. Both, trip production rates and trip attraction equations for each trip purpose of TTCI model were developed by MDOT Statewide and Urban Travel Analysis Section based on the most recent household travel survey data available – the 2015 *Comprehensive Household Travel Data Collection Program / MI Travel Counts III* (MITC3).

After calculated, trip productions and trip attractions were balanced so that the total productions and attractions were equal for the entire model area which results in each trip produced being attracted somewhere.

The methods described above apply to person trips that are generated for the TAZs that are within the model area, which are called internal trips. Trips that originate or end outside the model area are called external trips. External trips that originate inside the model area and travel outside the model area are identified as “internal to external” (I-E) trips, and trips from outside the model area (external) into the model area are referred to as “external to internal” (E-I) trips. Trips that pass through the model area without stopping are called “external to external” (E-E) trips. External travel is originally provided from the Michigan Statewide model. The information is then further processed and combined with traffic count volumes to develop an estimate of the number of E-I, I-E, and E-E trips for the model area.

Person trips calculated during the trip generation step include Non-Motorized (NM) trips. However, NM trips are relatively minor for this model area when compared to the total amount of trips being generated in the model area, therefore NM trips were not distributed, nor assigned to the road network, but simply taken out of the total person trips being produced. Non-motorized factors for each trip purpose were also developed by MDOT Statewide and Urban Travel Analysis Section based on MITC3.

Commercial vehicle trips are also calculated during the trip generation step. Internal-Internal and Internal-External commercial vehicle production and attractions are based on employment numbers by sector and are obtained using regression equations. After calculated, production and attraction commercial vehicle trips are also balanced to guarantee that every I-I and I-E commercial vehicle trip produced is attracted somewhere. External – External commercial vehicle trips are also calculated based on information from the Michigan Statewide model combined with traffic count volumes.

The output of the Trip Generation step is a balanced trip table containing passenger car trips for all trip purposes and commercial vehicle trips, which is used as one of the inputs for the next step of the traditional four-step TDFM, Trip Distribution.

Trip Distribution

The second step of the four-step TDFM process is called Trip Distribution. In this step, the balanced trip table from the Trip Generation stage (balanced productions and attractions, by trip purpose) along with the model road network, are used to determine how many trips produced in a zone will be attracted to each of the other zones.

Travel time between zones and a mathematical model called “gravity model” based on the attractiveness of each zone and how far people are willing to travel for different purposes are used in this step to best replicate the potential travel along the model road network and to show a reasonable interaction between one TAZ to another.

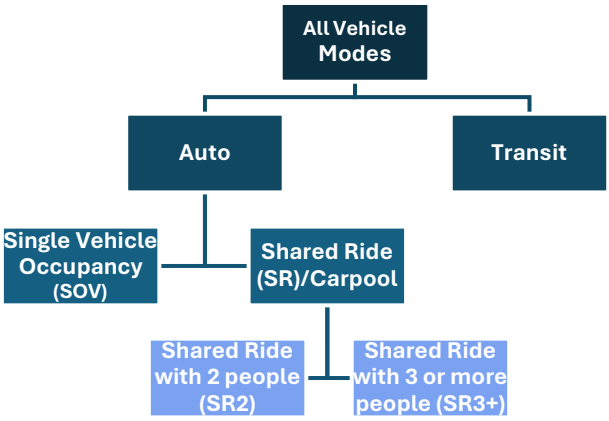
The gravity model assumes that a destination zone attracts trips based on the activity in that zone (number of employees and/or households) and the proximity to the zone of origin. Using the gravity model, trips produced in one zone are "distributed" to all other zones. The gravity model is calibrated using successive friction factor adjustments to produce model travel time trip length distributions for each trip purpose that are consistent with the travel time observed on the most recent household travel survey data available – MITC3

The results of the Trip Distribution step are matrices that provide a breakdown of relative TAZ to TAZ interactions by the various trip purposes and trip modes. The results of Trip Distribution are used for the next step, Mode Choice.

Mode Choice and Time of Day

Mode Choice is the third step of the four-step TDFM process. At this stage in model development, all trip data, except for external travel data, are in "person-trip" format. The trips must be allocated to distinct vehicular modes, which are auto and transit trips. The chart below provides a brief overview of the types of vehicle modes that are used to allocate the person trips for this model.

Figure 4.3 – Motorized Modes



Transit trips, different than auto trips, are not assigned to the TDFM road network due to the complex nature of the trip interactions and socio-economic conditions related to transit ridership. The TDFM is used for MTP purposes to analyze regional transportation patterns, and not necessarily micro-level or individual trip characteristics. As such, mode choice for this model used a simplified approach where transit trips are initially calculated prior to auto trips and then subtracted from the total vehicular trips. The resulting trip total is then broken into various auto shares: Single Occupancy Vehicles (SOV), Shared Rides with two people (SR2), and Shared Rides with three or more people (SR3+). Shared Rides may alternatively be referred to as "carpooling" or "High Occupancy Vehicles" (HOV). The result of the mode choice component is a series of person-trip tables by vehicular mode and trip purpose for each TAZ Origin-Destination pair.

The mode choice step also includes Auto Occupancy and Time-of-Day sub-steps. In the auto occupancy sub-step formulas are applied for each purpose to convert person trips to vehicle trips. Once person trips become vehicle trips, Time of Day (TOD) modeling factors are applied to split these vehicle mode trips into one of the four TOD periods (AM, MD, PM, and NT). The finalized product from the Mode Choice step is a number of tables representing vehicle mode trip categories by each time period.

Mode Choice, along with auto occupancy and Time-of-Day modeling, factors, and parameters are based on data provided by MITC3 program conducted by MDOT.

Traffic Assignment

Traffic (or "Trip") Assignment is the final step in the traditional four-step TDFM and is the process of route selection between zones. This step takes the vehicle trips distributed in the previous phase and assigns them a path on the roadway using the underlying principle of a TDFM that trip makers will use the "best" route, based on travel time.

Different methods and supporting functions can be used in the traffic assignment step. The TTCI model uses the bi-conjugate Frank-Wolfe equilibrium assignment method which takes advantage of multi-threaded processors and converges relatively quickly when compared to other available equilibrium assignment methods.

This assignment method considers the volume as well as the capacity of the road links. During this process, a roadway that is reaching or has reached its maximum capacity will result in reduced travel time. As such, the assignment routine will include these time reductions when choosing the "best" path, and if the delay is significant, an alternative road may be used to accommodate that traffic. This continues until the system reaches equilibrium.

After the first iteration of the traffic assignment, the model starts a processed call feedback loop. In this process, the congested travel speeds resulting from the traffic assignment are used to re-compute zone-to-zone travel times. At this point, a comparison is made between the initial and the updated zone-to-zone travel times. If the travel times are not reasonably similar, the updated travel times are then used to rerun trip distribution and the subsequent model steps. This process is repeated iteratively until a convergence criterion or iteration limit is met.

When the feedback convergence criterion is met the Traffic Assignment step results in a series of vehicle-trip (modeled traffic volume or "traffic flow") tables, by vehicular mode, and separated into TOD, for each model road link within the model road network which is considered the final output of a TDFM.

Post processes then sum all 4 periods traffic volumes creating a volume that represents the number of vehicles that travel on that link (road) over a typical twenty-four-hour day. The "assigned" 24-hour link traffic volumes are then compared with "observed" traffic data (traffic counts) as part of the model calibration, validation, and reasonability review.

Notice that the TDFMs used for MTP purposes do not include factors such as road geometrics (hills, tight curves, etc.) or road conditions.

Model Calibration/Validation

The most important factor when validating TDFM results is to ensure that the base year assigned volumes reflect the observed base year conditions. To achieve this goal the TDFM base year assigned volumes need to be within a reasonable level of the traffic counts collected around the model base year. Traffic counts on the federal-aid road system from all respective maintaining road agencies within the MPO are crucial to perform these comparisons and without this information, the effectiveness of the model is limited. For TTCI MTP 2050 TDFM calibration process traffic counts provided by MDOT Transportation Data Management System (TDMS) and local road agencies within TTCI MPO were used.

Very often the preliminary model results don't meet the established criteria and model adjustments are needed. These model adjustments are called model calibration and consist of returning to a previous step in the modeling process to calibrate inputs and/or outputs data when it is necessary. Model calibration is applied for each step of the TDFM development process and for the entire model system to adjust the model to achieve model outputs that simulate (within established validation criteria) the actual base year traffic counts. When the calibration is completed, the base year model is considered validated or statistically acceptable.

Application of the Validated Travel Demand Forecast Model

Once the model is validated it can be confidently used to forecast "future travel demand". In this the base year socio-economic data is substituted by forecasted socio-economic data and the base road network is substituted by a road network accounting for changes finalized or committed on the TIP. Then the trip generation, trip distribution, and traffic assignment can be repeated, and future trips can be simulated as part of the planning process. The assumption is that model formulas and relations developed for the base year model structure remain constant over time, as to provide an unbiased forecast. For this 2050 Metropolitan Transportation Plan five scenarios were developed: Base year 2022 (validated), Interim year 2025, Interim year 2030, Interim year 2040, and Horizon year 2050.

Different scenarios can be prepared and tested anytime for any significant developments of housing or employment, or for changes to the transportation network as needed. The TTCI TDFM can also be used for additional transportation system analysis outside of the planning process, which includes, but is not limited, to the following:

- Impact analysis for planned roadway improvements, expansions, or other capacity-altering alternatives

- Impact analysis of land use changes on the network (e.g., what are the impacts of a new major retail store being built).
- New accessibility, such as a proposed bridge, can be tested to identify traffic flows to and from the new roadway and for adjacent roadway links. Limiting factors, such as the closure of a bridge can also be tested.
- Road closure, road restriction, and/or detour evaluation studies can be conducted to determine the effects of closing a roadway, and/or restricting capacity, and detouring traffic during construction activities, which are useful for construction management and are also referred to as "Work zone testing".
- Individual links can be analyzed to determine which TAZs are contributing to traffic flow on that particular link. The results can be shown as a percentage breakdown or by raw volumes. This analysis is referred to as selected link analysis.
- Potential improvements to relieve congestion can also be tested. Future traffic can be assigned to the existing network to show what would happen in the future if no improvements were made to the present transportation system. From this, improvements can be planned that would alleviate demonstrated capacity problems.
- Model runs as part of air quality conformity analysis if required.

The model results for the base year and the horizon year scenarios are discussed in more detail in the following "*TTCI Base Year and Horizon Year Model Results*".

TTCI Base Year and Horizon Year Model Results

The Travel Demand Forecast Model (TDFM or "model"), described above, was used to identify roadway capacity constraints and congestion within the TTCI Metropolitan Planning Area (MPA). These results are provided for two different scenarios:

1. Base year 2022 ("current" year)
2. Horizon year 2050 with committed projects, as listed in the available TIPs and 2050 SE and employment data forecast.

The results of the TDFM use a scale based on the current or anticipated volume of the roadway, over a 24-hour period, and the allotted capacity of the roadway. The results provided are called "Volume to Capacity ratios (VOC)". The TRB Highway Capacity Manual describes any corridor with VOC over one as an over capacity corridor. As small MPOs area

normally do not have over capacity corridors the Table y-3 below aims to describe the different levels of flow experienced in a corridor with different VOC levels.

Table 4.7 – Volume over Capacity Ratio Level description

Volume to Capacity Ratio (VOC)	VOC Level
< 0.60	Free Flow – No delay
0.60 - 0.70	Little delay
0.70 - 0.80	Some delay
0.80 – 0.90	Moderate delay
0.90 – 1.00	Approaching Capacity – Significant delay
>1.00	Over Capacity – Excessive delay

In addition to identifying the roadway capacity constraints, the TTCI MPO, and technical and policy committees were provided opportunities to review the model results. Due to the limited amount of approaching or over capacity corridors over a daily period in the area, no capacity projects were tested or selected outside of those already listed in the most current Transportation Improvement Plan (TIP).

Since there were limited roadways within the TTCI MPO area that exhibited high-capacity restrictions on a daily level, the results presented to the MPO and the various committees for comment included roadways with the highest daily VOC levels for the area (VOC > 0.65). By showing roadways with moderate VOC levels, members of the various TTCI committees were able to identify potential traffic congestion problem areas that may need attention in future construction programs. These locations may also illustrate operational-type issues on a roadway segment, especially during peak travel periods.

Base Year 2022 Results

The Base Year 2022 scenario analysis looked at the existing conditions of the area-wide transportation system as it was in 2022. The 2022 year was chosen because of the availability of demographic and employment data and traffic counts for the development and calibration of the model in accordance with the timeline for this Metropolitan Transportation Plan. Roadway projects and socio-economic data changes happening after 2022 are not included in this scenario.

The model does not show any roadways with daily traffic volumes that result in approaching capacity or over capacity conditions for the base year. Therefore, this document presents the 20 daily highest VOC corridors listed below:

1. WB Front St. from Division St. to Hall St.
2. WB 8th St. from Lake Ave to Woodmere Ave
3. EB 8th St. from Union St. to Woodmere Ave
4. WB 14th St. from Division St. to Veterans Dr.
5. EB Front St. from Sixth St. Ext to Division St.
6. WB Front St. from Sixth St. Ext to Division St.
7. EB 14th St. from Division St. to Veterans Dr.
8. EB US-31 from West Silver Lake Rd to M-37
9. WB US-31 from West Silver Lake Rd to M-37
10. NB Keystone Rd. from Birmley Rd to Hammond Rd.
11. SB Peninsula Dr. from Garfield Ave to Center Rd.
12. SB W Bay Shore from Traverse Hwy to Cherry Bend Rd.
13. SE Grandview Pkwy. from Traverse Hwy to Cass St.
14. NB Peninsula Dr. from Garfield Ave to Center Rd.
15. SB Keystone Rd. from Birmley Rd. to Hammond Rd
16. EB Front St. from Railroad Ave to Gilbert St.
17. WB Front St. from Railroad Ave to Gilbert St.
18. NB W Bay Shore from Traverse Hwy to Cherry Bend Rd.
19. WB 8th St. from Woodmere Ave to Garfield Ave
20. EB 8th St. from Woodmere Ave to Garfield Ave

Detailed information on the twenty highest VOC roadway corridors, including AM Peak and PM peak VOCs for the Base Year 2022 can be found in Table y-4. Figures y-1 to y-6 show the daily, AM, and PM peak maps for the base year scenario.

Horizon Year 2050 Results

The Horizon Year 2050 includes all the capacity-related committed projects listed in the 2023 – 2026 TIP and 2026 – 2029 TIP along with the projected changes in socio-economic data through 2050 approved by the TTCI Technical and Policy Committees. Traffic volume results were also compared to the expected capacities for the road system in 2050. As the base year, the model results do not show any roadways with daily traffic volumes resulting in approaching capacity or over capacity. The 20 roadways with the expected highest daily VOCs in Horizon Year 2050 are listed below:

1. WB Front St. from Division St. to Hall St.
2. WB 8th St. from Lake Ave to Woodmere Ave
3. EB 8th St. from Union St. to Woodmere Ave
4. WB 14th St. from Division St. to Veterans Dr.
5. EB Front St. from Sixth St. Ext to Division St.
6. WB Front St. from Sixth St. Ext to Division St.
7. EB 14th St. from Division St. to Veterans Dr.
8. EB US-31 from West Silver Lake Rd to M-37
9. WB US-31 from West Silver Lake Rd to M-37
10. NB Keystone Rd. from Birmley Rd to Hammond Rd.
11. SB W Bay Shore from Traverse Hwy to Cherry Bend Rd.
12. SE Grandview Pkwy. from Traverse Hwy to Cass St.
13. SB Keystone Rd. from Birmley Rd to Hammond Rd.
14. EB S. Airport Rd. from Cass Rd to Park Dr.
15. NB W Bay Shore from Traverse Hwy to Cherry Bend Rd.
16. EB Front St. from Railroad Ave to Gilbert St.
17. WB Front St. from Railroad Ave to Gilbert St.
18. WB S. Airport Rd. from Cass Rd. to Park Dr.
19. WB 8th St. from Woodmere Ave to Garfield Ave
20. EB 8th St. from Woodmere Ave to Garfield Ave

Detailed information on the twenty highest VOC roadway corridors, including AM Peak and PM peak VOCs for the Horizon Year 2050 can be found in Table y-5. Figures y-7 to y-12 show the daily, AM, and PM peak maps for the horizon year scenario.

Table 4.8: Base Year highest VOC roadway corridors

Daily VOC Rank	Road Name	Extent	Jurisdiction	2022 VOC Average		
				AM Peak	PM Peak	Daily
1	WB Front St.	Division St. to Hall St	Traverse City	0.91	0.94	0.88
2	WB 8th St.	Lake Ave to Woodmere Ave	Traverse City	0.99	0.95	0.86
3	EB 8th St.	Union St. to Woodmere Ave	Traverse City	0.97	0.92	0.83
4	WB 14th St.	Division St. to Veterans Dr.	Traverse City	0.88	0.86	0.76
5	EB Front St.	Sixth St. Ext to Division St.	Traverse City	0.85	0.81	0.74
6	WB Front St.	Sixth St. Ext to Division St.	Traverse City	0.78	0.79	0.72
7	EB 14th St.	Division St. to Veterans Dr.	Traverse City	0.83	0.79	0.71
8	EB US-31	West Silver Lake Rd to M-37	Blair Twp	0.88	0.77	0.69
9	WB US-31	West Silver Lake Rd to M-37	Blair Twp	0.74	0.85	0.68
10	NB Keystone Rd.	Birmley Rd. to Hammond Rd	Garfield Twp	0.80	0.76	0.68
11	SB Peninsula Dr.	Garfield Ave to Center Rd	Traverse City	0.98	0.68	0.67
12	SB W Bay Shore	Traverse Hwy to Cherry Bend Rd.	Elmwood Twp	0.84	0.74	0.67
13	SE Grandview Pkwy	Traverse Hwy to Cass St.	Traverse City	0.83	0.75	0.67
14	NB Peninsula Dr.	Garfield Ave to Center Rd.	Traverse City	0.74	0.83	0.67
15	SB Keystone Rd.	Birmley Rd to Hammond Rd.	Garfield Twp	0.76	0.77	0.67
16	EB Front St.	Railroad Ave to Gilbert St.	Traverse City	0.76	0.77	0.66
17	WB Front St.	Railroad Ave to Gilbert St.	Traverse City	0.81	0.75	0.65
18	NB W Bay Shore	Traverse Hwy to Cherry Bend Rd.	Elmwood Twp	0.71	0.77	0.65
19	WB 8th St.	Woodmere Ave to Garfield Ave	Traverse City	0.75	0.73	0.65
20	EB 8th St.	Woodmere Ave to Garfield Ave	Traverse City	0.70	0.70	0.65

Figure 4.4: TTCI Base Year 2022 Capacity Analysis – Daily

Metropolitan Planning Area

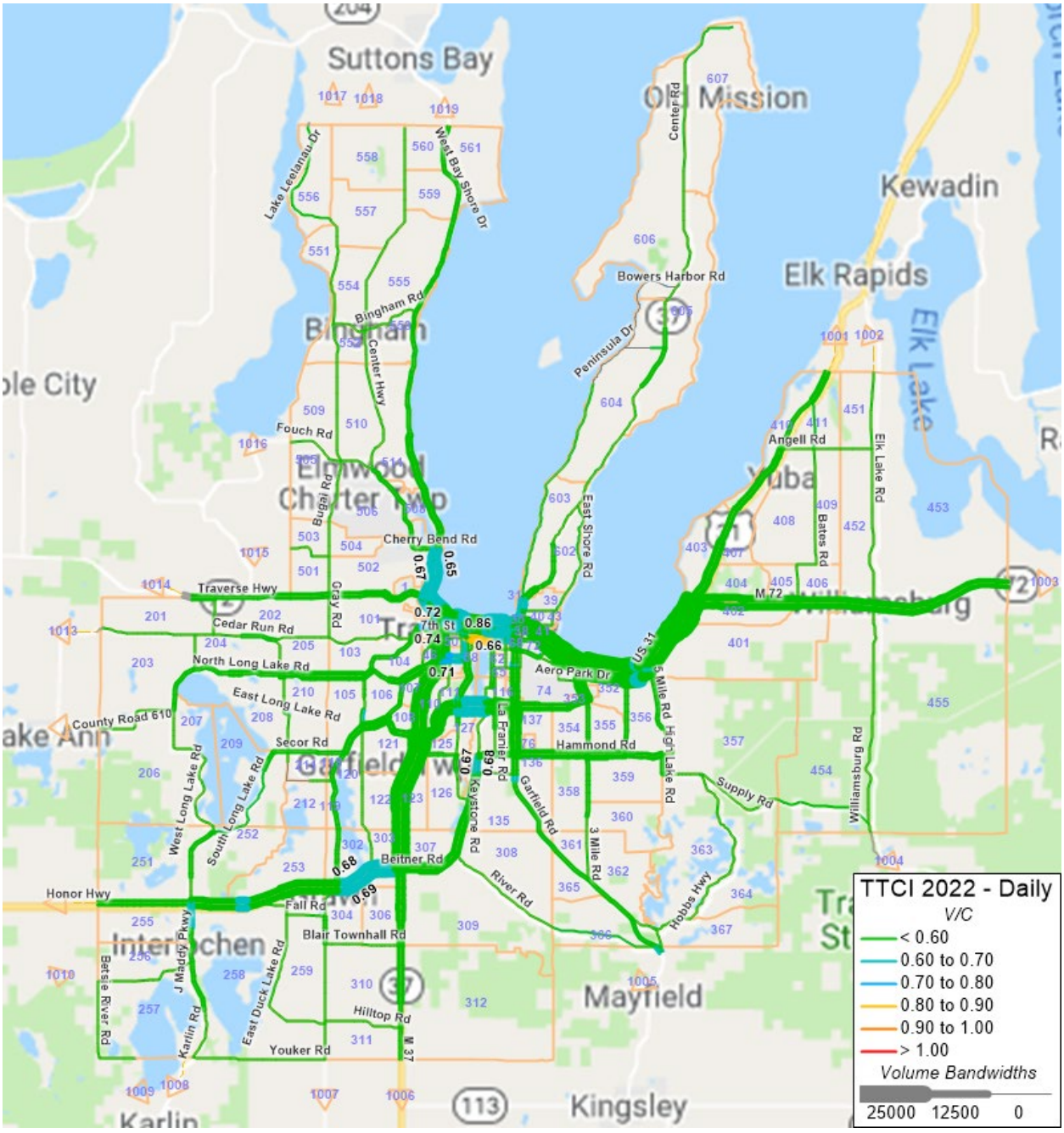


Figure 4.5: TTCI Base Year 2022 Capacity Analysis – Daily

Traverse City

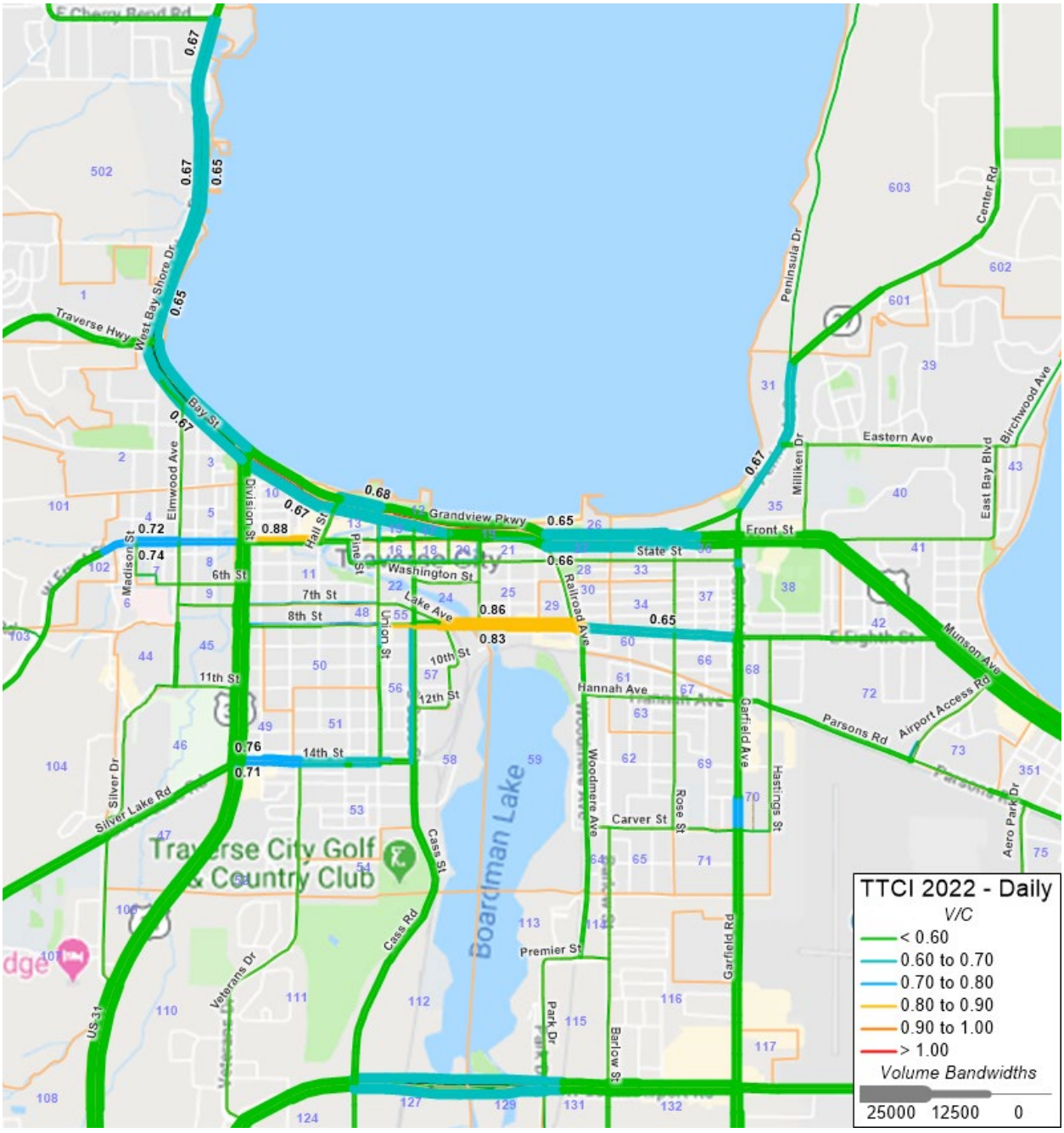


Figure 4.6: TTCI Base Year 2022 Capacity Analysis – AM Peak Period

Metropolitan Planning Area

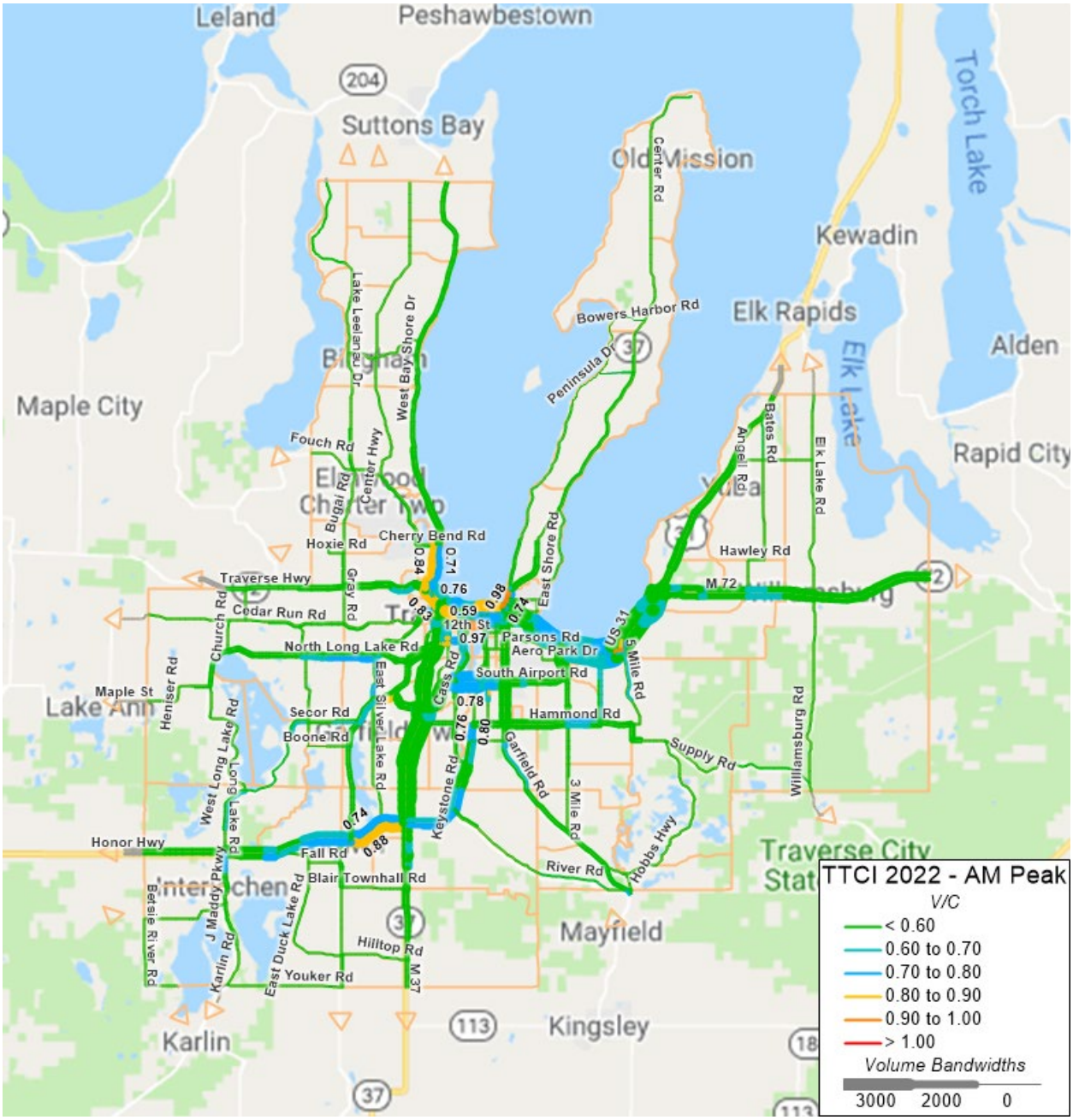


Figure 4.7: TTCI Base Year 2022 Capacity Analysis – AM Peak Period

Traverse City

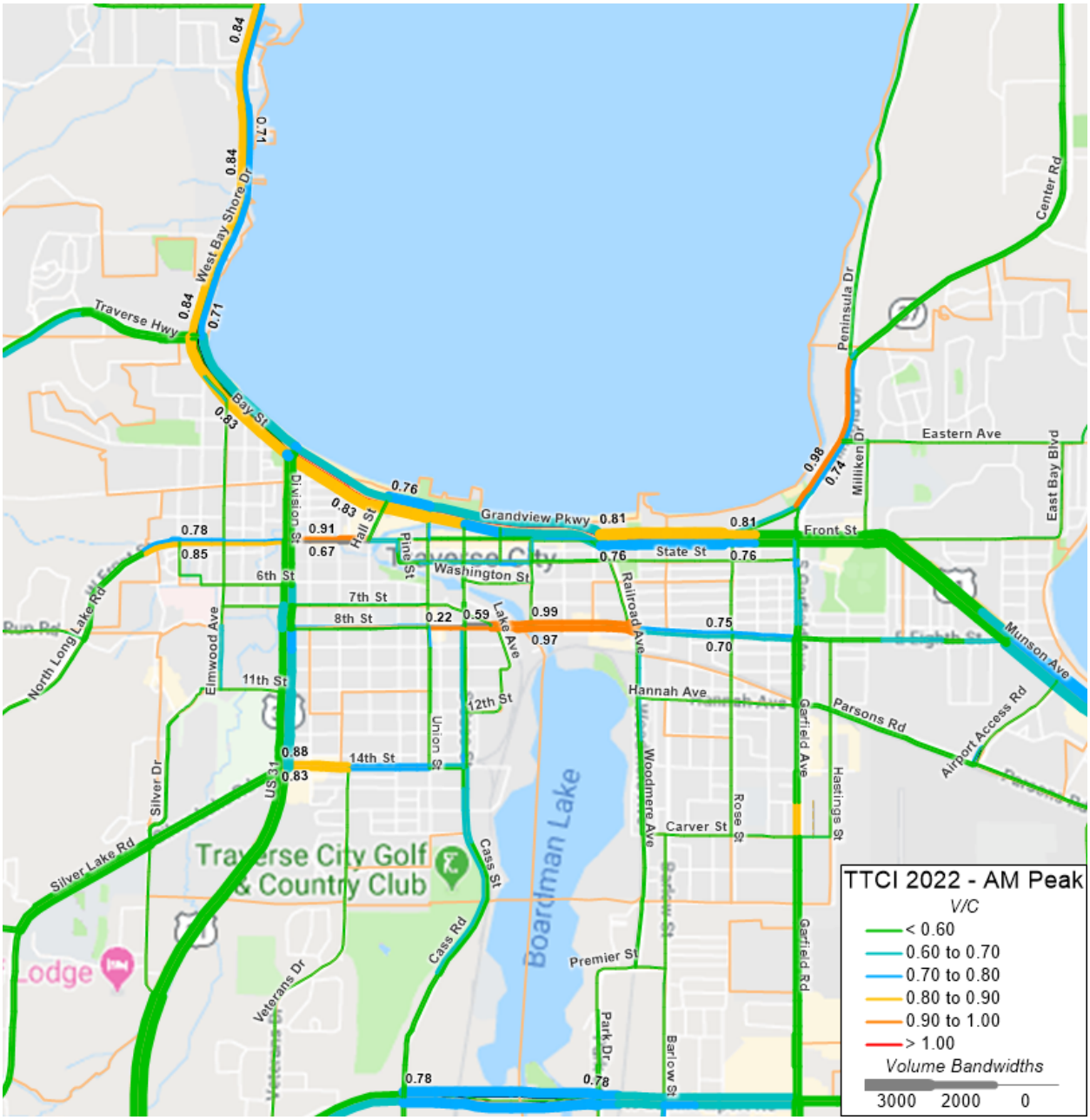


Figure 4.8: TTCI Base Year 2022 Capacity Analysis – PM Peak Period

Metropolitan Planning Area

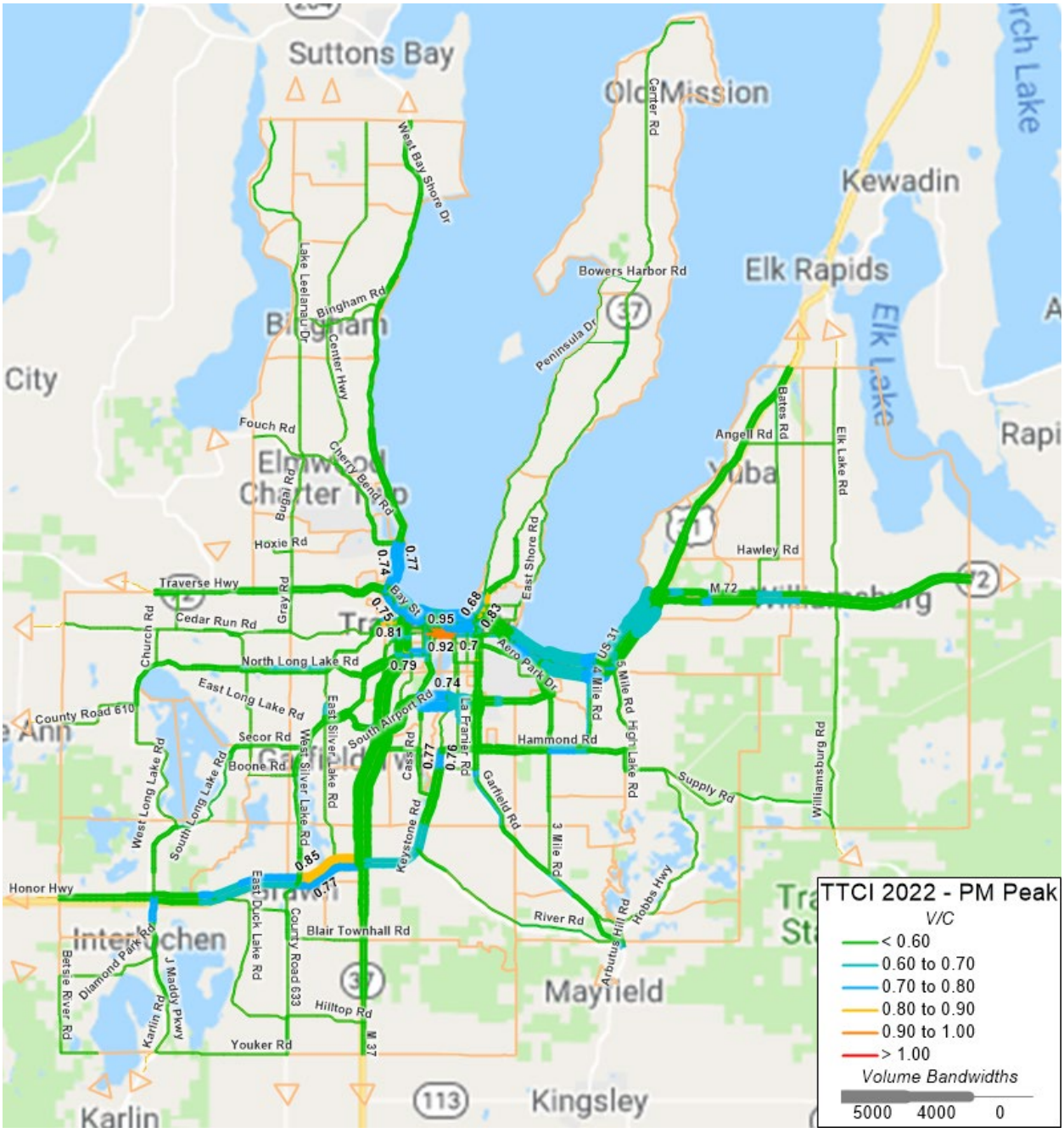


Figure 4.9: TTCI Base Year 2022 Capacity Analysis – PM Peak Period

Traverse City

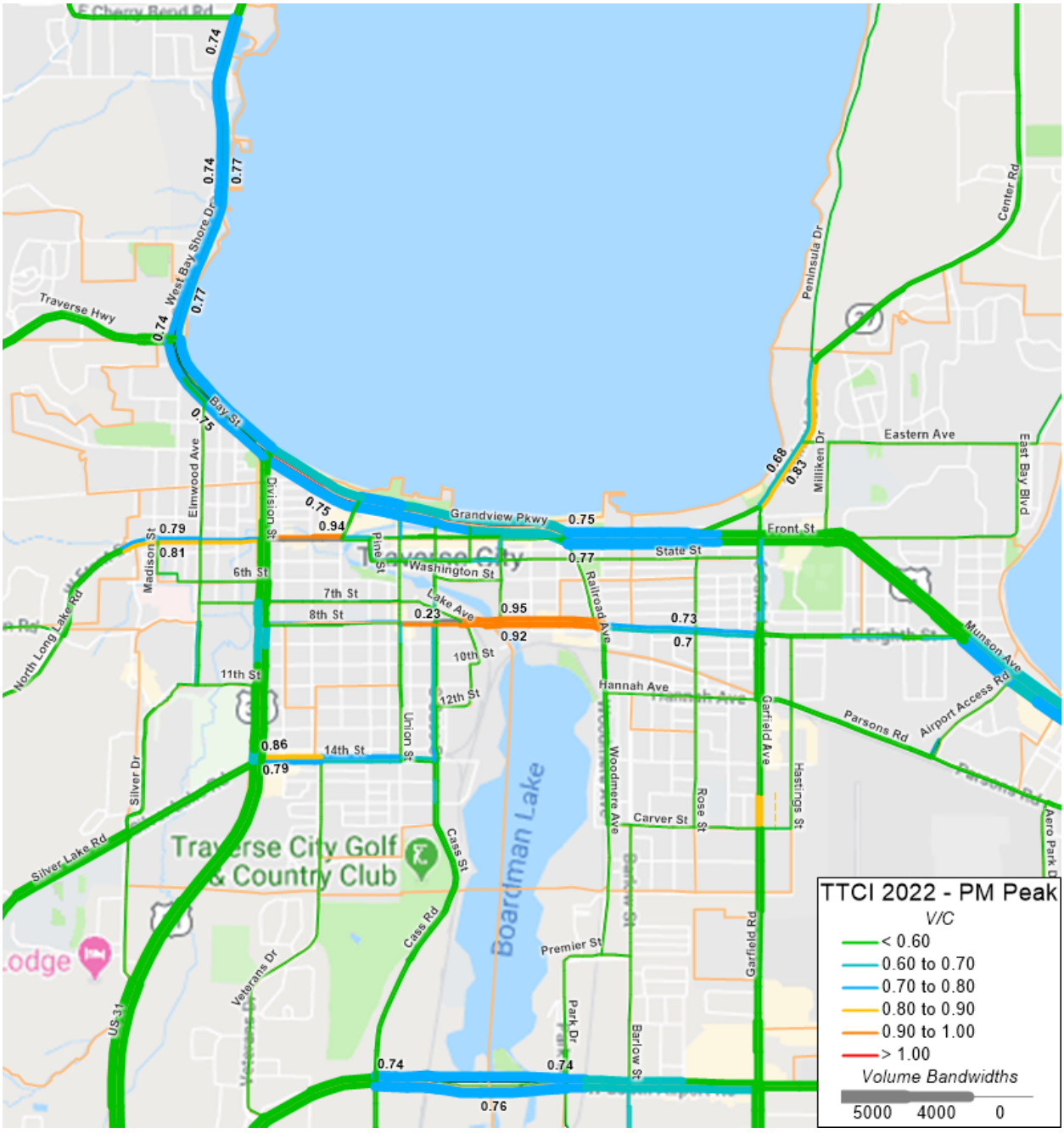


Table 4.9: Horizon Year highest VOC roadway corridors

Daily VOC Rank	Road Name	Extent	Jurisdiction	2050 VOC Average		
				AM Peak	PM Peak	Daily
1	WB Front St.	Division St. to Hall St.	Traverse City	0.92	0.94	0.88
2	WB 8th St.	Lake Ave to Woodmere Ave	Traverse City	1.00	0.98	0.88
3	EB 8th St.	Union St. to Woodmere Ave	Traverse City	1.00	0.93	0.85
4	WB 14th St.	Division St. to Veterans Dr.	Traverse City	0.88	0.89	0.79
5	EB Front St.	Sixth St. Ext to Division St.	Traverse City	0.87	0.82	0.77
6	WB Front St.	Sixth St. Ext to Division St.	Traverse City	0.80	0.82	0.74
7	EB 14th St.	Division St. to Veterans Dr.	Traverse City	0.86	0.80	0.73
8	EB US-31	West Silver Lake Rd. to M-37	Blair Twp	0.91	0.79	0.71
9	WB US-31	West Silver Lake Rd. to M-37	Blair Twp	0.77	0.87	0.71
10	NB Keystone Rd.	Birley Rd. to Hammond Rd.	Garfield Twp	0.82	0.77	0.70
11	SB W Bay Shore	Traverse Hwy to Cherry Bend Rd.	Elmwood Twp	0.88	0.75	0.69
12	SE Grandview Pkwy	Traverse Hwy to Cass St.	Traverse City	0.86	0.76	0.69
13	SB Keystone Rd.	Birmley Rd. to Hammond Rd.	Garfield Twp	0.76	0.79	0.69
14	EB S. Airport Rd.	Cass Rd. to Park Dr.	Garfield Twp	0.82	0.77	0.67
15	NB W Bay Shore	Traverse Hwy to Cherry Bend Rd	Elmwood Twp	0.72	0.80	0.67
16	EB Front St.	Railroad Ave to Gilbert St.	Traverse City	0.79	0.77	0.67
17	WB Front St.	Railroad Ave to Gilbert St.	Traverse City	0.81	0.77	0.66
18	WB S. Airport Rd.	Cass Rd. to Park Dr.	Garfield Twp	0.80	0.77	0.66
19	WB 8th St.	Woodmere Ave to Garfield Ave	Traverse City	0.76	0.74	0.66
20	EB 8th St.	Woodmere Ave to Garfield Ave	Traverse City	0.72	0.70	0.65

Figure 4.10: TTCI Future Year 2050 Capacity Analysis – Daily

Metropolitan Planning Area

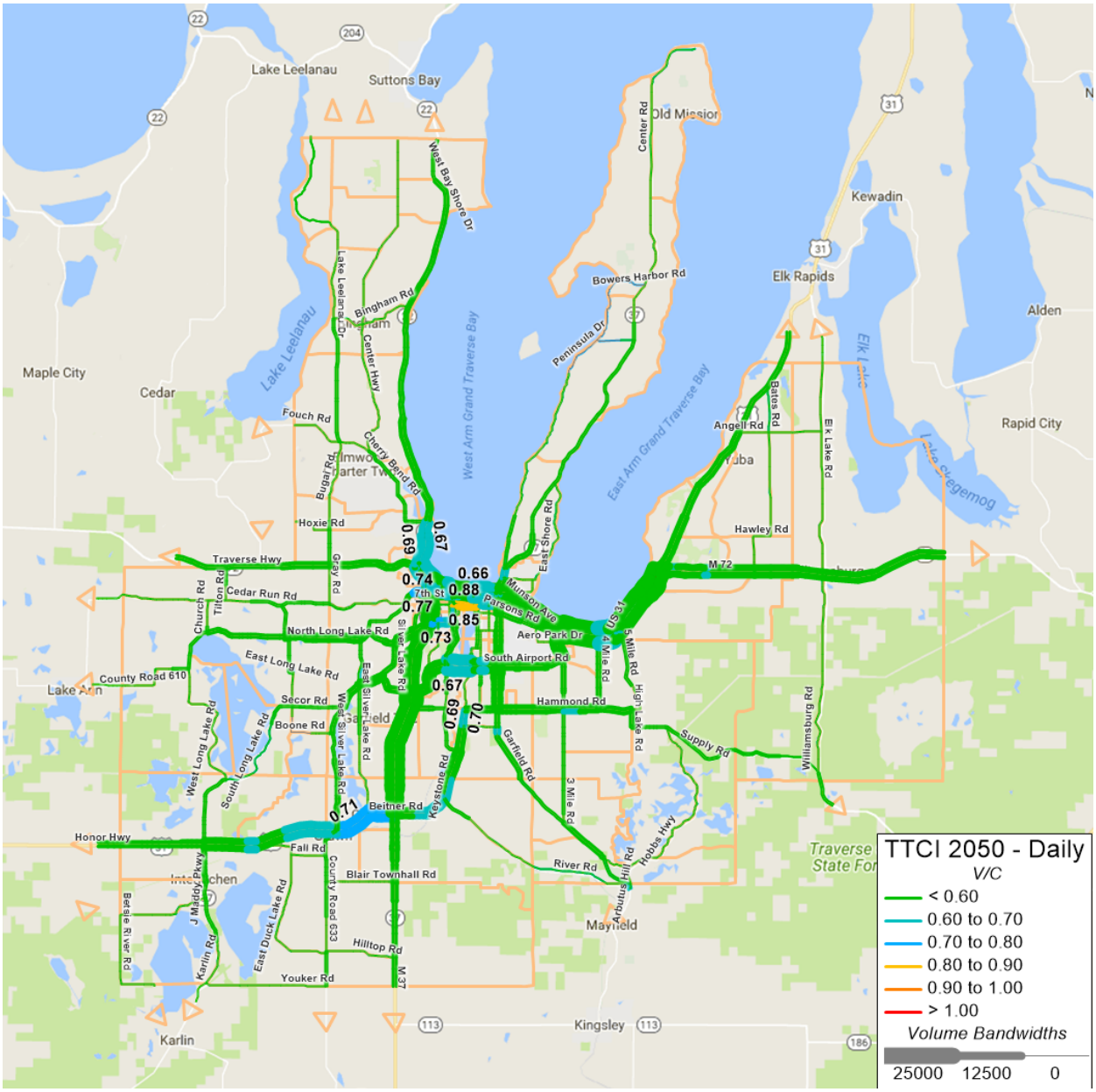


Figure 4.11: TTCI Future Year 2050 Capacity Analysis – Daily

Traverse City

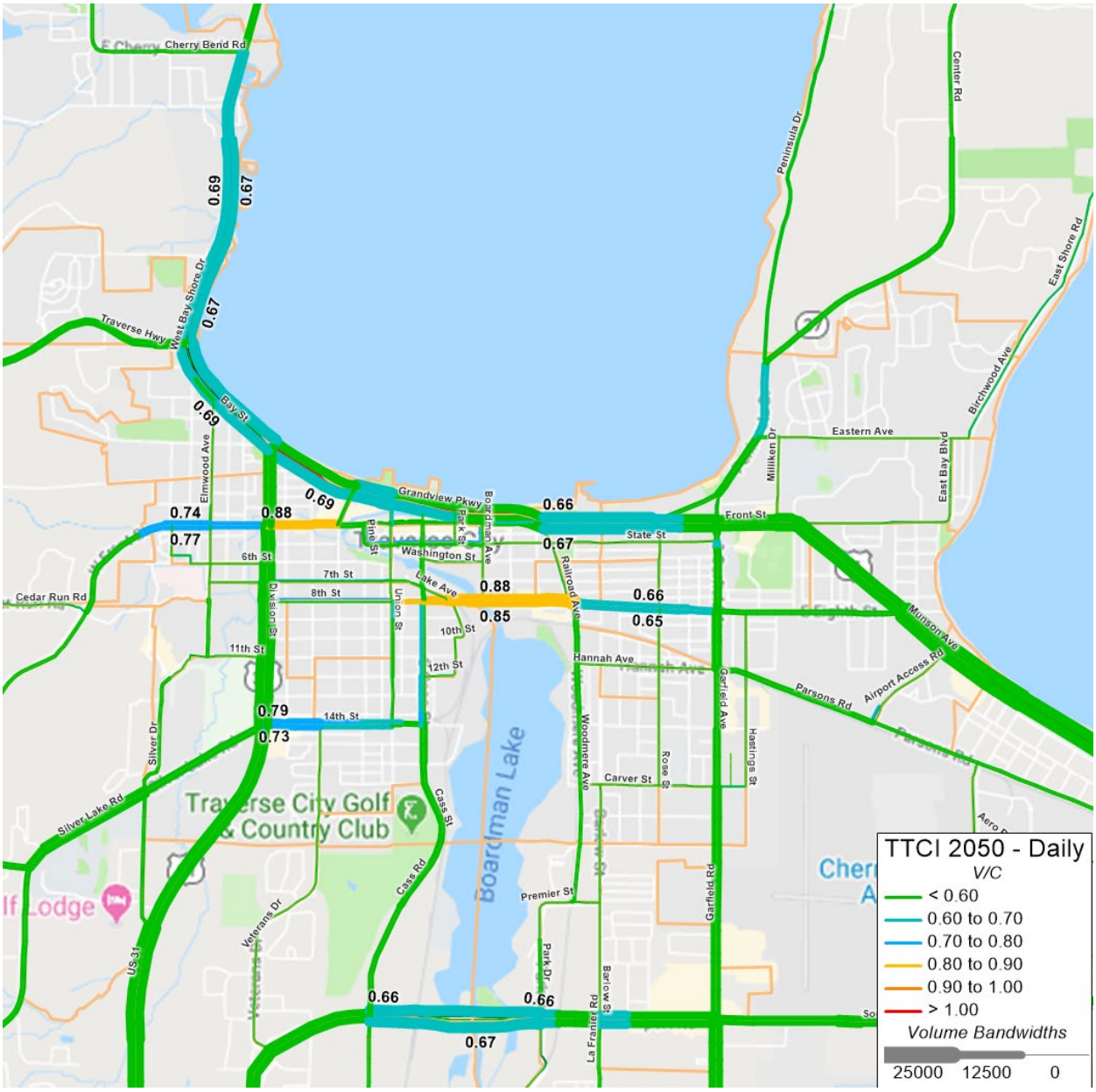


Figure 4.12: TTCI Future Year 2050 Capacity Analysis – AM Peak Period

Metropolitan Planning Area

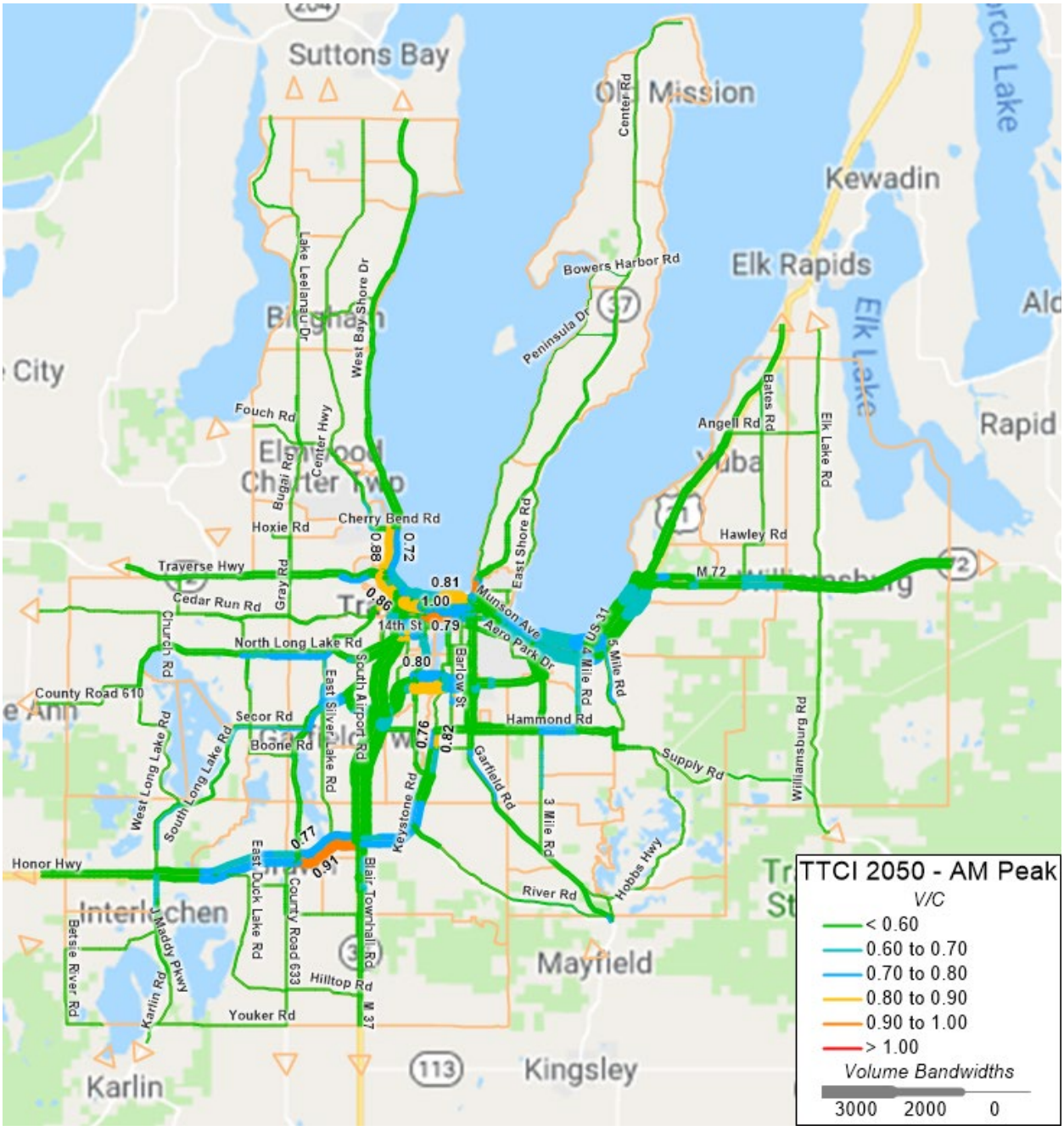


Figure 4.13: TTCI Future Year 2050 Capacity Analysis – AM Peak Period

Traverse City

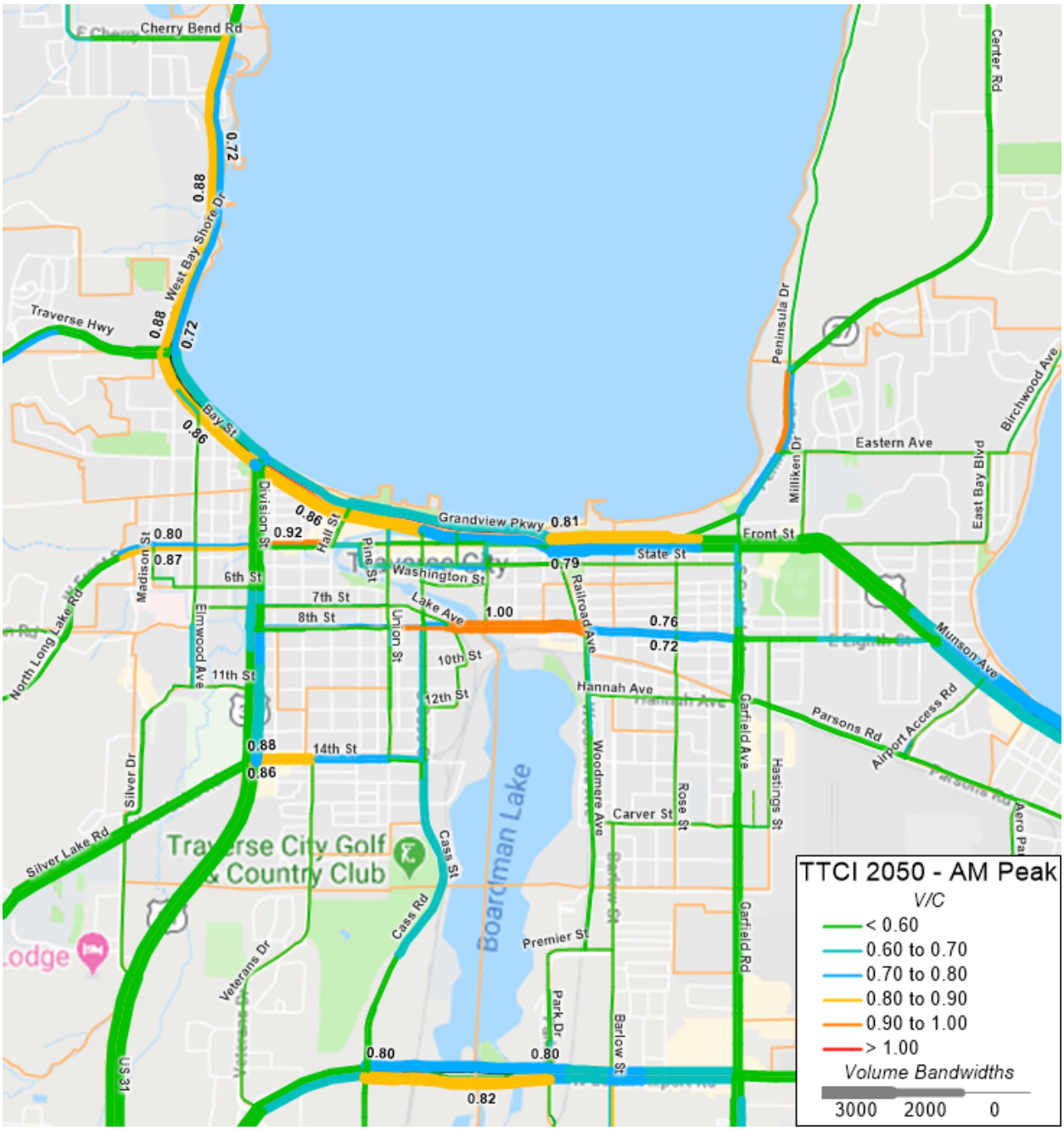


Figure 4.14: TTCI Future Year 2050 Capacity Analysis – PM Peak Period

Metropolitan Planning Area

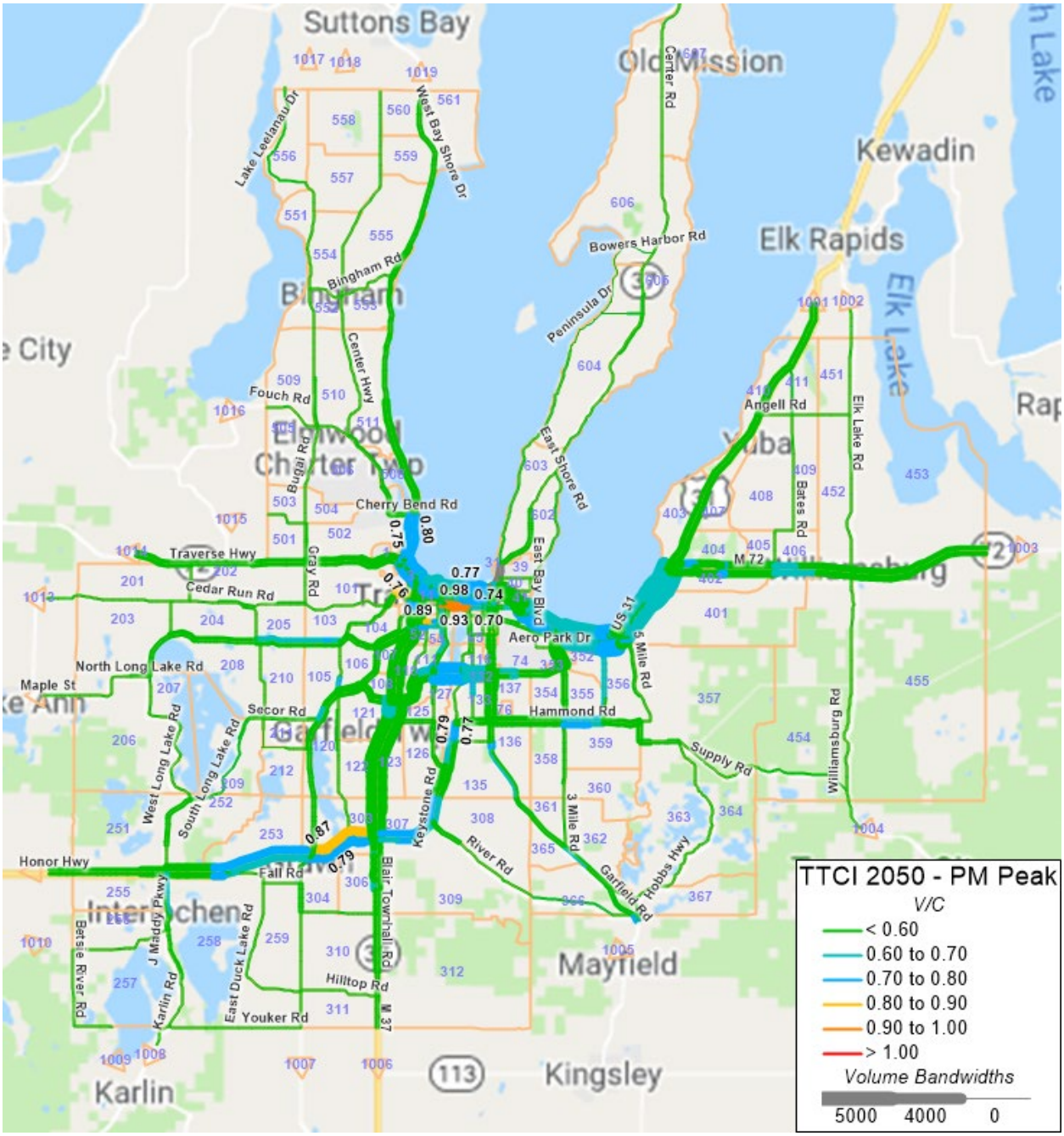
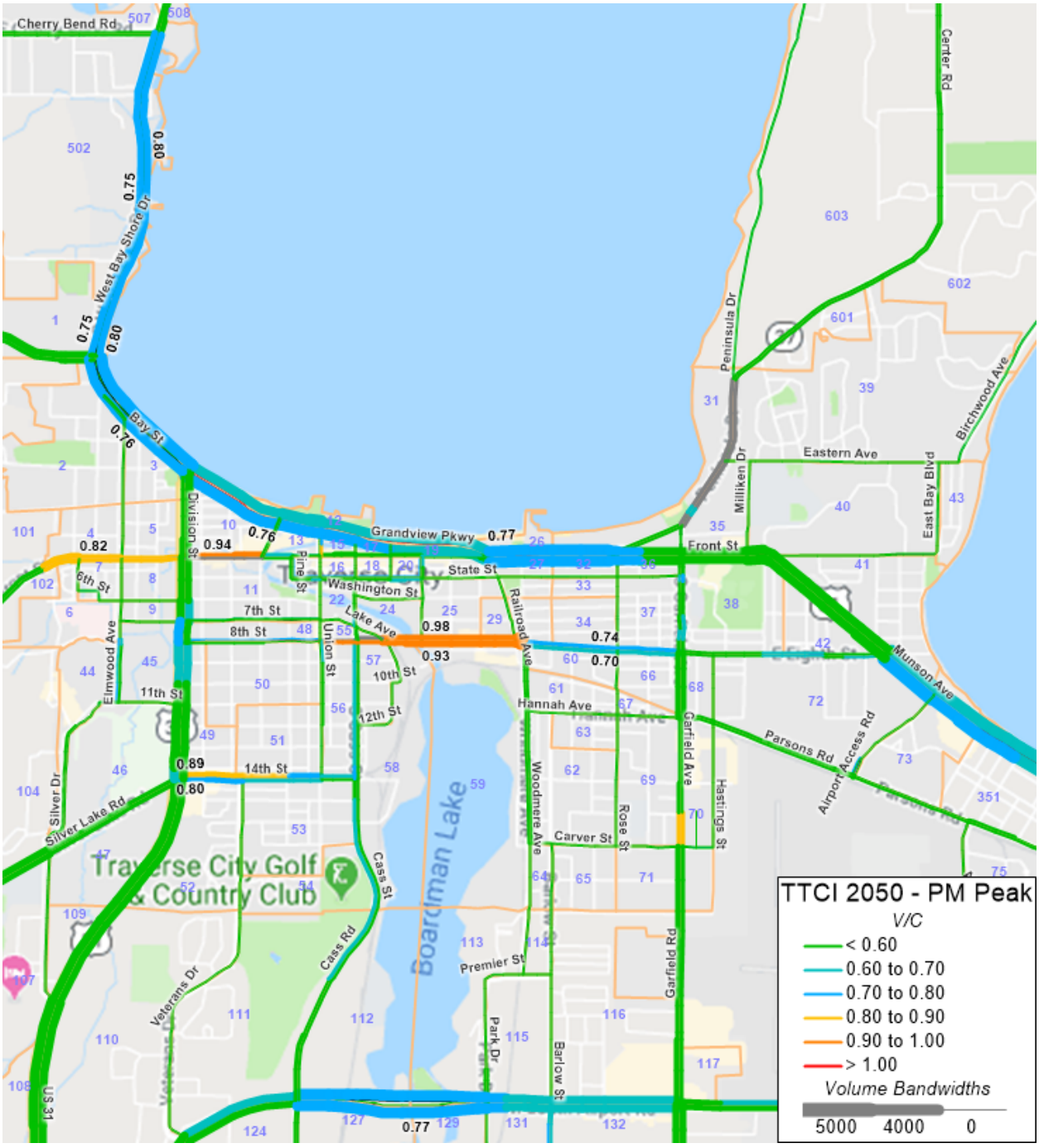


Figure 4.15: TTCI Future Year 2050 Capacity Analysis – PM Peak Period

Traverse City



Vulnerability Assessment

The Vulnerability Assessment examines the population characteristics of the TTCI MPO study area, focusing on key factors such as age, race, poverty and income status, housing, traffic and travel study, etc. The analysis includes data on population distribution, age for older adults and underage population, racial diversity, and the proportion of individuals living below the poverty level, which serve as indicators for targeting vulnerable populations.

Understanding the demographic composition is critical for effective planning, resource allocation, and identifying priority areas for intervention. The roadway and transit projects in the TIP must identify and address disproportionately high and adverse human health or environmental effects of its programs and policies on minority and low-income populations. This chapter serves to demonstrate the TTCI Transportation Improvement Program projects for Fiscal Years 2026 – 2029 is in compliance with the requirements stated in Title VI of the Civil Rights Act of 1964, the National Environmental Policy Act of 1969, the Federal-Aid Highway Act of 1970, and the Civil Rights Restoration Act of 1987. This chapter ensures that overall program does not disproportionately distribute benefits or have negative effects on the vulnerable population.

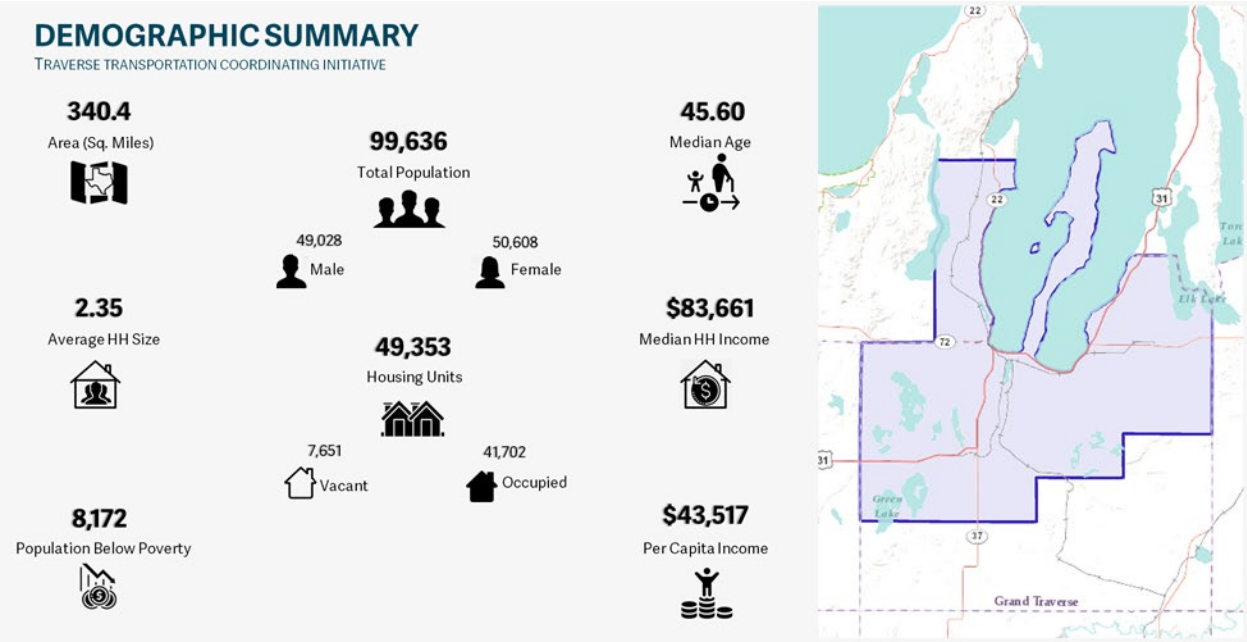
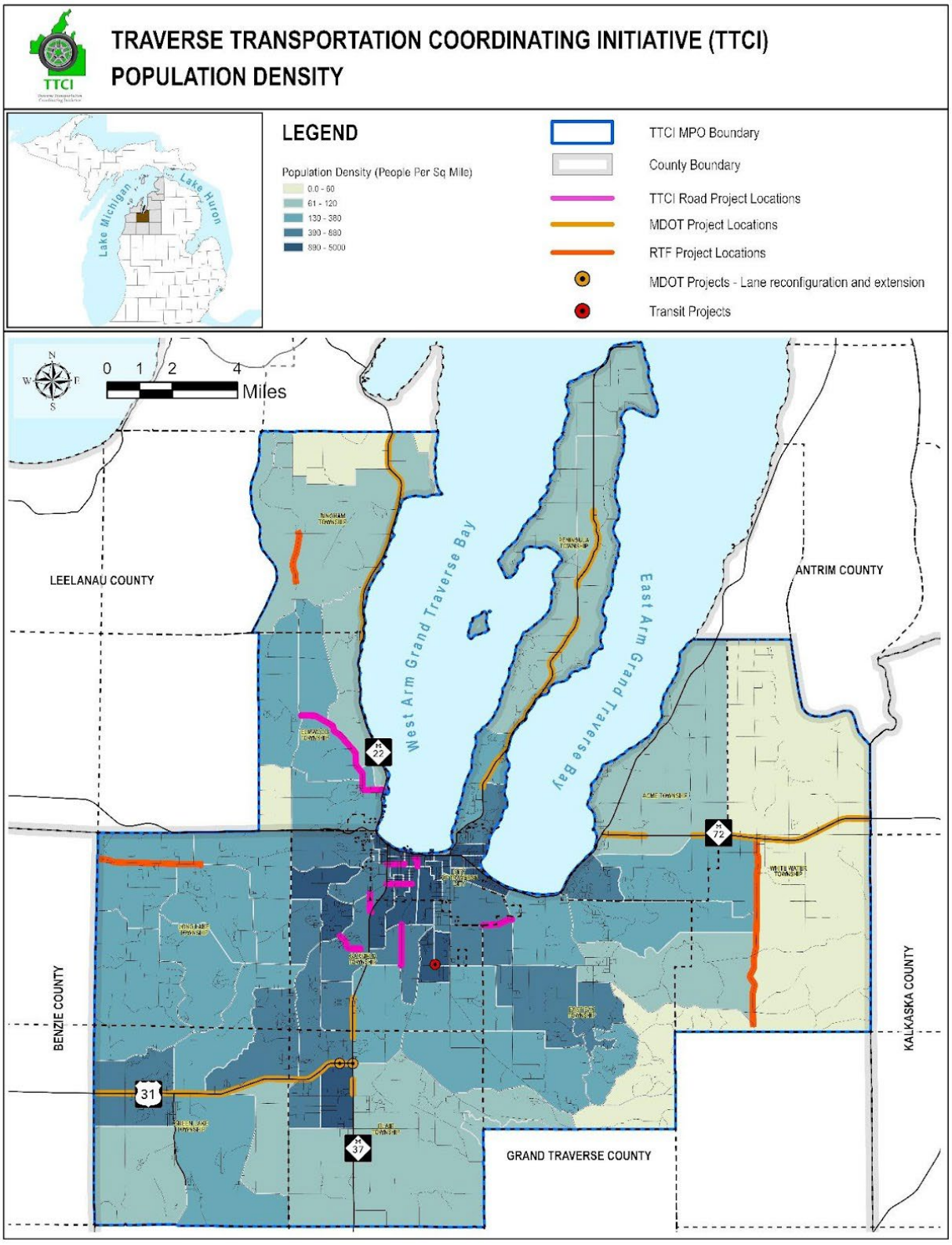


Figure 4.16: Population Density



Vulnerability Assessment

TTCI's vulnerability analysis is based on two primary data sources:

1. The list of transportation projects programmed in the FY 2026–2029 Transportation Improvement Program (TIP); and
2. Demographic data from the 2023 American Community Survey (ACS) 5-Year Estimates, published by the U.S. Census Bureau.

The ACS data was used to identify the geographic distribution of key population groups within the TTCI planning area and to determine Vulnerable Population Priority Areas. These areas were analyzed in the context of TIP project locations to assess the extent to which the needs of vulnerable communities are being considered in regional transportation planning.

TTCI identified the following population groups as indicators of potential vulnerability:

- Age: Residents aged 65 and older, representing aging populations; and residents under 18, representing dependent youth populations.
- Race/Ethnicity: People of Color (POC): Based on U.S. Census categories, this includes individuals who identify as Black or African American, Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, Some Other Race Alone, or Two or More Races.
- Income: Households with income below the federal poverty level in the past 12 months.

In addition to age, race/ethnicity, and income, the analysis also incorporates factors such as disability status, vehicle availability, population density, and average commute times, all of which contribute to identifying transportation-related vulnerabilities within the region.

Methodology

To identify Vulnerable Population Priority Areas, TTCI analyzed U.S. Census Block Groups where the percentage of residents from one or more of the identified groups exceeds the TTCI MPO-wide average. The analysis considered each of the four population indicators (older adults, youth, people of color, and individuals in poverty).

Block groups with above-average representation in one or more categories were flagged for inclusion in the vulnerability analysis. Areas with multiple overlapping vulnerable populations were then classified based on the number of indicators for which they exceeded the MPO average:

- Block groups with two or more above-average indicators were designated as High Vulnerability Priority Areas.
- Those with one indicator above the average were designated as Moderate Vulnerability Priority Areas.

The Vulnerable Population Priority Area classification was used to evaluate the equity distribution of projects included in the TIP. Table 9 (next page) provides a breakdown of the population characteristics and the corresponding block group classifications.

Table 4.10: Vulnerable Population Priority Area

2023 ACS 5YRS ESTIMATES	**TTCI MPO**		**VULNERABLE POPULATION PRIORITY AREA**	
Area (Sq. Miles)	340.4	100%	35.97	11%
Total Population	99636	100%	16082	16%
Total Population White	91936	92%	14135	88%
Total People Of Color (Non-White)	7700	8%	1947	12%
Total Population Aged 65 And Above	22373	22%	3564	22%
Total Population Under 18 Years Age	18534	19%	3381	21%
Total Individuals Below Poverty Line	8172	8%	3092	19%

Maps in this chapter display each demographic group individually, as well as a combined map to illustrate overall priority areas across the TTCI MPO.

Summary of Analysis

In total, all projects within the TTCI area are located within or adjacent to a vulnerable population priority area. In summary, the TTCI's programmed 2026-2029 transportation projects are distributed throughout the TTCI planning area, with no population groups being disproportionately neglected or overexposed by these projects. The needs of minority and

low-income populations are being considered in the planning of future transportation improvements, ensuring safety, improving connectivity, and enhancing transit services.

Fiscal Year 2026 – 2029 TTCI MPO Call for Projects (CFP) includes the following types of projects within the MPO area:

- Road Commission: Road improvements, traffic signal upgrades, road reconstruction, road rehabilitation, etc.
- Transit: Carbon reduction initiatives, including the purchase of propane or electric transit buses.
- City: Road improvements (e.g., mill crown correction, overlays, ADA ramp upgrades) to enhance connectivity and improve transit services.
- MDOT Trunkline Projects: Traffic and safety improvements such as lane reconfiguration, shoulder corrugation installation, curve warning sign installations, freeway sign upgrades, and operations projects like road widening to construct turn lanes.

Figure 4.17: Age

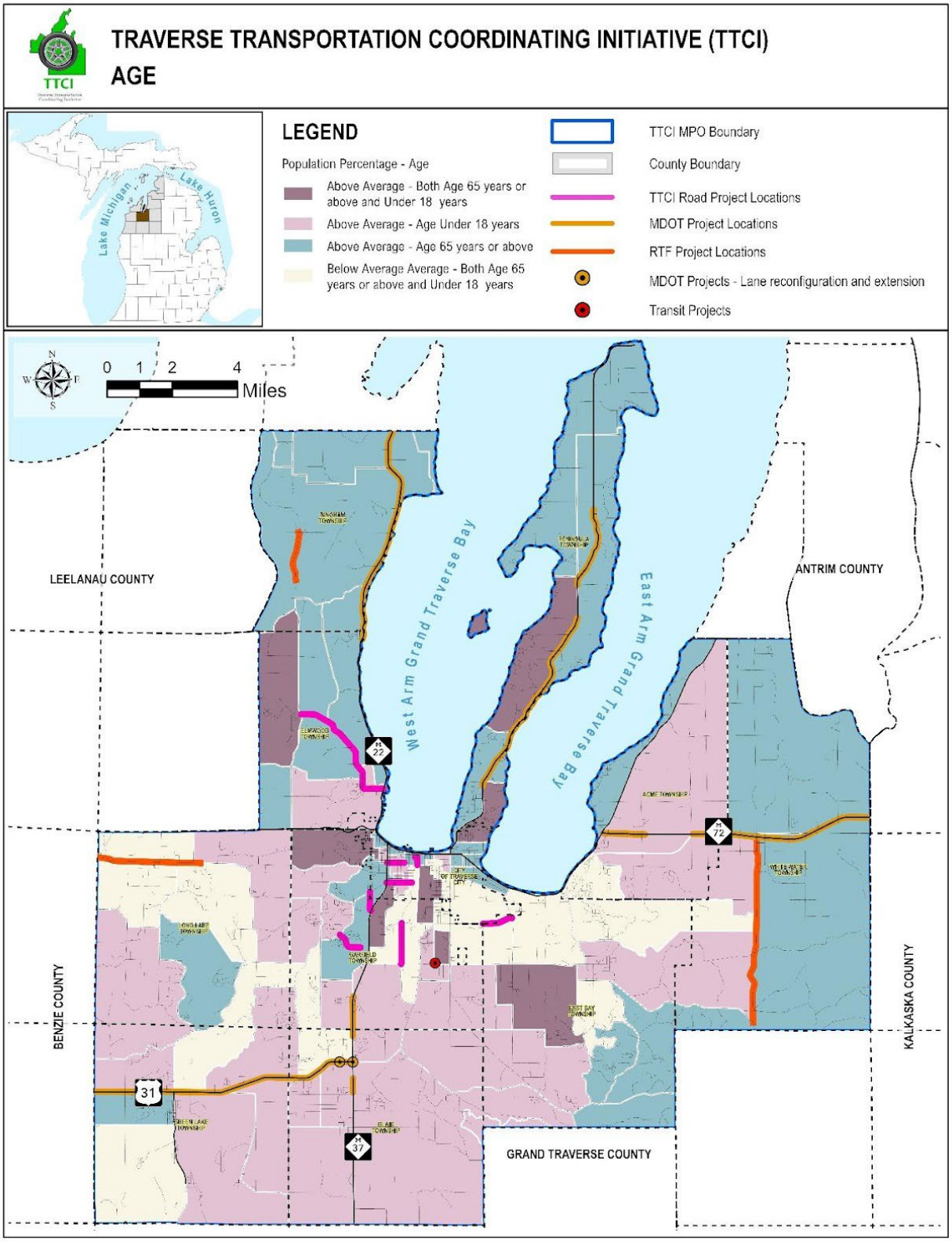


Figure 4.18: Race

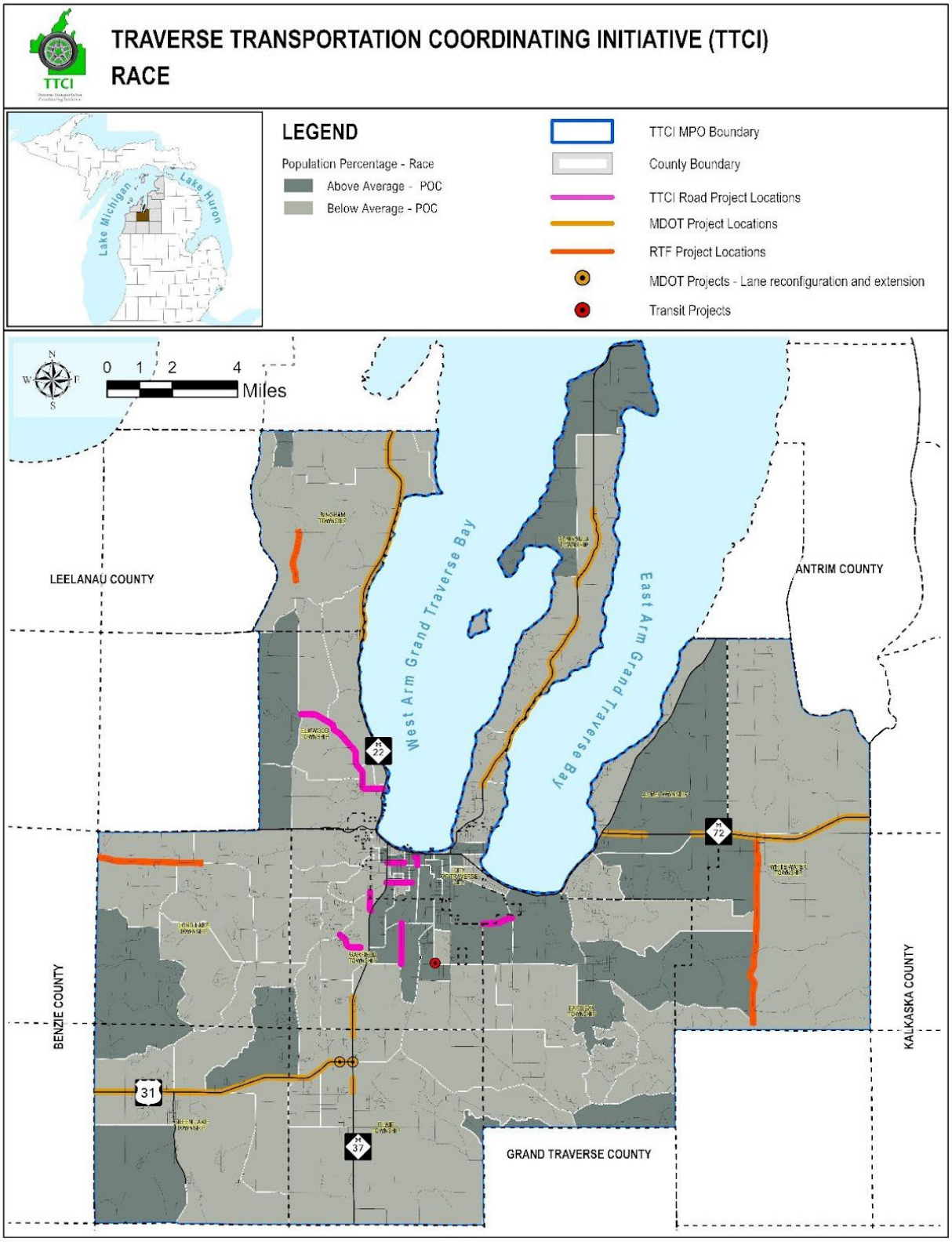


Figure 4.19: Income/Poverty

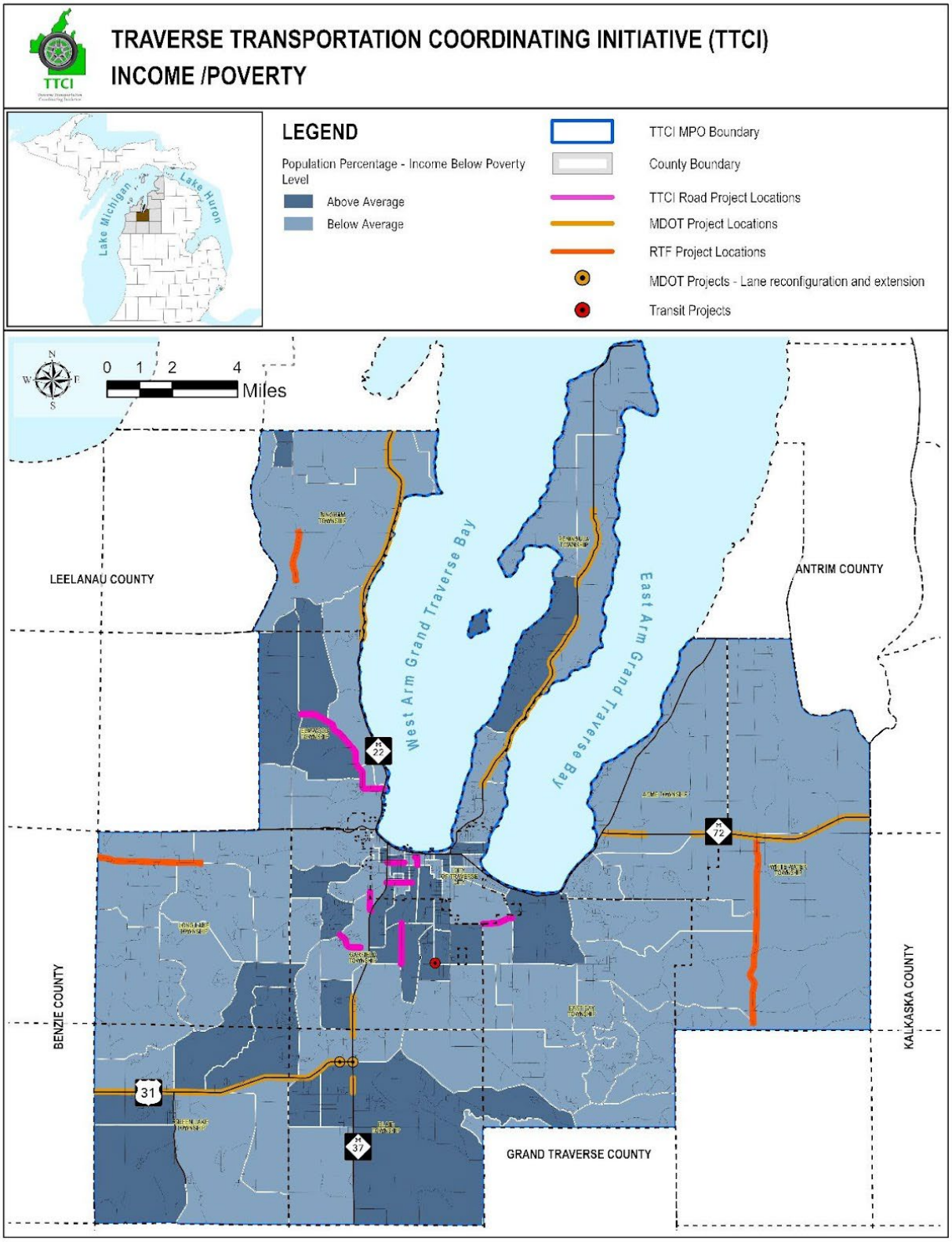
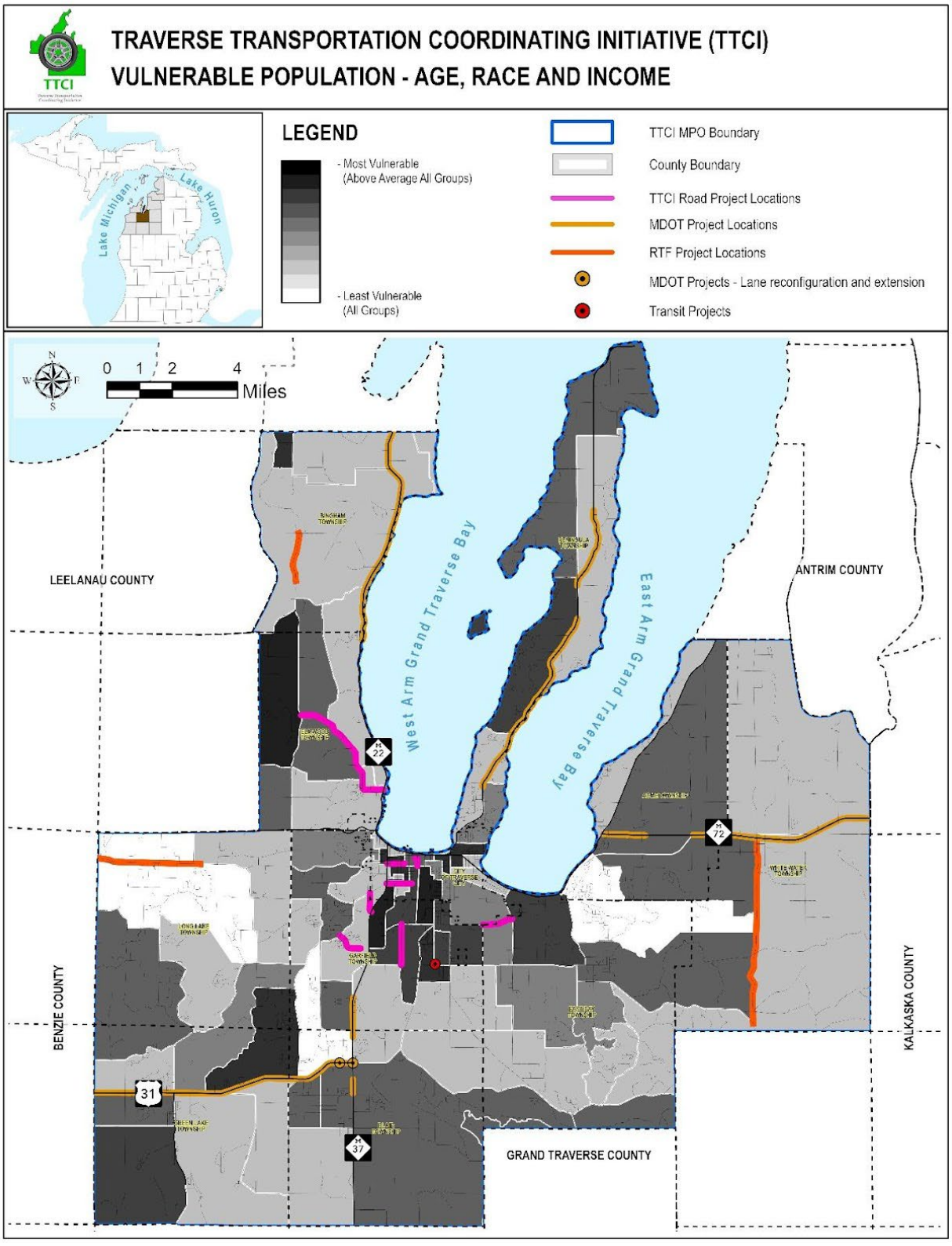


Figure 4.20: Vulnerable Population



CHAPTER 5: ENVIRONMENTAL CONSIDERATIONS

This chapter demonstrates various environmental resource considerations in reference to the projects listed in the TIP FY26-29. Key environmental features reviewed in this chapter include waterbodies, wetlands, forests, Land use Agricultural lands, endangered species, historic sites and structures, cemeteries, etc. While TTCI's priority is to develop and improve the region's transportation system, land use and transportation are closely intertwined. This section identifies and understands the changing land uses to guide transportation decisions over the next 25 years.

At present, most proposed projects consist of routine maintenance, road rehabilitation, or minor upgrades, with minimal ecological or cultural disturbance. Larger or more transformative projects will continue to follow applicable environmental review procedures under NEPA and related state regulations to ensure that the region's natural and cultural heritage is protected as the transportation system evolves.

Land Cover

The 2021 National Land Cover Database (NLCD) provides the most current and standardized land cover data across the United States. It uses a 16-class legend based on a modified Anderson Level II classification and a 30-meter resolution to identify land cover types and their changes over time. The TTCI Land Cover Map portrays 2021 information from the National Land Cover Database for the entire TTCI area.

The table below provides a breakdown of major land cover types within the MPO boundary, as illustrated in the accompanying map. It includes acreage and the percentage each land cover type represents of the total area.

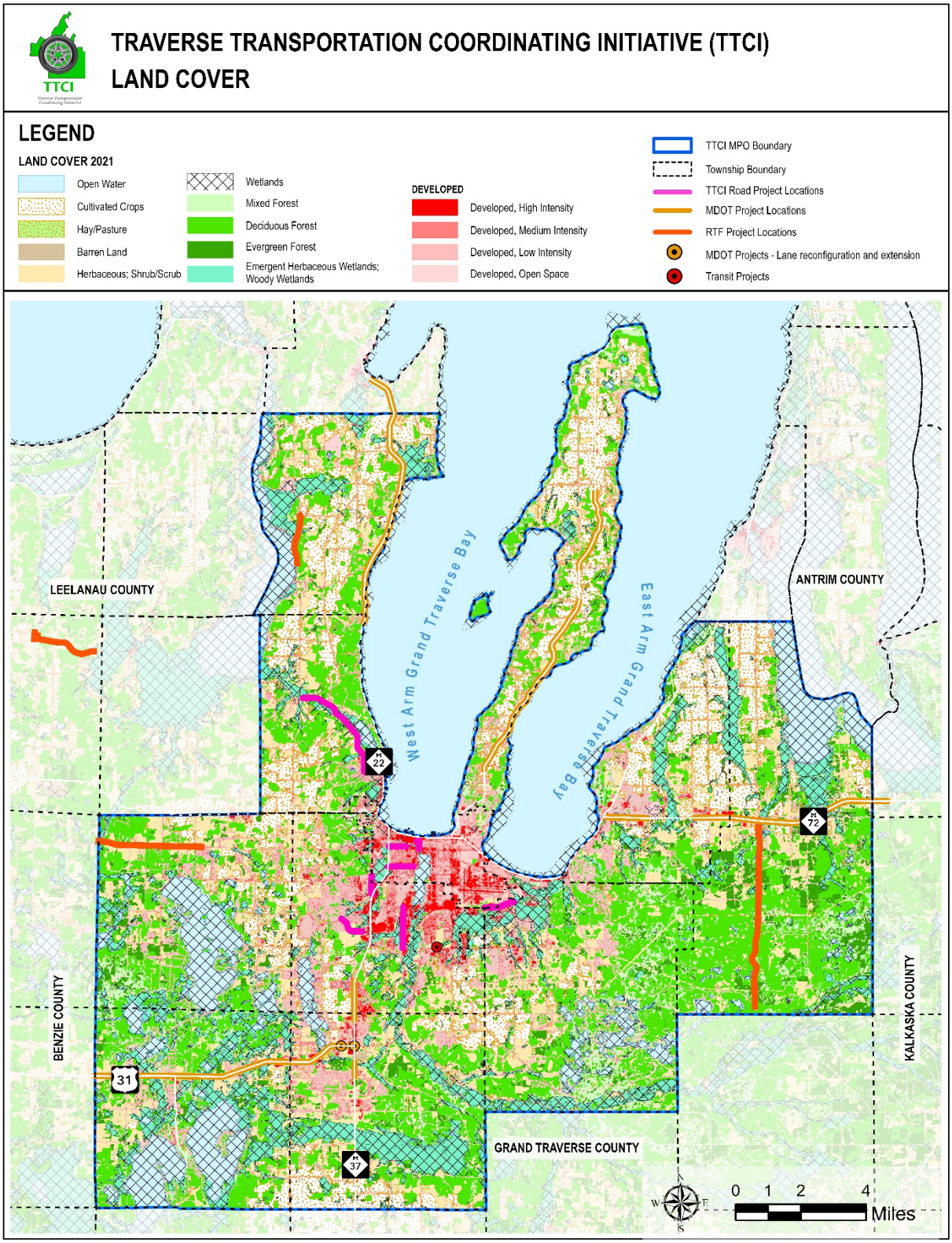
Table 5.1 – Land Coverage by Acres

Land Cover Percentage		
NCLD Type	**Area Acres**	**% of Area**
Cultivated Crops	36410.24	16.71%
Hay/Pasture	1253.75	0.58%
Barren Land	1361.73	0.63%
Decidius Forest	52939.98	24.30%
Emergent Herbaceous Wetlands and woody	24780.75	11.37%

wetlands		
Evergreen Forest	10339.33	4.75%
Herbaceous	22669.89	10.41%
Mixed Forest	10959.6	5.03%
Open Water	16607.73	7.62%
Shrub/Scrub	2718.19	1.25%
Developed High	2827.97	1.30%
Developed Medium	7405.9	3.40%
Developed Low	13391.16	6.15%
Developed Open Space	14202.4	6.52%

Developed land accounts for approximately 17.36% of the total area, while open water covers around 7.62%. A significant portion of the land is state-owned or designated for parks and recreational use, particularly near lakeshores and forested regions. These public and protected lands offer critical ecological services and recreational opportunities. Their presence should be carefully considered in transportation planning efforts to ensure environmental preservation and community access.

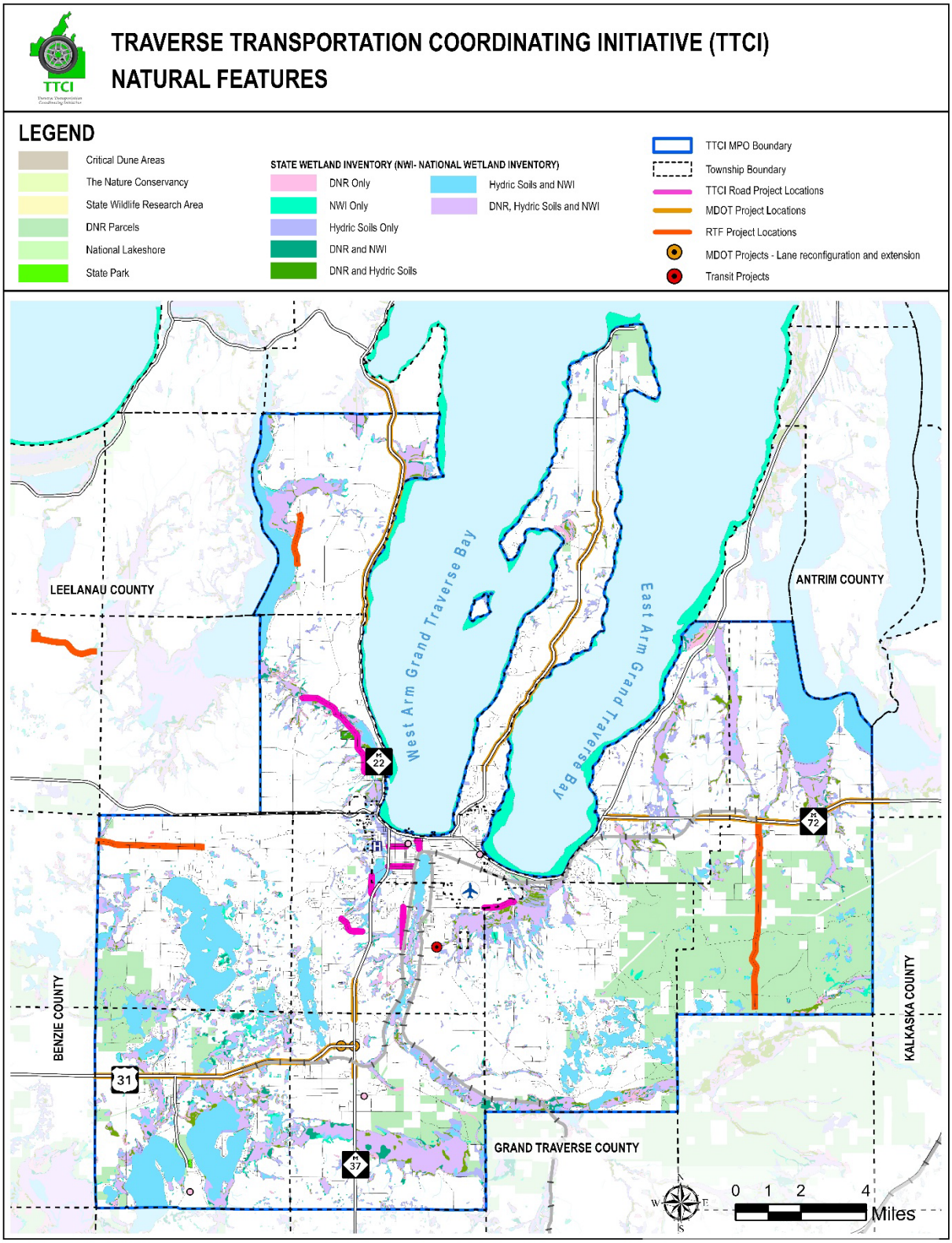
Figure 5.1 – Land Cover



Natural Features and State Wetland Inventory

The Natural Features Map highlights critical ecological zones within the TTCI area. This includes state-designated natural lands such as: Critical Dune Areas, State Parks, National Lakeshores, DNR Parcels, Nature Conservancy, and Wildlife Research Areas. The map also integrates the National Wetland Inventory (NWI), classifying wetlands by their environmental characteristics: Wetlands with DNR oversight, Areas with Hydric Soils only, Locations identified in the National Wetland Inventory (NWI). These features are critical in maintaining regional biodiversity, water quality, and habitat conservation.

Figure 5.2 – Natural Features



Endangered Species

Endangered species protection is a key consideration, even if direct impacts from TTCI projects are minimal. Current data from the Michigan Department of Agriculture and Rural Development and the Michigan Natural Features Inventory indicate:

Grand Traverse County

No federally endangered species currently listed

Leelanau County

1. Birds – Piping Plover *(Charadrius melodus)* - Endangered and Imperiled
2. Plants – Michigan Monkey-flower *(Mimulus michiganensis)* - Endangered and Critically Imperiled

Largely TTCI projects are not adversely affecting endangered species.

Endangered Species Sources*

https://www.michigan.gov/mdard/plant-pest/pesticides/pesticide-regulatory-info/endangered-species-by-county

https://mnfi.anr.msu.edu/species/description/14943/Michigan-monkey-flower

https://mnfi.anr.msu.edu/species/description/10978/Piping-plover

Historic Sites

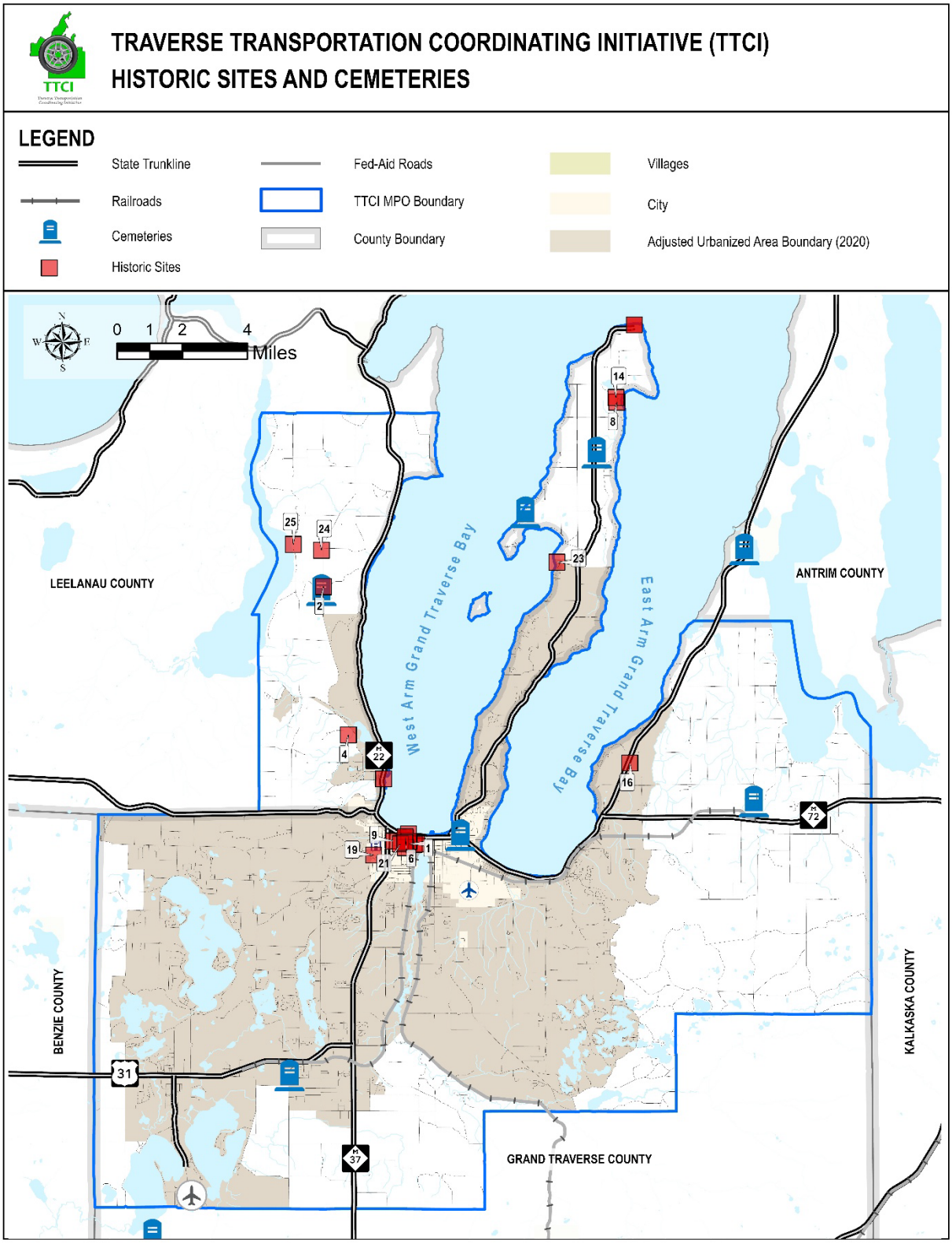
Historical and cultural resources are also a key environmental factor. Sites considered in this review were sourced from: National Register of Historic Places (NRHP), Michigan Historical Markers and Local Historical Societies. A total of 25+ sites and districts have been identified within the TTCI boundary, including historic bridges, homes, districts, courthouses, schools, and cultural landmarks.

Historic Sites Sources*

https://public-nps.opendata.arcgis.com/maps/18fe4b262473496a8ca7871a67d844ee/explore?location=44.782305%2C-85.566506%2C12.00

https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466

Figure 3.3 – Historic Sites and Cemeteries



Sr. No	Name	Type	Address	Township/City	County	Year	Sources	Notes
1	American Legion Memorial Bridge	Structure	S. Cass St. over Boardman R	Traverse City	Grand Traverse	1930	National Register of Historic Places	
2	Bingham District No. 5 Schoolhouse	Building	Jct. of Co. Rds. 618 and 633, Bingham Township	Bingham Twp	Leelanau		National Register of Historic Places	2 buildings
3	Boardman Neighborhood Historic District	District	Roughly bounded State and Webster Sts., and Railroad and Boardman Aves.	Traverse City	Grand Traverse	1800s	National Register of Historic Places	174 buildings
4	Campbell--DeYoung Farm	District	9510 E. Cherry Bend Rd.	Elmwood Twp	Leelanau		National Register of Historic Places	10 buildings, 4 sites
5	Central Neighborhood Historic District	District	Roughly bounded by 5th, Locust, Union, 9th, and Division Sts.	Traverse City	Grand Traverse		National Register of Historic Places	459 buildings
6	City Opera House	Building	106--112 Front St.	Traverse City	Grand Traverse	1891	National Register of Historic Places	
7	Congregation Beth Shalom	Building	311 Beth El Way	Traverse City	Grand Traverse	1885	DNR Historical Markers	
8	Dougherty Mission House	Building	18459 Mission Road	Peninsula Twp	Grand Traverse	1839	National Register of	3 buildings

Sr. No	Name	Type	Address	Township/City	County	Year	Sources	Notes
							Historic Places	
9	Friend's Meetinghouse	Building	208 S Oak	Traverse City	Grand Traverse	1894	DNR Historical Markers	
10	Grand Traverse Bay	District/Area	Clinch Park	Traverse City	Grand Traverse		DNR Historical Markers	
11	Grand Traverse County Courthouse	Building	328 Washington St	Traverse City	Grand Traverse	1900	DNR Historical Markers	
12	Greilickville	District/Area	13501 S. W. Bay Shore Dr	Traverse City	Leelanau		DNR Historical Markers	
13	Hannah and Lay Mercantile Building	Building	109 E Front St	Traverse City	Grand Traverse		DNR Historical Markers	
14	Hedden Hall "Old Mission Inn"	Building	18599 Old Mission Rd.	Peninsula Twp	Grand Traverse	1869	National Register of Historic Places	
15	Hesler Log House	Building	20500 Center Rd	Peninsula Twp	Grand Traverse	1850s	DNR Historical Markers	
16	John Pulcipher House	Building	7710 US 31 N	Acme Twp	Grand Traverse		National Register of Historic Places	

Sr. No	Name	Type	Address	Township/City	County	Year	Sources	Notes
17	Ladies Library Association/Building	Building	216 Cass St	Traverse City	Grand Traverse	1909	DNR Historical Markers	
18	Mission Point Lighthouse	Building	20500 Center Rd	Peninsula Twp	Grand Traverse	1870	Old Mission Point Historical Society	
19	Northern Michigan Asylum	District	Bounded by C & O RR tracks, Division and 11th Sts., Elmwood Ave., Orange and Red Drs.	Traverse City	Grand Traverse	1885	National Register of Historic Places	15 buildings
20	Novotny's Saloon	Building	423 S. Union St	Traverse City	Grand Traverse		DNR Historical Markers	
21	Perry Hannah House	Building	305 6th St.	Traverse City	Grand Traverse	1891	National Register of Historic Places	2 buildings
22	South Union Street Bridge	Structure	S. Union St. over Boardman R.	Traverse City	Grand Traverse	1931	National Register of Historic Places	
23	Stickney Summer House--Bowers Harbor Inn	Building	13512 Peninsula Dr	Peninsula Twp	Grand Traverse		National Register of Historic Places	
24	William Core and Margaret McFarland Farm	District	5946 S. Center Hwy	Bingham Twp	Leelanau		National Register of	14 buildings, 16 sites, 6

Sr. No	Name	Type	Address	Township/City	County	Year	Sources	Notes
							Historic Places	structures combined
25	William Core and Margaret McFarland Farm	District	5856 S. Lake Leelanau Dr.	Bingham Twp	Leelanau		National Register of Historic Places	14 buildings, 16 sites, 6 structures combined

CHAPTER 6: PUBLIC PARTICIPATION

Public Involvement Process

TTCI developed its MTP public involvement process in accordance with federal metropolitan transportation planning requirements (23 CFR 450.316), ensuring a transparent, inclusive, and iterative approach to community engagement. The process reflects TTCI's commitment to early and continuous engagement with the public, stakeholders, and partner agencies throughout the development of the 2050 MTP.

Guiding Principles

TTCI's public involvement process was guided by the following principles:

- Accessibility: Engagement opportunities were designed to be physically, digitally, and linguistically accessible to participants across age groups, income levels, and abilities.
- Transparency: Public outreach efforts were clearly communicated in advance, and all materials used in planning sessions were made publicly available online.
- Inclusivity: Targeted outreach sought to elevate voices from underserved and traditionally underrepresented populations, including rural residents, low-income households, older adults, and those with limited transportation access.
- Iterative Feedback: Public input was used not only to shape the plan's priorities but to inform its goals, strategies, and investment decisions at key stages of the planning process.

Engagement Tools and Strategies

TTCI's engagement strategy integrated both in-person and digital methods to maximize public participation. These included:

- Public Input Sessions: Held at highly trafficked and diverse venues such as libraries, parks, farmers markets, and workforce centers in summer 2023, these sessions utilized gallery walks, mapping exercises, and visual prompts to elicit qualitative input.
- Stakeholder Advisory Surveys: A survey was distributed to representatives from local jurisdictions and partner agencies from March through May 2025, gathering 66 responses that identified top transportation challenges, projects, and desired sub-plans.

- Online Engagement: Surveys and engagement announcements were published on the Networks Northwest website and shared through digital newsletters and email lists to ensure broad reach.
- North Region Active Transportation Plan (NRATP) Coordination: TTCI leveraged the extensive input gathered through the 2023–2024 NRATP process, which included both in-person events and a regional online survey with 443 respondents.
- Committee Meetings: Discussions with the TTCI Technical Committee and Policy Board in March 2025 provided key directional guidance and validation of public concerns. These meetings are open to the public and supported TTCI's interjurisdictional coordination mandate.

Federal Compliance

The TTCI public involvement process was fully aligned with federal requirements as outlined in 23 CFR 450.316 and the Fixing America's Surface Transportation (FAST) Act. This included providing adequate public notice of all involvement activities and offering early and continuous opportunities for public review and comment throughout the development of the MTP. TTCI explicitly considered and documented public input to shape the plan's goals and strategies, ensuring that community feedback informed decision-making. Special outreach efforts were made to engage individuals and groups traditionally underserved by the transportation system, including low-income and minority households. In addition, TTCI ensured that technical information, draft planning documents, and mapping tools were accessible to the public to promote transparency and facilitate meaningful participation.

Continuous Improvement

TTCI recognizes that successful public participation is not a one-time activity, but an ongoing commitment. As such, the agency will continue to review its Public Participation Plan periodically to ensure alignment with federal guidance and local best practices. TTCI is also exploring enhanced digital engagement tools and more robust performance measures to assess the effectiveness of its outreach efforts in future MTP updates.

Stakeholder Engagement Summary

The TTCI 2050 MTP was shaped by extensive stakeholder engagement across multiple platforms. In addition to broad public outreach, TTCI collaborated with local governments, planning professionals, transportation advocates, and agency partners to ensure the plan reflects a shared regional vision for transportation investment.

North Region Active Transportation Plan Input Sessions

Public engagement began with in-person input sessions held in July 2023 at key locations throughout the Metropolitan Planning Area (MPA), including the Traverse Area District Library, Hull Park, the Sara Hardy Farmers Market, and the Michigan Works! office in Traverse City. These sessions were designed to elicit early public feedback on transportation system performance and future priorities. Activities included mapping exercises, open dialogue, and a gallery walk using images from other communities, prompting participants to comment on transportation infrastructure features—such as sidewalks, roundabouts, transit amenities, bicycle lanes, and pedestrian safety.

Key themes included support for traffic calming, enhanced non-motorized facilities, safer crosswalks, and more inviting transit environments. The session at Michigan Works! offered a deeper engagement opportunity and was promoted as such, providing space for participants to voice both general concerns and project-specific ideas. Findings from these sessions directly informed the goals and priority strategies outlined in the MTP.

North Region Active Transportation Plan (NRATP)

Additional stakeholder input was gathered through the North Region Active Transportation Plan (NRATP), a comprehensive 21-county regional planning effort jointly led by Networks Northwest and the Northeast Michigan Council of Governments (NEMCOG). Although the NRATP focused exclusively on non-motorized transportation, its findings are highly relevant to this Metropolitan Transportation Plan—particularly for the Grand Traverse and Leelanau County portions of the TTCI Metropolitan Planning Area (MPA).

As part of the NRATP engagement process, in-person public input sessions were held across the region, including four events within the TTCI MPA:

- *Garfield Township – April 24, 2024*
- *East Bay Farmers Market – May 30, 2024*
- *Traverse City (SMART Commute Week) – June 7, 2024*
- *Leelanau County Government Center – October 18, 2023*

These sessions used a variety of hands-on tools to generate meaningful feedback. A “gallery walk” exercise featured visual prompts and images from other communities that illustrated both exemplary and problematic transportation conditions. Participants used sticky notes to react to images grouped by five key categories: sidewalks, roundabouts, buses, bike lanes, and traffic calming/pedestrian safety.

- **Sidewalks**: Attendees expressed strong support for sidewalks in walkable, human-scale environments. They favored denser development patterns with tree-lined sidewalks, street-level amenities, and buildings that create a sense of safety and comfort. A connected and well-maintained sidewalk network was seen as critical to encouraging more walking trips.
- **Roundabouts**: While not opposed to roundabouts in principle, participants emphasized that their scale and design must be context-appropriate. Safety for pedestrians and cyclists was a consistent concern, especially at larger or multi-lane roundabouts.
- **Buses**: Attendees supported increased transit usage but stressed the need for improved comfort and usability. Suggestions included installing more covered shelters, adding benches, and ensuring bike racks are consistently available on buses to facilitate multimodal trips.
- **Bike Lanes**: While respondents supported dedicated bike infrastructure, they raised concerns about on-street lanes that offer minimal protection from vehicles. They expressed a preference for separated or off-road trails that enhance safety and usability, especially given northern Michigan's seasonal limitations on biking.
- **Traffic Calming & Pedestrian Safety**: Participants widely supported traffic calming strategies such as speed reductions and enhanced crosswalk visibility. Specific praise was given to 8th Street and 14th Street in Traverse City, which were cited as examples of effective pedestrian-oriented street design. Road design that matches desired speed limits was seen as a benefit to all users—drivers, pedestrians, and cyclists alike.

Each input session also included interactive mapping activities, where participants were asked to identify areas of concern and places where infrastructure was working well. These discussions provided geographically grounded feedback that helped shape a regional matrix of priorities in the final NRATP. Key findings from the mapping exercises included:

- **South Airport Road**, **Division Street**, and **14th Street** were identified as particularly dangerous for pedestrians and cyclists due to a lack of cohesive sidewalk and non-motorized connections.
- **Grandview Parkway**, **Peninsula Drive**, and **South Airport Road** were cited as corridors where slower traffic speeds would enhance safety and livability.

- Some participants advocated for rerouting or reconfiguring **South Airport Road** to reduce travel speeds and allow the corridor to better serve adjacent residential land uses.
- While the **downtown Traverse City** area was recognized as relatively bike-friendly, participants pointed out the lack of safe, continuous connections to outlying neighborhoods and regional destinations.

In addition to the in-person events, the NRATP also included a widely distributed online survey, which remained open from September 2023 through June 2024. The survey received 443 total responses, with 108 from Grand Traverse County alone. It featured several open-ended questions that offered deeper insights into user experience and network limitations.

Respondents were asked:

- Where do you feel most comfortable using non-motorized transportation?
- Where do you feel least comfortable using non-motorized transportation?
- Specifically, what about the area you described as uncomfortable made you feel that way?

Key survey findings include:

- **Most comfortable locations**: Grand Traverse County residents identified the TART Trail, Boardman River Loop, and downtown Traverse City as the most comfortable places to walk or bike. Leelanau County residents highlighted the Leelanau Trail, state park trails, and county roads with wide shoulders.
- **Least comfortable locations**: In Grand Traverse County, concerns centered on Franke Road, Silver Lake Road, Division Street, Garfield Road, Veterans Drive, US-31, Grandview Parkway, 8th Street, 14th Street, 4-Mile Road, 5-Mile Road, and South Airport Road. In Leelanau County, the M-22 corridor—particularly near Cherry Bend Road and Suttons Bay—was frequently cited.
- **Top concerns**: Across both counties, common issues included high traffic volumes, excessive speeds, lack of safe crossings, inattentive drivers, and inadequate separation from vehicles. Participants called for more robust trail networks, safer roadway crossings, and designs that prioritize vulnerable users.

The insights gathered through the NRATP process were used extensively to shape the TTCI 2050 MTP's non-motorized system strategies, investment priorities, and regional connectivity goals. The detailed feedback from both mapping and survey responses

provided a critical foundation for understanding how existing infrastructure is experienced by users—and where improvements will deliver the greatest benefits for safety, accessibility, and multimodal mobility.

TTCI Technical Committee and Policy Board Discussions

In addition to broad public outreach, TTCI facilitated focused engagement with key stakeholders and decision-makers through dedicated discussions with its Technical Committee and Policy Board in March 2025. These meetings provided critical input from local governments, transportation agencies, and planning professionals, directly informing the development of goals, investment strategies, and implementation priorities for the MTP.

March 13, 2025 – Technical Committee Input

At its March 13 meeting, the TTCI Technical Committee identified major regional challenges and opportunities across several thematic areas:

- **Complete Networks & Multimodal Connectivity**: Committee members supported shifting from "Complete Streets" to "Complete Networks" to better reflect a regional approach that includes sidewalks, trails, crossings, and transit linkages. A conceptual non-motorized map was proposed to coordinate connections within the urbanized area, with funding opportunities tied to network-level thinking.
- **Transportation Safety**: Concerns were raised about high-crash areas, such as stretches near the Grand Traverse Resort and intersections like M-72 at Bates Road. Several local plans and placemaking strategies already include safety-driven design principles, and there was consensus that safety improvements should be prioritized systemwide.
- **Land Use & Economic Integration**: Stakeholders emphasized that transportation investment should reflect where growth is occurring and support higher-density development. Master Plans and zoning ordinances in several communities already incorporate active transportation principles and connectivity requirements.
- **Infrastructure Resilience**: Committee members identified areas vulnerable to congestion or environmental disruption, including crossings like S. Airport Road over the Boardman River. Wetlands, stormwater capacity, and floodplain constraints were raised as key planning considerations.
- **Cost Allocation**: Participants noted challenges in cost-sharing across jurisdictions and expressed concern that developers are often expected to fund significant infrastructure at later stages of development. Suggestions were made for more coordinated MPO-level strategies to manage costs and prioritize investments.

- **Trail Systems & Year-Round Use**: Several members advocated for making trail networks viable year-round, including the possibility of snowplowing for high-use areas. There was also discussion about the potential of e-bikes to increase access in hilly terrain, particularly in townships with more rural or topographically varied settings.
- **Transit & Travel Demand Modeling**: Transit was emphasized as a vital part of long-range planning and should be incorporated at early stages. MDOT presented the MPO-specific Travel Demand Model under development to forecast system performance and inform strategic investments.

March 25, 2025 – Policy Board Input

At the March 25, 2025 meeting, the TTCI Policy Board—comprising elected officials, local representatives, and agency partners—engaged in a facilitated discussion to identify core priorities and challenges for the 2050 MTP. The conversation reinforced and expanded upon the themes raised by the Technical Committee earlier in the month. The following seven priority areas emerged across jurisdictions:

1. **Safety & Intelligent Transportation Systems (ITS)**
   Nearly all jurisdictions emphasized traffic safety as their top concern. Specific issues included high-speed corridors, dangerous intersections (such as M-72 at Bates Road and Hammond at 4 Mile Road), and pedestrian vulnerability, especially in school zones and along state highways. Board members expressed strong interest in implementing roundabouts and other traffic-calming measures, along with improved coordination and modernization of traffic signal systems.
2. **Complete Networks / Active Transportation**
   There was broad and enthusiastic support for continuing to expand the region's non-motorized infrastructure. Priorities included sidewalks, shared-use trails, and safe pedestrian crossings—particularly those connecting residential areas to schools, workplaces, and transit stops. Many jurisdictions emphasized the need for seamless township-to-township connections and regional corridor continuity. Barriers identified included resident resistance (often due to cost concerns), right-of-way limitations, and challenges in adapting infrastructure on legacy corridors.
3. **Economic & Land-Use Integration**
   Multiple members stressed the need to align transportation planning with regional land use and economic development strategies. Growth management was a recurring theme, with concerns that new development was increasing transportation demand in areas lacking sufficient infrastructure. Members

expressed a strong interest in targeting transportation investments toward activity centers, workforce housing areas, and commercial hubs. Transit planning was also discussed in the context of workforce accessibility and commuting patterns.

4. **Seasonal Tourism Impacts**
   The seasonal influx of visitors during the summer months was acknowledged as a major factor influencing traffic volumes and transportation system performance. Board members highlighted concerns related to congestion, safety, and access in tourist-heavy areas. Several emphasized the importance of accounting for peak-season demand in long-range planning and infrastructure design.

5. **Asset Management & Maintenance**
   The preservation of existing infrastructure emerged as a high priority. Jurisdictions pointed to pavement degradation, stormwater capacity issues, and utility conflicts—particularly in urbanized areas. Freeze/thaw cycles were noted as a cause of rapid deterioration in both roadways and subsurface systems. The need for a coordinated and fiscally constrained asset management strategy was a key takeaway.

6. **Growth & Housing Pressure**
   Several jurisdictions noted that new development is outpacing the capacity of existing transportation infrastructure. This has led to concerns about long-term traffic congestion, roadway safety, and infrastructure adequacy in fast-growing areas. Board members recommended that transportation investments be guided by current and forecasted land use patterns, and that coordinated planning tools be used to anticipate growth before it creates critical capacity issues.

7. **Service & Accessibility**
   The Board recognized that in some communities, up to 30% of the population lacks access to a personal vehicle. Members called for more inclusive transportation planning that serves users across all ages, income levels, and travel modes. This included support for public transit expansion, improved pedestrian access, and safe, multimodal connections to essential services and employment.

TTCI MPO Stakeholder Survey

To supplement public engagement efforts and ensure the MTP reflected the insights of local leadership, Networks Northwest administered a stakeholder survey targeting representatives from jurisdictions and agencies within the TTCI Metropolitan Planning Area (MPA). The survey was available from March 6, 2025 to May 2, 2025, and was designed to

gather long-range perspectives on regional transportation challenges, priorities, and desired planning initiatives.

A total of 66 individuals responded to the survey, including 24 members of the TTCI Policy Board and Technical Committee. The remaining participants represented staff and officials from municipalities, road commissions, transit providers, and planning entities across Grand Traverse and Leelanau Counties. The survey consisted of both ranking and open-ended questions, which invited respondents to reflect on issues facing their own communities as well as the region as a whole.

The questions posed in the survey were as follows:

- What are the top three transportation challenges your community or agency will face in the next five years?
- What are the top three transportation challenges for the entire TTCI area over the next five years?
- What are the top three transportation projects you would like to see completed in your community or agency within the next five years?
- What are the top three transportation projects you would like to see completed in the TTCI area within the next five years?
- What region-wide transportation sub-plans should be developed in the next five years for inclusion in the next MTP? *(Participants ranked priorities.)*
- What is one action TTCI could take in the next five years that would make you feel transportation planning efforts have been successful?

Key Findings:

The most commonly cited transportation challenges—both at the local and regional scale—were as follows:

- **Traffic Congestion and Vehicle Volume**: Respondents noted increasing delays during peak hours, especially along key corridors like South Airport Road, Division Street, and M-72.
- **Aging Infrastructure and Maintenance**: There was strong consensus around the need to reinvest in pavement, bridges, and drainage systems, particularly in areas affected by freeze/thaw deterioration.

- **Non-Motorized and Multimodal Safety**: Many expressed concern for pedestrian and bicycle safety, calling out high-speed corridors, incomplete networks, and a lack of safe crossings.
- **Public Transit Limitations**: Respondents identified the need to expand and modernize services offered by BATA, including improved frequency, coverage, and infrastructure like bus shelters.
- **Funding and Policy Constraints**: Several participants acknowledged limitations related to funding availability, coordination across jurisdictions, and regulatory barriers that slow project delivery.

When asked to identify the **top transportation projects** they would like to see advanced over the next five years, several themes emerged:

- **East-West Connectivity and Traffic Calming**: There was a strong desire to improve cross-regional access, particularly through the implementation of traffic-calming strategies and additional east-west connections.
- **Non-Motorized Network Expansion**: Participants prioritized trail extensions and safer connections beyond downtown Traverse City, including support for projects such as the Nakwema Trailway and Cherry Bend Road improvements.
- **Pedestrian Infrastructure Enhancements**: Many advocated for improved crosswalk visibility, curb extensions, and reduced speed zones to enhance walkability, especially near schools and commercial areas.
- **Access Management**: South Airport Road was frequently identified as a corridor requiring coordinated access management strategies to address turning conflicts and improve overall safety.
- **Transit Service Improvements**: Participants supported greater investment in the Bay Area Transportation Authority (BATA), including efforts to increase route efficiency, ridership, and integration with other modes.

Sub-Plan Priorities:

When asked to rank future sub-plans for potential inclusion in the next MTP, respondents expressed the following preferences:

- **Complete Streets/Complete Networks** was the most highly ranked topic, with 12 respondents selecting it as their top priority and 6 ranking it second. This reflects a strong regional interest in multimodal corridor design and universal accessibility.

- **Resilience Planning** emerged as a mid-range priority, with 20 respondents placing it third or fourth. Concerns about infrastructure durability, climate-related events, and stormwater management were likely contributing factors.
- **Economic and Land Use Integration** received more mixed support. Three respondents ranked it as their highest priority, with others placing it second (5), third (4), or fourth (9), indicating that while important, it may be viewed as more context-dependent.

Indicators of Success:

In response to the open-ended question—"What is one action TTCI could take in the next five years that would make you feel transportation planning efforts have been successful?"—responses varied widely, yet reflected meaningful expectations:

- **Measurable Progress**: Many participants emphasized the need for clearly defined goals and metrics by which to assess MTP implementation, suggesting the adoption of performance indicators and public reporting mechanisms.
- **Visible Infrastructure Outcomes**: Others identified specific actions such as new sidewalks, traffic signal upgrades, protected bike lanes, and safer intersections as tangible proof of success.
- **Multimodal Expansion**: Several respondents pointed to expanded transit, improved bicycle access, and integrated mobility options as key indicators of regional progress.
- **Ongoing Public Engagement**: A smaller but notable group emphasized the value of continued stakeholder involvement, transparent planning, and regular communication to ensure accountability and trust in the process.

Agency Consultation

In developing the TTCI 2050 Metropolitan Transportation Plan (MTP), staff drew upon a combination of direct consultation and related planning efforts to ensure broad input was reflected in the final document. Where time and resource constraints limited the ability to conduct in-depth, standalone outreach with all stakeholder groups, TTCI incorporated public and agency feedback gathered through concurrent initiatives such as the North Region Active Transportation Plan (NRATP), the Community Economic Development Strategy (CEDS), and regional transportation studies. This approach helped supplement the MTP's public involvement process and strengthened the integration of cross-sector perspectives.

Consultation with agencies was guided by the requirements of 23 CFR 450.316(b), which call for Metropolitan Planning Organizations (MPOs) to coordinate with agencies responsible for transportation, land use, environmental protection, conservation, economic development, freight, and public health, among others. While TTCI's MTP development was subject to an accelerated timeline due to the MPO's recent designation and associated planning deadlines, every effort was made to engage relevant partners and regulatory agencies in a manner consistent with federal guidance.

Throughout the planning process, TTCI's Technical Committee and Policy Board received regular updates and were actively involved in reviewing draft elements, confirming regional goals, and prioritizing transportation strategies. Input from these two advisory bodies—composed of representatives from local governments, transportation providers, road commissions, and planning professionals—was integral to shaping the plan's direction and ensuring it reflected the unique needs of the Traverse City-Garfield Urbanized Area.

Consultation also occurred through direct outreach and participation in collaborative meetings. This included email communications, virtual calls, and invitations to provide feedback through the TTCI MPO Stakeholder Survey. A notable opportunity for cross-agency collaboration took place during the Community Economic Development Strategy (CEDS) sessions held on October 3, 2024, and February 20, 2025. These meetings convened a broad group of local officials, planners, economic development professionals, and environmental stakeholders, many of whom contributed feedback relevant to long-range transportation planning.

TTCI maintained a consultation contact list to support transparency and documentation of outreach activities. This list included the following agencies and partners:

Federal and State Agencies

- Federal Highway Administration (FHWA)
- Michigan Department of Transportation (MDOT)
- MDOT Northwest Region Traverse City Service Center
- Michigan Department of Environment, Great Lakes, and Energy (EGLE)
- Michigan Department of Natural Resources (MDNR)

Transportation Providers and Operators

- Bay Area Transportation Authority (BATA)
- Northwest Regional Airport Authority (Cherry Capital Airport)

Local Governments and Road Commissions

- Grand Traverse County Road Commission

- Leelanau County Road Commission
- City of Traverse City
- Grand Traverse County
- Leelanau County
- Acme Township
- Bingham Township
- Blair Township
- Charter Townships of East Bay, Elmwood, Garfield, and Long Lake
- Green Lake Township
- Peninsula Township

Community and Tribal Organizations

- Traverse Area Recreation and Transportation Trails (TART Trails)
- Grand Traverse Band of Ottawa and Chippewa Indians
- Traverse City Area Public Schools (TCAPS)
- Northwestern Michigan College
- Traverse Area District Library
- Traverse Connect (Regional Economic Development)
- Groundwork Center for Resilient Communities

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Title VI Considerations

The Traverse Transportation Coordinating Initiative (TTCI) ensures compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, or national origin in programs and activities receiving federal financial assistance. As a Metropolitan Planning Organization (MPO), TTCI follows all federal regulations governing public participation, including those found in 23 CFR 450.316 and related guidance from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

Throughout the development of the 2050 Metropolitan Transportation Plan (MTP), TTCI provided early and continuous opportunities for public involvement. These opportunities were designed to offer fair access to the planning process and to allow all individuals and organizations within the Metropolitan Planning Area (MPA) to provide input. Public notices

were issued in advance of all outreach events, and multiple meeting formats were used to facilitate broad participation.

TTCI also made a good-faith effort to reach individuals and groups who may have limited access to traditional participation methods. Meetings were held at accessible locations such as libraries, parks, public buildings, and community service centers. These venues were selected to encourage participation by a wide range of residents and local officials. TTCI used plain-language materials, visual aids, and interactive activities to support public understanding of the planning process.

In accordance with Executive Order 13166, TTCI is prepared to provide language assistance services for individuals with limited English proficiency (LEP) upon request. Although no such requests were received during this planning cycle, TTCI maintains procedures to address language access if needed in future outreach efforts.

All comments submitted during the public engagement process were documented and considered in the preparation of this MTP. TTCI remains committed to upholding the legal requirements of Title VI and will continue to ensure that its public involvement activities are conducted in a nondiscriminatory manner.

CHAPTER 7: VISION, GOALS, AND OBJECTIVES

Vision Statement

The Traverse Transportation Coordinating Initiative envisions a safe, efficient, and connected regional transportation system that supports economic vitality, enhances mobility for all users, and preserves the natural and community character of Northwest Michigan. Through collaboration, data-driven planning, and responsible investment, TTCI seeks to create a resilient and multimodal network that meets the needs of today while preparing for the opportunities of tomorrow.

Planning Goals

The TTCI 2050 MTP is grounded in a comprehensive public engagement process and guided by the collective input of residents, stakeholders, and agency partners. From the earliest input sessions to committee-led discussions and surveys, the planning process consistently highlighted key themes that informed the development of the MTP's primary goals. These goals reflect the region's transportation priorities and offer a unifying vision for regional investment and coordination.

1. **Improve Transportation Safety** Ensure safe travel for all users—motorists, bicyclists, pedestrians, and transit riders—by reducing traffic crashes, enhancing infrastructure design, and promoting behavior-based safety initiatives.
2. **Preserve and Maintain Existing Infrastructure** Extend the lifespan of transportation assets through proactive maintenance, rehabilitation, and replacement strategies, while optimizing the use of limited resources.
3. **Enhance Multimodal Connectivity** Promote a seamless and accessible network for all users by expanding non-motorized and transit infrastructure, improving intermodal connections, and closing critical gaps.
4. **Support Economic Vitality and Land Use Integration** Coordinate transportation investment with land use and development patterns to improve access to jobs, education, and services, and to support thriving commercial, residential, and industrial areas.
5. **Foster Resilient and Reliable Transportation Systems** Design and implement transportation improvements that account for environmental constraints, seasonal variability, emergency access needs, and long-term system adaptability.

6. **Promote Efficient and Effective Operations** Use data and technology to manage congestion, optimize traffic flow, and improve system efficiency, including the integration of Intelligent Transportation Systems (ITS) and signal modernization.
7. **Expand Access to Mobility Options** Ensure equitable and inclusive transportation by addressing the needs of transit-dependent populations and underserved communities, and by enhancing access to safe and affordable alternatives to driving.
8. **Coordinate Regional Transportation Planning** Facilitate collaboration among municipalities, agencies, and stakeholders to align transportation priorities and improve implementation of shared regional strategies.

Supporting Objectives and Strategies

To implement the regional goals identified in the MTP, TTCI has developed a set of supporting objectives and strategies. These translate the high-level vision into targeted actions that address specific needs, challenges, and opportunities identified through public input and data analysis. The objectives are intended to guide project selection, funding decisions, and coordination efforts over the life of the plan.

Planning Goal	Supporting Objectives and Strategies
Improve Transportation Safety	• Identify and prioritize high-crash corridors and intersections for safety improvements • Incorporate design features such as roundabouts, protected crossings, and traffic calming
Preserve and Maintain Existing Infrastructure	• Use asset management systems to evaluate pavement and bridge conditions • Prioritize funding for maintenance and rehabilitation projects in the TIP • Coordinate utility upgrades with roadway improvements to maximize efficiency
Enhance Multimodal Connectivity	• Expand non-motorized facilities such as sidewalks, trails, and bike lanes • Complete regional trail corridors and strengthen township-to-township connectivity • Promote transit stop enhancements and first-mile/last-mile solutions

Support Economic Vitality and Land Use Integration	• Align transportation investment with master plans and zoning to support compact, mixed-use development • Improve access to regional economic centers, including industrial zones and downtown districts • Prioritize transportation improvements that support workforce mobility and housing access
Foster Resilient and Reliable Transportation Systems	• Address freeze-thaw impacts, flooding, and stormwater management through project design • Plan for alternate routes and redundancy to enhance emergency response • Include natural features in long-term infrastructure planning
Promote Efficient and Effective Operations	• Modernize traffic signal systems and promote region-wide ITS deployment • Use travel demand modeling and data analytics to identify bottlenecks and evaluate system performance • Collect and analyze data to better understand traffic behavior during peak seasonal traffic. • Encourage coordinated access management on high-traffic corridors
Expand Access to Mobility Options	• Partner with BATA to ensure transit frequency and coverage. • Provide infrastructure such as shelters, benches, and ADA-compliant crossings at transit stops • Support safe pedestrian and bicycle access to transit and essential services
Coordinate Regional Transportation Planning	• Hold regular meetings of TTCI committees and working groups to coordinate implementation • Align TTCI strategies with state and regional plans such as Michigan Mobility 2050 • Foster partnerships with school districts, tribal nations, business groups, and other stakeholders

These objectives and strategies reflect the consensus and direction expressed through robust stakeholder engagement and provide a roadmap for achieving the TTCI region's long-term transportation vision.

CHAPTER 8: FINANCIAL STRATEGY AND PROJECT PRIORITIZATION

This chapter outlines the Traverse Transportation Coordinating Initiative's (TTCI) approach to funding strategies, investment priorities, and project selection for the Metropolitan Transportation Plan (MTP). It synthesizes information from TTCI's first approved TIP (FY 2026–2029) and documents known funding constraints, strategic priorities, and illustrative needs that shape long-range transportation planning.

Financial Context and Constraints

TTCI's financial strategy is rooted in the principles of fiscal constraint as required under federal law. As a newly established MPO, TTCI's current financially constrained project list is derived entirely from the FY 2026–2029 Transportation Improvement Program (TIP). That TIP represents TTCI's only set of short-term (4-year) programmed investments, all of which are matched to reasonably expected federal, state, and local revenue sources.

At this time:

- **Short-Term Investments (FY 2026–2029)** are established via the approved TIP and include projects across roadways, transit, and state-managed corridors.
- **Medium- and Long-Term Investments (FY 2030–2050)** have not yet been identified by local Act 51 agencies. No fiscally constrained project list currently exists beyond 2029.
- **Illustrative Visionary Projects** are limited to a small subset of known needs referenced in the North Region Active Transportation Plan (NRATP) and illustrative project section of the TIP. No exhaustive regional list is yet available.

Investment Strategy and Program Areas

The foundation of TTCI's investment approach is built on the following programmatic areas:

- **System Preservation**: Emphasizing pavement and bridge condition improvements that align with TAMC and MDOT performance targets.
- **Multimodal Accessibility**: Supporting transit and nonmotorized investments, including complete streets, bike/ped pathways, and mobility hubs.
- **Safety and Operations**: Prioritizing intersections, lane reconfigurations, traffic control devices, and public safety projects with proven countermeasures.

- **Carbon Reduction and Emissions Mitigation**: Including transit fleet modernization, active transportation enhancements, and congestion mitigation.
- **Regional Economic Connectivity**: Supporting projects that improve freight movement, commercial corridors, and rural access to the state and interstate systems.

Project Prioritization Process

TTCI's project selection and prioritization process is governed by the MPO's Technical Committee and Policy Board, using a transparent, criteria-based scoring system aligned with the MTP goals. The prioritization logic includes:

- Asset condition (pavement/bridge/transit)
- Equity and access for vulnerable populations
- Readiness and deliverability
- Regional significance and connectivity
- Consistency with MTP and NRATP

While this process has been fully implemented for the short-term TIP projects, future MTP updates will expand it to include medium- and long-term priorities once they are submitted by Act 51 agencies.

Available Highway and Transit Funding

The majority of federal transportation funding originates from the federal motor fuel tax, currently set at 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel. These revenues are deposited in the Highway Trust Fund (HTF), which allocates funds to both the Federal-Aid Highway Program and the Mass Transit Account. In recent years, the HTF has required substantial transfers from the federal General Fund due to declining fuel tax revenues, a trend driven by rising fuel efficiency and the growing use of electric vehicles.

Federal highway funds are apportioned to states based on formulas established by law, with a portion subsequently allocated to local agencies. Transit funds are similarly distributed through formula programs administered by the Federal Transit Administration (FTA).

Michigan's transportation revenues primarily come from state motor fuel taxes (currently 31 cents per gallon) and vehicle registration fees, which feed into the Michigan Transportation Fund (MTF) and Comprehensive Transportation Fund (CTF). Local transportation funding, while critical, varies significantly across jurisdictions and is typically derived from transportation millages, special assessment districts, and other

mechanisms. Due to this variability, TTCI's financial planning focuses on federal and state revenue sources that are more predictable and quantifiable.

Sources of Federal Highway Funding

- Surface Transportation Block Grant Program (STBG) – Administering Agency: FHWA (administered by MDOT). Funds construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, and/or operational improvements to federal-aid highways and replacement, preservation, and other improvements to bridges on public roads. Michigan's STBG apportionment from the federal government is split, with slightly more than half allocated to areas of the state based on population and half that can be used throughout the state. A portion of STBG funding is reserved for rural areas. STBG can also be flexed (transferred) to transit projects. For the purposes of this TIP, STBG translates into STP Small MPO, STP Small Urban, STP Rural/Flexible, and STP Flexible (Bridge).

- Transportation Alternatives Program (TAP) – Administering Agency: FHWA (administered by MDOT). Funds can be used for a number of activities to improve the transportation system environment, such as non-motorized projects, preservation of historic transportation facilities, outdoor advertising control, vegetation management in rights-of-way, and the planning and construction of projects that improve the ability of students to walk or bike to school. Funds are split between the state and various urbanized areas based on population.

- Rail-Highway Grade Crossings – Administering Agency: FHWA (administered by MDOT). Project Type: Safety improvements at railroad crossings, such as installing or upgrading signals, gates, or crossing surfaces. MDOT selects and manages these projects statewide; improvements can occur on both state trunklines and local roads. Because this is a statewide program, MPOs do not control its distribution within their area.

- National Highway Freight Program (NHFP) – Administering Agency: FHWA (administered by MDOT). Project Type: Highway projects that improve freight movement on the National Highway Freight Network (NHFN), such as upgrades to important freight corridors, interchanges, or freight bottlenecks. Projects must be consistent with the State's Freight Plan and located on the designated NHFN. Michigan operates this as a statewide program in cooperation with regional MPO input.

- Carbon Reduction Program (CRP) – Administering Agency: FHWA (through MDOT). Project Type: Projects aimed at reducing on-road carbon dioxide emissions,

congestion reduction and traffic management, public transportation, and bicycle/pedestrian improvements.

Sources of Federal Transit Funding Programs

- Section 5307 Urbanized Area Formula Grants – Administering Agency: FTA (funds typically awarded to a region's designated transit agency). Project Type: Public transportation in urbanized areas, including capital projects (bus purchases, facility construction/rehabilitation), transit planning activities, and, in smaller urban areas, operating assistance. This is the largest source of federal transit funding in Michigan.

- Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities – Administering Agency: FTA (in Michigan, MDOT administers funds for small urban and rural areas). Project Type: Transportation services and capital equipment that improve mobility for older adults and people with disabilities, especially where existing transit is unavailable or insufficient. This includes purchase of accessible vehicles, supporting paratransit services, and transit facility improvements beyond ADA requirements.

- Section 5311 Formula Grants for Rural Areas – Administering Agency: FTA (program administered by MDOT for Michigan's rural transit providers). Project Type: Public transportation in non-urbanized (rural) areas, funding activities including capital improvements (buses, facilities), operating assistance for transit service, and planning for rural transit. MDOT runs a competitive grant process to distribute 5311 funds among Michigan's rural transit agencies. This program also allows certain job access projects in rural areas (carried over from the former JARC program).

- Section 5339 Bus and Bus Facilities – Formula (5339(a)) – Administering Agency: FTA (MDOT administers the state's portion). Project Type: Bus fleet replacement and bus facility projects – e.g. purchasing new buses, rehabilitating or rebuilding older buses, and constructing or renovating bus garages and transfer facilities. Large urban transit agencies receive 5339(a) apportionments directly, while smaller transit agencies receive funding through the state. These funds help transit providers maintain and modernize bus fleets and related infrastructure.

- Section 5339 Bus and Bus Facilities – Discretionary (5339(b)) – Administering Agency: FTA. Project Type: Competitive grants for bus system capital investments, such as purchasing buses, replacing aging fleets, and constructing bus facilities or modernizing bus stations. Discretionary (nationwide competitive grant program for bus capital). Transit agencies or states apply to FTA for 5339(b) grants. Projects are

evaluated on criteria like age and condition of assets being replaced, service reliability improvements, and benefits to riders. This program enables agencies to undertake larger bus capital projects than formula funds alone would allow.

- Section 5339 Low or No Emission Vehicle Program (Low-No, 5339(c)) – Administering Agency: FTA. Project Type: Grants for the purchase or lease of low-emission and zero-emission transit buses, along with supporting facilities and equipment. Eligible projects include battery-electric or fuel-cell bus purchases and related facility upgrades.

State of Michigan Transportation Funding Programs

- Michigan Transportation Fund (MTF) – Administering Agency: MDOT (statewide distribution by statute). Project Type: State-collected fuel tax and vehicle registration fee revenues used for highway and bridge construction, maintenance, and operations across the state. MTF revenues are also the primary source of the local matching funds required for federal-aid projects. Funding: Formula-based (governed by Public Act 51 of 1951). After certain earmarks and costs, roughly 10% of net MTF revenue is set aside to transit (CTF), and the remainder is split 39.1% to MDOT, 39.1% to county road commissions, and 21.8% to cities/villages. MTF funds are distributed directly to road agencies ("Act 51 agencies") based on factors like road mileage and population. They can be used on any public roads (not just federal-aid highways) for activities such as road resurfacing, snow removal, and traffic operations. In the TIP, MTF contributions typically appear as the state or local match on federal-aid projects; purely locally funded projects using MTF may be listed only if they are regionally significant

- Surface Transportation Program – Rural (STP-Rural or STBG-Rural) – Administering Agency: FHWA (administered by MDOT). Project Type: Capital improvements on roads functionally classified as rural federal-aid eligible (typically minor collectors and above). Eligible projects include resurfacing, reconstruction, shoulder paving, intersection improvements, culvert replacements, guardrails, and in some cases, non-motorized facilities or transit capital needs. The Northwest Michigan Council of Governments (NWMCOG), dba Networks Northwest, facilitates the Rural Task Force process. Each county-level RTF prioritizes projects, which are then submitted to a Regional Task Force for review and inclusion in the regional program. These funds support rural infrastructure preservation and mobility, especially where no other funding sources are available.

- Comprehensive Transportation Fund (CTF) – Administering Agency: MDOT (Office of Passenger Transportation). Project Type: State transit assistance – supports local

transit agency operations, capital projects, and as matching funds for federal transit grants. The CTF is the dedicated transit account within the MTF, receiving a share of state transportation revenue. Funding: Formula-based (by Act 51, 10% of certain state transportation revenues are directed to the CTF for public transportation). MDOT allocates CTF dollars to transit agencies for eligible uses: a major portion goes to local bus operating assistance, and other portions fund capital match (state match to federal 5307/5311 grants), specialized services, intercity bus program, etc.

- Transportation Economic Development Fund (TEDF) – Category C (Urban Congestion Mitigation) – Administering Agency: MDOT. Project Type: Road improvements in urban counties aimed at relieving congestion and improving all-season capabilities on important routes (often supporting economic development in urban areas). Examples include widening major county roads or improving critical intersections in growing urban counties. Funding: Hybrid – a combination of federal-aid highway funds and state funds dedicated to this program. (TEDF Category C receives a portion of federal STBG funds in Michigan, supplemented by state dollars.) Notes: Category C is focused on urban congestion relief. . MDOT distributes these funds to eligible counties based on a formula and project prioritization. Projects must be located in designated urban counties (as defined in Act 51) and address congestion. Unused federal portions do not carry over year-to-year, whereas the state-provided portion can carry forward to future years.

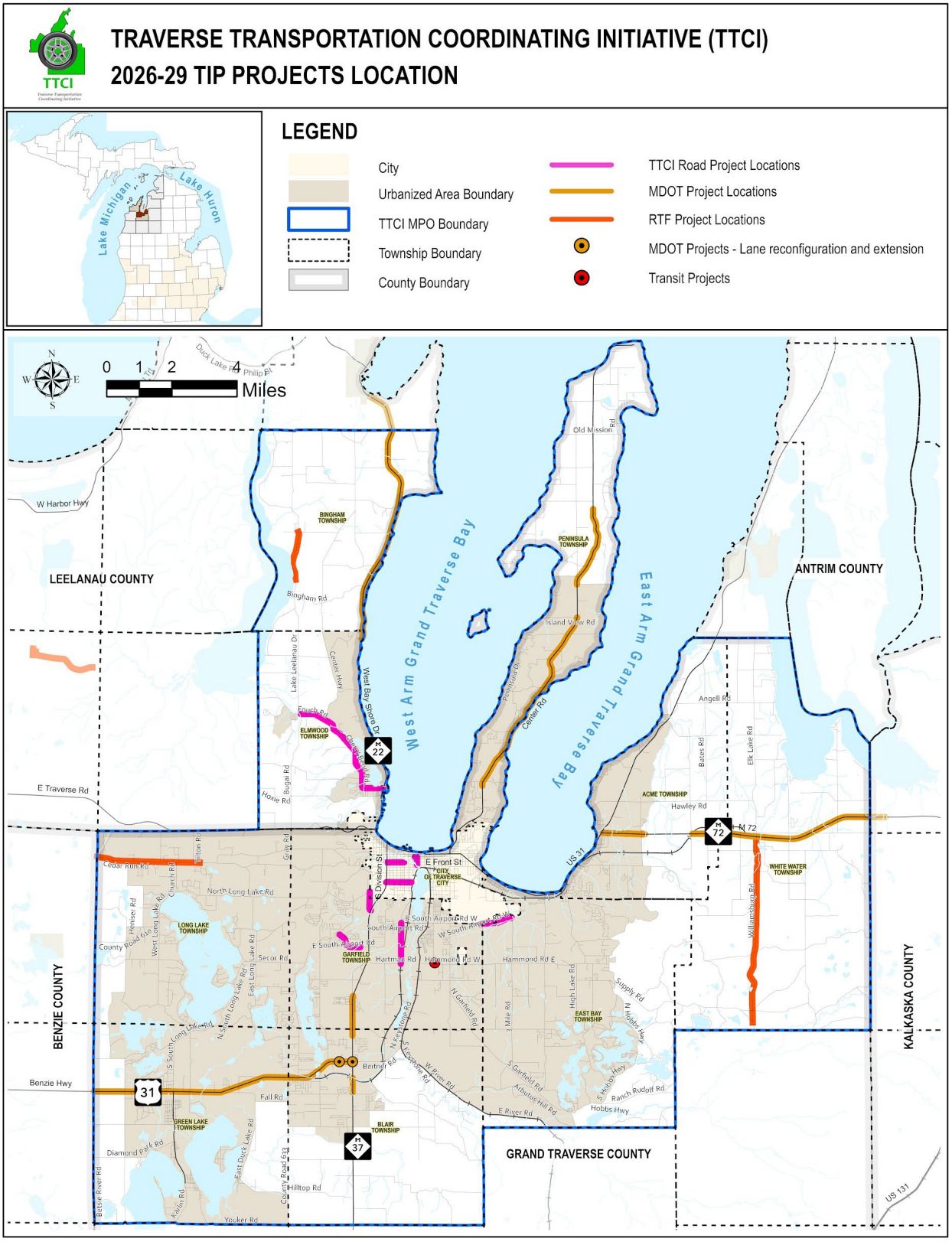
- Transportation Economic Development Fund (TEDF) – Category D (Rural All-Season Roads) – Administering Agency: MDOT. Project Type: Road improvements in rural counties, emphasizing the creation of all-season road networks that can accommodate heavy vehicles year-round without weight restrictions. Typically used to pave or strengthen key county roads to all-season standards, improving connectivity for trucking and rural industries. Funding: Hybrid – combination of federal and state funds (federal-aid funds plus state matching funds set aside for TEDF D).

- Transportation Economic Development Fund (TEDF) – Category F (Urban Areas in Small Cities and Villages) – Administering Agency: MDOT. Roadway improvements in cities and villages with populations between 5,000 and 49,999. Focuses on supporting economic development and enhancing the transportation network in smaller urban communities. Eligible projects typically include reconstruction, resurfacing, and capacity improvements on roads that directly support job growth and investment. State-funded. Category F is a state-only program with no federal-

aid match required. Funds are distributed through a competitive grant process and may require local match contributions depending on project scope.

- Local Bridge Program – Administering Agency: MDOT (Local Bridge Advisory Boards in each region). Project Type: Rehabilitation and replacement of locally-owned (county, city, or village) bridges. This program addresses structurally deficient or obsolete bridges off the state trunkline system. Funding: Blend of state and federal funds – primarily funded by a portion of Michigan's state fuel tax revenue (MTF) dedicated to local bridges, supplemented by federal Surface Transportation Block Grant funds that MDOT sets aside for bridges.

Figure 8.1 – FY 2026-2029 TTCI TIP Project Locations



Financial Plan for Short Term (TIP) Projects FY26-29

The function of the Financial Plan is to manage available federal-aid highway and transit resources in a cost-effective and efficient manner. Specifically, the Financial Plan details:

- Available highway and transit funding (federal, state, and local)
- Fiscal constraint (cost of projects cannot exceed revenues reasonably expected to be available)
- Expected rate of change in available funding

Summary of Short-Term (TIP) Projects

The following investment highlights were approved as part of the FY 2026–2029 TIP:

- Over **$8.3 million** in MPO-led federal-aid investments across four years.
- Transit investments exceeding **$27 million**, largely in vehicle acquisition and infrastructure upgrades.
- A mix of state (MDOT), local (Grand Traverse and Leelanau Counties), and regional transit projects that reflect current system preservation and operational needs.

Demonstration of Fiscal Constraint

Federal regulations require that the Metropolitan Transportation Plan (MTP) be fiscally constrained, meaning the estimated cost of projects included in the plan cannot exceed the reasonably expected revenues over the plan's time horizon. Fiscal constraint must be demonstrated for each year in which projects are programmed.

All federally funded projects must be included in the MTP. In addition, any regionally significant projects—regardless of funding source—must also be included if they are expected to impact the performance of the transportation system. In such cases, project submitters must demonstrate that funding is reasonably expected to be available, identifying the non-federal sources that will be used. Projects included in the MTP are considered commitments, and their total cost must not exceed the revenue forecast for the applicable fiscal years. These revenue forecasts are developed in coordination with MDOT, local agencies, and transit, using trends and projections. These forecasts reflect expected revenue availability and do not attempt to fully capture inflationary trends in project costs

The fiscal constraint tables within the MTP show that programmed expenditures match anticipated revenues in each year, reflecting the intent of local agencies and MDOT to fully utilize available funds for the projects within FY2026 to 2029.

Cooperative Revenue Estimation Process

TTCI's process for ensuring fiscal constraint begins with estimating the funding likely to be available over the FY 2026–2029 period. In Michigan, this process is facilitated by the Michigan Transportation Planning Association (MTPA), a statewide body that includes representatives from MDOT, MPOs, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA). MTPA convenes a Financial Work Group (FWG) to review historical funding data, federal apportionment trends, and state budget projections, then establishes standard growth rates and assumptions for federal and state transportation revenues. All MPOs in Michigan—including TTCI—use these assumptions to develop their TIP financial forecasts.

TTCI applied these guidelines in consultation with MDOT, local road agencies, and the regional transit provider to identify anticipated revenues across federal, state, and local sources. MDOT provided estimates of anticipated Surface Transportation Block Grant (STBG), Highway Safety Improvement Program (HSIP), and other federal-aid funding programs for use in the TTCI area, along with the expected availability of matching state funds. Transit providers contributed estimates for FTA programs such as Section 5307 and Section 5339. Local transportation agencies provided inputs on available local match (typically from the Michigan Transportation Fund or millage revenues), which were incorporated into the TIP to ensure that project funding packages were complete and feasible.

All revenue and cost estimates in the TIP are presented in year-of-expenditure (YOE) dollars, meaning they reflect the year the funds are expected to be obligated, with minor inflation adjustments applied as appropriate. This further ensures that fiscal constraint is demonstrated with a realistic financial outlook.

Fiscal Constraint Demonstration and Project Programming

Once the revenue forecast was established, TTCI worked with local jurisdictions, MDOT, and transit providers to ensure that the list of programmed projects did not exceed expected funding in any fiscal year. Project costs were aligned with the appropriate funding programs, and projects were scheduled or phased accordingly to maintain balance. This required coordination among TTCI's Technical Committee, local agency staff, and MDOT to refine project timing, cost assumptions, and match sources.

The result is a fiscally constrained FY 2026–2029 TIP in which no project has been programmed without a committed or reasonably expected funding source. Total programmed obligations in each fiscal year remain within the estimated funding available across all applicable funding categories—federal highway, federal transit, state, and local.

MDOT trunkline projects were incorporated into the program using separate state/federal resources that do not impact the MPO's fiscal balance.

TTCI's MTP therefore consistent with all federal fiscal constraint requirements. It reflects a careful and collaborative financial planning process designed to ensure that planned improvements are achievable within known funding limits, while preserving the fiscal integrity of the region's transportation system.

Resources Available For Capital Needs on the Federal-Aid Highway System

A summary of the predicted resources that will be available for non-MDOT capital needs on the federal-aid highway system in the TTCI MPO area over Fiscal Years 2026–2029 is given below. The only local funding (i.e., non-federal) included is the funding required to match the federal-aid funds. This is generally about 18.15% of the cost of each project for MPOs and 20% for RTF (the local match can be higher depending on total project costs and specific funding needs). Table 8.1 shows allocations for TTCI MPO only. However, since some RTF-funded projects fall within the TTCI MPO boundary, Table 8.2 provides the allocated federal and state amounts for those Rural Task Force projects located within the MPO boundary.

Table 8.1

TTCI	**Resources Available for Capital Needs on the Federal-Aid Highway System for TTCI Area (2026-2029)**			
FY	**FEDERAL: STBG + STBG Flex**	**CRSM**	**Local Match (18.15%)**	**Total**
2026	$1,093,000	$129,000	$407,000	$1,629,000
2027	$1,116,000	$131,000	$2,416,133	$3,663,133
2028	$1,138,000	$134,000	$252,349	$1,524,349
2029	$1,161,000	$137,000	$807,700	$2,105,700
Total	**$4,508,000**	**$ 531,000**	**$3,883,182**	**$8,922,182**

Table 8.2

RTF	Resources Available for Capital Needs on the Federal-Aid Highway System for TTCI Area (2026-2029)			
FY	**FEDERAL: STP - Rural Flex**	**State (TEDF category D funds)**	**Local Match 20% for RTF**	**Total**
2026	$1,211,000	$443,165	$1,163,075	$2,817,240
2027	$1,285,900	$306,649	$1,365,224	$2,957,773
2028	$1,310,900	$254,532	$131,550	$1,696,982
2029	$1,536,000	$371,721	$32,225	$1,939,946
Total	**$5,343,800**	**$1,376,066**	**$2,692,074**	**$9,411,940**

MDOT Capital Revenues

The estimate for MDOT capital revenues is directly based on the total programmed projects within the TTCI area. The projected total is $2,740,100 in federal, state, and local funds allocated to MDOT projects.

Table 8.3

MDOT	Resources Available for Capital Needs on the Federal-Aid Highway System for TTCI Area (2026-2029)			
FY	**FEDERAL: STG**	**State**	**Local**	**Total**
2026	$ 109,097	$12,122	$0	$121,219
2027	$0	$0	$0	$0
2028	$1,322,724	$180,657	$0	$1,503,381
2029	$1,115,500	$0	$0	$1,115,500
Total	**$2,547,321**	**$192,779**	**$0**	**$2,740,100**

Table 8.4

TOTAL (NON-MDOT) RESOURCES AVAILABLE FOR CAPITAL NEEDS ON THE FEDERAL-AID HIGHWAY SYSTEM FOR TTCI AREA (2026-2029)				
FY	**FEDERAL: STBG + STBG Flex + STP - Rural Flex + CRSM**	**State**	**Local match**	**Total**
2026	$2,542,097	$455,287	$3,602,205	$6,599,589
2027	$2,532,900	$306,649	$1,749,224	$4,588,773
2028	$3,905,624	$435,189	$383,899	$4,724,712
2029	$3,949,500	$371,721	$839,925	$5,161,146
Total	**$12,930,121**	**$1,568,845**	**$6,575,253**	**$21,074,219**

Estimates for Operations and Maintenance costs for the Federal-Aid Highway System

The majority of federal-aid highway funding is designated for capital costs, which include the construction and maintenance of physical assets within the federal-aid highway system (covering all I-, US-, and M-designated roads, as well as most public roads classified as "collector" or higher in the national functional classification system). Operations and Maintenance (O&M) costs—such as general street maintenance, snow and ice removal, pothole patching, rubbish removal, and electricity for streetlights and traffic signals—are the responsibility of the operating road agencies (MDOT and local road agencies). These costs also cover a wide range of routine activities including culvert and drainage maintenance, dust control, ditching, emergency response, mowing, guard rail repair, pavement markings, roadside cleanup, shoulder and surface maintenance, street sweeping, traffic signs and signals, trees and shrubs, winter maintenance, etc. However, federal regulations require an estimate of O&M costs on the federal-aid highway system over the years covered by the TIP. Table 14 below summarizes the O&M cost estimates for roads within the TTCI federal-aid highway system. These funds are not included in the TIP, as most highway operations and maintenance activities are not eligible for federal-aid funding.

Table 8.5

	Estimated Operations and Maintenance Costs on Federal-Aid Highway System for TTCI Area (FY 2026-2029)			
	2026	**2027**	**2028**	**2029**
MDOT	$6,600,000	$6,800,000	$6,900,000	$7,100,000
Local*	$7,022,457	$7,274,027	$7,534,736	$7,804,946
TOTAL	$13,622,457	$14,074,027	$14,434,736	$14,904,946

**Local includes total of City of Traverse City and Townships within the MPA in Grand Traverse County and Leelanau County*

***Note:** Local includes Operation and Maintenance estimates from City of Traverse City, GTCRC and LCRC.

City of Traverse City's all street maintenance costs are reported in the Major and Local Street Funds. The City does not budget by specific maintenance activities such as snow and ice control or pothole repair. Formal projections for future years are not prepared; therefore, a 4% annual inflation rate was applied to estimate costs for fiscal years 2027 through 2029. Additionally, budgeting is not conducted by specific activities such as snow and ice control or pothole.

Grand Traverse County Road Commission (GTCRC) used a methodology based on township-level data to estimate Operations and Maintenance (O&M) costs within the TTCI Metropolitan Planning Area (MPA). Cost estimates for routine maintenance and traffic control were derived from primary road maintenance figures, as the majority of GTCRC's primary roads are located on the National Functional Classification (NFC) network. For winter maintenance, a proportional allocation was applied using the share of lane miles within the MPA townships, resulting in an estimated 65.5% of total winter maintenance costs being attributed to the MPA.

The Leelanau County Road Commission does not maintain specific projections for future Operations and Maintenance (O&M) costs. However, a cost-per-mile estimate was developed based on expenditures for Primary roads, which are largely eligible for Federal Aid. These figures were then extrapolated to estimate annual costs per mile, applying a 4% annual increase for each year.

Operations and Maintenance (O&M) activities included in these estimates encompass a broad range of routine work, such as pothole patching, culverts, drainage, dust control, ditching, emergency response, mowing, guard rail, pavement marking, roadside cleanup, shoulder maintenance, surface maintenance, sweeping, traffic signals, traffic signs, trees and shrubs, winter maintenance.

Resources Available For Capital Needs of Public Transit Agencies

Transit agencies within the TTCI region receive funding from a mix of federal, state, and local sources. Capital needs are typically funded through a combination of federal grants, state contributions, local match, and farebox revenue. The Federal Transit Administration (FTA) plays a central role in distributing federal funds, primarily based on the population of the urbanized area and other formula-driven factors.

For example, FTA Section 5307 (Urbanized Area Formula Program) funds are distributed directly to eligible transit agencies in the TTCI area. Capital funding is administered through MDOT, which manages federal transit allocations and distributes them in accordance with state priorities and federal guidelines. Additional federal programs are also available (see summary of federal transit funding sources above).

The MDOT Office of Passenger Transportation (OPT), provides Comprehensive Transportation Fund (CTF) dollars to support both capital match requirements and the Local Bus Operating (LBO) program. LBO funds are especially critical, as federal transit aid—similar to highway funding—is not sufficient to fully cover system operations.

Local funding sources include farebox revenues, municipal general funds, and advertising revenue. These tend to vary annually, so this financial summary focuses primarily on federal and state funding resources, which provide more consistent and predictable revenue streams.

Table 8.6

Estimate resources available for Public Transit Agencies in TTCI Area (FY 2026-2029)			
2026	**2027**	**2028**	**2029**
$7,060,890	$6,724,679	$6,730,804	$6,737,179

Demonstration of Financial Constraint (FY 2026-2029)

Table 8.7

	2026	**2027**	**2028**	**2029**
Highway Funding	$4,567,459	$6,620,906	$4,724,712	$5,161,146
Highway Programmed	$4,567,459	$6,620,906	$4,724,712	$5,161,146
Transit Funding	$7,060,890	$6,724,679	$6,730,804	$6,737,179
Transit Programmed	$7,060,890	$6,724,679	$6,730,804	$6,737,179
Total Funding	$11,628,349	$13,345,585	$11,455,516	$11,898,325

Total Programmed	$11,628,349	$13,345,585	$11,455,516	$11,898,325
Difference	$0	$0	$0	$0

Illustrative Visionary Projects

TTCI maintains an illustrative list of regionally significant transportation projects that currently lack dedicated funding. These projects do not impact fiscal constraint calculations and are not programmed in the TIP. However, they serve to:

- Keep priority unfunded needs visible for future grant or funding opportunities
- Encourage regional alignment around future corridors, intersections, and transit nodes
- Highlight community-supported visions gathered through the NRATP and TIP outreach

Examples include:

- Reconstruction of 7th Street in Traverse City
- Rehabilitation of South Airport Road corridor
- Terminal and apron expansion at Cherry Capital Airport (non-roadway impact)

Next Steps

Work with local road agencies, transit operators, and MDOT to:

- Develop a fiscally constrained list of medium- and long-term investments for the 2030–2050 period
- Update this chapter in future MTP amendments once additional information becomes available

Projects FY 2030 - 2050									
Sr. No.	**Fiscal year**	**Responsible Agency**	**Primary Work Type**	**Project Name**	**Limits**	**Project Description**	**Phase**	**Total Project Cost within TTCI**	**Funding Source**
1	2030								
2	2031	Traverse City		7th Street	Division St to Union St			~$ 000,000	STBG/STL
3	2032								
4	2033								
5	2034	Traverse City		7th Street	Division St to Elmwood Ave			~$ 000,000	STBG/STL
6	2035								
7	2036								
8	2037	Traverse City	Microsurface	Traverse City Various streets	Unknown			~$ 000,000	STBG/STL
9	2038								
10	2039								
11	2040								
12	2041	Traverse City		Elmwood Ave	11th St to Front St			~$ 000,000	STBG/STL
13	2042								
14	2043								
15	2044	Traverse City		Eastern Avenue	Unknown			~$ 000,000	STBG/STL
16	2045								
17	2046								
18	2047	Traverse City		Cass St	8th st to 17th St			~$ 000,000	STBG/STL
19	2048								
20	2049								
21	By 2050	Traverse City	Mill and overlay	Traverse City Various streets	Unknown			~$ 000,000	STBG/STL
22	By 2050	Traverse City		Washington St	Boardman Ave to Cass St			~$ 000,000	STBG/STL
23	By 2050	Traverse City		Boardman Ave	Front St to 8th St			~$ 000,000	STBG/STL
24	By 2050	Traverse City	Microsurfacing	Garfield	Front St to City limits			~$ 000,000	STBG/STL
25	By 2050	Traverse City		Hall St.	Front St to PKWY			~$ 000,000	STBG/STL

CHAPTER 9: PERFORMANCE-BASED PLANNING AND PROGRAMMING

TTCI incorporates a performance-based planning and programming approach across its long-range transportation planning activities. This methodology ensures transportation investments are data-driven, outcome-focused, and aligned with national and state performance goals. By applying performance measures, TTCI can monitor system conditions, assess the effectiveness of strategies, and prioritize projects that advance mobility, safety, and infrastructure preservation in the Traverse City-Garfield Urbanized Area.

This approach not only fulfills federal requirements but also reinforces TTCI's commitment to transparent, data-informed decision-making. Performance-based planning provides a structured process for evaluating progress and refining investment decisions to address the evolving needs of the region.

Transportation Performance Management Framework

The U.S. Department of Transportation developed a framework that establishes a feedback loop between performance results and future planning. The framework sets up a process in which a strategic direction is set, standard analysis is conducted to identify trends and establish achievable future targets, available funding is programmed to support the achievement of the targets, and performance is monitored to evaluate and adjust future target setting and programming decisions. There are four main goals of the framework.

Goals of the Framework:

- Be applied on a regular, ongoing process.
- Provide key information to help decision-makers, allowing them to understand the consequences of investment decisions across transportation assets or modes.
- Improve communication between decision-makers, stakeholders, and the traveling public.
- Ensure targets and measures are developed in cooperative partnerships and based on data and objective information.

Federal Requirements

Metropolitan transportation planning: "[MPOs]…, in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning." 23 USC § 134(c)(1); 49 USC § 5303(c)(1). "The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision making to support the national goals…." 23 USC

§134(h)(2); 49 USC § 5303(h)(2). During the TIP development process, TTCI uses performance measures to guide project prioritization.

Federal Performance Measures and Targets

Federal legislation, including the Moving Ahead for Progress in the 21st Century Act (MAP-21) and its successor, the Fixing America's Surface Transportation (FAST) Act, established the foundation for performance-based transportation planning. These laws require states and MPOs to monitor specific performance measures and set quantifiable targets in coordination with state departments of transportation and public transit agencies.

The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), reaffirmed the emphasis on performance management and requires continued tracking of federally defined performance measures. These include:

- PM1: Safety Performance Measures
- PM2: Pavement and Bridge Condition
- PM3: System Performance and Freight
- TAM: Transit Asset Management
- PTASP: Public Transportation Agency Safety Plan

These performance areas help guide regional decision-making and align TTCI's Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP) with national goals for transportation safety, infrastructure condition, congestion reduction, system reliability, freight movement, and environmental sustainability.

TTCI MPO Target Setting and Monitoring

As a newly designated MPO, TTCI has elected to support the performance targets set by the Michigan Department of Transportation (MDOT) for highway-related measures and by the Bay Area Transportation Authority (BATA) for transit-related measures. TTCI's adoption of statewide and regional targets ensures consistency and simplifies reporting across the multi-jurisdictional area.

TTCI staff collaborate with MDOT, BATA, and other regional planning partners to monitor system performance and evaluate progress toward targets. This includes annual reviews of crash data, pavement condition assessments, bridge condition ratings, and transit asset inventories. As the MPO's data systems and modeling capabilities grow, TTCI anticipates establishing region-specific targets tailored to localized needs and priorities.

Relationship Between Projects and Performance Outcomes

All projects included in the TTCI MTP and TIP are selected, in part, for their ability to support progress toward federally required performance measures. Project selection and prioritization incorporate performance-based criteria that address system preservation, safety enhancements, multimodal improvements, and freight mobility. By aligning project programming with performance outcomes, TTCI ensures that available resources are used efficiently and that transportation investments yield tangible benefits.

For example, roadway resurfacing projects improve pavement condition (PM2), safety upgrades such as roundabouts or signal enhancements address crash reduction goals (PM1), and expanded transit routes improve access and reliability (TAM and PTASP). Each project's anticipated performance impact is evaluated during the project vetting process and documented in the TIP.

Safety Targets (PM1)

Improving transportation safety is a key priority at the federal, state, and regional levels. The Federal Highway Administration (FHWA) requires all state departments of transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to adopt safety performance measures (PM1) under 23 CFR 490 Subpart B as part of a performance-based transportation planning approach.

TTCI supports MDOT's statewide safety targets, which are updated annually and based on five federally required measures:

1. Number of fatalities
2. Rate of fatalities per 100 million VMT
3. Number of serious injuries
4. Rate of serious injuries per 100 million VMT
5. Number of non-motorized fatalities and serious injuries

Table 9.1 – Michigan Statewide Crash Trends 2021-2023

Safety Performance Measure	2021	2022	2023
Fatalities	1,136	1,123	1,095
Serious Injuries	5,979	5,782	5,816
Non-Motorized Fatalities & Serious Injuries	674	720	785

The state safety targets are based on a five-year rolling average of crash data and are submitted as part of Michigan's Highway Safety Improvement Program (HSIP) annual report. The 2025 statewide targets are as follows:

Table 9.2 – Michigan Statewide Safety Performance Targets for 2025

Safety Performance Measure	Baseline Condition (5-Year Average)	2025 State Target
Number of Fatalities	1085.2	1098
Fatality Rate (per 100M VMT)	1.137	1.113
Number of Serious Injuries	5,727.8	5,770.1
Serious Injury Rate (per 100M VMT)	5.988	5.85
Number of Nonmotorized Fatalities & Serious Injuries	743	728.3

These measures are informed by Michigan Traffic Crash Facts and crash data systems. TTCI's planning efforts include targeted safety strategies to address high-crash corridors and intersections, enhance pedestrian crossings, and promote non-motorized safety through infrastructure and design improvements.

Bridge and Highway Targets (PM2)

The Michigan Department of Transportation (MDOT) establishes performance targets for pavement conditions on the National Highway System (NHS) as part of its Transportation Performance Management (TPM) program. These targets aim to maintain and improve pavement quality across the state.

TTCI also supports MDOT's targets for infrastructure condition and system performance. These include:

- Percent of Interstate pavements in good/fair/poor condition
- Percent of non-Interstate NHS pavements in good/fair/poor condition
- Percent of NHS bridges in good/fair/poor condition by deck area

Table 9.3 – Michigan State Pavement Targets

Measure	Baseline Condition (2022-2025)	2-Year Target	4-Year Target
% Interstate Pavement in Good Condition	70.4%	59.2%	67.1%
% Interstate Pavement in Poor Condition	1.8%	5.0%	5.0%
% Non-Interstate NHS in Good Condition	41.6%	33.1%	29.4%
% Non-Interstate NHS in Poor Condition	8.9%	10.0%	10.0%

TTCI supports these statewide targets and incorporates them into project selection and prioritization processes to ensure alignment with MDOT's goals for pavement conditions.

Bridge Targets

MDOT also sets performance targets for bridge conditions on the NHS, focusing on the percentage of bridge deck area classified as in Good or Poor condition. These targets help guide maintenance and rehabilitation efforts to ensure bridge safety and reliability.

Table 9.3 – Michigan State Bridge Targets

Measure	Baseline Condition (2022-2025)	2-Year Target	4-Year Target
% NHS Deck Area in Good Condition	22.1%	15.2%	12.8%
% NHS Deck Area in Poor Condition	7.0%	6.8%	10%

TTCI collaborates with MDOT to support these targets by identifying and programming bridge projects that contribute to the improvement of bridge conditions within the region.

System Performance and Freight (PM 3)

MDOT has developed targets for travel time reliability on the NHS for Interstate and non-Interstate roads. Freight reliability is also included and is a separate measure. Data on travel time is evaluated to see how it varies over time and to demonstrate consistency. The definitions below help to explain the difference between congestion and travel time reliability:

- **Congestion**: Occurs when there are too many vehicles at the same place at the same time (demand exceeds supply). An increase in congestion usually results in a decrease in the "quality" of the driving experience. It typically occurs during peak periods of the day and reflects increased system use. Most travelers are accustomed to everyday congestion and can plan for it.
- **Travel Time Reliability**: Refers to the consistency or dependability of travel time, measured from day to day or across different times of the day. Unreliable travel times generally occur during peak periods and are more frustrating because they are less predictable. Michigan's highways have been approximately 85 percent reliable, meaning 85 percent of person-miles traveled meet federally established thresholds. Freight reliability is calculated using the 95th percentile travel time due to its longer travel durations.

TTCI coordinates with MDOT to monitor pavement and bridge conditions through PASER ratings, bridge inspections, and performance dashboards. The MTP and TIP prioritize resurfacing, bridge rehabilitation, and maintenance projects that support asset preservation goals and improve regional reliability.

TTCI also supports MDOT's targets for system performance and freight. These include:

- Travel time reliability on the Interstate and non-Interstate NHS
- Truck travel time reliability index

Table 9.4 – Michigan State System Reliability Targets

Measure	Baseline Condition (2022-2025)	2-Year Target	4-Year Target
Level of Travel Time Reliability of the Interstate	97.1%	80.0%	80.0%
Level of Travel Time Reliability of the Non-Interstate NHS	94.4%	75.0%	75.0%
Freight Reliability Measure on the Interstate	1.31	1.60	1.60

Transit Asset Management (TAM)

The Federal Transit Administration (FTA) requires all providers of public transportation that receive federal funds under 49 U.S.C. Chapter 53 to develop and implement a Transit Asset Management (TAM) Plan. This requirement is outlined in 49 CFR Part 625 and is intended to ensure that transit assets are maintained in a State of Good Repair (SGR). A transit asset is considered in a state of good repair when it performs as intended and has not exceeded its Useful Benchmark Life (UBL) or condition threshold.

The purpose of the TAM framework is to support performance-based planning and programming by:

- Enhancing safety and reliability of public transportation systems
- Extending the useful life of capital assets
- Supporting long-term financial sustainability

In compliance with these requirements, the Bay Area Transportation Authority (BATA) has developed TAM Plans that include performance targets for three core asset categories:

1. Revenue Vehicles (Rolling Stock)
2. Equipment (Non-revenue service vehicles)
3. Facilities (Maintenance and administrative buildings)

TTCI, as the Metropolitan Planning Organization (MPO), is responsible for coordinating with transit providers to ensure that TAM targets are integrated into the transportation planning process. TTCI supports the TAM targets set by its transit partners and incorporates these targets into its long-range planning and TIP project prioritization where applicable.

The TIP supports asset management goals by identifying projects and investments that contribute to maintaining or improving the condition of transit assets. These include vehicle replacements, facility renovations, and equipment upgrades that help ensure the transit system remains safe, efficient, and reliable for the traveling public.

State of Good Repair (SGR)

State of Good Repair (SGR) refers to the condition in which a transit asset is functioning as intended, without posing safety risks, and is maintained according to its design and performance standards. An asset is considered to be in a state of good repair when it is in acceptable operating condition, meets relevant performance criteria, and has not exceeded its Useful Benchmark Life (UBL) or condition threshold.

SGR is a core concept in Transit Asset Management (TAM) and a key performance area under federal transportation law, particularly the FAST Act and 49 U.S.C. §5326. Transit agencies and MPOs are required to track and report asset conditions against SGR metrics to support performance-based investment decisions and federal funding eligibility.

Useful Benchmark Life (UBL)

Useful Benchmark Life (UBL) is the industry-standard estimate of the expected service life of a transit asset, used primarily for Transit Asset Management (TAM) and State of Good Repair (SGR) reporting. It represents the age at which a vehicle, facility, or piece of equipment is expected to be replaced, based on typical operating conditions and maintenance practices.

UBL values are established by the Federal Transit Administration (FTA) in coordination with industry partners and are used to:

- Determine whether an asset is in a “state of good repair”
- Track progress toward TAM performance targets
- Inform capital planning and replacement schedules

UBL differs from 'useful life' in accounting or funding contexts. UBL is a performance benchmark rather than a fixed threshold—assets may remain in use beyond their UBL if they continue to operate safely and effectively.

Transit Economic Requirements Model (TERM)

The Transit Economic Requirements Model (TERM) is a tool developed by the Federal Transit Administration (FTA) to estimate the capital investment needs of the nation’s transit systems. It helps evaluate the costs of maintaining, rehabilitating, and replacing transit

assets to keep them in a State of Good Repair (SGR) and to expand service to meet future demand.

TERM is used to:

- Assess the condition and performance of existing transit infrastructure
- Forecast investment needs over short- and long-term planning horizons
- Support national policy discussions and reporting to Congress (e.g., in the biennial FTA Conditions & Performance Report)

TERM uses data on asset inventories, age, condition, and usage to estimate how much funding is required to:

- Maintain current service levels
- Address state-of-good-repair backlogs
- Support system expansion and modernization

While TERM is primarily used at the federal level for national-level analysis, the principles behind TERM have influenced how transit agencies and MPOs develop Transit Asset Management (TAM) plans, particularly for performance target setting and investment prioritization.

Table 9.5 – Transit Capital Asset Inventory

Asset Category	**Total Number**	**Avg Age (years)**
Revenue Vehicles	**77**	**11.7**
Bus	5	14.6
Cutaway Bus	58	4.6
Van	9	2.6
School Bus	5	17.4
Asset Category	**Total Number**	**Avg Age (years)**
Equipment – Service Vehicles	**7**	**11.7**
Trucks and other rubber tire vehicles	2	12
Vans	3	9.2
Cutaway	1	10.9
Equipment – Maintenance Shop	4	1
Equipment – Vehicle Equipment	2	7.5
Equipment – Fueling Equipment	1	1
Asset Category	**Total Number**	**Avg Age (years)**
Facilities		
Passenger & Parking Facilities	2	11
Maintenance and Administrative	1	1

Table 9.6 – Transit State of Good Repair Targets for 2026 – 2029

Revenue Vehicles					
Age - % of revenue vehicles within an asset class that have met or exceeded their UBL	**Asset Class**	**2026**	**2027**	**2028**	**2029**
	Bus	25%	25%	25%	25%
	Cutaway Bus	25%	25%	25%	25%
	Van	25%	25%	25%	25%
	School bus	25%	25%	25%	25%
Equipment					
Age - % of vehicles / equipment that have met or exceeded their UBL	**Asset Class**	**2026**	**2027**	**2028**	**2029**
	Trucks and other rubber tire vehicles	50%	50%	50%	50%
	Vans	33%	66%	66%	66%
	Cutaways	100%	100%	100%	100%
	Maintenance Shop Equipment	0%	0%	0%	0%
	Vehicles Equipment	0%	0%	0%	0%
	Fueling Equipment	0%	0%	0%	0%
Facilities					
Condition - % of facilities with a condition rating below 3.0 on the FTA TERM Scale	**Asset Class**	**2026**	**2027**	**2028**	**2029**
	Passenger Facilities	0%	0%	0%	0%
	Maintenance and Administration	0%	0%	0%	0%

Table 9.7 – Transit Capital Asset Inventory

Asset Category	Total Number	Avg Age (years)
Revenue Vehicles	**77**	**11.7**
Bus	5	14.6
Cutaway Bus	58	4.6
Van	9	2.6
School Bus	5	17.4
Asset Category	**Total Number**	**Avg Age (years)**
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Equipment – Maintenance Shop	4	1
Equipment – Vehicle Equipment	2	7.5
Equipment – Fueling Equipment	1	1
Asset Category	**Total Number**	**Avg Age (years)**
Facilities		
Passenger & Parking Facilities	2	11
Maintenance and Administrative	1	1

Public Transportation Agency Safety Plan (PTASP)

The Bay Area Transportation Authority (BATA) has developed a Public Transportation Agency Safety Plan (PTASP) in accordance with 49 CFR Part 673. This plan outlines BATA's safety performance targets, safety management policies, and strategies to continuously monitor, assess, and improve safety for both passengers and employees.

BATA's PTASP is consistent with the Federal Transit Administration's Safety Management System (SMS) framework, which emphasizes proactive risk management, safety assurance, and the fostering of a strong safety culture. BATA's PTASP identifies specific procedures for hazard identification, risk assessment, performance monitoring, and training programs.

TTCI coordinates with BATA to ensure that safety planning efforts are incorporated into the regional transportation planning process. TTCI supports BATA's performance targets and reflects them in its MTP and TIP planning documents.

BATA's PTASP can be accessed publicly at www.bata.net.

Ongoing Monitoring and Plan Evaluation

TTCI is committed to an iterative approach to performance monitoring and plan implementation. Through its biennial TIP updates, 5-year MTP updates, and regular committee meetings, TTCI evaluates the degree to which project investments are advancing established regional goals. Staff will continue to work with local governments, transit providers, and MDOT to identify data gaps, assess performance outcomes, and refine prioritization criteria.

TTCI's implementation monitoring includes:

- Comparing anticipated performance outcomes of programmed projects with actual system data (e.g., pavement condition, crash rates, and transit asset health). This includes using tools such as MDOT's Performance Dashboards, PASER ratings, bridge inspection reports, and BATA's asset condition inventories.
- Tracking project delivery timelines and funding utilization to ensure that programmed TIP projects are advancing on schedule and within budget. TTCI conducts semi-annual TIP status reviews and collaborates with local implementing agencies to identify delays, cost overruns, or changes in project scope.
- Incorporating public input, agency feedback, and technical analysis into post-project reviews to determine if implemented strategies met performance

expectations. This includes revisiting regional safety hotspots, non-motorized access points, and freight corridors after capital improvements are completed.

- Monitoring regional travel behavior and transportation system trends using travel demand modeling, traffic counts, and emerging technologies (e.g., probe data and crowdsourced mobility data) to evaluate long-term impacts and adjust planning assumptions.
- Aligning updates to future MTPs with lessons learned from previous planning cycles, such as the effectiveness of project prioritization criteria, funding distribution by mode, and the ability of the MPO to influence desired outcomes in the regional system.

This performance-driven process ensures that TTCI's long-range planning remains accountable, flexible, and aligned with both federal performance requirements and local transportation objectives. TTCI's process draws upon best practices established by peer MPOs across Michigan and the nation, and prioritizes continuous improvement in how planning decisions translate into system-level outcomes. Future efforts may also include publishing an annual or biennial Performance Implementation Report, which would provide the public and stakeholders with transparent updates on the status of major goals, trends in key metrics, and performance gaps that may require strategic response.

Figure 9.1 Performance Monitoring Cycle

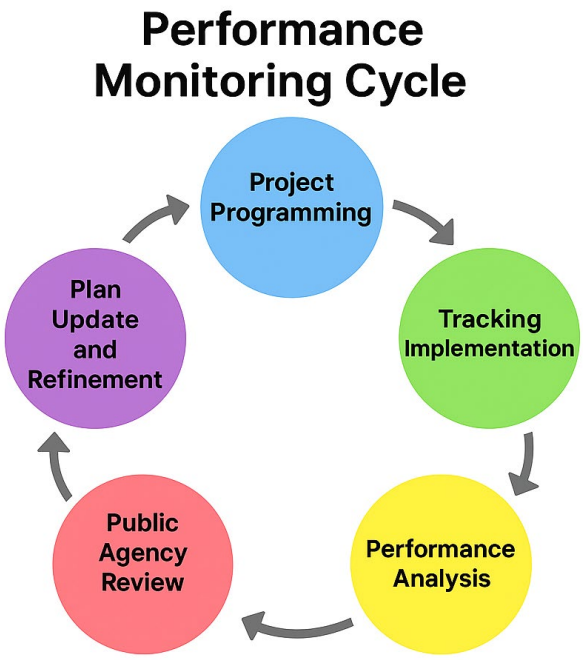

Table 9.8 – Performance Monitoring Cycle

Stage	Activity	Data Sources / Tools
Project Programming	Align TIP projects with MTP goals and targets	MTP, TIP, Performance Measures
Tracking Implementation	Monitor delivery timelines, costs, funding utilization	TIP Review, Local Agency Reports
Performance Analysis	Compare anticipated vs. actual outcomes (safety, pavement, transit)	MDOT Dashboards, PASER, BATA TAM Data
Public & Agency Review	Gather feedback from public and partners after projects are built	Surveys, Meetings, Post-Project Analysis
System Monitoring	Track regional trends and long-term system performance	Travel Demand Model, Traffic Counts, Probe Data
Plan Update and Refinement	Use insights to adjust prioritization, strategies, and performance targets in future updates	MTP Updates, Strategic Assessments, Annual Performance Reporting (future)

APPENDIX A: GLOSSARY OF TERMS

ADA (Americans with Disabilities Act): Federal legislation that prohibits discrimination against individuals with disabilities in all areas of public life, including transportation facilities and services.

Asset Management: A systematic process for maintaining, upgrading, and operating physical assets cost-effectively.

BATA (Bay Area Transportation Authority): The regional public transportation provider for Grand Traverse and Leelanau Counties.

CFP (Call for Projects): A competitive process used by TTCI to solicit project applications from eligible agencies for inclusion in the TIP or MTP.

Congestion: A condition on transportation networks that occurs when demand for roadway space exceeds supply, typically during peak travel periods.

FAST Act (Fixing America's Surface Transportation Act): A federal transportation funding and authorization bill signed into law in 2015 that governs surface transportation spending.

FHWA (Federal Highway Administration): A division of the U.S. Department of Transportation that supports state and local governments in the design, construction, and maintenance of the nation’s highway system.

FTA (Federal Transit Administration): A U.S. Department of Transportation agency that provides financial and technical assistance to local public transit systems.

Fiscal Constraint: A requirement that MPOs demonstrate that projects included in the MTP and TIP can be funded with revenues that are reasonably anticipated to be available.

Freight: Goods transported in bulk by truck, train, ship, or aircraft.

GIS (Geographic Information System): A technology platform used for capturing, storing, analyzing, and managing spatial and geographic data.

Long-Range Transportation Plan (LRTP) / Metropolitan Transportation Plan (MTP): A federally required, long-term (at least 20-year) regional transportation planning document developed by an MPO.

MAP-21 (Moving Ahead for Progress in the 21st Century Act): A federal transportation funding law enacted in 2012 that emphasized performance-based planning and programming.

MDOT (Michigan Department of Transportation): The state agency responsible for Michigan's transportation infrastructure and coordination with MPOs.

MPO (Metropolitan Planning Organization): A federally mandated and federally funded transportation policy-making organization in urbanized areas with populations over 50,000.

NHS (National Highway System): A network of roadways important to the nation's economy, defense, and mobility.

PASER (Pavement Surface Evaluation and Rating): A visual rating system used to evaluate the condition of pavement surfaces.

Performance-Based Planning and Programming (PBPP): A strategic approach that uses data to support decisions aimed at helping to achieve desired performance outcomes.

Public Participation Plan (PPP): A formal document that outlines how an MPO will engage the public in transportation planning and decision-making.

PTASP (Public Transportation Agency Safety Plan): A federally required safety plan developed by transit providers to document safety policies, goals, and performance targets.

Scenario Planning: A method of analyzing possible future conditions to inform planning and investment decisions.

State of Good Repair (SGR): A condition in which a capital asset is able to operate at a full level of performance.

TAM (Transit Asset Management): A strategic and systematic process of operating, maintaining, and improving public transportation capital assets.

TIP (Transportation Improvement Program): A short-term (4-year) list of federally funded transportation projects prioritized by an MPO.

TTCI (Traverse Transportation Coordinating Initiative): The designated MPO for the Traverse City-Garfield Urbanized Area.

UBL (Useful Benchmark Life): The industry standard estimate of the expected service life of a transit asset, used for asset management and reporting.

UWP (Unified Work Program): A document that outlines the transportation planning activities to be conducted by an MPO and its partners over a one- or two-year period.

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APPENDIX B: RESOLUTION

Traverse Transportation Coordinating Initiative

Resolution #25-03

Networks Northwest
Talent / Business / Community

RESOLUTION TO ADOPT THE TRAVERSE TRANSPORTATION COORDINATING INITIATIVE (TTCI) 2050 METROPOLITAN TRANSPORTATION PLAN

WHEREAS, the Traverse Transportation Coordinating Initiative (TTCI) was designated in October 2023 as the Metropolitan Planning Organization (MPO) for the Traverse City-Garfield Urbanized Area pursuant to federal requirements set forth in 23 U.S.C. § 134 and 49 U.S.C. § 5303; and

WHEREAS, as the designated MPO, TTCI is responsible for developing a Metropolitan Transportation Plan (MTP) that establishes a long-range (20-year) vision for regional transportation investment in accordance with federal regulations found in 23 CFR 450.324; and

WHEREAS, the TTCI 2050 MTP was developed through a cooperative, comprehensive, and performance-based planning process that included coordination with the Michigan Department of Transportation (MDOT), Bay Area Transportation Authority (BATA), local jurisdictions, and partner agencies; and

WHEREAS, the TTCI 2050 MTP reflects federal planning factors, supports established performance measures and targets, and includes a financially constrained list of priority projects as required by federal law; and

WHEREAS, the development of the TTCI 2050 MTP included a robust public participation process, consistent with TTCI's adopted Public Participation Plan, and included opportunities for public input through surveys, meetings, and stakeholder consultation; and

WHEREAS, the TTCI Technical Committee has reviewed and recommended the 2050 MTP for adoption;

NOW, THEREFORE, BE IT RESOLVED that the Policy Board of the Traverse Transportation Coordinating Initiative hereby adopts the TTCI 2050 Metropolitan Transportation Plan, including all supporting documentation and appendices, as the official long-range transportation plan for the TTCI Metropolitan Planning Area, effective June 2025, and authorizes its submission to the Michigan Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration for approval.

BE IT FURTHER RESOLVED, that TTCI staff are authorized to make administrative modifications and minor amendments to the MTP in accordance with TTCI's established procedures and federal guidance.

Adopted this XXth day of XXXX, 2025 at a regular meeting of the TTCI Policy Board held in Traverse City, Michigan.

_____ XX/XX/2025

Beth Friend, Chair
Traverse Transportation Coordinating Initiative

Date

APPENDIX C: POSTING OF PUBLIC NOTICE

PUBLIC NOTICE

Traverse Transportation Coordinating Initiative (TTCI)

Draft 2050 Metropolitan Transportation Plan (MTP)

The Traverse Transportation Coordinating Initiative (TTCI) is accepting public comment on the draft 2050 Metropolitan Transportation Plan (MTP), which outlines The MTP outlines the region's long-range transportation vision, investment priorities, and strategies through the year 2050. It addresses roadway preservation, transit, non-motorized transportation, freight, safety, and emerging infrastructure needs. The plan includes a financial element demonstrating fiscal constraint and is developed in accordance with applicable federal and state regulations. The comment period runs from June 6, 2025 to June 25, 2025.

The draft MTP is available at www.networksnorthwest.org/ttci or at Networks Northwest, 600 E. Front St., Suite 205, Traverse City, MI. Comments may be submitted by by mail, or online. All comments must be received by June 25, 2025.

Title VI Notice: TTCI does not discriminate based on race, color, national origin, sex, age, disability, or other protected status in accordance with Title VI of the Civil Rights Act of 1964 and related laws.

If you are an individual with a disability and need special assistance, please contact Networks Northwest at 231-929-5000.

Posted: 6/6/2025

APPENDIX D: MINUTES FROM TTCI TECHNICAL COMMITTEE MEETING – MARCH 13, 2025

Traverse Transportation Coordinating Initiative (TTCI)

The mission of the Traverse Transportation Coordinating Initiative (TTCI) is to provide coordinated leadership and direction for the development and conduct of the continuing, cooperative & comprehensive transportation planning process for the Traverse City urban area.

TTCI Technical Committee Meeting

Thursday, March 13, 2025 at 1:30pm

1209 S Garfield Avenue Suite C, Traverse City, MI or Via Zoom

APPROVED– MEETING MINUTES - APPROVED

Call to Order

The Vice Chair called the meeting to order at 1:32 pm on Thursday, March 13th, 2025.

1) Introduction/Roll Call of Voting Members

Roll Call: Voice introduction of membership was accepted as roll call.

Present:

Cody Stricker (Long Lake Twp.); John Sych (Garfield Twp.); Maxwell Cameron (GT County); Shawn Winter (Traverse City); Angelica Scott (GT County Road Commission); Claire Karner (East Bay Twp.); Lindsey Wolf (Acme Twp.); Max Gierman (MDOT);

Others present:

Barry Hicks (NN); Emma Kelly (NN); Rob Carson (NN); Ben DuBois (MDOT); Rick Venner (Cherry Capital Cycling Club); Richard Robbins (GT Safe Street Alliance); Wayne Shoonover (OHM Advisors); Fern Spence (GT County); Ben Dubois (MDOT); Chris Elliott (GTCRC)

Online: Lynette Wolfgang (Blair Twp.), Sarah Clarren (Elmwood Twp.); Carolyn Ulstad (Groundwork); Christina Nicholaides (FHWA); Daniela Khavajian (MDOT); Bill Clark (BATA)

2) Approval of Agenda and Meeting Minutes for December 19th, 2024 (action requested)

J. Sych asked if there needed to be any changes to the agenda and/or meeting minutes for December 19th, 2024.

Motion: C. Stricker moved, supported by S. Winter, to approve the TTCI Technical Committee Meeting Minutes for December 19th, 2024.
Outcome: The motion was approved unanimously by a voice vote.

3) Public Comment

The floor was open for public comment; Safe Street Alliance was introduced which emphasized the Alliance's focus on safe, non-motorized transportation corridors.

4) New Business

A) TIP, MTP and UPWP Document Creation and Review

The committee discussed the creation and review process for the Transportation Improvement Program (TIP), Metropolitan Transportation Plan (MTP), and Unified Planning Work Program (UPWP), providing an overview of timelines and deliverables. They raised concerns about uncertainties around funding and potential policy changes, particularly regarding federal funding, including formula grants, discretionary grants, and environmental justice requirements.

The committee also provided input on key priorities for the MTP, such as complete streets, intelligent transportation systems, and resilience to extreme weather, as well as specific project needs like the M-72 corridor and the Tarte Trail. The importance of coordinating regional transportation planning across jurisdictions and addressing challenges from high-density development was emphasized.

Additionally, the committee highlighted the importance of securing funding for these initiatives. The technical committee is currently in the process of drafting the TIP as a three to four-year outlook of transportation projects, while also developing the UPWP with a focus on comprehensive community engagement, detailed mapping and analysis of transportation needs, emerging transportation technologies, connectivity challenges between jurisdictions, and innovative funding mechanisms. They aim to have all documents prepared and potentially approved by the end of June, with ongoing opportunities for public input and review. The approach emphasizes flexibility and a forward-thinking strategy to adapt to changing transportation landscapes and community needs.

B) MTP Goal Setting

- Biking and Walking Infrastructure
- New IT Infrastructure
- Lindsey Wolf (Acme Twp.)
    - Concern raised about excessive crashes between 5 Mile Road and Grand Traverse Resort.
    - Emphasis on integrating "Complete Streets" principles.
    - The Place-Making Plan is already in place.
    - TC-Charlevoix Trail discussed.
    - M-72: Proposed addition of an extra lane at the M-72 and US-31 intersection.
    - Addressed safety concerns at the M-72 and Bates intersection, a high-risk area for tourists.
- Claire Karner (East Bay Twp.)
    - Focus on Complete Streets & Economic and Land-Use integration.
    - Land Use should be a driving factor in transportation system development.
    - Coordination efforts with County and MDOT are ongoing.
    - Challenges in funding coordination.
    - Beach District Plan addresses Complete Network concepts.
    - Advocacy for mode-shift (diverse transportation options).
    - The community's top request: Snowplowing for trails and sidewalks in the Beach District.
    - Concern about providing safe access for vulnerable users.
- Shawn Winter (Traverse City)
    - Development of a conceptual non-motorized map for the urbanized area to aid coordination of connections across the community.

    - Proposed shift from using the term "Complete Streets" to "Complete Networks" to better reflect current goals.
    - Suggested linking funding to the concept of Complete Networks.
    - Concern raised about developers bearing disproportionate costs, particularly "last in" developments.
    - Opportunity to differentiate and innovate compared to other MPOs.
    - Shift in construction focus from new builds to rehabilitation due to cost constraints.
    - Discussion about the region's perception of trails primarily as recreational rather than transportation assets.
    - Emphasis on regional resilience and the need for alternative routes in the case of accidents.
    - Discussed the broader impact of transportation decisions, including carbon offset, climate, and land-use implications.
- Richard Robbins (GT Safe Street Alliance)
    - Focus on trail development for biking and multi-modal transportation.
    - Coordination efforts between townships, counties, and cities for seamless connections.
    - Planning around both North-South and East-West corridors.
    - Nordic countries serve as examples of implementing year-round transportation corridors.
    - Vancouver, Canada, recognized as an example of integrating all-year trails and transportation routes.
    - Trails should be primary transportation routes year-round.
- Rick Venner (Cherry Capital Cycling Club)
    - Discussion on the potential for e-bikes to make previously inaccessible routes passable, especially for hilly areas.
    - Support for reduced restrictions to promote e-bike use.
- John Sych (Garfield Twp.)
    - Referenced the Master Street Plan mentioned in MI Planning Enabling Legislation.
    - Emphasized the importance of connectivity through private developments.
    - Discussion on the connection from Zimmerman to Heritage Road—close to completion but not finalized.
    - Active transportation is included in the Master Plan and mandated through zoning, with additional trails provided by the township.
    - Access management improvements discussed for S. Airport and Silver Lake; potential partnership with East Bay to extend improvements to Three Mile.
    - Corridor Improvement Authority (CIA) as a potential funding mechanism.
    - Collaborating with MDOT on a study to look at the US-31 corridor as a boulevard rather than a highway.
    - Land Use: Developers are attracted to areas with existing infrastructure and utilities, and higher-density development offers a better return on investment.
    - Resilience concerns: Potential issues at the S. Airport Crossing over the Boardman River due to high traffic and the delayed Hartman/Hammond Bridge project. Related considerations such as wetlands, floodplains, and storm water management were noted. These factors are being reviewed not only for maintaining reliable transportation networks, but also for ensuring broader infrastructure resilience in the event of disruptions.
- Cody Stricker (Long Lake Twp.)

    - The adopted Master Plan aims to create "village centers" that reduce traffic on major corridors.
    - Focus on lower-speed village centers as part of the plan.
    - Economic and land-use considerations are a priority in their execution of village center plans.
- Bill Clark (BATA)
    - Emphasized the importance of incorporating transit into planning from the start, rather than retrofitting it later.
- Daniela Khavajian (MDOT)
    - The Travel Demand Model (TDM) was discussed as a valuable forecasting tool for transportation planning.
    - MDOT is currently developing this model for the MPO area to support planning processes by providing insights into travel patterns, traffic volumes, and key data sets that can help identify the area's needs and priorities.
    - TDM can predict how changes in the network might affect traffic patterns and behaviors.

Other Updates:

- MAP - Transportation Planning Task Force: Claire is involved, and Shawn inquired about updates.
- Shawn mentioned that construction on Grandview Parkway will begin next Friday.

5) Public Comment

Fern Spence thanked the committee for their efforts and mentioned that she invited Safe Street Alliance today, in turn they get to tell community members to take the survey that is out.

6) Member Comments

8) Adjourn

Meeting Adjourned at 2:47 pm.

Sincerely,

Emma Kelly
Administrative Specialist

APPENDIX E: MINUTES FROM TTCI POLICY BOARD MEETING – MARCH 26, 2025

Traverse Transportation Coordinating Initiative (TTCI)

The mission of the Traverse Transportation Coordinating Initiative (TTCI) is to provide coordinated leadership and direction for the development and conduct of the continuing, cooperative & comprehensive transportation planning process for the Traverse City urban area.

TTCI Policy Board Meeting

Wednesday, March 26th, 2025 at 3:00 pm

1209 S Garfield Avenue Suite C, Traverse City, MI or Via Zoom

MEETING MINUTES

Call to Order

Chair Friend called the meeting to order at 3:01 pm on Wednesday, March 26th, 2025.

1. **Roll Call of Voting Members**

Roll Call: Voice introduction of membership was accepted as roll call.
Present:
Chuck Korn (Garfield Twp.); Beth Friend (East Bay Twp); Doug White (Acme Twp); Don Mayle (MDOT); Nicole Blonshine (Blair Twp.); Rick Robbins (Leelanau Co.); Ron Lemcool (Long Lake Twp.); Maura Sanders (Peninsula Twp.); Deborah Allen (City of TC); Jeff Shaw (Elmwood Twp.); Scott Seifert (GT County); Shaughn Handley (BATA); Fern Spence (GT Co.)
Others present:
Barry Hicks (NN); Isha Pithwa (NN); Emma Kelly (NN)
Online:
N. Alger (GT County);

2. **Approval of Agenda and Minutes**

The agenda was reviewed and approved.

Minutes from the January 29th policy board meeting were approved following a motion and discussion.

Motion by Shaw supported by Korn to approve the meeting minutes from January 29th.

3. **Public comment** was opened, but no comments were received, so the meeting moved forward.

4. New Business

a) TIP, MTP, and UPWP Document Creation and Review

Hicks discussed the potential financial impacts and changes for the MPO area:

- Formula Grant: Anticipate no significant changes in FY25, though there is uncertainty regarding FY26.
- Carbon Reduction: Projections are proceeding as expected, with no changes at present.
- Environmental Justice (EJ): At the most recent MTPA meeting, FHWA stated that EJ is no longer required in TIPs and MTPs. However, Title VI regulations must still be followed.
- Changes may come from Washington as the current administration continues to develop goals and provide guidance.

Hicks then provided an update on plans being put into place for MPO. He explained that the TIP is a 3-year document, MTP is a 5-year document, and UPWP is approved annually as part of the grant process. The UPWP will be updated to include the upcoming fiscal year. After this year, once the MTP is finalized, feedback from technical/policy committees and surveys indicates there are many areas requiring further discussion. A discussion today is necessary to gain additional feedback. Additional items noted about document development for the next few months:

- Goal-setting for the upcoming year and the next 5 years (due to MTP) will be incorporated. A goals section will be added to discuss top priorities for the next MTP.
- Presented the review and approval schedule for TIP, MTP, and UPWP through June.
- An engagement page has been created on the TTCI website for updates and drafts.

Friend asked if the bulk of funding comes from the highway trust fund. Hicks confirmed yes.

Mayle explained MDOT's change to demographic analysis, now managed at the division level. The division is hesitant to include certain key words that the administration may not approve. MPOs can choose and include any activities fitting local goals and priorities.

- Discretionary Grants: No applications were made as Networks Northwest is too new to apply.
- Uncertainties: Many programs have been delayed or are up in the air, though most are expected to proceed.
- NEVI Funding: Will not move forward, only previously obligated funds will be used.2025 MTP Goals

Discussion:

Summary of Common Themes

The following recurring themes emerged during the discussion across jurisdictions:

1) **Safety & Intelligent Transportation Systems (ITS)**

- Nearly all jurisdictions emphasized traffic safety as their top concern.
  Specific concerns include:
  - High-speed corridors and dangerous intersections (e.g., M-72/Bates, Hammond & 4 Mile).
  - Pedestrian safety, especially in school zones and along highways.
  - Interest in roundabouts and other traffic-calming strategies.
  - Need for better coordination and modernization of traffic signals.

2) **Complete Networks / Active Transportation**

- Strong support for continued development of non-motorized infrastructure:
  - Sidewalks, trails, and safe crossings, especially to schools and workplaces.
  - Township-to-township connections and regional corridor development.
  - Barriers noted include resident resistance (cost concerns) and road suitability.

3) **Economic & Land-Use Integration**

- Multiple members stressed the link between land-use planning and transportation:
  - Growth management and development pressures impacting transportation needs.
  - Interest in aligning transportation investments with economic activity centers and housing.
  - Public transit planning driven by workforce access and commuting patterns.

4) **Seasonal Tourism Impacts**

- Summer months bring major increases in traffic volume, particularly in tourist-heavy areas.
- Safety, congestion, and access to popular areas are key concerns during peak season.

5) **Asset Management & Maintenance**

- Emphasis on maintaining and upgrading existing infrastructure:
  - Pavement, stormwater systems, and utility coordination (especially in city areas).
  - Freeze/thaw cycles creating rapid deterioration.
  - Need for comprehensive asset management planning and prioritization.

6) **Growth & Housing Pressure**

- Rapid development is outpacing transportation infrastructure in several areas.
- Concerns about unplanned growth impacting safety, traffic flow, and long-term capacity.

7) Equity & Accessibility

- Recognized need to serve populations without personal vehicles (approx. 30% in some areas).
- Calls for more inclusive planning that supports all users regardless of mode or income level.

Comments

- **Peninsula Township – Maura Sanders**
  - Top Priorities:
    1. Safety & Intelligent Transportation Systems
    2. Complete Networks – Emphasis on non-motorized path development within the township.
    3. Agricultural Safety – Safe passage for farm equipment on M-37.
    4. Seasonal Tourism – Increased traffic volume and safety issues during peak summer months.
    5. Infrastructure Concern – Erosion issue where a road is falling into the bay.

- **Elmwood Township – Jeff Shaw**
  - Top Priorities:
    1. Multi-Jurisdictional Connectivity – Emphasis on Complete Networks, particularly Cherry Bend Road and M-22 corridor.
    2. Safety & Intelligent Transportation
  - Additional Concerns: Agriculture and tourism remain key drivers of transportation needs.

- **City of Traverse City – Deb Allen**
  - Top Priorities:
    1. Complete Streets/Networks – Strong alignment with regional priorities.
    2. Traffic Signal Modernization – Preparing for a comprehensive signal assessment.
    3. Intelligent Transportation Systems
    4. Seasonal Tourism Impacts
    5. Asset Management – Integrated approach to managing road-related infrastructure (e.g., water, sewer, utilities).
  - Discussion Point: Need strategies to prioritize investments based on population and street volume.

- **Long Lake Township – Ron Lemcool**
  - Top Priorities:
    1. Safety & Intelligent Transportation
       - Intersections and general traffic safety, including interest in roundabouts ("Bean-abouts").
    2. Growth Management – Need for forward-looking planning to guide growth and housing.
    3. Complete Streets Limitations – Long Lake Road not well suited for traditional complete streets implementation.

- **Blair Township – Nicole Blonshine**
  - Top Priorities:
    1. Safety & Speed Reduction
       - Specific issues near school zones and areas with high speeds.
    2. Complete Networks – Includes sidewalks and bus stop waiting areas.
    3. Local Traffic Data – Need for reliable traffic counts to inform project eligibility and funding.

- **MDOT – Don Mayle**
  - **Update:**
    - New legislation on road speed reductions does not significantly alter current processes.
    - Townships can fund studies, but final approval rests with the Michigan State Police.

- **Acme Township – Doug White**
  - Top Priorities:
    1. Safety & Intelligent Transportation
    2. Complete Networks
  - Intersection of Concern: Bates/M-72 – Identified as a particularly dangerous location.
  - Additional Notes: Lower priority for other issues, but interested in a broader Speed Study.

- **BATA – Shaughn Handley**
  - Top Priorities:
    1. Economic Land Use Integration – Public transit routes are driven by workforce access.
    2. Safety & Intelligent Transportation
    3. Complete Networks

- **Leelanau County – Rick Robbins**
  - Top Priorities:
    1. Economic & Land-Use Coordination – Focused on understanding traffic patterns and accommodating growth.
    2. Traffic Routing – Interest in rerouting traffic from S. Airport/US-31 around the city to Three Mile

- **Garfield Township – Chuck Korn**
  - Top Priorities:
    1. Maintenance & Asset Management
    2. Safety – Emphasized pedestrian safety (e.g., avoiding walking on highways).
    3. Intelligent Transportation Systems – Interest in integrated traffic signalization to improve capacity and efficiency.
  - Complete Networks: Advocated for trails connecting land uses across the township.
  - Concern: Residents in subdivisions often resist sidewalks due to cost.

- **East Bay Township – Beth Friend**
  - Top Priorities:
    1. Safety – Specific intersection: Hammond & 4 Mile.
    2. Resilience – Road deterioration due to freeze/thaw cycles.

- Additional Notes: East Bay has a mix of rural and urbanizing areas; new apartment developments are increasing. Trails seen as a key tool for workforce mobility.

5. **Public comment**

- **Grand Traverse County – Fern Spence**
  - Top Priorities:
    1. Complete Networks – Focus on active transportation corridors between townships and school access (e.g., sidewalks to W. Central High School).
    2. Safety – Noted rise in personal injuries per EMS/911 data.
    3. Resilience – Stormwater issues (MS4) need to be addressed.
    4. Economic & Land-Use Integration
    5. Equity – 30% of the population lacks access to a car.

- **Leelanau County – Rick Robbins**
  - Key Points:
    - Echoed Rick Robbins' comments.
    - Recommended that LCRC (Leelanau County Road Commission) be included in MPO meetings.

6. **Update or discussion on future agenda items:**
   - Friend: They are fixing 3 Mile Rd after school gets out. Possibly Townline Road at the same time. Not confirmed. Emergency services also said they may be leaving one lane open.
   - Meet again in April

7. **Reminder:** Next Meeting: April 23rd, 2025 at 3:00 PM

8. The meeting was **adjourned at 4:38pm** with thanks to the participants.

APPENDIX F: MINUTES FROM TTCI TECHNICAL COMMITTEE MEETING – JUNE 12, 2025

Traverse Transportation Coordinating Initiative (TTCI)

The mission of the Traverse Transportation Coordinating Initiative (TTCI) is to provide coordinated leadership and direction for the development and conduct of the continuing, cooperative & comprehensive transportation planning process for the Traverse City urban area.

TTCI Technical Committee Meeting

Thursday, June 12th, 2025 at 1:30pm

1209 S Garfield Avenue Suite C, Traverse City, MI or Via Zoom

MEETING MINUTES

Call to Order

The meeting was called to order at 1:35 p.m. on Thursday, June 12th, 2025, by J. Sych.

Hicks requested that we add item 4c. BATA 5310 Form to the agenda. J. Sych asked for a motion to amend the agenda by adding item 4c.

Motion: L. Wolf moved, supported by Z. Cole, to amend the agenda by adding item 4c.

Outcome: The motion was approved unanimously by a voice vote.

1) Introduction/Roll Call of Voting Members

Roll Call: Voice introduction of membership was accepted as roll call.

Committee Members Present: Chris Elliott (GTCRC – Alternative V); Maxwell Cameron (GT County); Lindsey Wolf (Acme Twp.); Claire Karner (East Bay Twp.); Bill Clark (BATA); John Sych (Garfield Twp.); Ben DuBois (MDOT - Alternative V); Bill Clark (BATA); Zach Cole (Traverse City)

Staff Present: Barry Hicks (NN); Isha Pithwa (NN); Cassidy Robarts (NN); Emma Kelly (NN)

Others present: Chris Kushman (TART); Alisha Busitill (OHM Advisors); Bill Vandercook (East Bay Twp.); Ben Taylor (MDOT Intern);

Online: Lynette Wolfgang (Blair Twp.); Krista Phillips (MDOT); Daniela Khavajian (MDOT); Fern Spence (GT County); Carolyn Ulstad (Groundwork)

2) Approval of Agenda and Meeting Minutes for May 8th, 2025 (action requested)

J. Synch asked if there needed to be any changes to the agenda and/or meeting minutes for May 8th, 2025.

Motion: Z. Cole moved, supported by C. Karner, to approve the TTCI Technical Committee Meeting Minutes for May 8, 2025.

Outcome: The motion was approved unanimously by a voice vote.

3) Public Comment

The floor was open for public comment; no comments were made

4) New Business

a. TART - Support Use of Railroad Line for Multi-Use Non-Motorized Trail

Chris Kushman from TART Trails presented a proposal focused on using an inactive railroad corridor in Blair Township for a multi-use, non-motorized trail. He emphasized that, with the MPO structure now in place, there was a strong opportunity to connect key regional trail gaps, particularly between Traverse City and Blair Township. Kushman highlighted that the corridor along Cass Road was currently in exempt status due to its state-owned designation and lack of active use, which potentially opens the door for repurposing. The proposal included long-term visions for extending connections to Kingsley and River Road, enhancing regional mobility and recreational access.

Committee members expressed strong support. Claire Karner called it a logical and necessary first step, while Lindsey Wolf noted full support from Acme Township. John Sych emphasized the broader regional impact of the project, citing similar success from the Traverse City to Suttons Bay trail. Zach Cole added that connecting both sides of River Road—even where the track remains active—would benefit from long-term planning, and he supported exploring trail segments along Hoosier Valley and other locations in Blair Township. Kushman noted interest from Kingsley to integrate their trail network as well.

Following discussion, Claire Karner moved to recommend the resolution to the TTCI Policy Board. Zach Cole seconded the motion, and it passed unanimously by voice vote.

Motion: C. Karner moved, supported by Z. Cole, to pass recommendation to the TTCI Policy Board to pass the resolution.

Outcome: The motion was approved unanimously by a voice vote.

b. FY 2026 Meeting Schedule Draft

Barry Hicks introduced the draft 2026 TTCI meeting calendar. The proposal suggested holding Technical Committee meetings on the first Thursday of every other month, with Policy Board meetings occurring two weeks afterward. This schedule, Hicks noted, would allow faster processing of TIP amendments and better decision-making alignment between the committees. He emphasized the importance of this scheduling structure to avoid long delays between project approvals. Considerations were made for busier months, such as December and July, where meetings may be skipped if unnecessary.

Motion: Z. Cole moved, supported by L. Wolf, to recommend the 2026 TTCI calendar to the TTCI Policy Board for approval.

Outcome: The motion was approved unanimously by a voice

c. 5310 Form for BATA

Isha Pithwa presented a funding request for a new project submitted by BATA under the 5310 program. The form outlined a project for FY 2026 supporting a position held by Bill Clark. Hicks explained that this was part of BATA's transition from a small-urban to an urbanized designation, which affected the type and frequency of project submissions. Hicks added that as a result of this transition, TTCI staff were seeing an increased number of forms and would continue working with BATA as they adapted to the new funding environment.

Motion: C. Karner moved, supported by L. Wolf, to recommend the BATA 5310 form to the TTCI Policy Board for approval.

Outcome: The motion was approved unanimously by a voice vote.

5) Continuing Business

a. FY 2025 MTP - Consideration

Barry Hicks introduced the final draft of the FY 2025 Metropolitan Transportation Plan (MTP), the third and most comprehensive of the MPO's core planning documents. Unlike the TIP or UWP, which require annual updates, the MTP is updated every five years, although it may be amended as necessary. Hicks reviewed various sections of the document, including public participation processes, survey results, and the vision and goals developed earlier in the year. He called attention to Pages 22–23, which for the first time show integrated regional transit route information, and to Page 28, which discusses PACER road ratings for the federal-aid system. The plan also includes a section on non-motorized connectivity, a major theme in regional planning.

Claire Karner inquired whether adopted township-level non-motorized plans could be included. Hicks and Pithwa confirmed that many were already included, but staff would gladly work with each township individually to add specific projects or road segments not yet reflected in the document. Hicks emphasized that this approach would be part of the MPO's ongoing planning process, and adjustments could be made even after MTP adoption.

Zach Cole raised concerns about the process for assigning project numbers for non-TIP projects and emphasized the need for earlier engagement with MDOT and Act 51 agencies. Cole noted that design timelines often take up to two years, and delays in receiving fiscal authorization and project numbers hinder planning. Hicks acknowledged the concern and agreed to coordinate a focused meeting with MDOT and local agencies to discuss the issue and align on a process going forward.

Motion: B. Clark moved, supported by C. Elliot, to recommend that the TTCI Policy Board approve the (MTP) as presented.

Outcome: The motion was approved unanimously by a voice vote.

6) Public Comment

Zach Cole raised questions regarding whether projects removed from funding eligibility lists could be reinstated later and how such decisions would be made. Hicks clarified that this would require a TIP amendment and follow proper committee review. He reiterated TTCI's commitment to working directly with member agencies to improve coordination and decision-making during the early phases of project development.

7) Member Comments

Future agenda items will include follow-ups on MTP implementation, BATA funding updates, and coordination with MDOT on project number assignments.

8) Adjourn

Meeting Adjourned at 2:35 pm.

Sincerely,

Emma Kelly

Administrative Specialist

APPENDIX G: MINUTES FROM TTCI POLICY BOARD MEETING – JUNE 25, 2025

APPENDIX H: SUMMARY OF PUBLIC INPUT

Summary of Public Input

Development of the TTCI 2050 Metropolitan Transportation Plan (MTP) was informed by robust public input gathered from multiple outreach initiatives between 2023 and 2025. These activities reflect the MPO's commitment to ensuring that regional transportation planning is shaped by the needs, perspectives, and priorities of residents, partner agencies, and stakeholders throughout the Traverse City-Garfield Urbanized Area.

1. Metropolitan Planning Area (MPA) Public Engagement Sessions

In July 2023, Networks Northwest hosted a series of public input sessions across Traverse City as part of the North Region Active Transportation Plan (NRATP) process, which also served as early engagement for the MTP. Events were held at the Traverse Area District Library, Hull Park, the Sara Hardy Farmers Market, and Michigan Works! Traverse City. These sessions utilized interactive exercises—including mapping activities and a gallery walk of transportation imagery—to encourage attendees to identify areas of concern and highlight best practices in infrastructure.

Key themes included:

- Desire for improved pedestrian and bicycle safety, including better-marked crosswalks and separated bike facilities.
- Support for traffic calming measures and context-sensitive roundabout designs.
- Interest in comfortable, accessible transit stops with shelters and bike racks.
- Feedback on the need for safer non-motorized connections beyond downtown areas, especially along South Airport Road and Division Street.

2. North Region Active Transportation Plan (NRATP) Input

The NRATP public engagement spanned over a year and included input sessions within the TTCI MPA in Garfield Township, East Bay Township, Traverse City, and Leelanau County. A gallery walk activity at each event encouraged participants to provide feedback on sidewalks, transit, bike lanes, and traffic safety. A widely distributed online survey, open from September 2023 through June 2024, yielded 443 responses region-wide—108 of which came from Grand Traverse County.

Findings specific to the MPA include:

- Strong public preference for non-motorized routes like the TART Trail and Leelanau Trail, citing safety and separation from vehicles.

- Discomfort with high-speed, high-traffic corridors including Franke Road, Silver Lake Road, M-22, and South Airport Road.
- Recommendations for improved trail connectivity, lower traffic speeds, and safer crossings, especially for vulnerable users and school zones.

These findings directly influenced the MTP's goals around multimodal connectivity, infrastructure preservation, and safety.

3. MPO Stakeholder Survey

From March 6 to May 2, 2025, TTCI conducted a regional stakeholder survey that received 66 responses from local officials, agency representatives, and the general public. Respondents were asked to identify top transportation challenges and project priorities for both their communities and the region.

Major themes included:

- Traffic congestion, aging infrastructure, and multimodal safety as leading regional challenges.
- Project priorities such as traffic calming, transit route expansion, non-motorized trail connectivity, and access management on South Airport Road.
- A high-ranking preference for sub-plans focused on Complete Networks, transit planning, and infrastructure resilience.

This input shaped both the short-term investments included in the FY 2026–2029 TIP and long-term objectives in the MTP.

4. Regional Economic Strategy Feedback

Transportation comments from the Comprehensive Economic Development Strategy (CEDS) process were also reviewed and incorporated. Stakeholders emphasized the need for expanded public transit, shared freight distribution facilities, infrastructure maintenance, and investment in non-motorized systems. Suggestions also included:

- Creating rail freight access to hubs in central and southern Michigan.
- Extending sidewalk systems and exploring alternative funding tools, such as tourism-based infrastructure taxes.
- Recognizing the role of transportation in placemaking and economic vitality.

This additional regional context underscored the importance of aligning transportation investment with land use, housing, and workforce access.