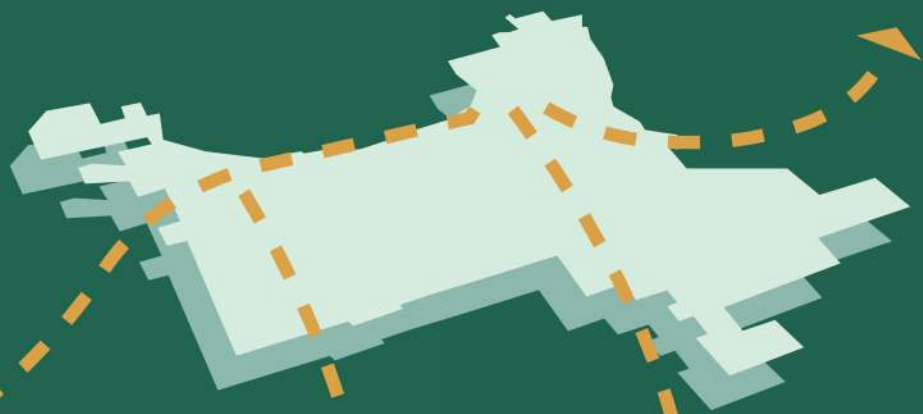
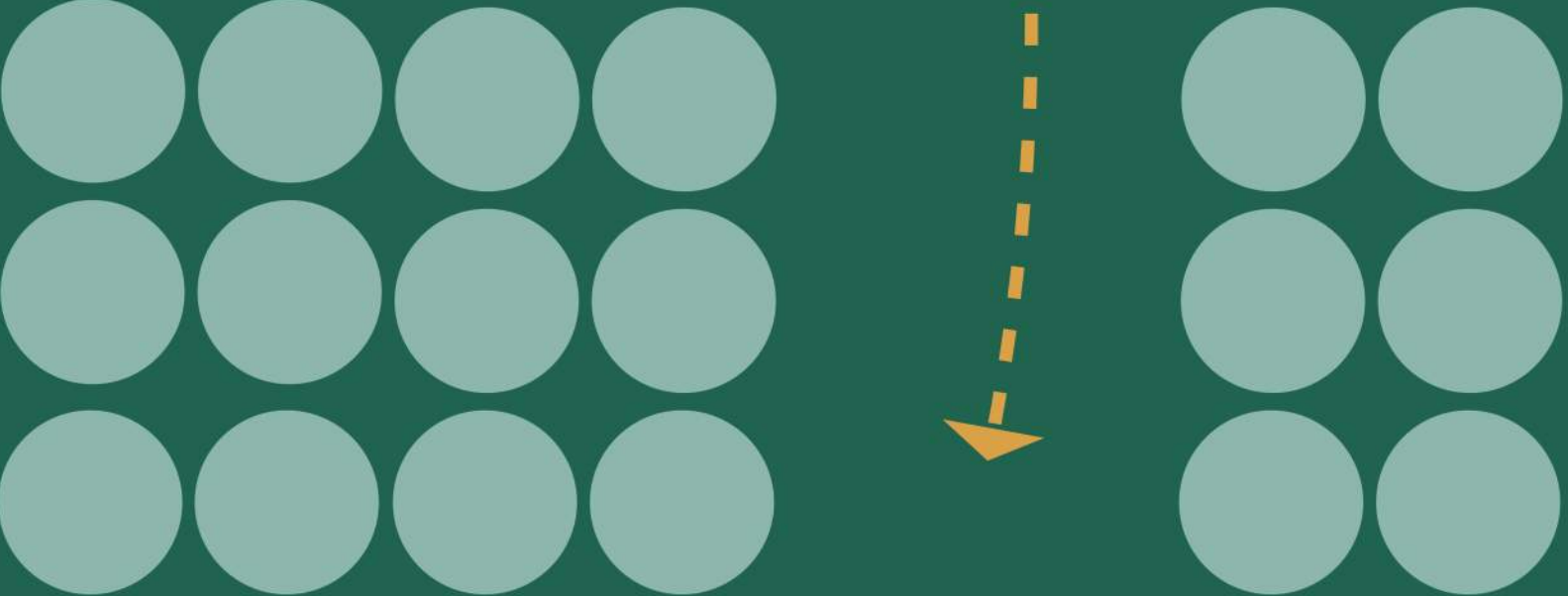


**T R A V E R S E
C I T Y**

**Mobility
Action
Plan**



Summer 2024



SPECIAL ACKNOWLEDGMENTS

Representing the work of City staff, a dedicated and active Leadership Committee, and the extensive engagement of Traverse City residents and stakeholders, the Mobility Action Plan embodies Traverse City's mobility vision for the future. We want to acknowledge the hard work and dedication of the following groups and individuals through this process.

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Example of Low-Volume Residential Street (Washington Street)

1

Background and Purpose



E Eighth Street Cycletrack and Sidewalk

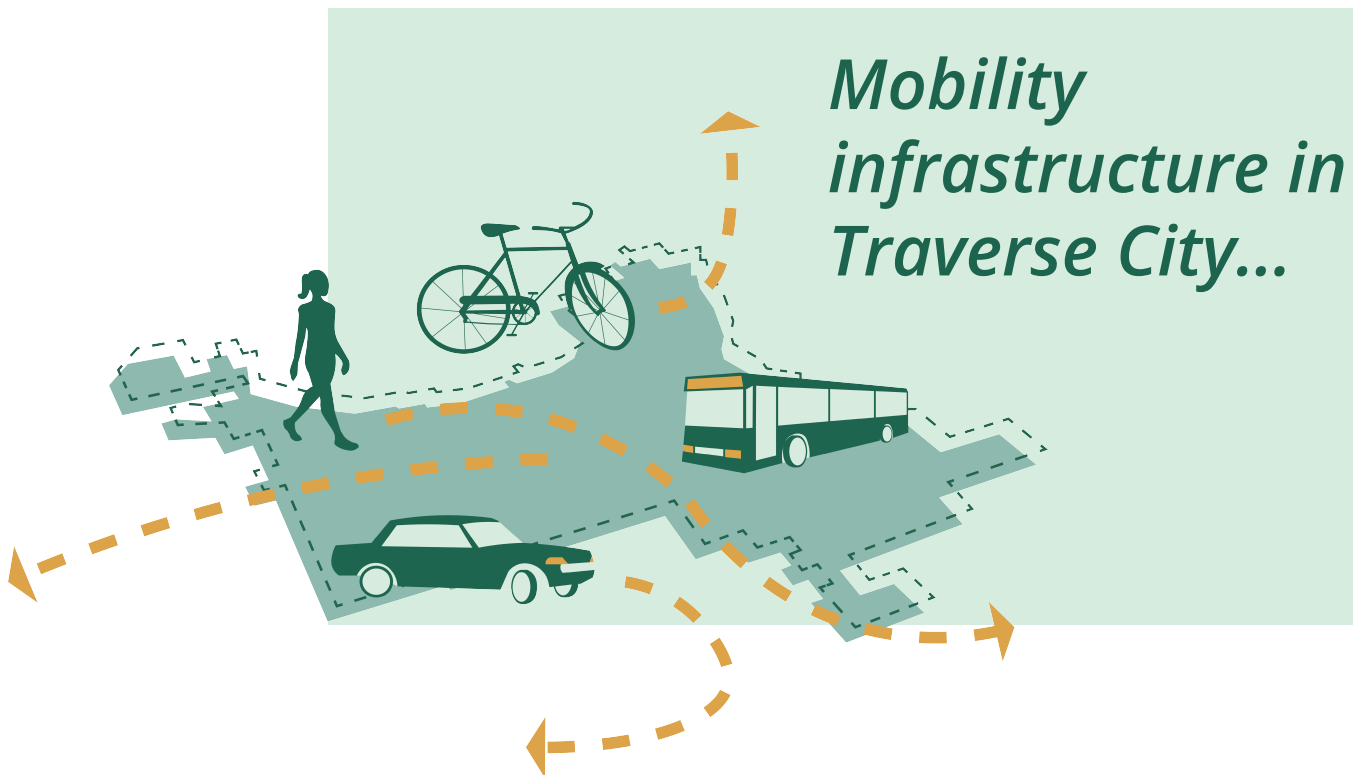
Introduction

Traverse City is an active city and has been heralded as one of the most bikeable cities in Michigan. Located in the four-season beauty of Northwestern Michigan, people love spending time walking and bicycling throughout the community. From summer rides in the bay breeze to family rides to the library on crisp autumn days to coffee shop commutes on a snowy winter evening – the natural beauty of Traverse City drives people outdoors for recreation.

Residents of Traverse City are also conscious of their environmental footprint. Many seek sustainable transportation alternatives that reduce their carbon footprint while encouraging an active and healthy lifestyle. In fact, 10% of Traverse City households do not own a car compared to 7% statewide¹. In this sense, bicycling and walking represent a lifestyle shift that reduces one's dependency on cars while promoting personal health and care for the earth.

1.) Data gathered from United States Census Table B08201: Household Size by Vehicle Available.

Bicycling and walking also represent an empowering transportation choice for those who have few. While Traverse City's population swells during the summer with tourists, many of the city's full-time residents lack the ability to own or operate a vehicle, as one in ten households don't have access to a car². One in five residents are also older than 65³ – a demographic that often represents a decline in one's ability to get around. With the region's current infrastructure oriented around the movement of cars, shifting street design towards increased mobility and access for people walking and bicycling represents a great equalizing of people's ability to get around, regardless of age, income, race, ethnicity, or ability.



Understanding these factors, there is a unique groundswell of support towards making Traverse City a leading bicycling and walking community not only here in Michigan but also nationally. This vision of bicycling is one where everyone feels comfortable riding on city streets and trails; it's a vision of Traverse City as a vibrant community that is in tune with nature and accessible via bicycle. This vision reflects residents' values and desires to see continued, relentless momentum to improve non-motorized facilities.

However, accomplishing this vision requires more than pavement striping and protective bollards. It requires a fundamental culture shift in how we view and discuss mobility in Traverse City. It requires the combination of good infrastructure design, high levels of maintenance, education, and training to create shared understanding between cyclists, pedestrians, and motorists. This represents a long, incremental process but the end result is a community that truly embodies its mobility values and lives them out on a daily basis. This is the ultimate vision of the Traverse City Mobility Action Plan.

2

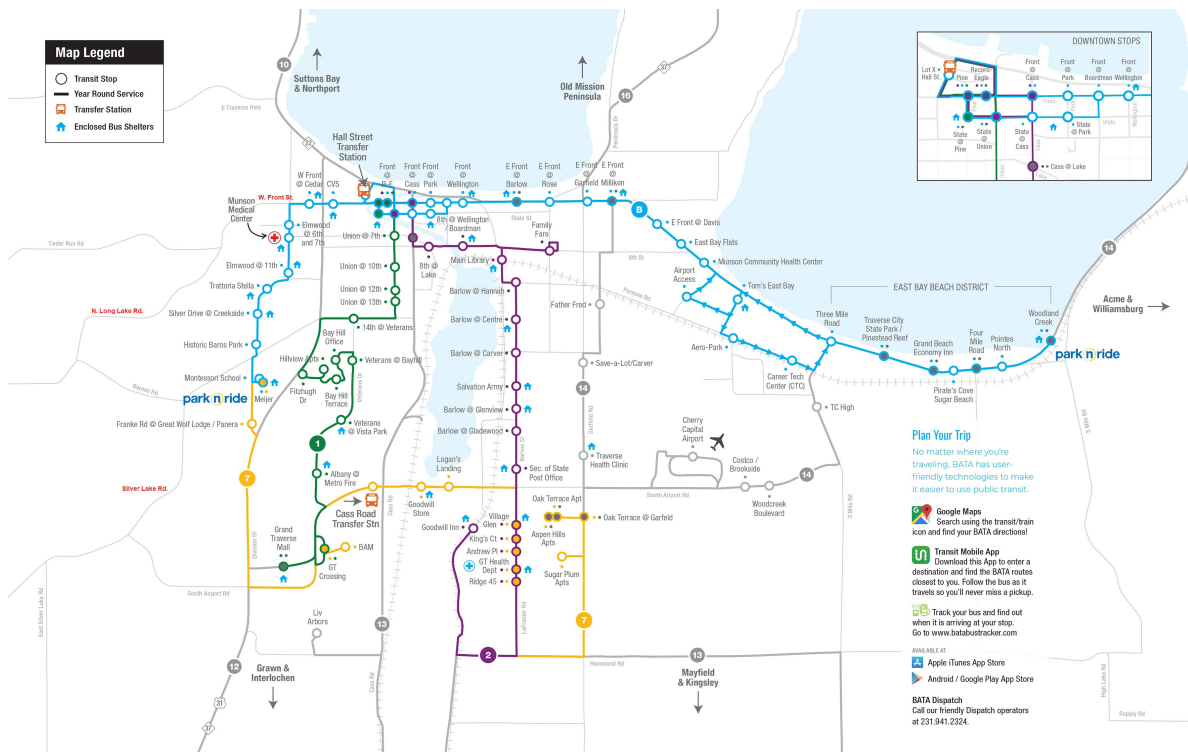
2.) Data gathered from United States Census Table B08201: Household Size by Vehicle Available.

3.) Data gathered from United States Census Table S0101: Age and Sex.

Although the Traverse City Mobility Action Plan provides a number of specific recommendations, it primarily acts as a methodology for integrating bike and pedestrian infrastructure into the City's existing capital improvements process. It also provides suggestions towards shifting thinking and perceptions about transportation modes and their operations for City staff, community stakeholders, and the general public.

...
will be designed with all users in mind, regardless of how they choose to travel.

While the Mobility Action Plan emphasizes non-motorized travel with a particular emphasis on bicycling infrastructure, this Plan also acknowledges the importance of pedestrian infrastructure along with access to public transit. BATA has been an active partner throughout the Mobility Action Plan process, participating as a member of the Leadership Committee and sharing valuable insights on the system's function and relationship with other modes. Sidewalk and streetscape environments play a crucial role in Traverse City's mobility network, as they encourage walkability through its many neighborhoods and business districts. While there remains room for general improvement, the sidewalk network features extensive coverage – a testament to the City's emphasis on walkability over time. Sidewalks, crosswalks, and other pedestrian infrastructure improvements are included in the Mobility Action Plan; however since the bicycle network has historically been more lacking than the pedestrian network, the primary focus of the Plan is to enhance the City's bicycle infrastructure to achieve the community's vision of a balanced and complete mobility network.

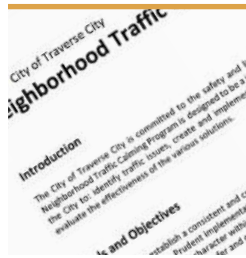


Above: BATA Transit Map

Previous Transportation Planning Initiatives

Traverse City has long focused on improving the city's mobility network – this is evidenced in the number of city policies and transportation-oriented plans, and street reconstruction and improvement projects the City has undertaken over the past decade. Although not comprehensive, a number of those pertinent to the Mobility Action Plan are discussed below:

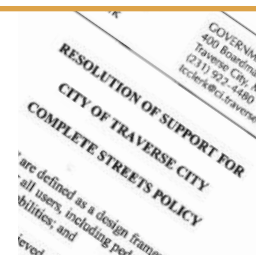
2011



Neighborhood Traffic Calming Program (2011) – Adopted by the City Commission in April 2011, this program outlined the community's desire for lower-speed streets through street calming treatments. It outlined a process where residents could contact the City and request traffic calming devices to be installed on their streets. City staff would then analyze the area and determine whether these devices were appropriate. Over the years, this program was underutilized due to a lack of dedicated resources.

2011

Complete Streets Resolution (2011) - Adopted by the City Commission in October 2011, this resolution outlined the City's commitment towards a street network that "provides convenient access for all users." This resolution also stated the City's intent to develop a non-motorized transportation plan that is ultimately integrated into the street improvement program.



2013



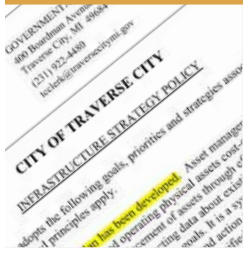
Corridors Master Plan (2013) - This plan focused on streetscape improvements and land use recommendations along East Front Street, West Front Street, Eighth Street, Fourteenth Street, and Garfield Avenue. Although the plan considered the city's transportation network, this plan was largely oriented towards changing building development and streetscape standards along these corridors.

2014

Active Transportation Plan (2014)* Not Formally Adopted – Developed by the Active Transportation Committee (a sub-committee of the Planning Commission), this document recommended changes to the City's transportation policies and identified specific infrastructure improvements. While not formally adopted, this plan envisioned "a complete, well-maintained, active transportation network that encourages a healthy mix of transportation choices."



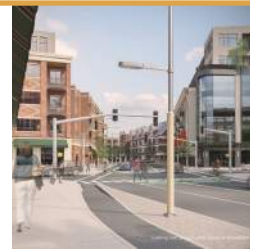
2014



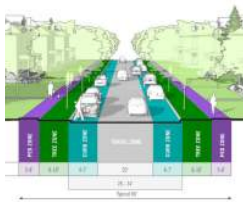
Infrastructure Strategy Resolution (2014) - An amendment to the City's Infrastructure Strategy adopted in 2009, this resolution stated that the City's infrastructure process would follow a developed asset management plan, reference design guides developed by the National Association of City Transportation Officials (NACTO) and Federal Highway Administration (FHWA), and be managed as a system, including underground and aboveground infrastructure. The resolution also prioritized infrastructure expenditures, with sidewalks and local streets being the highest priority for maintenance and repair.

2017

Envision Eighth Street Plan (2017) - Providing a vision for Eighth Street as a mixed-use district, this plan proposed the cycle track configuration currently existing on Eighth Street. The plan also provided landscape and streetscape features to incorporate within the proposed North Boardman Lake District (NBLD).



2018



Street Design Manual (2018) - This plan provides a toolkit for desired street characteristics based on their context. This manual classified all streets in Traverse City and provided a preferred street design for each street classification. While useful in identifying components of successful streets, this manual is a high-level design guide that does not address implementation from a city-wide standpoint.

**The Street Design Manual is intended to work in tandem with the Mobility Action Plan*

2022

Transportation Demand Management Study (2022) - Adopted by the Traverse City Downtown Development Authority (DDA), this report provides "quick-win" opportunities, short-term priorities, and recommendations for further study. These recommendations are oriented towards improving mobility within the downtown district.



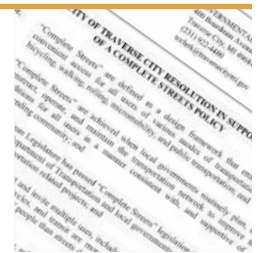
2022



BATA Transit Master Plan (2022) – Developed to guide the regional transit agency over the next ten (10) years, this report outlined the system’s operations after the COVID-19 pandemic and identified steps to address ridership and staffing shortages to meet demand. Some steps involved concentrating service in higher-density, higher-demand areas as well as increasing frequency to areas outside of Traverse City. This plan integrates with mobility in Traverse City by extending the reach of those walking or cycling, as a regional transit system complements the City’s mobility network.

2022

Complete Streets Resolution (2022) - Adopted by the City Commission in December 2022, this resolution reaffirmed Traverse City’s Complete Streets Policy from 2011, restating its commitment towards complete streets and a balanced mobility network. This resolution was adopted as a means to support the on-going work of the Mobility Action Plan while also informing development of a future Complete Streets Policy.



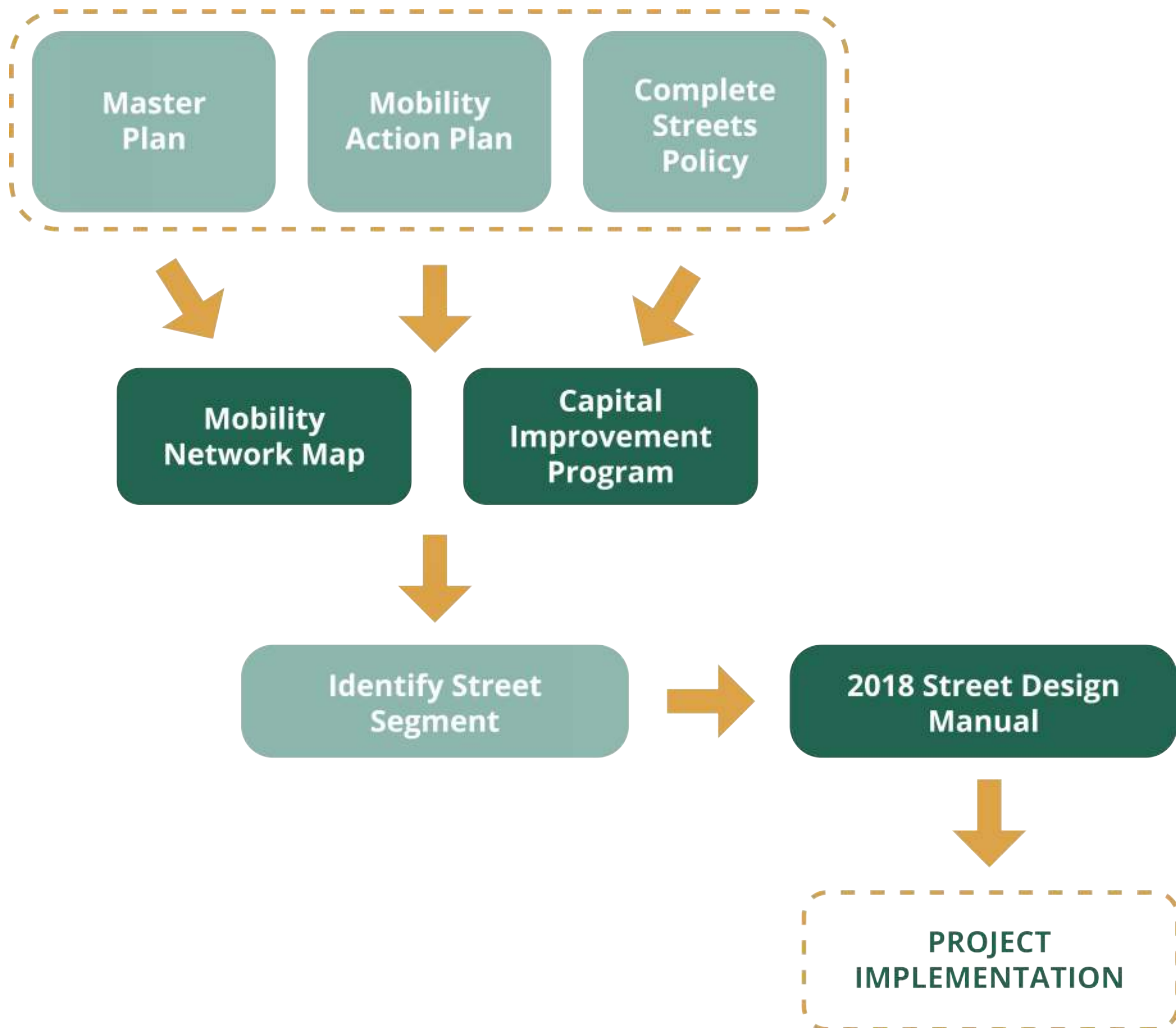
These past studies, reports, and resolutions indicate Traverse City’s commitment towards making the city a more welcoming place to walk and ride a bike. While representing the City’s mobility values, these various plans have not provided a unified citywide bicycle network plan while providing a framework for city staff to incrementally work towards its completion. With this in mind, the Mobility Action Plan was developed to meet this need and serve as a critical policy document that assigns modal hierarchy to Traverse City’s street network and provides guidance to City staff in a way that allows the network to be nimbler and evolve to meet community needs.

What is Mobility?

“Mobility” refers to a person’s ability to move freely and easily. It’s not just about how fast people can travel, but how easily they can access desired destinations, such as jobs, services, and social interactions. In the context of getting around Traverse City, mobility implies a transportation network that empowers people of all ages and physical abilities to travel safely to all parts of the city by walking, bicycling, or through other non-motorized transportation methods.

How To Use This Plan

The Mobility Action Plan is a component of the City's Master Plan; it is tasked with taking a "deeper dive" into the topic of mobility and how the vision of this plan will be incorporated into the City's capital infrastructure and maintenance process. Oriented around action, this document outlines steps to be taken by City staff and provides the basis for allocating resources towards developing the City's mobility network as well as improving City operations for the ongoing maintenance of infrastructure. This process is discussed further in Chapter 7: Implementation.



As the City's overarching, long-range mobility plan, the Mobility Action Plan will inform the policies that ultimately guide the amendment and development of infrastructure ordinances. This structure also works in tandem with the 2018 Street Design Manual, as the Mobility Action Plan provides a framework towards the incremental development of the City's mobility network while the Street Design Manual offers design guidelines for what Traverse City's streets can look like. This mobility infrastructure suite – from the long-range plan to the guiding policies to the ordinances and design guides – all of these work towards making Traverse City a better place for all mobility users.

2

Mobility Vision

Traverse City is a community with high mobility aspirations. Not content with simply being “good enough,” there is widespread desire for the City to stand shoulder-to-shoulder with not only the premier bicycling communities here in Michigan but those across the nation. This bold and progressive goal envisions a place where residents live their daily lives walking and bicycling, no longer dependent on an car in a way that aligns with community values. This vision is encompassed in the Mobility Action Plan’s vision statement.

Vision Statement

“Traverse City will be a place where people can access jobs, housing, amenities, and natural features using a safe and balanced mobility network that reduces the region’s carbon footprint.”

Values

To achieve this vision, five guiding themes were identified through the development of the Mobility Action Plan. These are discussed below.



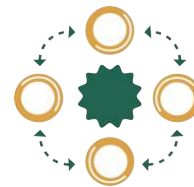
People



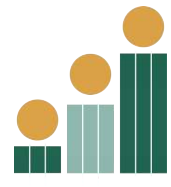
Environmental Stewardship



Connectivity



Adaptability



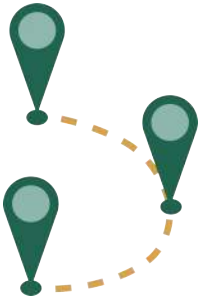
Prosperity



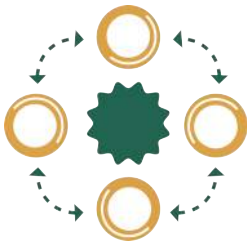
People – Traverse City is a city of people spanning all abilities, ages, and stages of life – each with unique transportation needs in their lives. Traverse City desires for its mobility network to provide equitable access to community assets for everyone, empowering them to travel with dignity and comfort. This value recognizes that mobility infrastructure is inherently people-focused. A successful mobility network creates an environment where all people can travel and participate in daily life regardless of life circumstance.



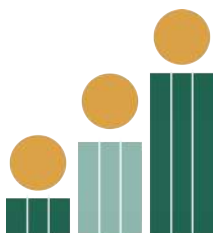
Environmental Stewardship – Traverse City follows a stewardship mindset regarding its infrastructure, recognizing that investments in mobility improvements have long-lasting impacts on the City’s overall sustainability and quality of life. This value demonstrates respect for Traverse City’s unique natural environment and infrastructure’s role in encouraging an active and healthy lifestyle.



Connectivity - Traverse City desires to be a place where people can access all parts of the city and region using a safe, convenient, and comfortable mobility network. This value emphasizes the importance of connections; to work and school, across busy high-volume roadways, to recreation opportunities, over the Boardman-Ottaway River, to places to shop and receive services, between all neighborhoods throughout the city, and to other modes such as transit. This value conveys a connectivity commitment, pulling all parts of the city closer together.



Adaptability – Traverse City desires to be a community responsive to change and views its streets as an asset to be managed and modified in response to changing conditions over time. While addressing the anticipated conditions brought by climate change, this value also focuses on how street design can evolve incrementally over time. Streets designed fifty-plus years ago fail to account for today’s complexities, just as streets designed today will likely be rendered obsolete by future conditions. Humbly acknowledging this reality along with a posture of incremental change can create an adaptable mobility network that best meets current and foreseeable future needs.



Prosperity – Traverse City views its mobility network as an economic driver. Increased mobility options knit the local business and employment ecosystem closer together and create a welcoming environment for all types of people. This value recognizes that places conducive to people walking and bicycling support strong business districts, livable neighborhoods, and provide opportunities to access hubs of employment and commerce – all generating economic value to the broader community.

Infrastructure & Culture: Ingredients for Shifting the Mobility Paradigm

While many non-motorized plans focus solely on physical infrastructure, this is only half of the story. A community's mobility culture – its understanding and interactions between all mobility users – ultimately shapes how welcoming it is towards pedestrians, cyclists, and transit riders. A healthy mobility culture is one of shared responsibility and respect; it's one where people walking, biking, waiting for the bus, or driving a car/SUV/truck interact safely and predictably. In contrast, an unhealthy mobility culture is where people walking, biking, riding transit, or driving a car/SUV/truck are antagonistic towards one another; it's characterized by an environment that is hostile, unpredictable, and unsafe for all mobility users.

In this sense, even the best mobility infrastructure can only go so far in shaping a community's posture towards mobility. Because of this, changing mobility infrastructure must be paired with changing mobility culture. While less visible than a protected bicycling facility or a striped crosswalk, mobility culture is nonetheless a foundational component in creating a welcoming bicycling and walking community. Fostering a culture change takes time, but its rewards are evident in the way mobility users interact with one another. Chapter 4 describes how culture can begin to shift towards one of shared safety, predictability, and hospitality.



3

Community Engagement



October 26, 2022 Community Open House

The overall vision of the Mobility Action Plan was established through rigorous public engagement over a year-long period. Due to its simultaneous development with the Master Plan, public engagement efforts for the Mobility Action Plan were largely coordinated with the Master Plan Team. This process intended to reach as many residents and stakeholders as possible, as participants could offer feedback on both plans shaping Traverse City's future.

Beginning in the fall of 2022, the planning team engaged the public through community surveys followed by a Master Plan + Mobility Action Plan Community Open House event on October 26, 2022. Information from the open house and survey results shaped the development of the Mobility Action Plan's overarching themes, values, and the first draft of the City's proposed mobility network. These were then brought before the public at the March 15, 2023 Open House for further feedback and refinement. This feedback guided the final development of the Mobility Action Plan.

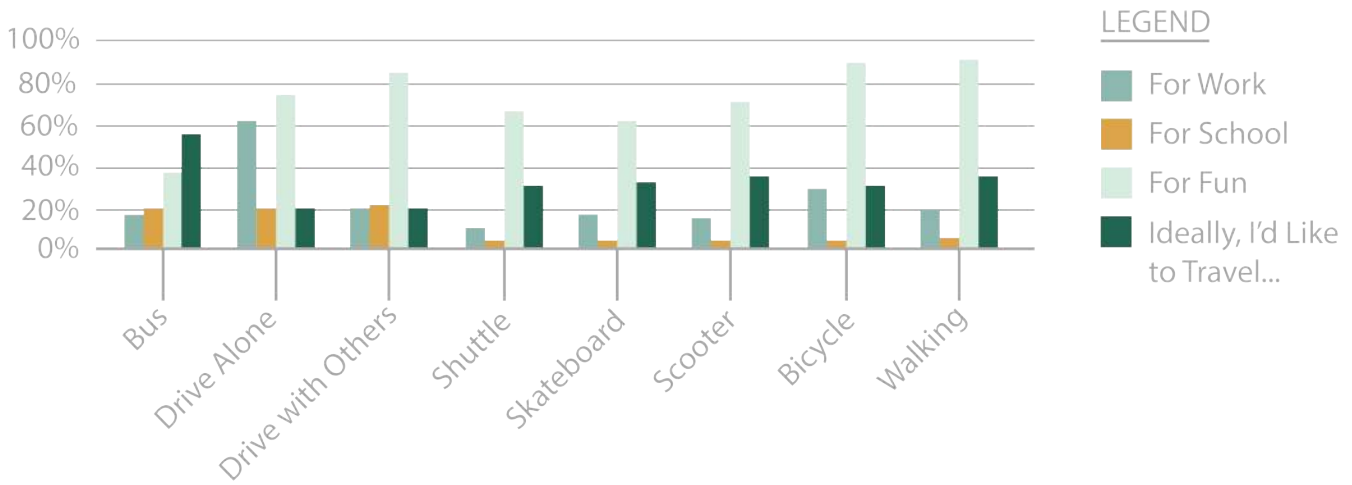
Throughout this process, development of the Mobility Action Plan was guided by the Mobility Action Plan Leadership Team. Comprised of elected and appointed officials, City staff, and mobility stakeholders, this group dedicated their time, energy, and expertise towards shaping this Plan.

Summaries of how community engagement shaped the Mobility Action Plan are described on the following pages.

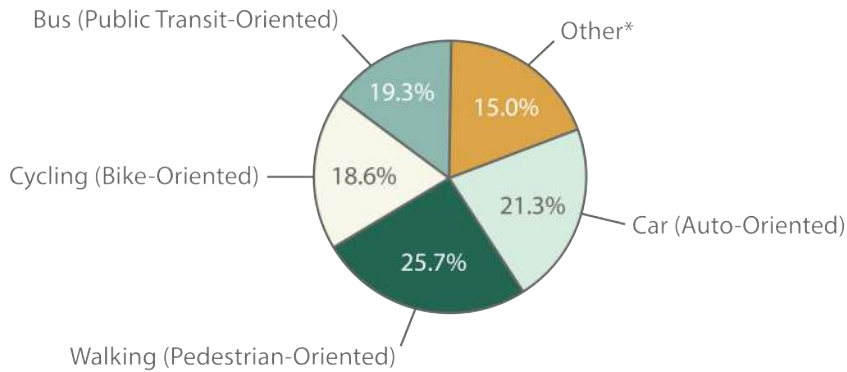
Community Survey

First Community Survey - Developed in partnership with the Master Plan Team, the first community survey was released in September 2022 and closed in October 2022. This survey largely focused on respondent’s demographic information, however a number of questions identified how residents travel around Traverse City as well as their future mobility preferences. An astonishing 1,910 people participated in this survey, offering a large pool of information to pull from. Results on mobility-related questions are included below:

Question 10: How do you transport yourself on a daily basis? Select all that apply.



Question 13: What modes of transportation should Traverse City prioritize going forward? Rank from highest (#1) to lowest (#8) the following transportation modes.



	Choice #1		Choice #2		Combined	
	Percentage	Count	Percentage	Count	Percentage	Count
Bus (Public Transit-Oriented)	19.52%	351	20.08%	361	19.3%	712
Car (Auto-Oriented)	31.77%	577	11.56%	210	21.3%	787
Walking (Pedestrian-Oriented)	24.92%	451	27.40%	496	25.7%	947
Cycling (Bike-Oriented)	13.49%	246	24.23%	442	18.6%	688
Other*	12.87%	234	17.75%	322	15.0%	556

*Other category includes freight, skateboard/scooter, shuttles or ride-sharing, and rail

These survey results indicate that residents travel primarily by car alone but desire to use alternative transportation modes. Participants typically walk and ride their bicycles for recreation purposes as opposed to transportation. Participants also desire the City to prioritize pedestrian transportation modes over other modes. Due to the City's relatively extensive pedestrian network in comparison to its bicycle network, these desires for better street crossings and non-motorized infrastructure aligns with the Mobility Action Plan's goal to enhance alternative transportation modes across the city.

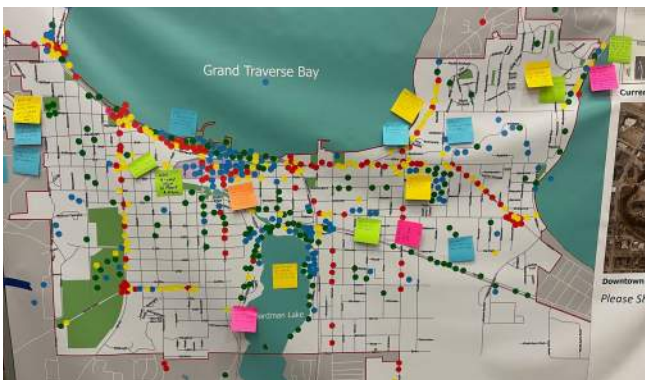
Second Community Survey – Released in November 2022, this survey acted as a follow-up from the Open House held on October 26, 2022. In total, 676 people participated in the survey and offered further feedback on their mobility values. These responses indicated support for the City's transition to a multi-modal mobility network as well as identified improved traffic management during summer months as a priority.

Community Events

To achieve this vision, five guiding themes were identified through the development of the Mobility Action Plan. These are discussed below.

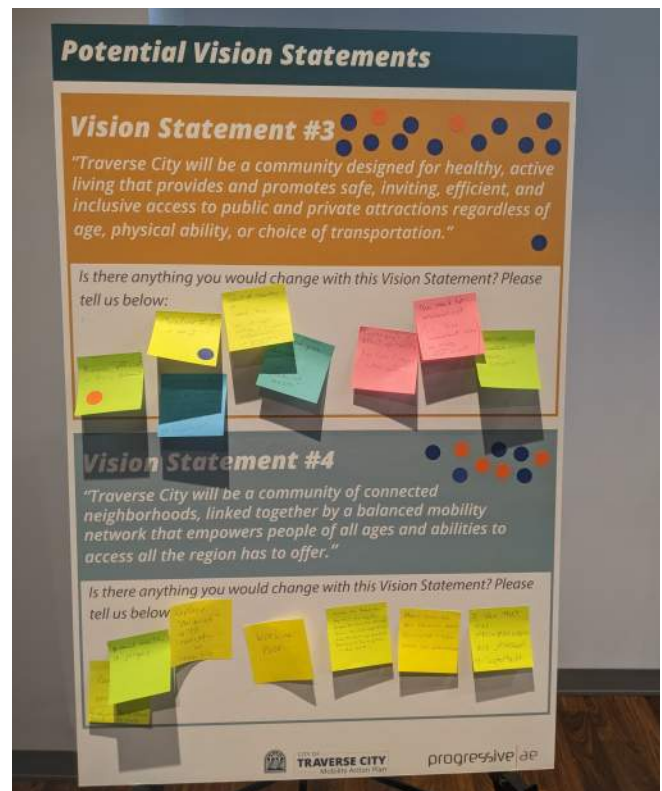
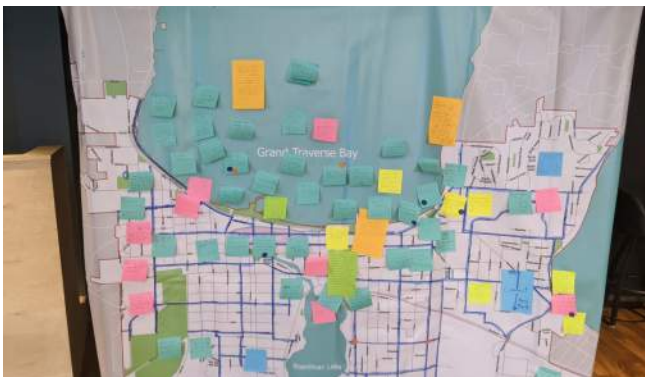
Community Event #1 – Hosted at the Hagerty Center on October 26, 2022, this was a joint open house-style event held with the Master Plan Team. Over 200 people participated in the event throughout the evening, offering their thoughts for both the Master Plan and Mobility Action Plan. Event exercises were crafted with maximum inclusivity in mind – ensuring that attendees of all ages and abilities could offer their feedback and engage in thoughtful conversations about the City's future mobility network.





Images and Feedback from October 26, 2022 Community Open House

Community Event #2 – Hosted at The Alluvion in the Commongrounds Building, this open house-style event was held on March 15, 2023 and provided a casual environment to engage and converse with participants. The primary focus of this event was discussing proposed themes, values, and vision statements as well as presenting the first draft of the mobility network. Participants were asked to vote on which themes, values, and vision statements most resonated with their future mobility vision in Traverse City. Participants were also asked to “brand their streets,” or develop a brand that identifies their desired street design unique to Traverse City. They were also asked to provide feedback on the draft mobility network map, placing notes and drawing lines on areas they felt should be included in the network. Interactive street pieces were also laid out on a table for participants to manipulate, offering them an opportunity to envision their preferred street designs given what is feasible in relation to limited rights-of-way and trade-offs.



These events indicated the strong emphasis that Traverse City residents place on mobility. Some key takeaways included the importance of safety and education, a widespread desire for protected pedestrian facilities and trails, maintaining the city's connection to nature, and increasing connectivity across high-speed, high-volume streets.

Images from March 15, 2023 Community Open House



Mobility Action Plan Leadership Committee Bike Tour (October 2022)

Mobility Action Plan Leadership Team

Development of the Plan was guided by the Mobility Action Plan Leadership Team – a group of City leaders, City staff, and mobility stakeholders that met monthly throughout the planning process. This group provided insight into city operations, including planning, infrastructure maintenance, engineering, and parking management. Along with feedback heard from public participation, the Leadership Team was crucial in developing the Plan’s overall vision and mobility network and ultimately act as “ambassadors” of the Mobility Action Plan.

Planning Commission + City Commission

The Mobility Action Plan Team also presented and sought feedback from the Planning Commission and City Commission in joint workshops throughout the process. Held on October 24, 2022, January 9, 2023, and March 13, 2023, these meetings summarized public feedback, discussed street design, highlighted proposed tactical engagement projects, and presented the proposed mobility network. These sessions ensured City leadership was involved in the process and contributed to the decision-making guiding the plan’s development.

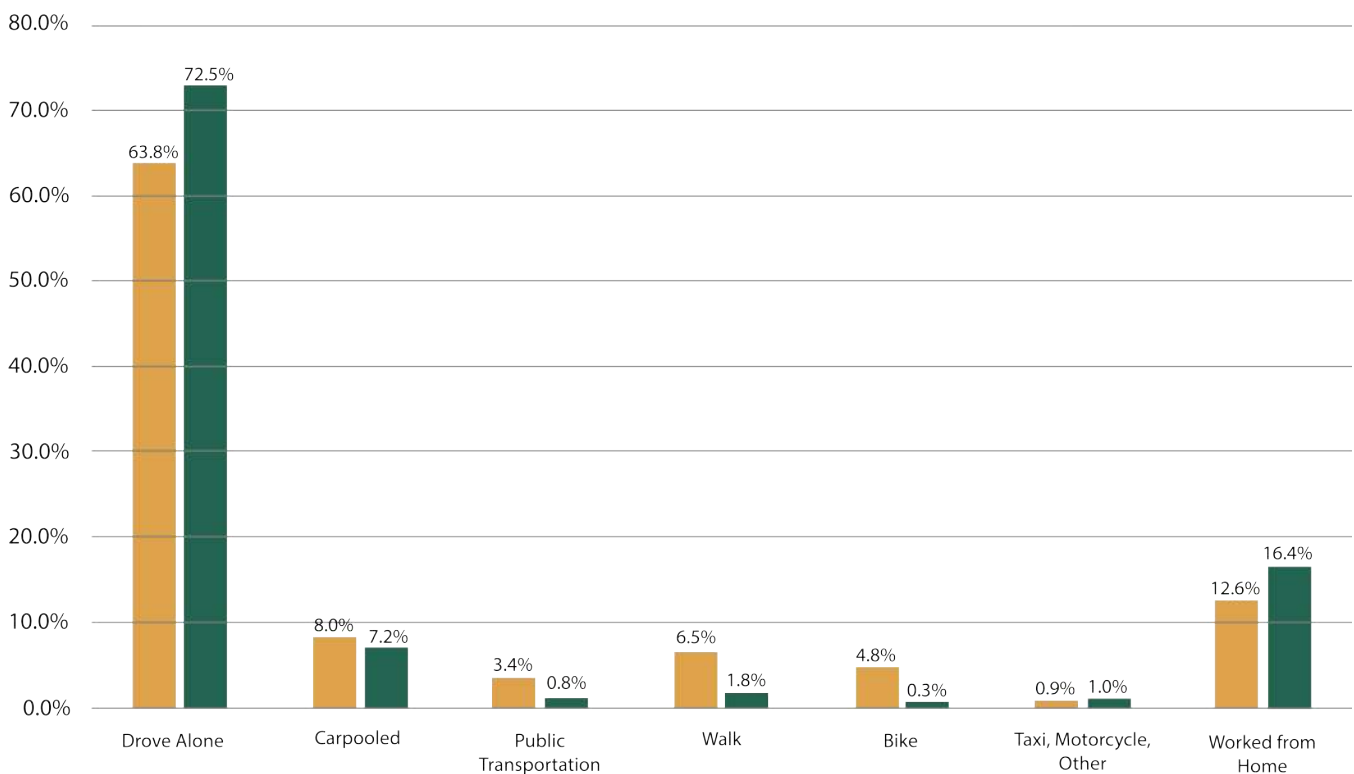
Downtown Development Authority (DDA) Board

Regular updates were made to the Downtown Development Authority (DDA) Board. These presentations kept downtown leaders apprised of the planning process and offered them a venue to provide feedback. Due to downtown’s unique characteristics, these meetings provided information that informed development of the proposed mobility network.

4

Mobility Culture

Shifting a community’s culture surrounding transportation does not occur overnight. The way people get around – the driving and bicycling habits they develop, how they interact with other mobility users, how they handle incidents of unpredictability – are engrained through lived experiences and reinforced by existing infrastructure. For decades, Traverse City’s mobility culture has been oriented around motorized vehicles. While slowly changing, this perception viewed streets as belonging solely to cars – pedestrians and cyclists were tolerated as long as they remained out of the street. Today, Traverse City features one of the highest shares of bike and walking commuters in Michigan and has experienced declining rates of single-occupancy vehicle usage over the past 10 years. While representing change, continuing to shift the perspective surrounding mobility is a momentous undertaking; however, it is required if the tenets of this Plan are to be acted out and fully realized.



- Traverse City (2021)
- Michigan Statewide (2021)

Means of Transportation to Work (2021)

Data Gathered from United States Census Bureau, 2015-2022, ACS 5-Year Estimates.

Existing Mobility Perceptions

Before we envision the mobility culture we desire, we must first acknowledge existing perceptions surrounding transportation in Traverse City. The October 26, 2022 Community Open House offered a candid view into how residents perceive walking, bicycling, and driving around the city. Listed below are a number of quotes from residents that speak on the city's current mobility culture.

"I'd like to see Division Street up to 14th Street just go away. I think it's a terrible thing. It's like the Cross Bronx Expressway in the Bronx. It just cuts the neighborhood - you can't get across it except at the traffic light."

"I think biking is definitely a part of it, but if we're being realistic, you know we do have winter here in Northern Michigan."

"I guess more traffic calming measures would be nice too. Slower speeds and maybe more - I don't know what it takes - more patrol or more speed bumps - calming the traffic."

"I bike as much as I can. I live downtown. But I also drive a lot because unfortunately most of the things I need aren't within biking distance."

"It would be nice to have more consistent lighting in the evenings throughout the city. Because sometimes it gets pretty dark and it is hard to see bicyclists."

"Well, right now the system of bike lanes in the town are disjointed. I think it would help if it was more cohesive, more consistent from one area to the next."

"I recently took a trip up from Cass and Eighth roughly to the Sutton Bay Trail and I found it pretty difficult to negotiate the crossing at Grandview Parkway and to get up to where the trail started."

"It is extremely difficult [to get around] during the summertime. For you know, eight to ten weeks, it's a pain. But other than that, the city in itself is fairly easy to get around. There are some routes to take to avoid some of the bottlenecks."

"I walk and I drive my car. I no longer ride my bike because it's taking my life in my own hands. I've given that up."

"I think it's really important that I think if we want to see more families cycle and also more women cycle, you have to create those protected spaces."

"One thing to realize is that everyone does not ride a bike anymore, and that if you do ride a bike that you should follow the rules because I certainly notice bicyclists not stopping or not looking for another car or something like that."

"Every day we do get out to run or bike, so that counts too and we try to do that for errands. We're lucky where we live right now where we can bike to restaurants, downtown bike to the bar, bike to the grocery store."

These quotes demonstrate an apprehension towards walking and bicycling – largely formed from a perceived lack of safety. This perception seemingly accepts the existing transportation system as built around cars, with cyclists and pedestrians sacrificing their safety and comfort in efforts to navigate it. Residents choosing to walk or bicycle around town gravitate towards slower-speed routes that seem “less risky” - only interacting with high-speed and high-traffic streets when absolutely necessary. For others though, this perceived lack of safety is enough of a deterrent to prevent them from riding their bike or walking altogether.



Above: Woodmere Avenue



Above Top: Division Street and Grandview Parkway
Above Bottom: Division Street north of Fourteenth Street



Existing perceptions surrounding public transit are also met with skepticism. Although transit is an important component of Traverse City’s mobility network, stigmas regarding its usage unfortunately persist. Like many communities, “riding the bus” is viewed as a last-resort option that is inconvenient and carries an unfortunate perception of being “lower-class.” Changing this perception is key to addressing traffic congestion, achieving the City’s ambitious climate goals, and breaking down barriers for people with limited mobility options.

These existing perceptions on walking, bicycling, and riding transit reinforce the belief that the mobility network is made solely for vehicles, resulting in fewer people that are comfortable interacting with traffic. This leads to infrequent and unpredictable behavior between bicyclists and motorists, increasing frustration and distrust among mobility users.

Different Places, Different Mobility Experiences

Just as no two cities are alike, mobility culture is unique to each place. We all have unique experiences that inform our perception of a community's mobility culture – both good and bad. Some of these stories we have experienced in the past are:

1

Chicago – Like schools of fish, the volume of people walking in downtown Chicago requires patience and a keen awareness from people driving downtown. Due to the “strength in numbers” mentality, this can embolden some people walking or cycling to take more aggressive actions such as jumping into crosswalks or weaving between cars on bicycles. This in turn creates conflict and unpredictability among people driving which results in Chicago's constant drone of car horns.

4

Atlanta– People driving cars stop and give ample room for people walking in the crosswalks – perhaps as an acknowledgement of Georgia's heat or a perception that people outdoors in the summer need to get to their destinations quickly.

7

Houston – Vast and sprawling, Houston is an environment of freeways and high-speed roads. While the city's infrastructure sets the stage, a culture of fast driving and lax enforcement creates a “wild west” environment where people walking and bicycling are taking their lives into their own hands. Because of this, bicyclists commonly ride on sidewalks, creating conflicts with people walking as well as drivers turning into parking lots.

2

Minneapolis – A city that takes bicycling seriously, people on bikes follow the rules of the road to a point. People cycling at night are reminded by others to turn on their bike lights and bicyclists stay in the directional lanes on the city's many two-way cycle tracks. In response, people driving give ample room to bicyclists, embodying a culture of shared street safety in the Twin Cities.

5

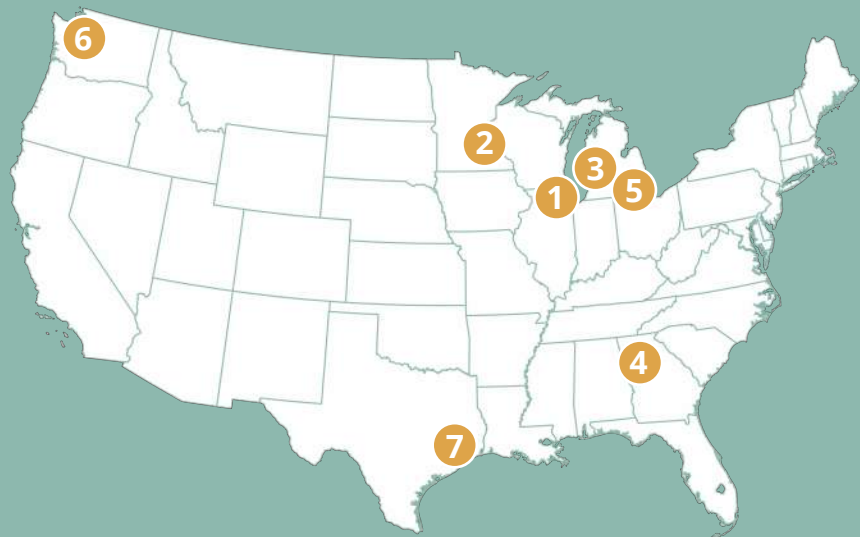
Ann Arbor– Although home to the University of Michigan, Ann Arbor's bicycling culture extends far past the university's campus. Known for its politically engaged and climate-focused populace, “The People's Republic of Ann Arbor” features some of the boldest bicycle infrastructure in the state, including two-way cycle tracks on downtown streets. The City has also passed ordinances protecting pedestrians in crosswalks, representing the City's emphasis on mobility.

3

East Grand Rapids – A community oriented around walkability, East Grand Rapids residents value mobility highly and are vocal about desiring improvements. Identified as one of the most walkable communities in Michigan, residents have pushed the city to continue expanding its pedestrian network in recent years, culminating in new crosswalks, bike lanes, and sidewalk improvements. Large crowds walking around Reeds Lake, visiting Gaslight Village, and riding bikes through town are a testament to resident's commitment towards pedestrian infrastructure.

6

Seattle– With numerous tourists visiting the Emerald City, there are opportunities for conflict between people walking, bicycling, and driving. Residents remind people to follow pavement markings and walk and bicycle in designated lanes, reducing the potential for crashes.



Changing this negative feedback loop is necessary in improving the relationship between motorists, cyclists, transit riders, and pedestrians. This moves these interactions from antagonistic in nature towards cooperative, as all mobility users have a shared interest in a predictable and safe transportation system. Provided below are the “Five E’s” for shifting mobility culture (Encouragement, Education, Enforcement, Engineering, and Empathy).



Traffic on Divison Street

These pursue a mobility network that is equitable and accessible for all people.

Equity in the context of walking and biking ensures that all transportation projects and policies prioritize the diverse needs of every community member, emphasizing the inclusion of historically underserved or marginalized groups. It is imperative that we strive for a transportation landscape where opportunities, benefits, and resources are distributed fairly across all demographics, addressing and rectifying any disparities in transportation access.

Access emphasizes the importance of creating a transportation environment where all residents, irrespective of their background, age, or physical abilities, can easily reach their desired destinations. This involves not just physical infrastructure but also considers the affordability, safety, and convenience of transportation options. In Traverse City, integrating Equity and Access into our transportation planning ensures a truly inclusive community, where walking and biking are viable, enjoyable, and equitable choices for all.

Encouragement

Unsurprisingly, how people discuss mobility impacts other people’s perceptions of it. Recognizing this, a successful communications strategy that conveys the benefits of a balanced mobility network can shift the conversation towards a better balance across all transportation modes. Although messaging and education are often joined together, encouragement refers to the packaging and format that information is conveyed.

As topics of mobility and transportation often elicit strong emotions, how this information is packaged and presented is extremely important. It should be noted that the current paradigm of transportation planning has been in place for decades; entire generations have grown up and become accustomed to seemingly ever-increasing car-oriented infrastructure investments. Because of this, prospects of change may be viewed as an unnecessary deviation of “what proper infrastructure is” and may represent an attack on what they have become familiar with over their lifetimes. In this sense, messaging needs to acknowledge this while also conveying the values of proposed changes (the “Why”) and how everyone ultimately benefits from a diversified mobility network.

Effective messaging campaigns often mimic Aristotle’s method of rhetorical persuasion. Understanding that we are more open to viewpoints that touch our hearts (*pathos*), minds (*logos*), and lived experiences (*ethos*) – this messaging device can create a sensible story of why mobility is important in Traverse City while bolstering it with supporting data. Summaries of how this is commonly achieved in other messaging campaigns are included on the following page.

Appeal to Emotion (Pathos) – This device is oriented towards evoking emotions such as curiosity or empathy. This is typically achieved by introducing a character, person, or story that the audience relates with and feels a connection towards. By telling this story, the audience puts themselves in the character’s shoes – offering a snapshot of how they live and what factors influence their lives.

Planning for Raven



RAVEN is eight years old and lives with her mom, brother, and sister in Southwest Detroit. Our challenge is to ask how we can support people like Raven each time we make decisions about our transportation system.

TODAY, Raven can't do all the things she wants. There are few safe crossings on busy streets around her home, speeding drivers, not many street trees, and inconsistent bikeways that she is comfortable using with her mom. Investing in our streets is an investment in Raven and others like her.

Achieving the Streets for People vision will make it easier for Raven to walk with her mom to school at Maybury Elementary, safer to bike to Riverside Park or take the bus to visit her grandparents at Livernois and Outer Drive, and give the people in her network more ways to stay connected.



Example of an Emotional Appeal (Pathos). *Detroit Streets for People Plan (2022). Page 4.*

Appeal to Logic (Logos) – This device is focused on providing a rational conclusion that is supported by relevant data. The conclusion must be easy for the audience to follow and any supporting data must be accurate. Using this device allows the audience to follow the message’s rationale, understand the reasoning behind the viewpoint, and process the tangible data that supports the message.

One in three Americans is age 50 or older
Is your community a great place for people of all ages?
By 2030, one out of every five people
in the United States will be 65 or older
Will your community be ready?

Visit us often at **AARP.org/livable**
Information and inspiration for local leaders

Example of a Logical Appeal (Logos). *American Association of Retired Persons: Public Policy Institute. (2022).*

Appeal to Character (Ethos) – This device is used to bolster the credibility of the message’s source; the audience is more receptive to messages coming from reliable and trustworthy individuals, entities, and organizations. Employing this device assures the audience the message comes from a reputable and reasonable source. One way of bolstering this appeal is to build partnerships with reputable organizations within the area to share the message. This builds credibility as it shows that numerous organizations endorse the message, indicating it has broad support and is a meaningful endeavor.

Tying these together, an example of mobility messaging that utilizes all three rhetorical devices (*pathos, logos, ethos*) is included below.

*“For years, Cynthia has wanted to bike to school with her two young children, but her discomfort with riding in the street along with fears of her children interacting with high-speed traffic have deterred her from doing so (**pathos**). A recent survey has shown that Cynthia is not alone; of X total number of participants, Y participants indicated a desire to walk or bike with their children to school. This indicates widespread support for better mobility facilities connecting neighborhoods to nearby schools (**logos**). As an active partner with our local schools (**ethos**), the City will continue to pursue opportunities to better connect people like Cynthia and her children to school.”*



Examples of bike advocacy billboards.

Far Left: Bike BloNo (Bloomington-Normal, IL) Educational Billboard.

Left: BIKE FM (Fargo, ND Moorhead, MN) Educational Billboard.

Education

Although messaging introduces the concept and merits of a multi-modal mobility network, education provides the “rulebook” on how it is intended to operate. With new infrastructure comes new behavioral expectations; education sets the stage by informing mobility users of these expectations. As more people use different mobility choices to get around, ensuring they understand the “rules of the road” is crucial in fostering shared safety among all users. This can be accomplished through a messaging campaign that is highly visible in the community. This messaging indicates Traverse City’s mobility values to both residents and tourists alike, conveying the expected mobility behaviors they are expected to abide by.

Like encouragement, education requires public-facing materials that engage the public in their day-to-day lives. This can be as simple as posters or billboards in public spaces or sharing posts via social media. Other opportunities include creating a character or icon that immediately conjures a connection to these educational efforts. Two examples include “McGruff the Crime Dog” developed by the Advertising Council in 1980 to raise awareness of police outreach efforts among children as well as “Smokey Bear” developed in 1944 by the United States Forest Service to provide education on natural conservation practices. Both of these characters embody each campaign’s educational message and become familiar messaging advocates over time.



Examples of characters developed for public education efforts.

Above: McGruff the Crime Dog (Advertising Council).

Right: Smokey the Bear (United States Forest Service).



Mobility education campaigns have successfully been implemented in other communities. Examples from Grand Rapids, MI and Fort Collins, CO demonstrate how campaigns can provide information on expected norms for road users. Both campaigns provided information on how mobility groups are expected to interact with one another, creating predictable transportation environments where safety, courtesy, and respect are shared among all street users.

Grand Rapids - Driving Change

In response to an increase in cyclist/motorist incidents, the City of Grand Rapids partnered with the Michigan Department of Transportation (MDOT) to both promote the City’s mobility network as well as provide education on how cyclists and motorists interact. Completed in 2017, the “Driving Change” campaign featured handouts, videos, and other resources oriented towards improving safety and increasing predictability between all mobility users. The campaign also features a webpage (grdrivingchange.org) that contains this content.

Geared towards accessing the broadest audience, these resources were printed in English and Spanish and were promoted through partnerships with neighboring local governments and institutions, non-profits, and other community entities. “Driving Change” is an example of how a community can craft messaging in an educational format that is accessible to all members of the public.



Driving Change

GRDrivingchange.org » Grand Rapids, Michigan, USA

Bicyclists are SAFER on the road



GRDrivingChange.org

Fort Collins - Ride Smart, Drive Smart

Developed by the Fort Collins Police Services and the City's FC Bikes program in 2018, the "Ride Smart, Drive Smart" campaign outlined how cyclists and motorists are expected to interact with each other on the roads. This campaign included a van that traveled around town for pop-up educational events as well as brochures outlining traffic laws and expectations in a graphically-rich format. Combined, these provide visible reminders of mobility expectations within the community.



Enforcement

Like other traffic laws, once street users are educated on expectations or the "rules of the road," traffic enforcement must be implemented to ensure these rules are followed. This reflects Traverse City's commitment to taking safety seriously and creating a culture that values all mobility users. As part of this, however, all mobility users need to follow the rules – whether driving, walking, bicycling, or using other methods of transportation. Signaling that these rules are for everyone reinforces the perception of safety being a shared responsibility and that all mobility users have an equal right to the street network.

While enforcement represents a direct manner in which the City prunes bad mobility behaviors, it would be needed rarely in an ideal world, as a healthy mobility culture grows from a mutual respect and courtesy of other mobility users coupled with street design that encourages safe driving habits. In healthy mobility cultures, enforcement represents maintaining a baseline of mobility expectations – penalizing the worst instances of bad behavior while encouraging compliance with each mobility group's expectations. Although enforcement is an important tool in maintaining the safety of the mobility network, it is insufficient in fostering a healthy mobility culture on its own. Recognizing that bad mobility behavior is driven by a lack of respect and courtesy for other users, healthy mobility cultures focus on cultivating this sense of shared responsibility before enforcement becomes the only tool used to maintain the network's safety.

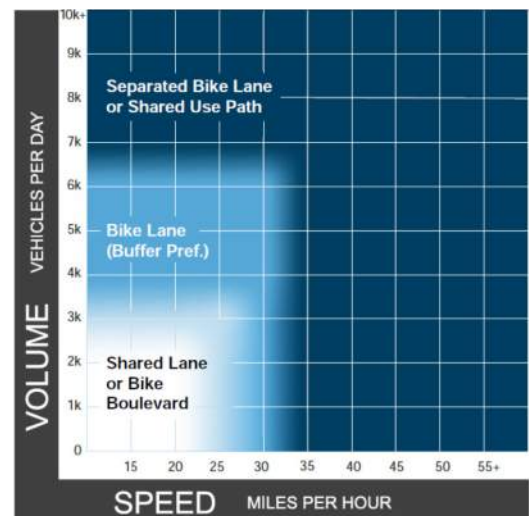
Engineering

Street design impacts our driving and walking habits, thereby influencing Traverse City's overall mobility culture. People's perception of danger influences how they drive; wide streets with few buildings and trees induce people to drive faster. Narrow streets with lots of trees, high levels of pedestrian activity, and buildings close to the curb encourage people to drive slower. Understanding this unique human behavior can be used to engineer our roads in a way to make them safer for people driving, bicycling, and walking. In this context, engineering refers to how the City's physical environment – its roads, bridges, intersections, and mobility infrastructure – all influence how people interact with other people getting around town.



Above: Lancaster Boulevard (Lancaster, CA) before road diet (Left) and after road diet (Right). Image accessed from Project for Public Spaces. **Below:** Preferred Bikeway Types Graphic. Image accessed from Ohio Department of Transportation.

While other ingredients of mobility culture heavily influence residents and those who spend time regularly within the community, engineering impacts behavior for all road users – regardless of whether they live in Traverse City or visit only once a year. Because of this, engineering is the physical representation of the community's values, as narrow roads, tight road geometries, and other traffic calming features require visitors to adhere to the community's mobility expectations.



Empathy

Mobility is ultimately about connections between people and places; it's a facet of life that is shared by everyone. With this in mind, creating a healthy mobility culture is a human-focused endeavor concerned with how mobility users interact with one another. While mobility users can be labeled as motorists, cyclists, pedestrians, transit riders, and others – they are all people, whether they choose to drive a vehicle or get around on their own two feet. This is where empathy plays a key role in “humanizing” mobility users, as each mobility user is simply another person trying to get around.

No matter how people travel throughout the day, their journeys begin as pedestrians.



Empathy refers to an ability to understand another person's feelings or perspectives. This is especially relevant in the realm of transportation, as driving, bicycling, and walking in our current environment of construction, traffic, and bad mobility behavior is commonly a cause of stress and aggravation. Simply put, our times in transportation often don't reflect us at our best moments. This is where empathy towards other mobility users is crucial in creating a healthy mobility culture. If we acknowledge that people we share the roads with have bad days too, whether it's a long day at work or visiting relatives at the hospital – we can extend grace to other users and share streets more generously.

Although empathy is likely the most nebulous ingredient of a healthy mobility culture, it embodies a philosophy of shared safety and common courtesy. By “putting themselves in other's shoes,” mobility users can understand the perspectives of others, regardless of whether they're behind a windshield or a pair of handlebars. For example, understanding that motorists desire predictable behavior from cyclists or that cyclists often avoid bike lanes with road debris in them – understanding where mobility users are coming from and the underlying reasons for their actions helps create empathy among these groups. This aspect of mobility culture is important for making people feel comfortable on Traverse City's streets, regardless of their choice in transportation.

Existing Mobility Network



5

Existing Conditions and Network

Within Traverse City's 8.6 square miles, there are 80 miles of local and major streets, 7 miles of MDOT-controlled state highways, 23 miles of alleys, and 99 miles of sidewalks. These features form the basis of Traverse City's existing mobility network which is comprised of non-motorized trails (such as the Traverse Area Recreation Trail), dedicated cycle tracks (such as the one on Eighth Street), on-street bicycle lanes, and signed sharrows (such as TART in Town).

There are roughly 31 miles of existing dedicated bicycle facilities in Traverse City, excluding streets that are marked with shared lane markings (aka "sharrows") which do not provide dedicated space for bicycling. The breakdown by facility type is included below:

Traverse City Bicycle Facility Types

Non-Motorized Trails	14.6 Miles
Dedicated Cycle Tracks	1.0 Mile
On-Street Bicycle Lanes	15.4 Miles
	31.0 Miles



Left: TART Trail along the waterfront

Right: Garfield Avenue and Hannah Street Intersection

Although not formally illustrated in this map, Traverse City's extensive residential street network represents a comfortable bicycling environment. Characterized by low-speed and low-volume streets, these "shared streets" are often quiet tree-lined environments where cyclists ranging in all ages and abilities can feel comfortable bicycling in. Even though these streets lack painted travel lanes or any form of bicycling infrastructure, they are a vital component of the city's mobility network because they are naturally calm, include frequent stops, and discourage long-distance high-speed motor vehicle traffic. These streets are also connected in a strong grid pattern, providing resiliency and multiple connectivity options for people riding bikes and walking. Please see page 58 for further definition of "low-stress streets."

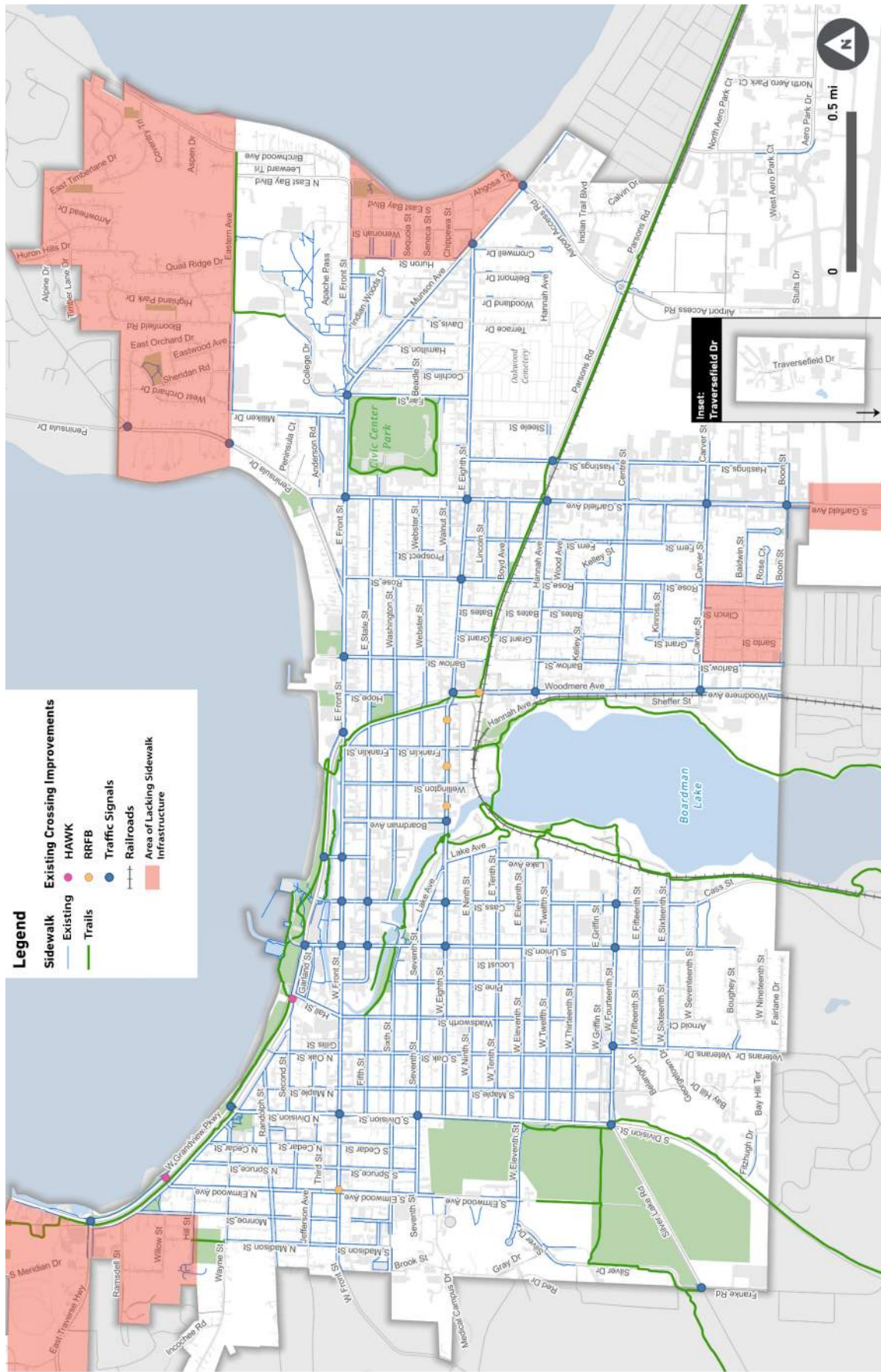


Examples of low-volume residential streets in Traverse City.

Existing Sidewalks

Traverse City features abundant sidewalk coverage – nearly every traditional residential street features sidewalks on both sides of the street. While the city has a strong sidewalk network, there are concentrated areas where they are lacking. These include the neighborhoods north of Eastern Avenue (base of Old Mission Peninsula), areas close to East Bay Park, neighborhoods around East Traverse Highway, some streets south of Fourteenth Street and Carver Street, and areas around the airport. The east side of Division Street between Front Street and Tenth Street lacks a sidewalk, likely due to constrained space within the road right-of-way. Garfield Avenue adjacent to the airport lacks sidewalks on both sides of the road – yet there are significant signs of "desire paths" that indicate people walk this corridor regularly. Although located within the "runway protection zone" which is closely regulated by the Federal Aviation Administration, this represents a quarter-mile gap in the City's sidewalk network which inhibits north-south pedestrian movement along Garfield Avenue. Although "desire paths" are not a formal segment of the City's current sidewalk network, they represent important connections for those using them regularly. Since many exist on private property, their incorporation and maintenance as part of the City's mobility network would require easements or land acquisitions.

Existing Sidewalk Network





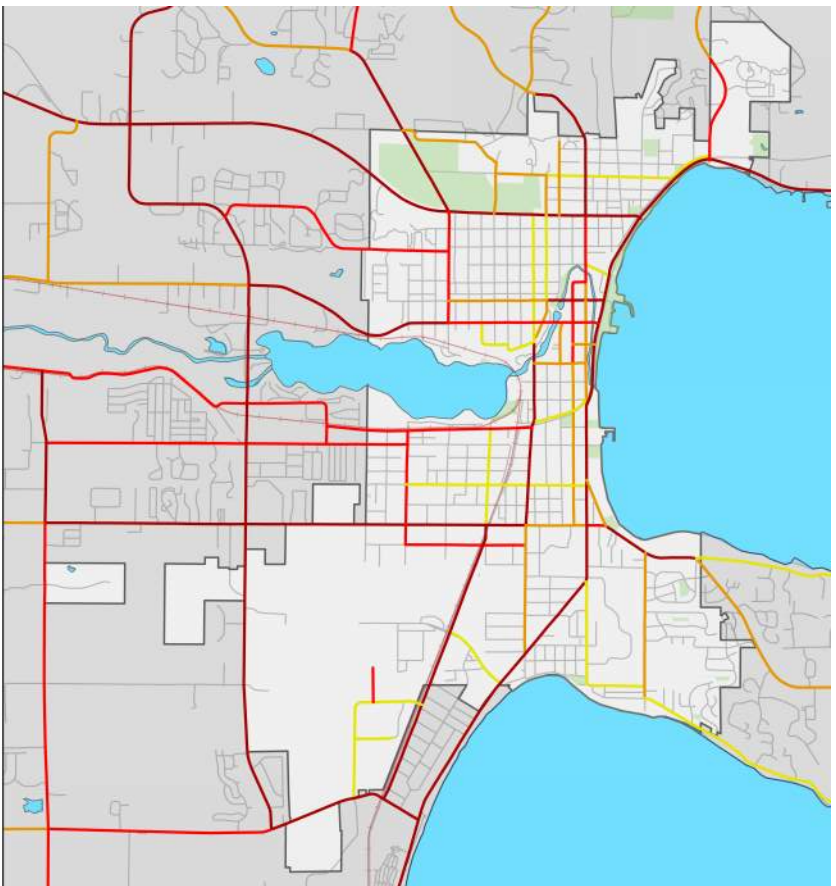
Garfield Avenue and Hannah Street Intersection

Existing Traffic Volumes

Because of its status as a key summer destination and its central role within the region, Traverse City's major arterials carry high volumes of traffic. Unsurprisingly, State and U.S. highways feature the highest traffic volumes, such as US-31, M-22, and M-37. Eighth Street also experiences heavy traffic, as it offers one of the few connections across the Boardman-Ottaway River. Major corridors within the city also feature moderate traffic volumes, such as West Front Street, Fourteenth Street, and Garfield Avenue. While neighborhood streets are not measured for Average Annual Daily Traffic (AADT), it can be assumed they feature limited traffic volumes as they service nearby residences and are often inefficient for through vehicle travel.

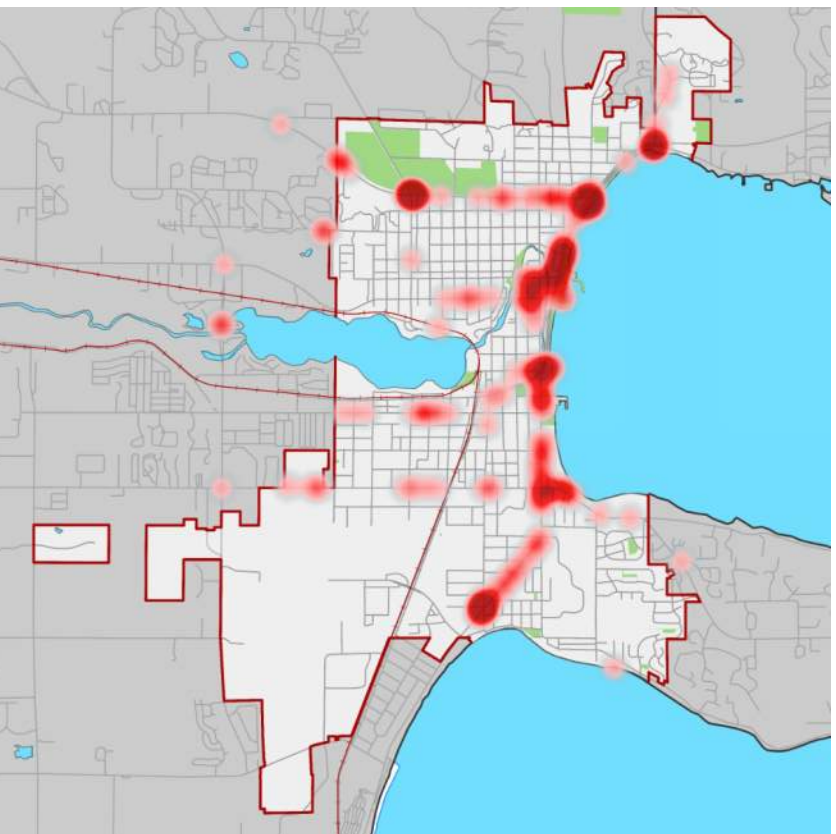
Traffic volumes are an important consideration in developing a mobility network, as they correspond to how stressful a street is to bike or walk along. Because of Traverse City's seasonality - with summer seasons experiencing higher traffic volumes, there are different ways to gather traffic data. Average annual daily traffic (AADT) is a measure of a roadway's average number of cars traveling on a street (traffic volumes). AADT is calculated over the span of a year, with total traffic volumes gathered and divided by 365 to illustrate the daily average traffic volumes. Average Daily Traffic (ADT) which observes traffic volumes over a shorter period of time, such as a few weeks or a month. Regardless of the manner in calculating volume, higher speed and higher volume roadways are less pleasant and more dangerous for pedestrians and cyclists than lower speed and lower volume roadways. Unsurprisingly, the location of these high-speed high-volume roadways had an overwhelming correlation with the streets residents stated they avoid at the October 26 Community Open House. Streets most frequently noted as places to avoid included Grandview Parkway (AADT 29,000) Division Street (AADT 22,000), and Peninsula Drive (AADT 12,000).

Because of this, traffic volumes are a key determinant in identifying a roadway's level of traffic stress (LTS), or a measure that identifies how easy a roadway is to navigate for pedestrians and bicyclists.



Average Annual Daily Traffic (AADT) Volumes

- LEGEND**
- Less Than 4000 AADT
 - 4001 - 8000 AADT
 - 8001 - 14000 AADT
 - More Than 14000



Locations People Avoid Walking and Cycling (Identified at October 26, 2022 Community Open House)

- LEGEND**
- Location identified as Place to Avoid

Level of Traffic Stress

As mentioned above, a roadway's level of traffic stress (LTS) quantifies how comfortable it is to use for cyclists and pedestrians. While there are numerous inputs such as proximity to traffic, traffic speeds, traffic volumes, and others – levels of traffic stress indicate which streets and intersections are easiest to navigate for the greatest number of cyclists and pedestrians and which streets and intersections are the most difficult and uncomfortable.

Bicycle Level of Traffic Stress (BLTS) measures how stressful it might be to bicycle on streets.

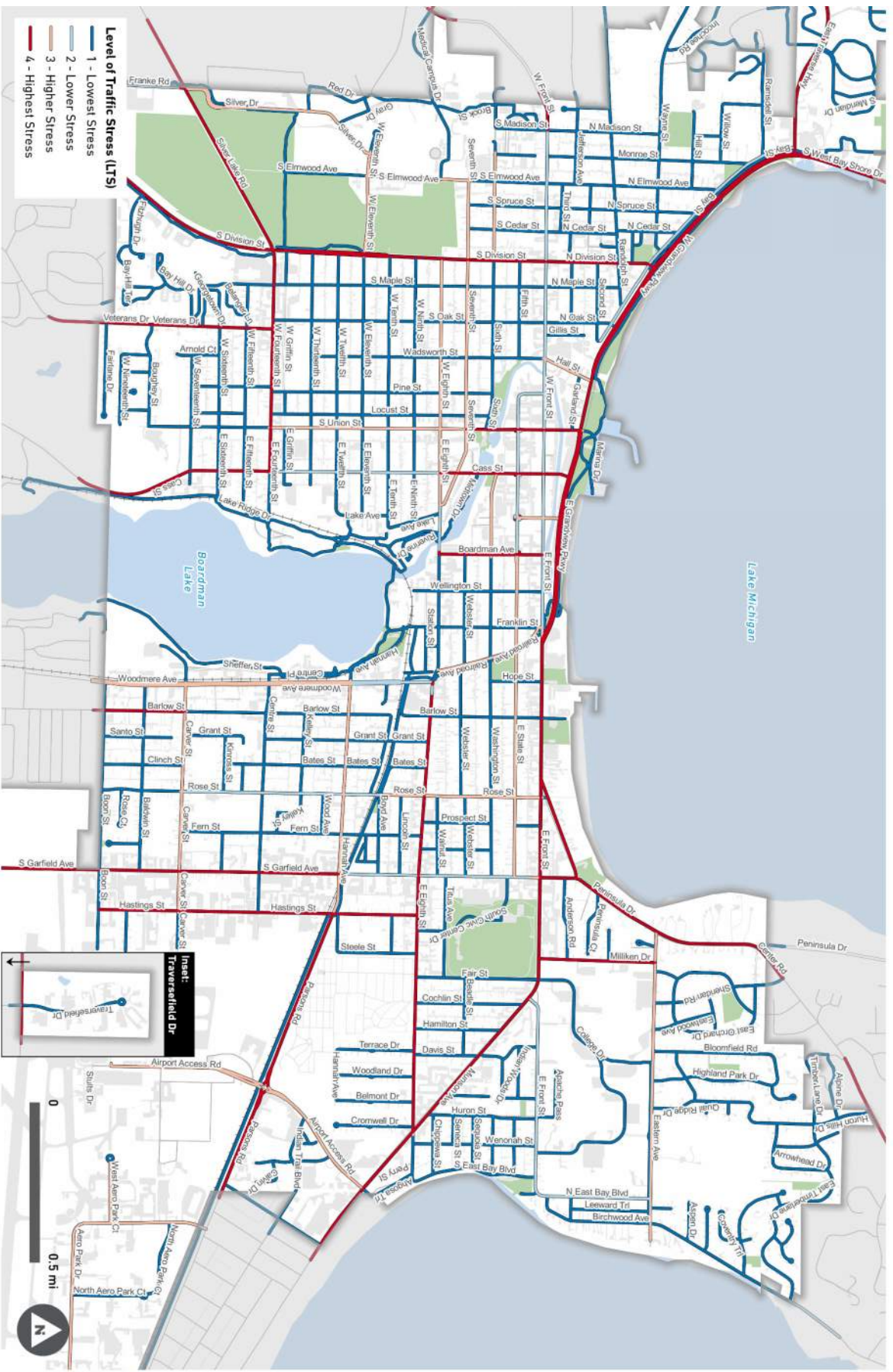
The method uses roadway and traffic conditions to assign a score from 1-4. The data used to conduct this analysis includes:

- Traffic Speed
- Traffic Volumes
- Number of Motor Vehicle Travel Lanes
- Existing Bicycle Facility (if present)

The table below shows examples of streets in cities around the world and how each scores on BLTS.

		Shared Lanes	Bike Lanes	Intersections	Trails	Separated Bike Lanes
TRAFFIC STRESS 	LOW Level of Traffic Stress 1	 Low Traffic < 20 mph	 Medium/High Traffic < 25 mph, 2-3 Lanes	 Medium/High Traffic Protected	 Trail	 Low/High Traffic Separated Bike Lane
	2	 Low Traffic 30 mph	 Low/Medium Traffic 30 mph, 2-3 Lanes	 Low/Medium Traffic Short Right Turn Lane	 Shared Use Path (Low Ped Volume)	
	3	 Low Traffic 35 mph	 Medium/High Traffic 35 mph, 3-4 Lanes	 Medium/High Traffic Long Right Turn Lane	 Shared Use Path (High Ped Volume)	
	HIGH 4	 Low/Medium Traffic > 35 mph	 Medium/High Traffic > 4 Lanes	 Medium/High Traffic Bike Lane Drop		

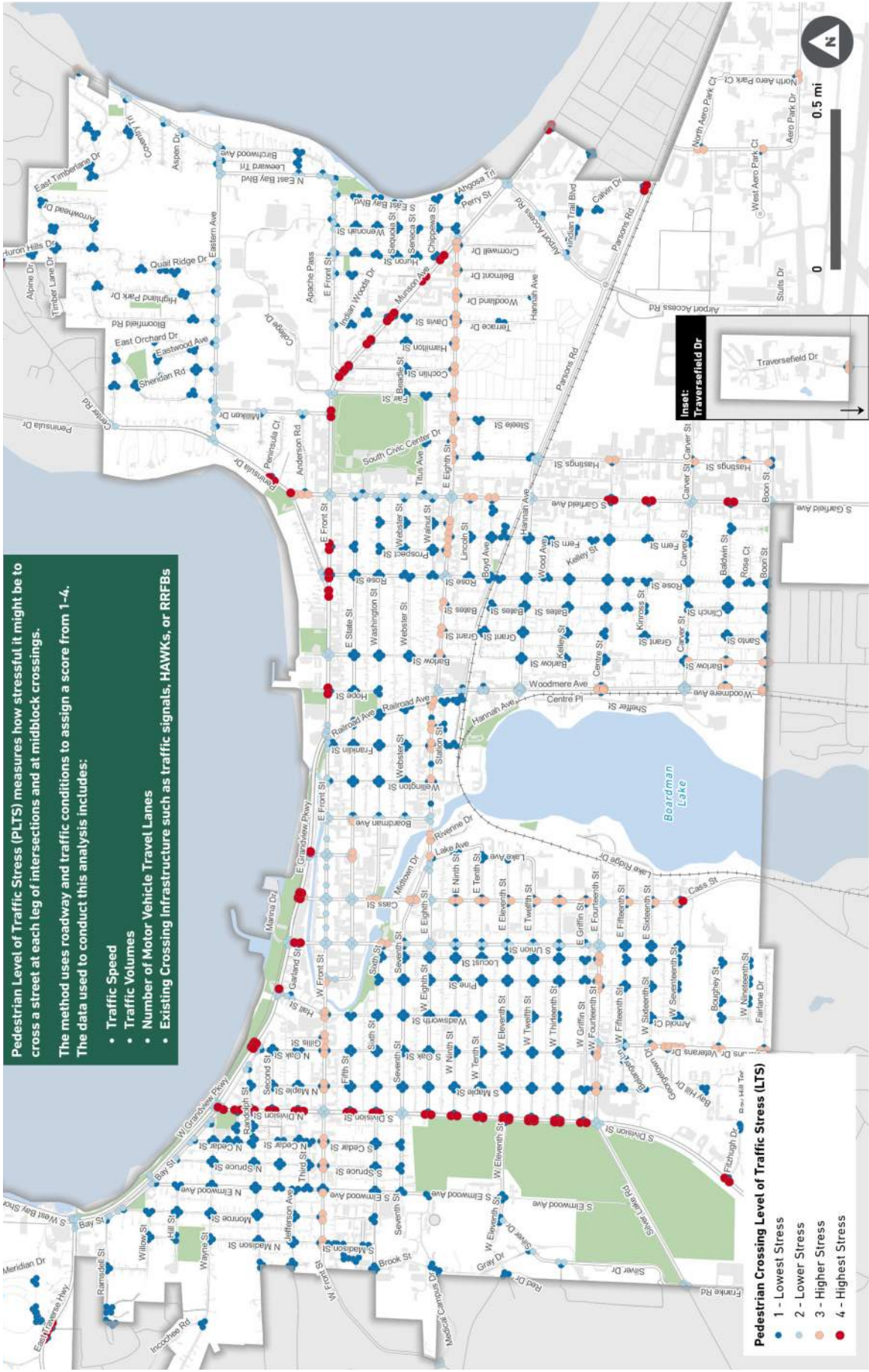
Bicycle Level of Traffic Stress



Pedestrian Level of Traffic Stress

Pedestrian Level of Traffic Stress (PLTS) measures how stressful it might be to cross a street at each leg of intersections and at midblock crossings. The method uses roadway and traffic conditions to assign a score from 1-4. The data used to conduct this analysis includes:

- Traffic Speed
- Traffic Volumes
- Number of Motor Vehicle Travel Lanes
- Existing Crossing Infrastructure such as traffic signals, HAWKS, or RRFBs



- Pedestrian Crossing Level of Traffic Stress (LTS)**
- 1 - Lowest Stress
 - 2 - Lower Stress
 - 3 - Higher Stress
 - 4 - Highest Stress

According to these maps, high-speed and high-volume corridors are the most challenging environments for cyclists and pedestrians to navigate. These include all stretches of US-31 through Traverse City as well as Silver Lake Road, Peninsula Drive, East Traverse Highway, and Garfield Avenue. In contrast to these roadways, neighborhood streets with lower speeds and lower traffic volumes feature lower levels of traffic stress. Recognizing that roads exist on a spectrum of safety and comfort for all mobility users – from quiet residential streets to high-speed arterial corridors – indicates there is no “one-size fits all” approach to mobility infrastructure. Understanding levels of traffic stress allows the right infrastructure to be tailored towards each roadway.

Distance to Nearest Crossing

Comfortable connectivity across high-traffic corridors is a key element of creating bikeable and walkable environments. Because of this, the location of traffic signals and other crossing infrastructure is a component of the existing mobility network. Traverse City features a number of crossing infrastructure types, these are discussed below.



Traffic Signal – The typical intersection traffic light, these signaling devices indicate when motorists, cyclists, and pedestrians are permitted to proceed.

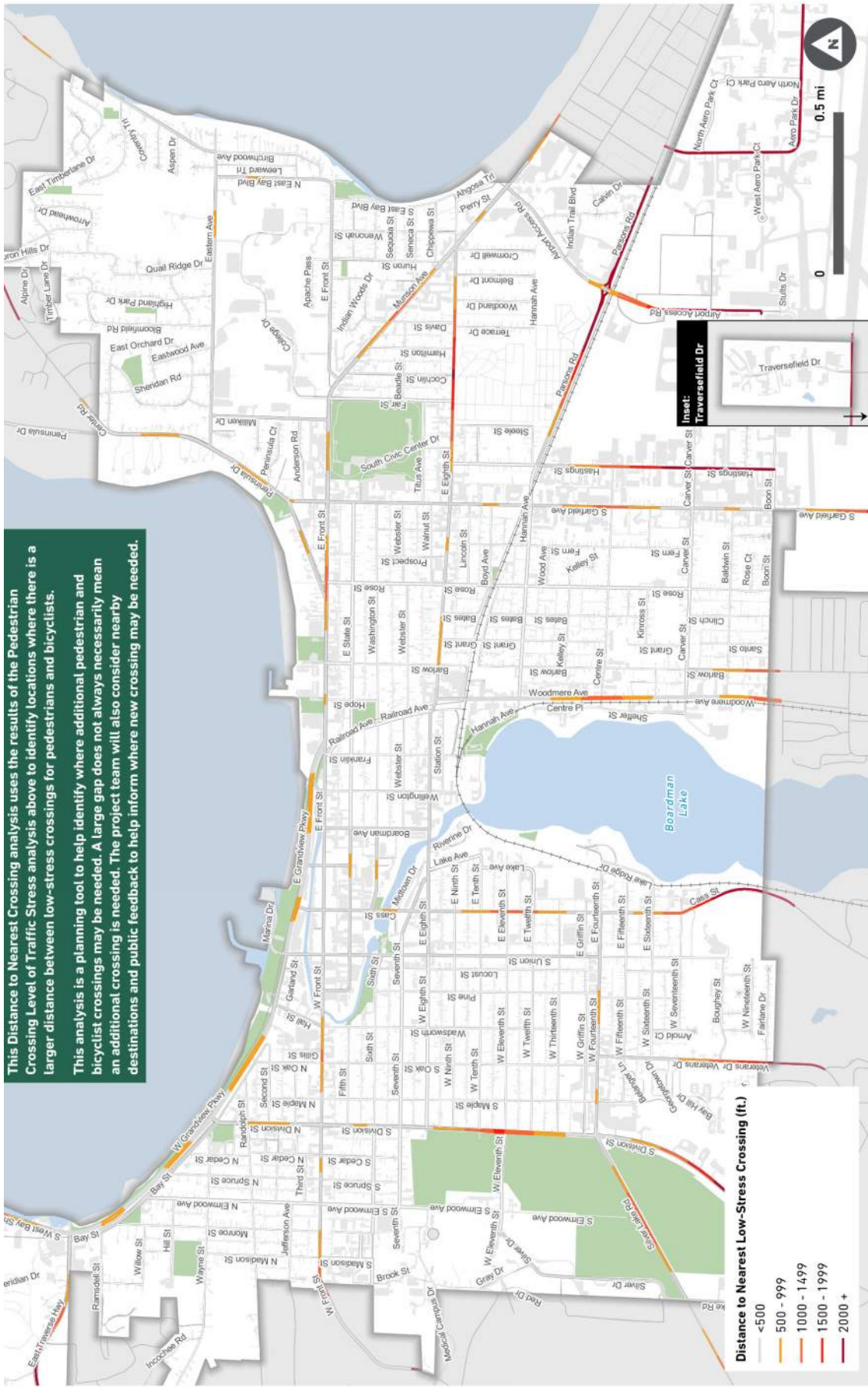
High-Intensity Activated Crosswalk (HAWK) or Pedestrian Hybrid Beacon (or Pedestrian Hybrid Beacon or PHB) – This overhead signaling device is used to stop traffic only when pedestrians activate the beacon. Once activated, the beacon lights up, indicating that traffic is to stop and allow the pedestrians to cross.



Rectangular Rapid Flashing Beacon (RRFB) – This signaling device is a highlighted pedestrian crossing warning sign that lights up when a pedestrian activates it. This encourages traffic to stop and yield to the pedestrian, allowing them to cross the street.

Distance to Nearest Crossing

This Distance to Nearest Crossing analysis uses the results of the Pedestrian Crossing Level of Traffic Stress analysis above to identify locations where there is a larger distance between low-stress crossings for pedestrians and bicyclists. This analysis is a planning tool to help identify where additional pedestrian and bicyclist crossings may be needed. A large gap does not always necessarily mean an additional crossing is needed. The project team will also consider nearby destinations and public feedback to help inform where new crossing may be needed.



Although these devices provide good connection points within the city, there are roadway segments that lack adequate crossing infrastructure, forcing cyclists and pedestrians to travel long distances to a protected crossing signal.

According to this map, Division Street (US-31) both at Eleventh Street and south of Fourteenth Street feature limited access to signaled east-west crossing opportunities. Portions of Grandview Parkway (US-31) also lack adequate locations to cross – namely from Clinch Park to West End Park. Other areas of limited connectivity include Cass Street south of Sixteenth Street, Woodmere Avenue and Hastings Street south of Hannah Avenue, Parsons Road near the airport, and East Eighth Street. These limited crossing locations present cyclists and pedestrians with difficult choices such as walking or bicycling long distances to designated signals or simply attempt to cross at uncontrolled crossing locations, posing safety hazards for them and increasing unpredictability for motorists.



E Eighth Street and Boardman Avenue Intersection

In pursuing this Plan’s vision for a mobility network, Toole Design gathered community feedback, guidance from the Mobility Action Plan Leadership Team, and numerous traffic, crash, and infrastructure data points that inform the development of a comprehensive mobility system. In addition to the qualitative data provided from residents and the technical expertise of the Mobility Action Plan Leadership Team and City staff, Toole Design analyzed quantitative data that informed the creation of the mobility network.

Mobility Network Intent

The intent of this network plan is not to prescribe modal facility types for each proposed network segment, but instead to identify the segments needed for the incremental build-out of this comprehensive mobility system. Identification of facility types should be cross-referenced with the 2018 Street Design Manual, as some street typologies are more conducive with certain facility types than others. It should also be noted that some streets are not designated for dedicated mobility facilities. This simply indicates they currently operate as adequate shared streets and should not be prioritized over streets where bicycling and walking are more stressful and dangerous. Because situations change over time – overhead power lines can be moved underground, curb cuts can be removed, streets and bridges can be reconstructed, the importance or desire for on-street parking, and a plethora of other factors influencing street design – this approach gives the City flexibility in prescribing the right infrastructure treatment at the right time. It should be noted that all mobility improvements will adhere to modern safety design standards, namely the Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG). Some of these facility treatments are included on the following pages.

Qualitative Methodology

Toole Design used feedback gathered from the October 26, 2022 and the March 15, 2023 community events, multiple online public surveys, and feedback from the Mobility Action Plan Leadership Team. Conversations with residents and stakeholders often corroborated what the data indicated – lending credence to notions of feeling “unsafe” or “uncomfortable” on certain sections of the City’s existing network.

Quantitative Methodology

Quantitative data that was collected includes the following:

Existing Traffic Volumes – This data indicates traffic volumes on major City streets. This data was gathered in 2019 before the COVID-19 pandemic and is used to represent the latest representation of how busy Traverse City streets are on a regular basis.

Bicyclist Crash Data – Gathered between 2017-2021, this data indicates the location and severity of bicycle/vehicle crashes within Traverse City.

Bicyclist Crash Density – Generated from the same bicyclist crash dataset, this observed bicycle crashes on specific segments of roadway within Traverse City, assigning each segment a rating based on the frequency of bicycle crashes, with more severe crashes that resulted in serious injuries or fatalities being weighted higher than property damage only crashes.

Pedestrian Crash Data – Gathered between 2017-2021, this data indicates the location and severity of pedestrian/vehicle crashes within Traverse City.

Pedestrian Crash Density - Generated from the same pedestrian crash dataset, this observed pedestrian crashes on specific segments of roadway within Traverse City, assigning each segment a rating based on the frequency of pedestrian crashes, with more severe crashes that resulted in serious injuries or fatalities being weighted higher than property damage only crashes.

Bicycle Level of Traffic Stress – This data was generated by observing factors such as roadway widths, roadway traffic speeds, and average daily traffic volumes. Roadway segments were assigned a value based on these factors which indicates the roadway's Level of Traffic Stress (LTS).

Pedestrian Level of Traffic Stress (PLTS) – Similar to the Bicycle Level of Traffic Stress, this data was generated by observing roadway widths, roadway traffic speeds, average daily traffic volumes, and what type of intersection control or improvement was included at each intersection (including traffic signals, HAWK signals, or RRFBs). This data was aggregated at intersections to illustrate high-stress crossing locations.

Distance to Nearest Low-Stress Crossing – This data was created using the results of the Pedestrian Level of Traffic Stress analysis and locating where there were gaps of 500 feet or more between PLTS 1 and PLTS 2 crossings (the lowest stress crossing scores).

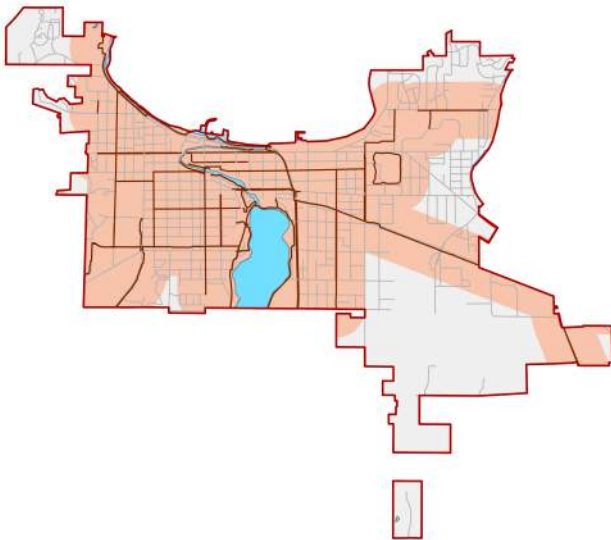
Mobility Network

Taking the quantitative and qualitative data into account, the Mobility Action Plan Team developed the preferred Mobility Network for Traverse City. This plan represents a network approach that seeks to connect the City's streets, neighborhoods, and business districts together in a "safe for all users, all abilities" network.

Observing the City's current bicycle network, it can be noted that 73% of Traverse City lies within a quarter-mile distance of some form of bicycle facility. While desiring to bring mobility infrastructure to the entire city, there are topographical challenges that limit the feasibility of mobility infrastructure in select locations. Accounting for this along with excluding the airport property, where public mobility is strictly prohibited, the Mobility Network seeks to place 93% of the City within a quarter-mile radius of a bicycle facility – a bold and aspirational goal that is in line with other progressive bicycling cities such as Seattle, WA and Fort Collins, CO. It should also be noted that TART, the City of Traverse City, and the Traverse City DDA are currently pursuing the Bayfront Improvement and Extension Project with the intent of enhancing mobility access to Grand Traverse Bay. This project includes reconstruction of the existing trail, replacing it with a bi-directional bicycle path along with dedicated spaces for other mobility users.

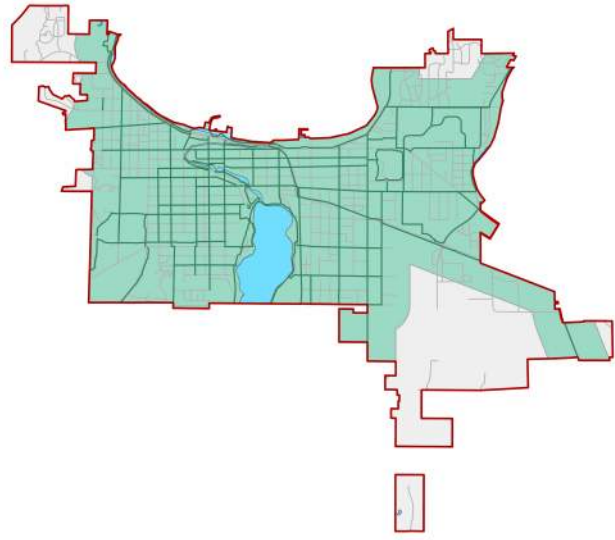
Existing Mobility Network

73% of Traverse City is within a quarter mile of an existing facility (Excluding Airport Areas)



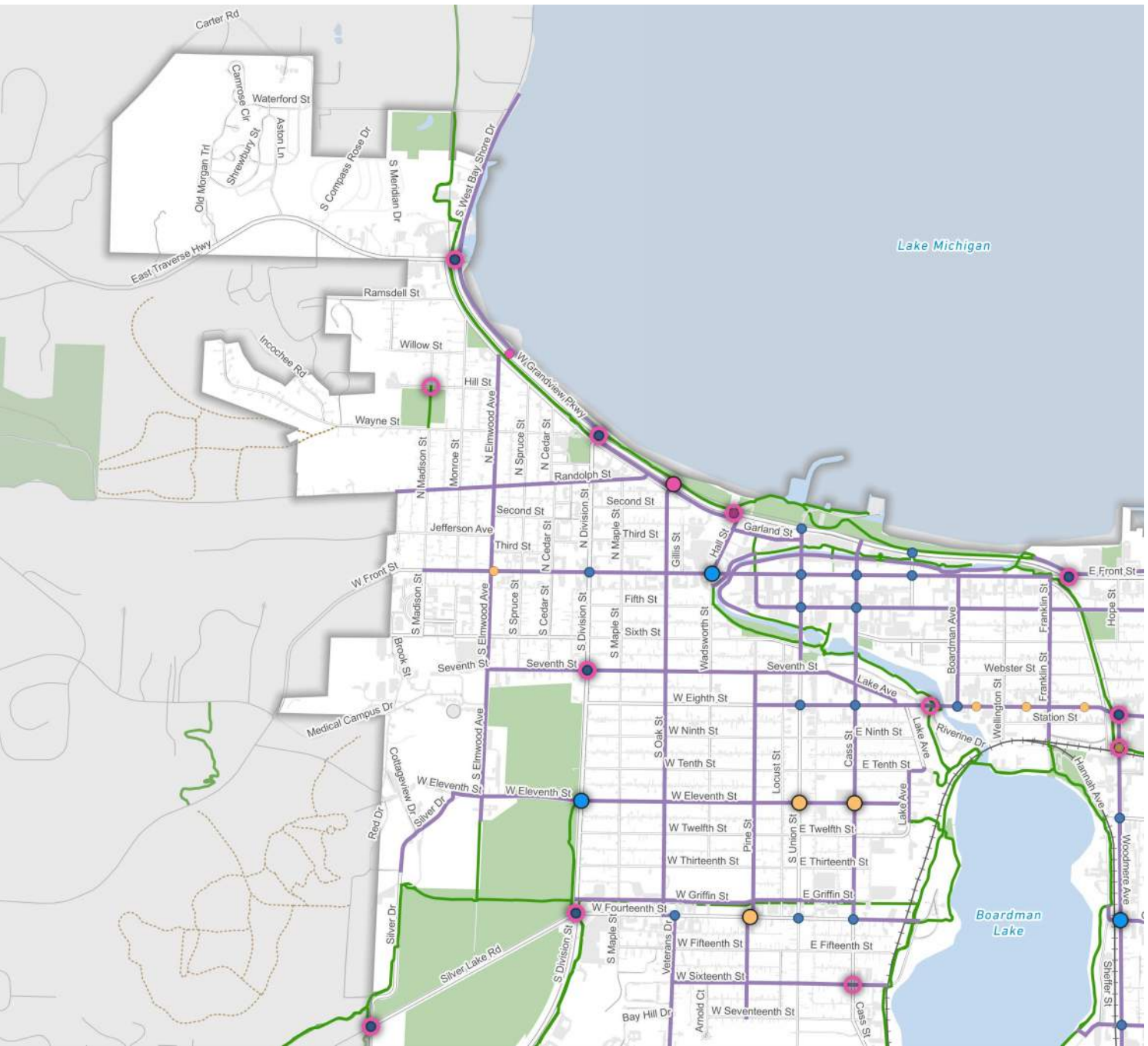
Proposed Mobility Network

93% of Traverse City is within a quarter mile of a proposed facility (Excluding Airport Areas)



Traverse City Mobility Network

Northwest Quadrant



Legend

- Nature Trails
- Paved Trails
- Railroads

Existing Crossing Improvements

- HAWK
- RRFB
- Traffic Signals

Potential Crossing Improvements

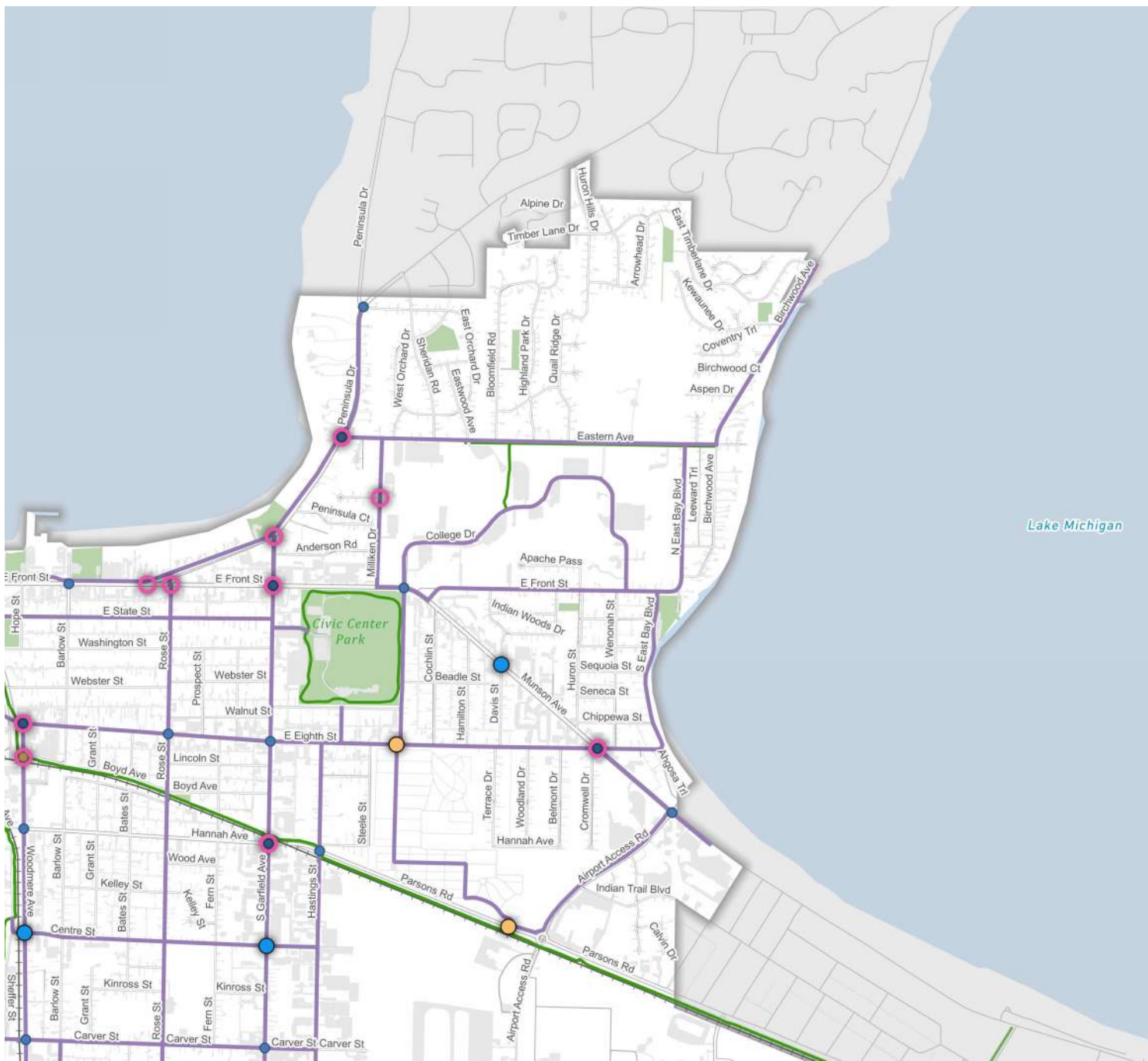
- HAWK
- RRFBs
- Traffic Signal
- Crossing Improvement

Potential Bike Network Improvements

- Proposed Vision Bike Network

Traverse City Mobility Network

Northeast Quadrant



Legend

- Nature Trails
- Paved Trails
- Railroads

Existing Crossing Improvements

- HAWK
- RRFB
- Traffic Signals

Potential Crossing Improvements

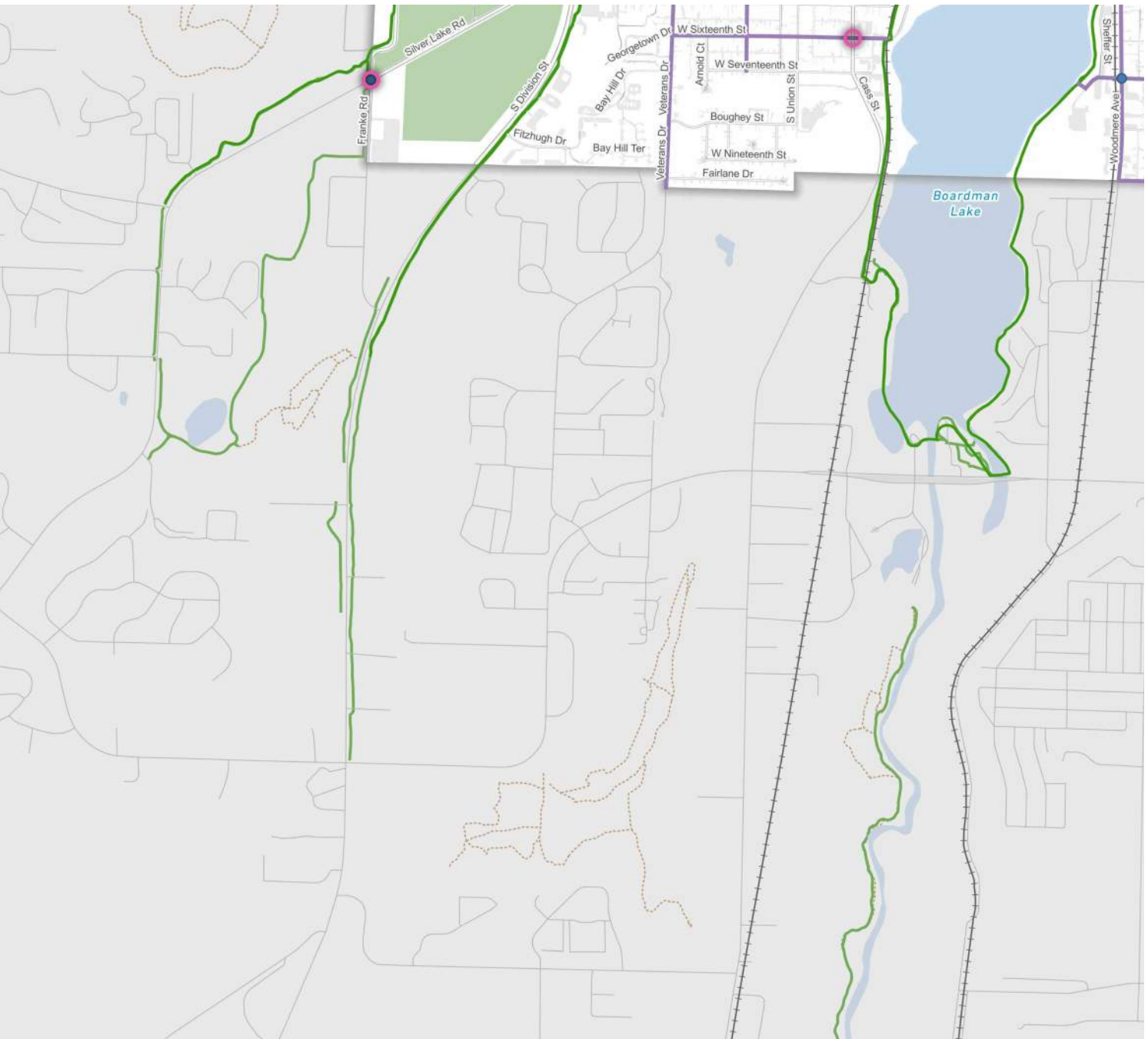
- HAWK
- RRFBs
- Traffic Signal
- Crossing Improvement

Potential Bike Network Improvements

- Proposed Vision Bike Network

Traverse City Mobility Network

Southwest Quadrant



Legend

- - - Nature Trails
- Paved Trails
- +— Railroads

Existing Crossing Improvements

- HAWK
- RRFB
- TrafficSignals

Potential Crossing Improvements

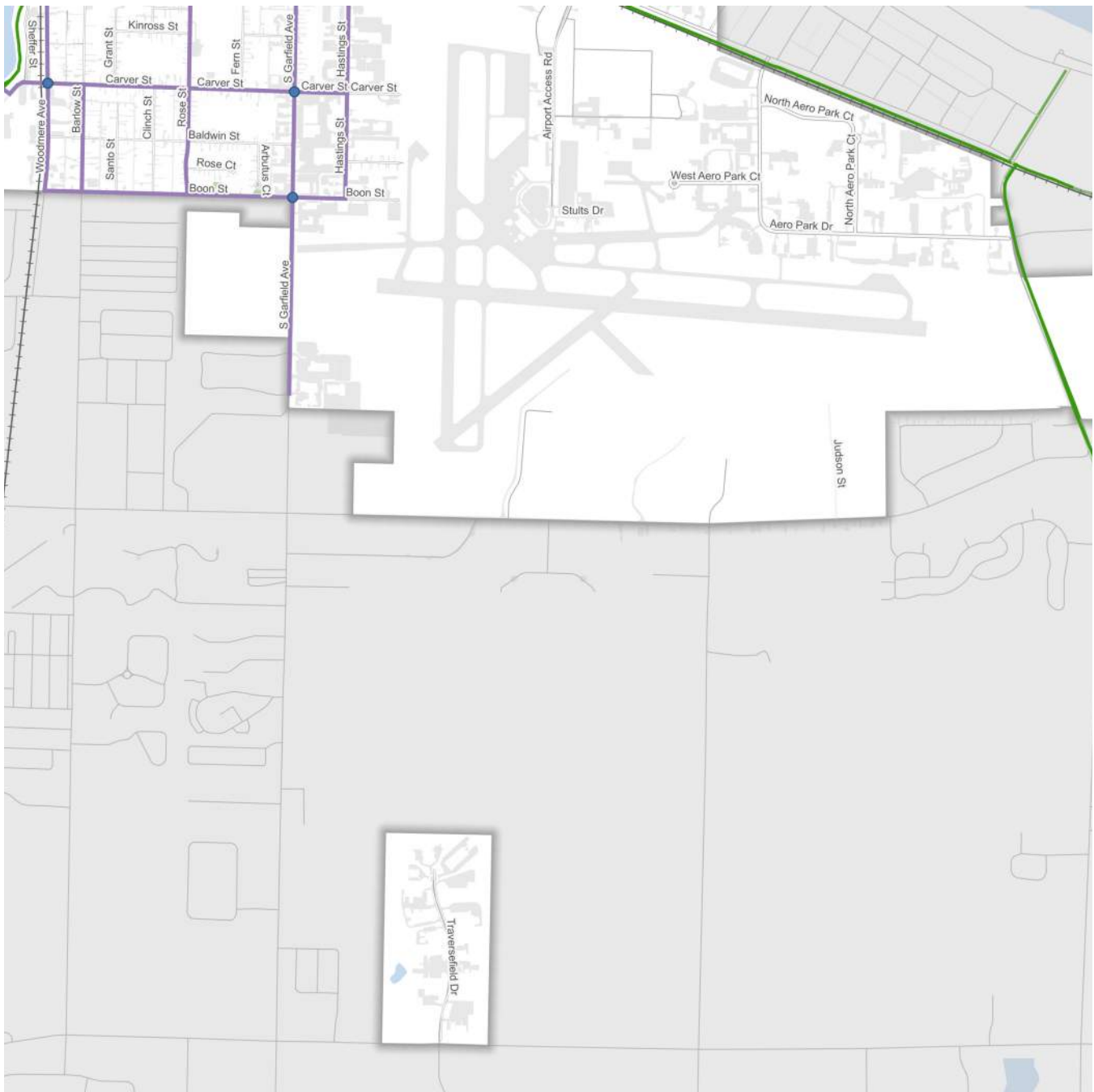
- HAWK
- RRFBs
- Traffic Signal
- Crossing Improvement

Potential Bike Network Improvements

- Proposed Vision Bike Network

Traverse City Mobility Network

Southeast Quadrant



Legend

- Nature Trails
- Paved Trails
- +— Railroads

Existing Crossing Improvements

- HAWK
- RRFB
- Traffic Signals

Potential Crossing Improvements

- HAWK
- RRFBs
- Traffic Signal
- Crossing Improvement

Potential Bike Network Improvements

- Proposed Vision Bike Network

Facility Treatment Types

Facility Type Cost Legend

\$	= Low-Cost Facility
\$\$	= Moderate Cost Facility
\$\$\$	= High-Cost Facility
\$\$\$\$	= Especially High-Cost Facility



Example of Shared Lane or Sharrow

Shared Lane or Sharrow

Design Speed: Under 25mph

Treatment Width: Depends on road width

Average Cost per Mile: \$

Maintenance: Street sweeping, snow plowing, restriping

Parking Interactions: Parking not impacted

Used to connect cyclists to destinations while offering cyclists the right-of-way in places where space is limited.

Pros

- Inexpensive to implement
- Full lane to cycle in
- Cyclists have the right-of-way
- Minimal pavement markings and construction

Cons

- Cyclist must share road with cars
- Cyclists and drivers must interact to avoid crashes
- Can create driver confusion
- May prevent less confident users from bicycling



Example of Paved Shoulder

Paved Shoulders

Design Speed: 35-55mph

Treatment Width: 4 feet to 6 feet from edge line

Average Cost per Mile: \$

Maintenance: Street sweeping, snow plowing

Parking Interactions: Parking not impacted

Mainly used in suburban or rural areas to allow space for cyclists.

Pros

- Offers space for cyclists that vehicles don't use
- Minimal changes to existing roads
- Allows cyclists to be visible to vehicles

Cons

- Left turns are difficult for cyclists
- Not a dedicated bicycling lane
- Often has debris that has blown off the road
- Not identifiable as a bicycling facility



Example of Bicycle Boulevard

Bicycle Boulevard

Design Speed: Under 25mph

Treatment Width: Depends on road width

Average Cost per Mile: \$\$

Maintenance: Street sweeping, snow plowing, wayfinding sign replacement

Parking Interactions: Parking not impacted

Used in residential areas to connect cyclists to destinations while offering cyclists the right-of-way in places where space is limited while reducing vehicle through traffic via traffic calming and occasionally diverting vehicles to adjacent streets.

Pros

- Only local traffic is allowed with the cyclist
- The cyclist has the right-of-way
- More space for groups of cyclists
- Utilizes existing infrastructure

Cons

- Cyclist must share the road with cars
- Cars make exiting driveways difficult for residents
- Must ensure the road isn't used as motor vehicle cut-through to avoid traffic congestion



Example of Bike Lanes

Bike Lanes

Design Speed: 25mph - 35mph

Treatment Width: 5 feet to 7 feet from curb or gutter pan if present

Average Cost per Mile: \$\$

Maintenance: Street sweeping, snow plowing, restriping

Parking Interactions: Must be located outside of door zone, may require parking space removal

Used to create dedicated routes for cyclists on striped roads to destinations.

Pros

- Create an easily identifiable lane for cyclist
- Can be paired with on-street parking
- Easy to add to most existing roads, space-permitted
- Familiar to public

Cons

- May require on-street parking to be removed
- Must be cleaned to remove debris from road



Example of Buffered Bike Lanes

Buffered Bike Lanes

Design Speed: Greater than 25mph

Treatment Width: 1.5 feet to 3 foot buffer, 5 feet to 7 foot lane

Average Cost per Mile: \$\$

Maintenance: Street sweeping, snow plowing, restriping

Parking Interactions: May require parking space removal

Used to create dedicated routes for cyclists on striped roads to destinations. Offer greater separation from vehicle traffic than regular bike lanes.

Pros

- More separation from vehicles
- More definition of the bike lane for people driving to see
- Can be made large enough to have cycle passing lanes or be multi-directional

Cons

- Left turns can be difficult for cyclists
- May require on-street parking to be removed
- Must be kept clean of debris



Example of Separated Bike Lanes

Separated Bike Lanes

Design Speed: Greater than 25mph

Treatment Width: 1.5 feet to 3 foot buffer, 5 foot to 7 foot lane, although larger lanes can be used where there are very high volumes of bicyclists

Average Cost per Mile: \$\$\$

Maintenance: Street sweeping, snow plowing, restriping, seasonal bollard removal/installation, bollard replacement

Parking Interactions: May require parking space removal

Used to create dedicated space for people bicycling. Provides a physical barrier separating bicycle traffic from vehicular traffic, offering an additional level of comfort for people bicycling.

Pros

- Semi-permanent barriers provide more safety from vehicles
- Better defined bike lane for drivers
- Can be made large enough to have cycle passing lanes or be bi-directional (two-way)

Cons

- Left turns can be difficult for cyclists
- May require on-street parking to be removed
- Barriers may need to be replaced over time
- Must be kept clean of debris
- Winter maintenance can be difficult with plow trucks



Example of Multi-Use Path

Multi-Use Paths

Design Speed: Greater than 25mph

Treatment Width: 10 foot minimum, 12 feet to 16 feet preferred

Average Cost per Mile: \$\$\$\$

Maintenance: Snow plowing, striping at intersections, repaving separate from street improvements

Parking Interactions: Parking not impacted

Used to create dedicated shared routes for cyclists and pedestrians, these facilities are often recreational in nature and are separated from the roadway.

Pros

- Fully separated pathways for cyclists and pedestrians
- Grass or other buffer located between path and roadway
- Often a recreational destination

Cons

- Large space requirements
- Requires enhanced road crossings or grade-separation for connections



Example of Cycle Track

Cycle Tracks

Design Speed: Greater than 25mph

Treatment Width: 5 feet to 7 foot buffer, 8 foot to 12 foot lane

Average Cost per Mile: \$\$\$\$

Maintenance: Snow plowing, restriping, seasonal bollard removal/installation, bollard replacement

Parking Interactions: May require parking space removal

Used to create dedicated routes for cyclists on striped roads to destinations. These facilities provide a fully-separated place for cyclists that is often parallel and grade-separated from the roadway.

Pros

- Permanent barriers separating cyclists from traffic
- Can be constructed at a different grade than the roadway

Cons

- Likely will require on-street parking to be removed
- Best for long, un-interrupted stretches with little to no driveways

Each of these facility treatment types have unique advantages and disadvantages that are very context-specific to surrounding infrastructure. Because of this, there is no “one-size-fits-all” approach to creating the Proposed Mobility Network, as these treatments must be deployed to fit the context, funding, and local input of each street segment when appropriate.

	Shared Lane (Sharrow)	Paved Shoulders	Bicycle Boulevard	Bike Lanes
Design Speed	Under 25 mph	35 - 55 mph	Under 25 mph	25 - 35 mph
Treatment Width	Depends on road width	4 ft - 6 ft from edge line	Depends on road width	5 ft - 7 ft from curb to gutter pan if present
Average Cost Per Mile	\$	\$	\$\$	\$\$
Maintenance	Street sweeping, snow plowing, restriping	Street sweeping, snow plowing	Street sweeping, snow plowing, wayfinding sign replacement	Street sweeping, snow plowing, restriping
Parking Interaction	Parking not impacted	Parking not impacted	Parking not impacted	Must be located outside of door zone, may require parking removal

Street Facility Matrix

	Buffered Bike Lanes	Separated Bike Lanes	Multi-Use Paths	Cycle Tracks
Design Speed	Over 25 mph	Over 25 mph	Over 25 mph	Over 25 mph
Treatment Width	1.5 ft - 3 ft buffer, 5 ft - 7 ft lane	1.5 ft - 3 ft buffer, 5 ft - 7 ft lane, larger lanes can be used	10 ft minimum, 12 ft - 16 ft preferred	5 ft - 7 ft buffer, 8 ft - 12 ft lane
Average Cost Per Mile	\$\$	\$\$\$	\$\$\$\$	\$\$\$\$
Maintenance	Street sweeping, snow plowing, restriping	Street sweeping, snow plowing, restriping, seasonal bollard removal / installation	Snow plowing, striping at intersections, repaving separate from street	Street sweeping, snow plowing, restriping, seasonal bollard removal / installation
Parking Interaction	May require parking space removal	May require parking space removal	Parking not impacted	May require parking space removal

Shared Streets: Design over Facility

While conversations around bicycle infrastructure often focus on facility types, a roadway's design and surrounding streetscapes play a much larger role in the roadway's perceived safety. Just as a separated bike lane on a busy, high-speed highway remains a stressful environment to walk or ride a bike, a street's design influences its level of traffic stress. With this in mind, designing streets to slow traffic not only creates safer streets but streets that are conducive to mixed pedestrian, bicycling, and vehicular traffic.

Because of the limited space within road rights-of-way, thoughtful planning must go into prioritizing modes on some streets and alternative modes on others. While some streets will emphasize cyclists, others will emphasize pedestrian travel while others emphasize transit access or vehicular traffic. With this in mind, the "shared street" design creates an environment conducive to pedestrian traffic while remaining open to bicycling and vehicular traffic. Because of their traffic-calming characteristics however – such as textured pavers, extensive landscape plantings, wide sidewalks with outdoor seating spaces, and the elimination of curbs and gutters – these shared streets represent low-speed, low-volume environments that operate more as public spaces rather than through-ways for vehicle traffic. Although absent of a dedicated bicycle facility, these streets offer cyclists and pedestrians a safe and comfortable environment to travel.



Clematis Street West Palm Beach, FL

Following a conversion from one-way to two-way in the 1990s, Clematis Street was redesigned in 2019 and now features a curbsless street, an 18-foot travelway with no striped centerline, wide sidewalks, and extensive landscaping features.

Broadway - Eugene, OR

Passing through downtown Eugene, this street lacks curbs and a striped centerline, features wide sidewalks, extensive streetscaping and sharrows indicating the multi-modal nature of the street.



Wall Street - Asheville, NC

Narrower than other shared street examples, Wall Street lacks curbs and striped centerlines and incorporates wide sidewalks allowing businesses to flex seating and other items into the street.



This topic was discussed at length in the context of State Street and Front Street within downtown Traverse City. Due to the area's high pedestrian traffic, limited right-of-way constraints, and an emphasis on creating low-speed and desirable environments to linger, the idea of implementing shared streets within downtown was discussed and identified as the preferable mobility future for downtown. This envisions a downtown that operates as an "outdoor living room" and is such a low-speed environment that all users feel safe interacting within this area. The intent of downtown shared streets are for Traverse City residents and visitors – families with young children, older couples, tourists traveling between stores and restaurants, professionals accessing their workplaces, friends connecting over drinks – all people would feel welcome and comfortable traveling in and through downtown Traverse City.

While aspirational, this requires Traverse City's mobility culture to first shift towards accepting shared spaces as an environment for all users. Until this occurs, incremental mobility facilities can bridge the span between this ultimate vision for downtown and the still largely auto-oriented conditions that exist today.

Complete Streets

“Complete streets” refers to an infrastructure design philosophy focused on building a mobility network that is accessible for all people, regardless of their transportation choices. Standing in contrast to the auto-oriented infrastructure of previous decades, “complete streets” are designed to create mobility networks accessible to people walking, riding bikes, taking transit, or other alternative transportation modes. Adopted in December 2022, Traverse City’s Complete Streets Policy desires to create:

“ - an equitable and effective transportation network where every transportation user can travel safely, conveniently, and efficiently, and where sustainable transportation options are available to everyone.”

This policy statement emphasizes the City’s focus on creating a multi-modal transportation network. Recognizing that streets differ in terms of traffic volumes, street widths, the number of driveways and intersections, and a variety of other factors - designing “complete streets” must be context-sensitive to these factors in determining the appropriate facility type.



The mobility facility appropriate for the street above...

...Is likely different from the facility appropriate for the street below



With this in mind, streets that are low-volume and low-stress (**left image above**) can be classified as “complete streets,” as they are comfortable and safe environments for all mobility users. Streets that feature higher speeds and higher traffic volumes (**right image above**) likely require mobility facilities that provide protection and separation from vehicular traffic. Recognizing this distinction between road types allows resources to be deployed in these high-stress corridors, resulting in a more resilient mobility network over time.

Background and Approach

Infrastructure implementation is more than just orange barrels and asphalt; it is a complex, ongoing process involving vision from policymakers and the public, and coordination across numerous city departments. Due to this complexity, there are challenges and trade-offs associated with design decisions, the construction process, and how facilities are maintained. A lack of intentional coordination can result in streets being reconstructed only to be torn up again to replace aging utilities; sidewalks leading to nowhere; and trails not being maintained. Unfortunately, it is easy for details to “slip between the cracks,” impeding overall implementation of the community’s vision.

Understanding roles and responsibilities is an essential element to prevent missed opportunities, effectively leverage resources, and prevent re-work. A sports analogy best captures how to “win the game” of effective infrastructure implementation. There are the policy-makers (elected and appointed officials), the coach (City administration), and the team players (City staff across multiple departments). Understanding this dynamic and the interactions between these entities will ensure success. Each group’s role as it pertains to infrastructure is highlighted below.

Infrastructure: It’s a Team Effort

Just as there are many roles in building a competitive franchise, there are many roles in Traverse City’s infrastructure process. This sports analogy shows that focusing on each role and their unique responsibilities makes the organization stronger as a whole.



- **Team Owners (Elected and Appointed Officials)**

Tasked with establishing vision, not involved in specific team strategy but guides long-term direction of team.

- **Coach (City Manager)**

Develops game plan and oversees performance of the team on a day-to-day basis.



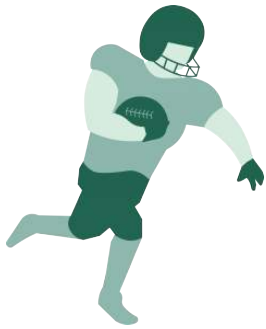
- **Team Players (City Staff)**

Professionals with unique skillsets that collaborate to execute the game plan.



Elected and Appointed Officials (Team Owners) – Just like a governing body of a sports team, the elected officials are tasked with establishing the long-range vision and rules of the team. While they operate “outside the locker room” and are not involved in specific team strategy, they create the policies and parameters the team must follow in order to win. The Traverse City Planning Commission and City Commission are some of the “policy-makers” for the City.

City Administration (Team Coach) – As leader of all city departments and staff, city administration acts as the team coach, ensuring that all players of the team are operating according to the established game plan. Just like a coach, city administration must ensure the team plays in accordance with the rules established by the policy-makers.



City Staff and Departments (Team Players) – As the City’s technical professionals, City staff represent the players on a team, using their unique skillsets in a complementary manner to follow the established policies and achieve the team’s objectives. In the context of Traverse City’s infrastructure process, it is city staff’s role to design, construct, and maintain the City’s infrastructure assets – streets and alleys, water and sewer lines, signs and signals, etc.

These separate roles – elected and appointed officials, city administration, and city staff – all play an important role in how Traverse City infrastructure is implemented, operated, and maintained. This section highlights how these roles can better coordinate to reduce conflict points and ensure the effective provision of infrastructure improvements. It also offers a review of existing policies and proposed practices that can be adopted and refined to achieve the city’s long-term mobility goals. This in turn should make the infrastructure implementation process more straight-forward, leading to the effective implementation of the City’s near-term, medium-term, and long-term improvements as outlined later in this section.



Governmental Center

Current Approach

Current Capital Improvement Program (CIP) Process

Traverse City follows a July 1 – June 30 fiscal year cycle. As capital expenditures make up a significant portion of each year's budget, the Capital Improvement Program (CIP) process is vitally important to not only the implementation of the City's transportation goals but the overall operation of city government.

The current process begins with the establishment of a CIP Committee comprised of the following entities:

- City Manager
- Planning Department
- Public Services Department
- Engineering Department
- Downtown Development Authority (DDA)
- Board of Light and Power
- Department of Municipal Utilities
- Parking Services
- Parks and Recreation
- Fire Department
- Police Department
- Treasury Department

The intent is for this Committee to outline large-scale improvements to the City's physical assets over the coming six (6) years. The CIP Committee reviews community needs and gathers proposed project lists from each department. The Committee then prioritizes projects based on staff capacity and available funding.

After the selection of projects, the CIP is presented to the Planning Commission who then schedules a public hearing. After the public hearing and adoption by the Planning Commission, the City Manager prepares the annual budget, incorporating the CIP's first year projects. It should be noted that allocated funding for proposed first year projects is typically insufficient to complete all projects on the list, leading to difficult budget decisions over the fiscal year.

During the Mobility Action Plan’s engagement process, frustration was expressed that the selection of capital projects sometimes operates in a “shot-gun” approach, attempting to hit many high-profile targets at once and serve as a “catch-all” for items that could be included elsewhere in the annual budget. This inconsistent and reactive process ultimately delays and weakens overall implementation by failing to maintain focus on a central vision. A vicious cycle is then created - decision-makers are frustrated by a lack of progress and feel compelled to select projects that will be of higher profile to demonstrate action, which in turn causes implementation of the vision to slow down, drawing more criticism for lack of progress. Taking a “less is more” or a systematic approach can yield a more actionable CIP as it allows resources to coalesce around fewer, large-scale projects and provides opportunities for infrastructure investments to build upon each other to produce a better result. A virtuous cycle can be created by changing the CIP process to one that is more proactive and methodical, maintaining focus on the long-term goals set forth by the City Commission, and achieving them more quickly, so the next batch of projects can proceed without delay.



Current General Fund Street Project Process

In addition to the Capital Improvement Process, City staff follow a process that helps project street reconstruction and resurfacing projects to be funded through the City's General Fund. This process generates the informal streets project list or "Rainbow Sheet" – a colored list of streets and construction estimates projected over a nine (9) year period.

This process begins with an Evaluation Phase, with the City Engineer considering the Infrastructure Policy outlining the City's desired break-down of infrastructure spending. They also consider maintenance costs and the geographic breakdown of previous year's projects. The development of the street project list is also informed by pavement quality (PASER) ratings along with proposed utility projects that are provided by the Municipal Utilities Superintendent.

From here, the process enters a Staff Review Phase. The Engineering Department provides the streets project list to the Department of Public Services, the Board of Light & Power staff, Department of Municipal Utilities, the Planning Department, Parks and Recreation Division, and the Downtown Development Authority (DDA) if applicable. The Planning Department reviews the list to ensure consistency with the Master Plan while the Engineering Department reviews the list and develops preliminary cost estimates for these projects. The Department of Municipal Utilities also reviews the list to ensure alignment with water and sanitary sewer infrastructure projects. Upon their review, each department meets with the City Manager to finalize the streets project list.

With all entities in agreement, the Planning Department will then take the document and publish a public hearing notice. During this Planning Department Review Phase, the Planning Commission tours the streets proposed for improvement and ultimately approves or rejects the streets project list. With the Planning Commission's approval, the streets project list is submitted to the City Commission for their approval.

For street reconstructions that represent a significant change in character or function, the Planning and Engineering Department consults the Planning Commission and Active Transportation Committee, first sharing early design concepts and gathering their feedback. The Planning Department sends out letters to impacted residents and gathers feedback. The Active Transportation Committee reviews resident feedback and develops project design recommendations.

Following these recommendations, the Engineering Department develops a preliminary roadway design and provides it to the Planning Commission for their review and approval. If the design is consistent with the Master Plan, the Planning Commission can approve the preliminary design. After the heavy lift of designing the project, garnering feedback, revising the project design to satisfy feedback, and receiving Planning Commission approval – the Engineering Department then develops the final design and begins soliciting bids for construction.

Graphic of Current Street Improvement Process

Step 1: Establish Capital Improvements Program

Developed annually, the Capital Improvement Program (CIP) is created by City staff, the City Manager, and is adopted by the Planning Commission. Upon approval and adoption by the Planning Commission, the CIP is included in the annual budget approved and adopted by the City Commission. This establishes the street projects to be programmed over the coming years.



Step 2: Street Design Development

With a street segment identified within the CIP, City Staff begin the process of designing its next phase. City Staff will refer to the Master Plan, Mobility Action Plan, Street Design Guide, and other documents informing the street's design. For extensive reconstruction projects, the Planning Commission along with public input will guide street design. Following this feedback, City Staff develop the preliminary street design. The final design is reviewed and approved by the Planning Commission.



Step 3: Final Engineering, Contract Award, and Construction

Once the preliminary street design has been approved by the Planning Commission, City Staff develops the final engineered drawings and specifications for construction. Upon completion of these documents, City Staff advertises for bids. City Staff then selects a bidder for construction. After this work, City Staff submits the bid and construction contract for final approval to the City Commission.





Washington Street

Recommended Approach

Challenges and Potential Solutions

Although these processes guide the City's current infrastructure improvement process, City staff have mentioned a number of limitations associated with them. Through numerous meetings with representatives of the City's various departments, common themes emerged as crucial to implementing the vision and goals of the Mobility Action Plan. These are discussed below.

CHALLENGE:

Lack of Coordination between City Departments – Although existing infrastructure processes call out a specific manner of coordination between departments, City staff mentioned this often does not function as it exists “on paper.” In meetings, staff mentioned the lack of a cohesive process for involving all city departments in determining annual infrastructure improvements. While departments will regularly consult with other departments on an “as-needed” basis, there is no standing meeting that brings all departments to the table. Staff mentioned a desire for a regular meeting to coordinate infrastructure improvements.

Case Study: Grand Rapids Design Team

With the adoption of the Vital Streets Plan in 2016, the City of Grand Rapids sought to formalize the process for City staff from relevant departments to collaborate on major infrastructure and development projects. Comprised of staff representing Planning, Traffic Safety, Mobility, Fire, Stormwater, Sanitary Sewer, Water Services, Street Lighting, Forestry, and Engineering (among others) – the Grand Rapids Design Team brings these departments together early in the infrastructure process, offering them an opportunity to coordinate projects, resolve design concerns, and ultimately apply the goals of the Vital Streets Plan into the City’s infrastructure improvements.

This Design Team process has a number of benefits. First, it gives City staff a venue to offer their expertise and share recommendations. As designing infrastructure is an iterative process, the Design Team ensures that all parties are consistently in the conversations that ultimately shape its implementation. Ideally, this reduces City staff time for project review while reducing re-work for project designers.

An equally important benefit of Design Team is its unified voice, representing the sum of the City’s technical expertise and professional knowledge. As the City’s planners, engineers, and professionals in water resources, public works, fire services, and utilities are represented and given an equal voice – the Design Team presents a recommendation that has been tested and deliberated over by experts from a variety of perspectives. Acknowledging this expertise and the work that goes into developing consensus – Grand Rapids establishes the Design Team’s recommendation as the final plan to be implemented. By enhancing interdepartmental coordination and empowering staff to make final recommendations, the Grand Rapids Design Team creates certainty and predictability into the infrastructure improvement process while ensuring infrastructure is constructed in accordance with the Vital Streets Plan and other City policies.

SOLUTION:

To meet the goals and objectives of the Mobility Action Plan, a regular coordination meeting between City departments involved in infrastructure can be held. In the case of the Grand Rapids Design Team, the City’s Engineering Department has “ownership” of the team’s administration – scheduling meetings, establishing agendas, and providing meeting minutes. The intent of these meetings is to develop consensus on infrastructure improvements and provide a final design recommendation to be implemented in accordance with the Mobility Action Plan, Street Design Manual, and other applicable infrastructure policies. Recognizing its importance and the weight of its recommendations, attendance at Design Team meetings should be mandatory and decisions should be well-documented to further bolster the group’s decision-making authority. An additional benefit is it can also be a mechanism to review complex private development projects. An important key to success is that departmental decision-makers must be at the table and commit to the standing meeting date and time as “off limits” for rescheduling, as well provide a unified voice in presenting street designs to the Planning Commission and City Commission.

CHALLENGE:

Relations between City Staff and Elected and Appointed Bodies – As identified in the City’s current Capital Improvement Program (CIP) process and General Fund Street Project Process, City staff develops projects and infrastructure designs that are then reviewed and adopted by the Planning Commission. Tasked with overseeing the physical development of Traverse City, the Planning Commission is the appointed body assigned to ensure the City’s development conforms to the Master Plan and Mobility Action Plan.

As project construction is a financial matter however, final awards for infrastructure projects go before the City Commission for approval. It has been noted that this is a potential point of conflict, as in some instances City staff and the Planning Commission have spent considerable amounts of time and energy to design an infrastructure asset yet the City Commission fails to award a construction contract due to disapproval or disagreement over the project’s design. This action subverts the established decision-making structure, assuming the decision-making responsibility of the Planning Commission while disregarding design considerations developed through the project engineering and design process. This introduces ambiguity and ultimately leads to project delays, increased staff demands, re-work, and costly increases due to project redesigns.

“As infrastructure is one of the most tangible aspects of good governance and its stewardship of public resources, ensuring that City leadership, City administration, and City staff work in a collaborative manner is crucial in building public trust and fulfilling the overall vision for a more sustainable mobility system.”

SOLUTION:

As infrastructure is one of the most tangible aspects of good governance and its stewardship of public resources, ensuring that City leadership, City administration, and City staff work in a collaborative manner is crucial in building public trust and fulfilling the overall vision for a more sustainable mobility system. As former sections stated, each group performs specific responsibilities, often involving the delegation of decision-making to other groups. This requires greater trust and communication between elected and appointed officials, City management, and City departments.

Project selection and design criteria have been formally adopted by the City Commission, as the legislative body, to provide direction to the City Manager, staff, and Planning Commission. The City’s *Infrastructure Strategy Policy* identifies what resources City staff and the Planning Commission should rely on for design guidance. The National Association of City Transportation Officials (NACTO) *“Urban Street Design Guide”* and *“Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities”* are currently listed. It is recommended that this policy be revisited to ensure that it aligns with the recommendations of the Mobility Action Plan, state and federal design requirements, as well as to reorganize the document into two major sections that relate to modal hierarchy and vulnerable road users, and the other to the design of streets and facility types.

A best practice is for the legislative body (City Commission) to set the criteria by which decisions are made, and the administration of those criteria is left to persons credentialed in their field (City staff) with an additional check involving the Planning Commission which is also considered an administrative body in local government. Engineering judgement is oftentimes required when working in urban environments due to constrained rights-of-way. Trade-offs are common in decision-making. The Infrastructure Strategic Policy and its cited resources, alongside this plan, the Complete Streets Policy, the Street Design Manual, and the City's Master Plan provide ample guidance.

This collaboration – from the City Commission establishing the overall vision and policies to trusting City staff and administration in developing designs and providing professional expertise to the Planning Commission's role to vet the proposed designs, ensuring their accordance with the City's future development – these interactions require trust between these three groups. Understanding that all groups have Traverse City's best interests in mind, responsibility for its welfare is shared across all groups.

Relations between City Commission, Planning Commission, and City Staff

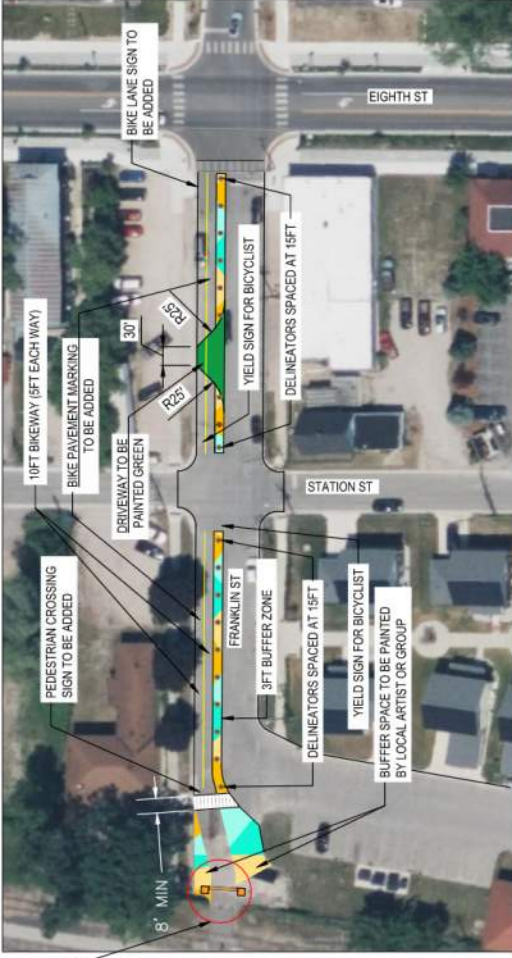
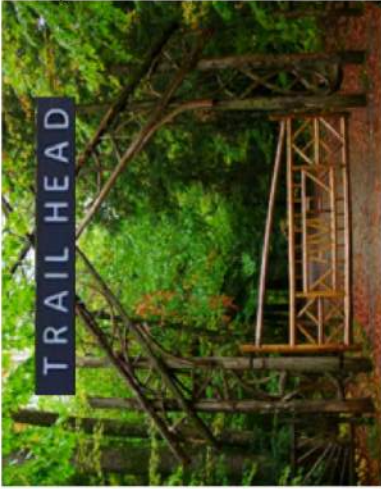


Implement a Proportional Engagement Strategy – Infrastructure improvements range from simple road resurfacing projects to complex reconstruction projects that incorporate new designs that alter traffic patterns. Recognizing this, community engagement cannot be a “one size fits all” approach and must instead be tailored towards each project. Although the City developed a useful “Level of Public Involvement Needed” worksheet in The City’s Public Participation Strategy, it now has an opportunity to create a decision-making matrix for infrastructure projects.

	Type of Street Project	Methods
Light <i>(Informative Approach)</i>	<ul style="list-style-type: none"> • Road maintenance like cape and crack sealings and wedgings • Rotomill and resurfacings and reconstruction that return road to previous state 	<ul style="list-style-type: none"> • Postcard • Website
Medium <i>(Design Input Needed)</i>	<ul style="list-style-type: none"> • Rotomill and resurfacings or reconstructions where curbs or road geometry is unchanged 	<ul style="list-style-type: none"> • Letter • Website • Design meetings
Heavy <i>(Design Input Needed)</i>	<ul style="list-style-type: none"> • Rotomill and resurfacings or reconstructions that move cubrs or that change road geometry (parking removal, lane configuration changes, etc.) 	<ul style="list-style-type: none"> • Informational sign • Same as above but including preferred design meetings

This approach can provide clarity to the community input process in a fair and predictable manner. By following this matrix, the City can plan for an amount of community engagement proportional to the project’s scope – capturing input from impacted residents, using their input to influence design, and ultimately yielding a project that is responsive to resident needs in a timely manner.

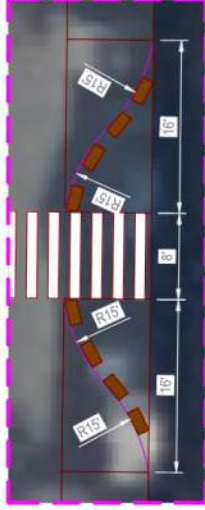
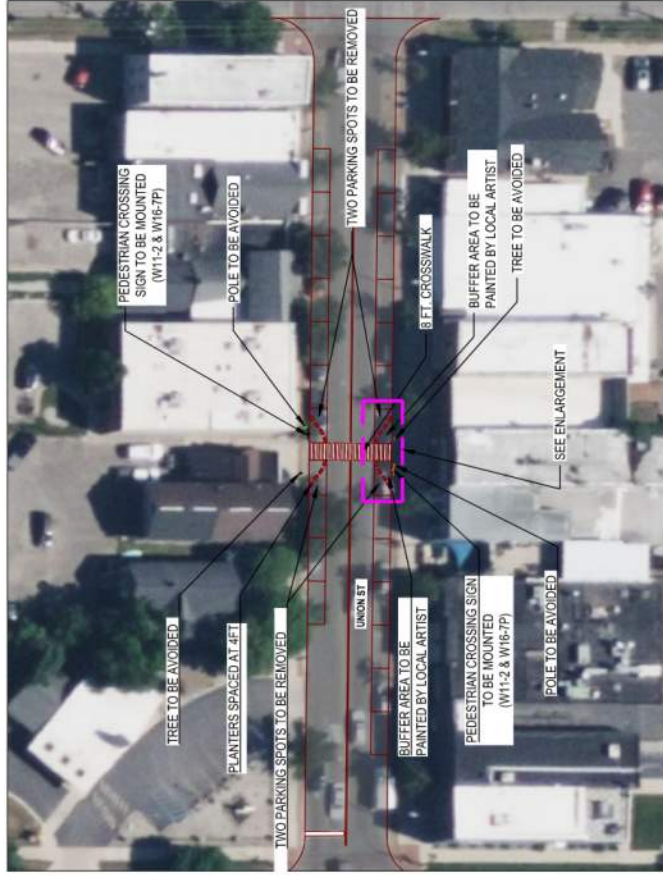
Flexibility to Implement Small-Scale Tactical Engagement / Traffic Calming – Infrastructure improvements range from simple road resurfacing projects to complex reconstruction projects that incorporate new designs that alter traffic patterns. Recognizing this, community engagement cannot be a “one size fits all” approach and must instead be tailored towards each project. Although the City developed a useful “Level of Public Involvement Needed” worksheet in The City’s Public Participation Strategy, it now has an opportunity to create a decision-making matrix for infrastructure projects. A number of tactical engagement projects considered during the planning process are included on following pages.



Item	Quantity	Apprx. Cost per Item (\$)	Total Cost (\$)
Delineators	19	40	760.00
Bike Pavement Markings	2	150	300.00
Yellow Waterborne Paint	895	0.75	671.25
Traffic Signs	3	130	390.00
Crosswalk	1	150	150.00
Gate & Sign	1	1000	1,000.00
Total (\$)			2,271.25

Required Signs	
Yield Sign	2
Bike Lane Sign	1

NOTE: Costs can be reduced through the utilization of items on hand, partnerships with local artists, or sponsorships from the community.



ENLARGEMENT



Item	Quantity	Approx. Cost per Item (\$)	Total Cost (\$)
Pedestrian crossing signs	2	130	260.00
Wood crates with plants	12	55	660.00
Crosswalk	1	150	150.00
Total (\$)			1,070.00

NOTE: Costs can be reduced through the utilization of items on hand, partnerships with local artists, or sponsorships from the community.

Policy Recommendations

While many of the points within this section are provided as long-term considerations, existing City policies can be changed in the near-term, reflecting the City's priorities towards fulfilling the vision and goals of this Plan. These policies and proposed changes are listed below.

Chapter 410 – Traffic Codes

- **Add Section Requiring Motorists to Give Cyclists Five (5) Feet When Passing** – While Michigan law requires motorists to give cyclists a three (3) foot buffer when passing, some communities have increased this buffer to a five (5) foot minimum to increase safety for cyclists.



Chapter 420 – Bicycle and Coaster Toys

- **Remove Language Requiring Licensing of Bicycles Sections** – According to Sections 420.01 – 420.03, cyclists are required to license their bicycles and attach this license on their bicycles. As Traverse City lacks a dedicated system for processing this licensing program along with the burden it places on bicyclists, it is recommended this requirement is repealed.
- **Consider Regulating Micro-Mobility Hubs** – As micro-mobility options such as scooter sharing becomes more prevalent, the City can implement “scooter corrals,” or dedicated locations where scooters are permitted to be parked and accessed. The City can review how other communities regulate micro-mobility options.
- **Add Section Addressing Electric Bicycles in Sensitive Areas** – Section 420.04 empowers the City Commission to prohibit bicycles and other vehicles in areas they deem appropriate. With the rise of E-bikes, this section can address different classifications of electric bicycles and provide guidance on where different classes are permitted. Class 1 electric bicycles (pedal-assisted and limited to 20 miles per hour) may be permitted in areas of regular bicycle use while Class 2 and Class 3 electric bicycles (featuring higher speeds) can be prohibited in sensitive areas such as shared use trails, pedestrian pathways, and other conflict areas.

Chapter 480 – Parking Generally

- **Add Section Prohibiting Vehicle Parking that Obstructs Sidewalks** – Language that prohibits parking that obstructs sidewalks can be added to ensure safe pedestrian spaces are maintained.
- **Add Section Prohibiting Vehicle Parking in Bicycle Lanes** – Language can be added to ensure vehicles do not park within bicycle lanes.



Chapter 668 – Safety, Sanitation, and Health

- **Add Section Requiring Removal of Snow/Ice/Leaves from Bicycle Facilities** – Language can be added to Section 668.11 that prohibits residents from piling snow or lawn debris in bicycle facilities. It can also enshrine the City's responsibility towards snow-plowing the City's bicycle facilities.
- **Review Snow-Clearing Enforcement Policies** – Although typically enforced based on resident's complaints, the City can consider adding code enforcement staff to ensure compliance and keep the mobility network accessible year-round.

Chapter 1020 – Street and Sidewalk Areas

- **Remove Language Prohibiting Playing in Streets and Alleys** – Although created with safety in mind, this rule reinforces roads as a place for cars and not for people. While this is already likely not enforced, removing this rule aligns with the City's view of streets being a place for all people and mobility modes. There are nuances to removing this rule however, as higher-volume streets are not appropriate for playing in while residential streets may be more appropriate. It should also be noted that all streets must be unobstructed and remain free for vehicle traffic. Because of these factors, this is another policy that requires thoughtful consideration before changing.

Above Left: Image from Easterbrook Blog Post (June 8, 2011).
Above Right: Image gathered from City of Grand Rapids, MI.

Chapter 1374 – Circulation and Parking

- **Revision of Bicycle Parking Requirements** – Consider amending bicycle parking language, potentially requiring more along major bicycle corridors or areas with high bicycling traffic.

Zoning Ordinance

- **Amend Zoning Ordinance** – Amend the Zoning Ordinance to include a bonus provision or parking reduction where showers are provided or transit infrastructure is provided to encourage active commuting. Increase required sidewalk width to 7 feet where vehicle parking is perpendicular to the pedestrian way to take into account car overhangs and sufficient pedestrian space. Consider reducing or eliminating vehicle parking requirements and consider provisions that encourage development of bus shelters, benches, and bicycle parking.

Traverse City Traffic Calming Program

- **Review Current Program Implementation** – According to the current process, Traverse City residents are tasked with identifying streets that are ideal candidates for traffic calming – not City staff. They then must approach the City and petition to study the street to see if traffic calming is feasible. A survey of surrounding property owners must then garner at least 50% support before funding can be allocated. While formalizing a way to implement important traffic calming features, this process may be overly complex and can erode public trust when projects that have been identified and deliberated over fail to be implemented due to lack of funding. With this in mind, the goals of this program may be better accomplished through a nimbler tactical urbanism program.



Mobility Action Plan Updates

- **Regularly Update Mobility Action Plan** – Just like the Master Plan, the Mobility Action Plan should be reviewed and updated every five years to ensure consistency with ongoing transportation initiatives. This allows the Mobility Action Plan to be a “living document” while further incorporating mobility efforts within the region.

Develop Mobility Education and Programming

Develop Shared Street Safety Messaging – Communities with healthy mobility cultures acknowledge a shared responsibility towards street safety. The City can develop a public messaging program can educate residents and visitors on how to interact between all road users and demonstrates that streets belong to people of all ages and abilities.

Active Transportation Committee

- ***Consider Dissolution of Active Transportation Committee*** – As the Planning Commission is already intimately involved in the development of infrastructure projects, the Active Transportation Committee largely serves a redundant role in overseeing the City's infrastructure projects. In the interest of reducing committees and freeing staff resources, the City can consider the dissolution of the Active Transportation Committee by formally transferring its responsibilities to the Planning Commission or another body as deemed appropriate.

Strategic Plan

- ***Consider Development of Strategic Plan*** – Many communities have undertaken strategic planning exercises in recent years as a way for elected officials and appointed boards to demonstrate their values and goals for the future, providing greater clarity on the organization's future direction. Staff have mentioned this would be a useful supplement as this information can be tied into future planning efforts.

City Staff Design Team

- ***Consider Establishment of Design Team*** – Similar to Grand Rapids' Design Team to implement its 2016 Vital Streets Plan, Traverse City can establish a regular meeting with relevant city departments to review development plans to ensure they comply with the Master Plan and Mobility Action Plan. The intent of this group is to review projects in a holistic manner, ensuring that City staff's concerns and feedback is shared and is used to inform the development of infrastructure projects. With all departments contributing and offering their input, the Design Team would then provide a final design to be implemented. An administrative policy could be enacted that defines the team's charge and responsibilities, as well as decision-making framework should a disagreement arise between departments.

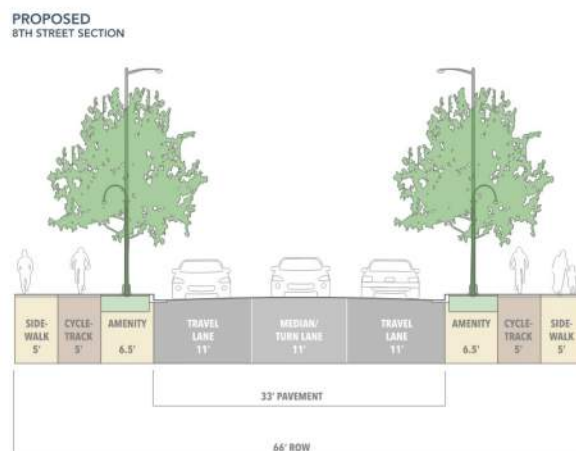
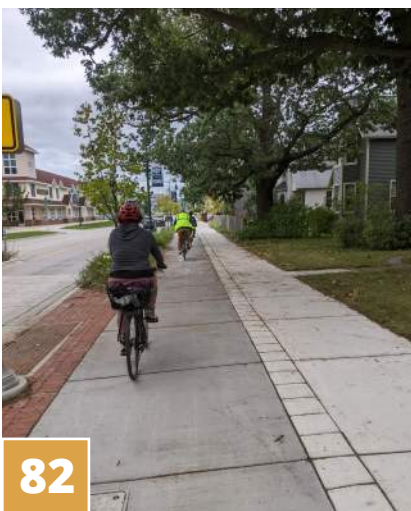
Identify Implementation Timeline

- ***Near-Term Improvements*** – Many mobility improvements can be achieved through small, incremental changes to the City's network. Improvements such as crosswalks, improved striping, sharrows, and wayfinding can be achieved quickly and are relatively affordable. While often considered "low-hanging fruit," these projects represent small wins that result in the build-up of the city's mobility network. These can conveniently be added to road resurfacing projects currently on the books, expediting the buildout of these projects.

- **Medium-Term Improvements** – These improvements represent projects that require more thought, planning, and deliberation than those that can be implemented in tandem with existing resurfacing projects. These projects represent changes to the city’s rights-of-way, reconsidering lane widths and the provision of mobility infrastructure in new and unique ways such as incorporating protected bicycle facilities. Although bold, these projects are possible to be constructed over coming years. Their implementation is predicated on a growing mobility culture however – one that prioritizes bicycling and walking infrastructure when road reconstruction opportunities arise over the coming construction seasons.
- **Long-Term Improvements** – These projects represent transformational mobility improvements that warrant extensive studies, stakeholder engagement, and budgeting. These complex projects typically require key trade-offs between accommodating vehicular traffic versus bicyclists and pedestrians. Because of this, these projects are not politically feasible currently but are likely to be successful in years to come, as Traverse City’s mobility culture continues to shift and becomes more accommodating towards bicyclists and pedestrians. Acknowledging that timing is a crucial ingredient in the mobility network’s success, these improvements take a decade-plus horizon and represent the large-scale, foundational projects the City can work towards achieving over time.

Eighth Street Implementation Case Study

The cycle tracks on Eighth Street were the product of a decade-long planning process that engaged the public and was subject to a number of studies. Culminating in the adoption of the Envision 8th Plan in 2017, this plan saw the corridor as a vibrant mixed-use environment featuring dedicated cycling facilities adjacent to the roadway. These improvements were made in tandem with a road reconstruction project in October 2019. These dedicated bike facilities provide an example of a long-term improvement that came to fruition in recent years, representing the work and engagement involved in projects of this magnitude.



Left: E Eighth Street Cycle Track and Sidewalk

7

Measures of Progress

As Traverse City continues to pursue its mobility vision and the buildout of its network, City leadership, administration, and staff should continually study metrics indicating the overall success of the Mobility Action Plan.

Perform Bicycle and Pedestrian Traffic Counts – In summary, the Mobility Action Plan intends to get more residents walking and bicycling throughout the city. There is no better way of measuring this success than by measuring the level of pedestrians and cyclists within the community over time. Increases in people walking and bicycling indicate the improving mobility culture the Plan strives to cultivate while the opposite indicates that barriers remain that inhibit people’s abilities to utilize the mobility network.

Miles of Facilities Installed – A simple measure of progress is tracking and publicizing the amount of new bicycle facilities constructed each year. This can be demonstrated in a simple graphic each year that is updated to the City’s webpage.



Carbon Emission Reductions – Relating directly to the Mobility Action Plan’s Vision Statement of “creating a mobility network that reduces the region’s carbon footprint,” studies can be conducted over time to gauge whether carbon emissions are decreasing within Traverse City. Although challenging to monitor regularly, measuring the number of City employees riding their bikes to work can indicate reduced carbon emissions.

Facility Implementation Impacts – The construction of new signals and traffic-calming devices can influence which streets people choose to take. Following construction of these facilities, the City can monitor traffic for changes in volumes and speed. This can convey information that then informs future facility implementation projects.

Above Left: Image from Bike Portland (December 4, 2019).

Above Right: Image gathered from City of Bellingham, WA (December 21, 2020).

Percentage of Residents within Quarter Mile of a Mobility Facility – The proposed Mobility Network envisions 93% of Traverse City being within a quarter-mile of a mobility facility. This is a forward-looking mobility goal shared with much larger communities such as Seattle and indicates Traverse City's commitment towards geographic equity. This can be achieved by inputting completed mobility projects into GIS and running buffer analyses each year.

Annual Community Survey – One method of gauging the Mobility Action Plan's overall success is by gathering qualitative data from residents and stakeholders. This can be achieved through an annual survey that prompts survey takers to indicate whether progress has been visible in their community. This serves a useful purpose of also continuously gathering data that can be used to identify areas of concern and refine future mobility projects.

Increased Transit Ridership – A successful mobility system complements the region's transit system and vice versa. As all transit trips begin with either a walk or bike ride, observing Bay Area Transportation Authority (BATA) ridership data can indicate how people are using the system as well as demonstrate how people are interacting with the mobility network.



Observe Traffic Crash Data – While the Mobility Action Plan seeks to create a safer transportation network for everyone, an increase in vehicle-cyclist or cyclist-pedestrian conflicts may indicate more people feeling comfortable bicycling and walking around Traverse City. While seemingly counterintuitive, more people bicycling and walking as opposed to driving will likely result in more crashes between different transportation modes. The severity of these crashes can indicate a key tenet of the Plan; lower traffic speeds due to the sharing of streets and a healthier mobility culture should reduce the number of severe crashes overall. Studying this trend over time can help achieve the City's goal of eliminating traffic fatalities.



Washington Street

Summary

Although these provide both quantitative and qualitative metrics for measuring the overall success of the Mobility Action Plan – understand that a healthy mobility culture represents the community’s collective sense of safety and is often an unmeasurable, intangible value. While there is little direct way to measure Traverse City’s mobility culture, these metrics can indicate its mobility culture in the aggregate, as a healthy mobility culture will yield positive changes in all of the metrics provided.

This plan recognizes that mobility culture takes time to change. This is not a reason for discouragement however; it’s a realization that incremental improvements to the network are steps towards realizing the City’s ambitious vision of being a premier bicycling, walking, and transit community. Traverse City has the opportunity to “live this plan” by implementing its recommendations and incorporating its procedures into existing processes. In this way, this Plan will guide the City’s infrastructure process, resulting in Traverse City’s streets being designed for all users in mind.

