



## City of East Grand Rapids

Mobility-Bike Action Plan

June 2021



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\*Special thanks to Aligned Planning for partnering on Community Engagement through Lake 2 Lake Tactical intervention.

## Background and Purpose

People in East Grand Rapids love spending time outside. This is a walkable community in which residents prioritize an active lifestyle. It is a destination for non-residents seeking recreation in beautiful, well-maintained public spaces. While the population of East Grand Rapids is slightly more than 10,000, the number of people here can double during sporting and cultural events and on summer days when everyone wants to be outside. The City’s network of pathways, streets and sidewalks is a crucial element of this inviting character and the network’s importance to the community requires a planning process that will preserve and expand mobility safely.

The groundwork for this effort was laid in the 2018 Master Plan update which, by establishing a goal of reviewing existing network infrastructure for all modes, integrated walking and cycling into the transportation planning process—an ambitious and exciting cultural change for any city. “Our streets and public spaces should continue to encourage walking and biking for better health and environmental quality,” the Master Plan said.

Accomplishing this to a meaningful degree is not just about infrastructure. It requires intentionally cultivating an expansive culture of mobility with good design, a high level of maintenance, education, and training to make sure the community understands that safety and respect are responsibilities shared by everyone and crucial components of the high quality of life they expect. No city, big or small, can simply flip a switch, or change an ordinance, or install a bike lane and seriously proclaim that they are now bike friendly.

This Mobility/Bike Action Plan (Action Plan) charts a path forward. It includes some specific recommendations for infrastructure planning and projects, but it is primarily a methodology for integrating bike and pedestrian planning and projects into an existing and robust infrastructure program. It also includes suggestions for messaging and a framework for shifting thinking and perceptions for transportation on both the City and public sides. East Grand Rapids, already a leader in quality of life and responsible infrastructure stewardship, now has an opportunity to raise the standard of integrated, holistic, and inclusive transportation planning in western Michigan in a modern manner that truly reflects the community’s values and aspirations.

### Action Plan Goals:

The Action Plan was commissioned to guide transportation and infrastructure planning and projects in East Grand Rapids by helping the City government to:

- Understand how the community views cycling and its concerns, needs and aspirations for cycling infrastructure.
- Identify policies and messaging strategies that will make cycling safer and more convenient for people of all ages and abilities.
- Connect to existing and planned bike infrastructure in neighboring communities.
- Identify where near-term improvements to the existing network can quickly improve conditions for cycling and leverage infrastructure in other communities, expanding residents’ opportunities to bike rather than drive for short trips or recreational rides.
- Identify where planned and future capital improvements can support more ambitious medium- and long-term projects, integrating multimodal considerations more fully into the City’s transportation planning process.

### Action Plan Values:

Feedback collected during outreach for the Action Plan reflects the community’s values:

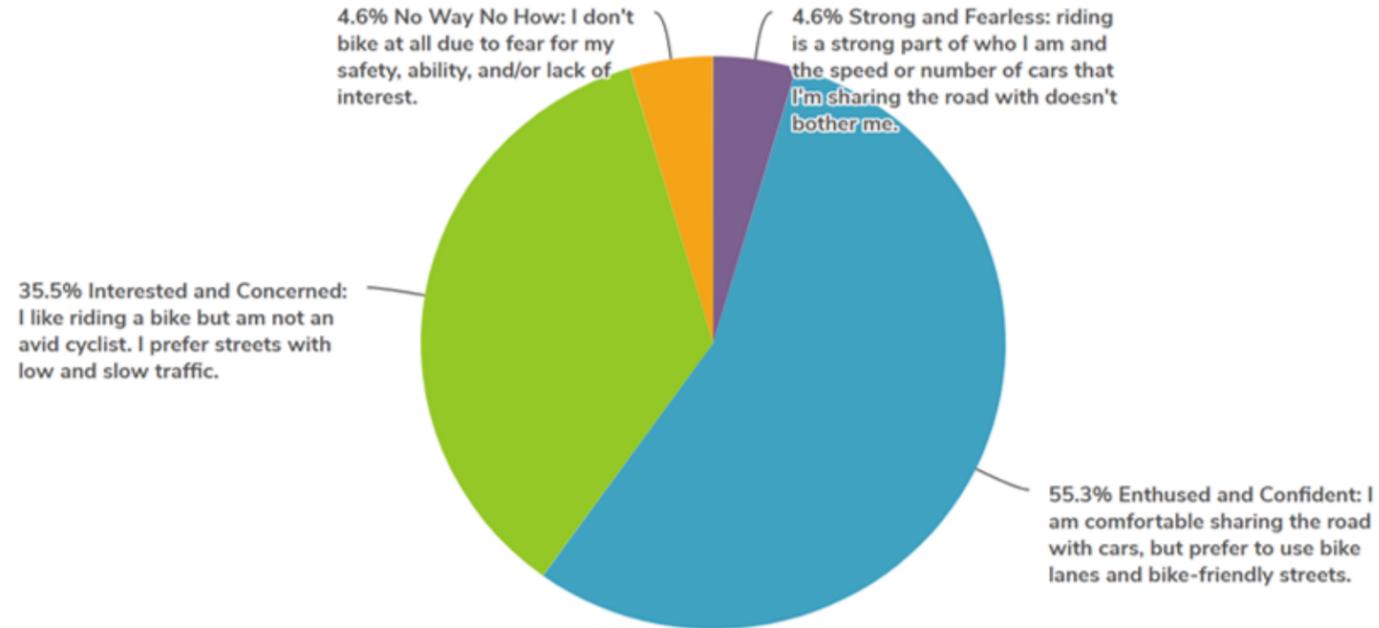
- Its desire for a transportation system that serves the entire community – all abilities and throughout life.
- Its support for encouraging walking and biking as a way to enhance physical and mental health.
- The need to make available multiple affordable and reliable options for travel throughout the region.
- The overarching goals of safe and environmentally friendly transportation that strengthens connections to neighbors and the community.

Value	Percent	Responses
We need to ensure transportation options are accessible, affordable, and reliable for all people to meet their travel needs.	20.0%	30
Walking and bicycling is good for our planet because it reduces green house gas emissions and is climate-friendly.	7.3%	11
All traffic-related injuries should be eliminated on our streets.	11.3%	17
Our streets should serve and accommodate people throughout all phases of their lives; as infants, students, adults, and aging seniors.	29.3%	44
We will encourage active transportation (walking and biking) to improve our mental and physical health.	21.3%	32
Our connections to people and places will deepen as we walk and/or bike through our community.	10.7%	16
		<b>Totals: 150</b>

The plan was developed using these values to guide the analysis and recommendations.

## Existing Conditions and Network

During outreach, it was clear that the network is already heavily used by people who are not driving cars. All survey respondents knew how to ride a bike, and a large majority – 79 percent – said that they would like to ride more. Respondents also chose which “biking personality” fit them best:



While a lot of respondents are already confident cyclists, more than a third expressed some uneasiness about riding on some City roads. Making these riders feel more comfortable would not only help the people in this category it would increase perceived and actual safety for everyone, including people walking and driving cars and send a message that biking is an accepted and expected way to get around East Grand Rapids. In the 21st century, biking has become a standard mode of travel in cities around the world and across the US, and bike infrastructure has become as commonplace as sidewalks in many forward-thinking communities.

### Complete Streets benefit everyone in the region.

Complete streets improve safety for all people on the roadways – whether driving, biking, walking, or taking transit. Complete streets provide viable transportation alternatives, thus reducing traffic congestion and parking demand. Complete streets help produce better health outcomes by reducing air pollution and promoting physical activity by allowing people to safely walk and bike. Complete streets help spur economic growth by decreasing transportation costs and connecting people to their jobs, neighborhood businesses, churches, healthcare providers, and schools. Complete streets strengthen communities by empowering youth, the elderly, people with disabilities, and other marginalized groups to be mobile. Complete streets stand to make our region healthier, wealthier, and stronger.

- **People who drive** enjoy comfortable travel speeds, improved safety, more clearly organized roadways, and increased predictability from people biking and walking.
- **People who walk** enjoy well-maintained sidewalks and walking paths, street trees, benches, and high-visibility crosswalks.
- **People who bike** enjoy dedicated spaces for riding and low speed limits, making for a safe comfortable riding experience and increased adherence to rules of the road from fellow riders. Numerous bicycle racks also allow easy parking next to popular destinations.
- **People who ride transit** enjoy covered shelter, benches, and easy-to-read transit signage. Loading platforms are strategically placed away from active traffic to make getting on and off the vehicle a safe and stress-free transition.
- **People of all ages and abilities** can travel in confidence knowing that ADA curb ramps, low speed limits, and high visibility will make for a safe and comfortable journey.

From <https://bikeeasy.org/our-work/advocacy/complete-streets/> “Complete Streets” are designed, developed, and refined considering the entire community—consistent with the values of East Grand Rapidians.

### Street Typology

Most of the 46-mile-long network of streets in East Grand Rapids (72 percent/33.4 miles) would be classified in transportation planning as residential “Neighborhood” streets, which connect residents with the wider network. “Link” streets are similar, but they carry more traffic; they comprise 9 percent/4.2 miles of existing roadway. “Network” streets, which move drivers out of neighborhoods toward downtown Grand Rapids or other cities, offices, stores, or other destinations comprise 12 percent/5.4 miles of existing roadway. “Crosstown” streets (7 percent/3.4 miles) serve similar purposes but are the widest and most heavily used, often with many lanes and traffic signals.

## STREET TYPES

### Neighborhood

72% (33.4 miles) of East Grand Rapid's Streets are classified as neighborhood

#### Qualities:

- Typical neighborhood street
- No pavement markings
- On-street parking is widely used
- Main use is for residents to get to and from their homes



*Hodenpyl Rd east of Rexford Dr*



*Edgewood Ave south of Maplewood Dr*

### Link

9% (4.2 miles) of East Grand Rapid's Streets are classified as link

#### Qualities:

- Similar to a typical neighborhood street, but busier
- No pavement markings
- On-street parking is typically utilized
- Used by residents to connect to other network or crosstown streets



*San Lue Rae Dr Eastbound at San Jose Dr*



*Argentina Dr. Eastbound at Floral Ave*

### Network

12% (5.4 miles) of East Grand Rapid's Streets are classified as network

#### Qualities:

- Larger roads used to enter or leave residential areas
- Can connect residential areas to outside the city, work, or shopping
- Lined roads
- Often have traffic signals at major intersections



*Wealthy St Eastbound at Plymouth Ave*



*Lakeside Dr Southbound at Wealthy St*

### Crosstown

7% (3.4 miles) of East Grand Rapid's Streets are classified as crosstown

#### Qualities:

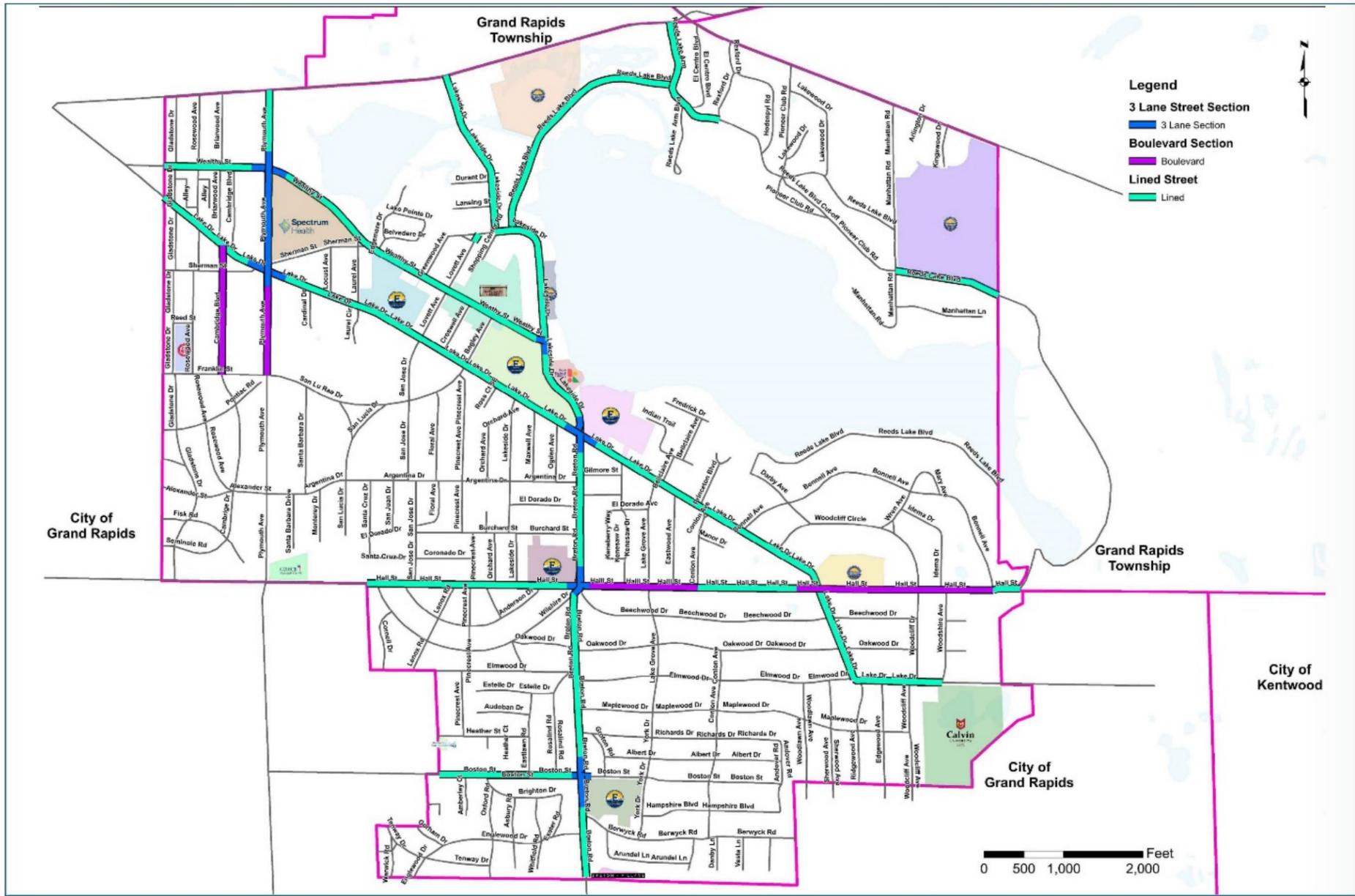
- Larger thoroughfares that are the main routes in a city
- These are the roads that non-residents are familiar with and utilize
- Intended to bring residents and non-residents to work, shopping, recreational opportunities, and throughout the city
- Lined with traffic signals and often multiple lanes



*Lake Drive Westbound at Breton Rd*



*Breton Rd Southbound at Hall St*



**POTENTIAL MOBILITY NETWORK - STREET LANE TYPE AND LINING**  
**EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN**

progressive|ae

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**Existing Street Types in East Grand Rapids**

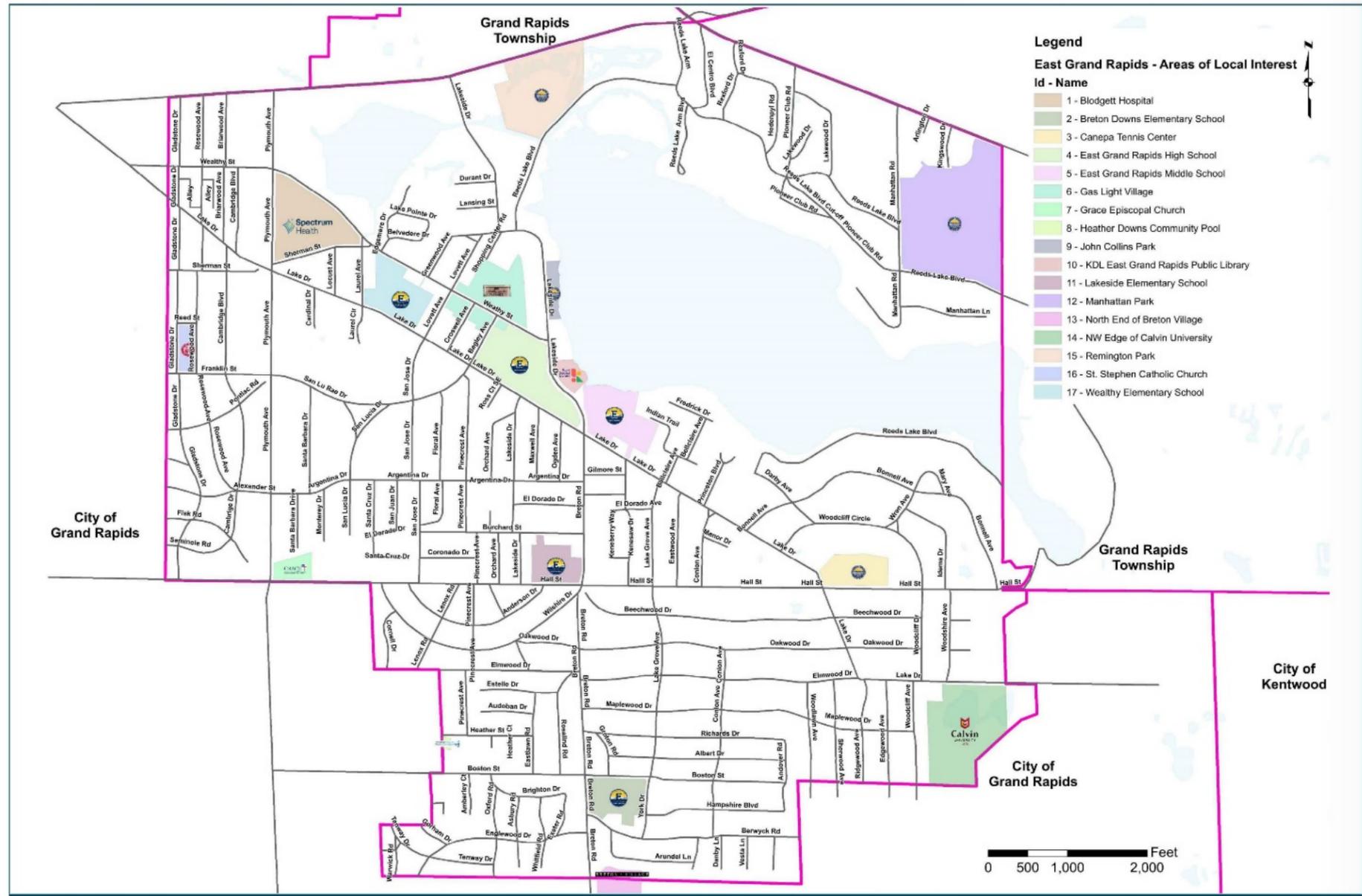
The prevalence of residential streets without painted travel lines is clearly illustrated in the map above, which shows them as thin grey lines. While these streets are not appropriate for formal bike lanes, almost all cyclists are comfortable riding on them. Treatments such as sharrows, bike boulevards, and/or paved shoulders, enhanced by strong “share the road” messaging and wayfinding, helps riders choose comfortable routes to schools, parks, shops, and other popular destinations. These treatments can showcase the City’s evolving planning framework while making the public comfortable living with and using new travel options and infrastructure.

**Travel Within the Network**

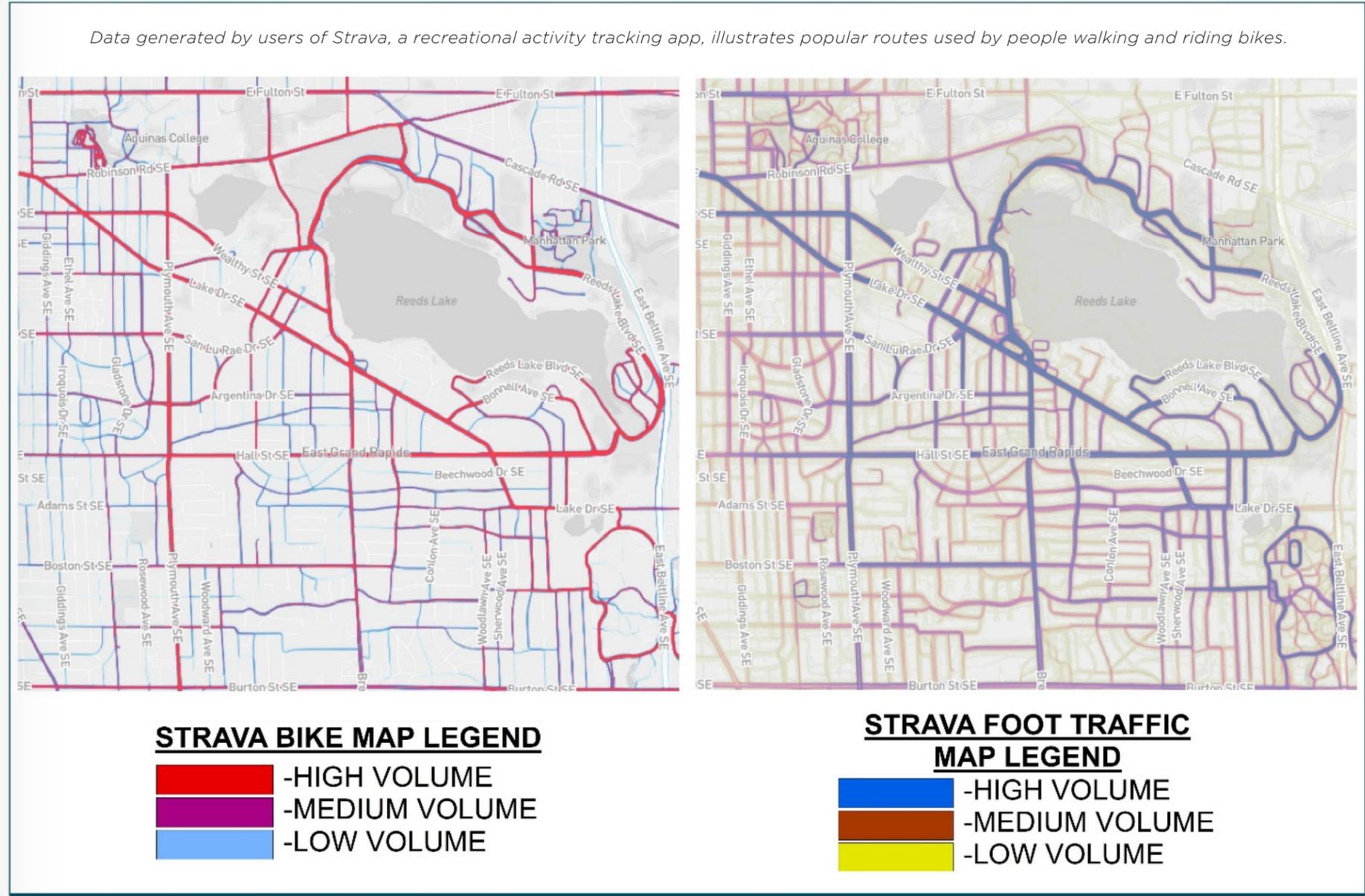
At the network level, bicycle routes should ultimately connect riders to sites like schools, the library, and Gaslight Village using “Network” streets like Lake Drive and Breton and Robinson Roads. Experienced cyclists, commuters, and those training for competitive events want to travel longer distances at higher speeds. “Network” and “Crosstown” streets, such as Lake Drive and Breton Road, enable them to connect to regional routes.

**Popular Destinations in East Grand Rapids**

Many destinations in East Grand Rapids, such as schools, parks, and shops are located along Wealthy Street (a “Network” street) and Lake Drive (a “Crosstown” street). Both pedestrians and cyclists frequent these streets, as well as the bigger, more continuous streets that enable connections between destinations as well as between East Grand Rapids and Grand Rapids (for example, Plymouth Avenue south of Lake Drive and Hall Street).



**POTENTIAL MOBILITY NETWORK - AREAS OF INTEREST**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN



**POTENTIAL MOBILITY NETWORK - STRAVA MAPS**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

People driving cars have similar preferences, they want to get to where they are going as quickly and as directly as possible. So, there is also a lot of car traffic on these destination-rich and convenient roads.

### Conflict Points

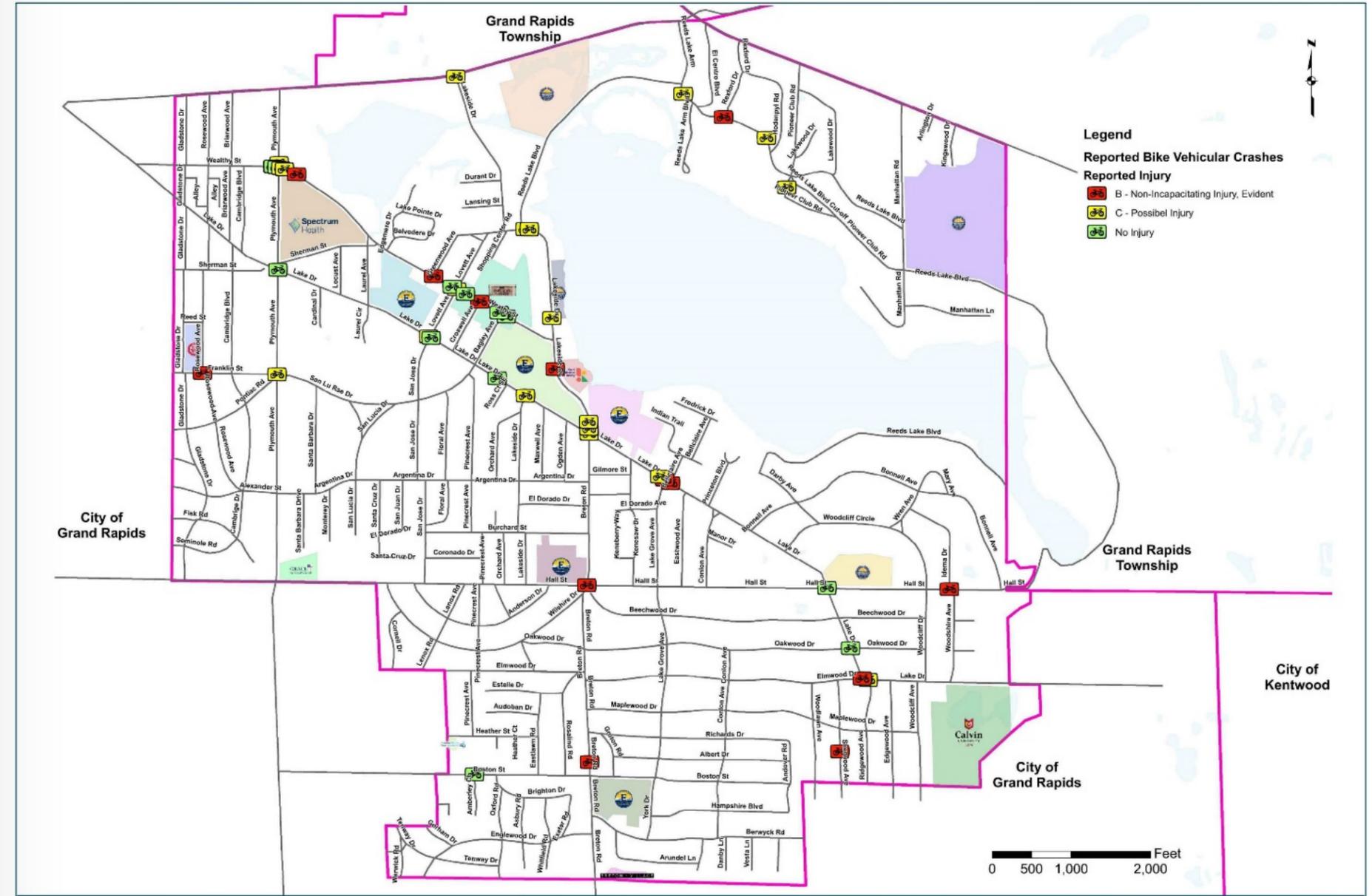
Not surprisingly, there are also a lot of conflicts between people driving cars, people riding bikes and people walking along these routes. From 2010 through mid-2020, there were 44 vehicle crashes involving bikes and 16 crashes involving pedestrians.

### Popular Destinations in East Grand Rapids

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### Recorded Bike Crashes

Fortunately, none of these crashes involved fatalities or incapacitating injuries, most likely because the cars involved were traveling at appropriately low speeds. While this data establishes a useful baseline for future monitoring, it will be important to note that as more people travel by bike, the total number of crashes might rise over time. Close analysis will be required to fully understand safety and conflict points as multimodal infrastructure is added throughout the network.



**POTENTIAL MOBILITY NETWORK - RECORDED BIKE CRASHES**  
EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

# Community Engagement

## Mapping Events

Despite COVID related restrictions on public gathering, a meaningful amount of input was compiled during the two summer events held at John Collins Park.

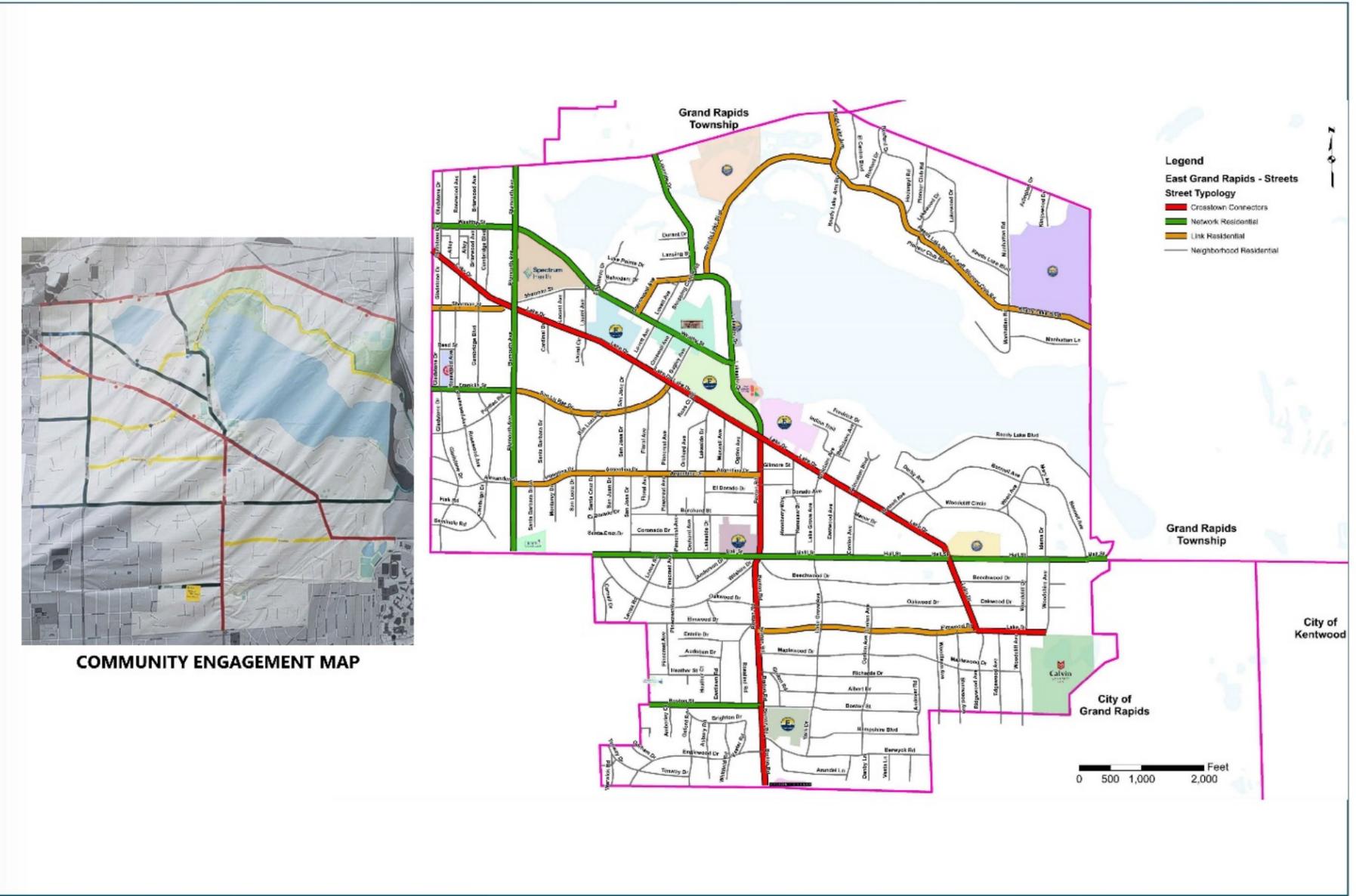
The first of these was held in July 2020 during the Concert in the Park series. About 80 people used a safe, contact-free survey administered via a QR code to share their opinions and ideas for making walking and cycling in East Grand Rapids easier and safer.

They used a huge vinyl map donated by Outfront Media, its 10-foot by 30-foot size accommodated social distancing, to note places where walking and biking is easier and where these activities are more challenging. Participants also identified destinations and places where improvements would be welcome. The big map, covered with multicolored dots and yellow post-it notes, generated a lot of useful discussion and brainstorming.

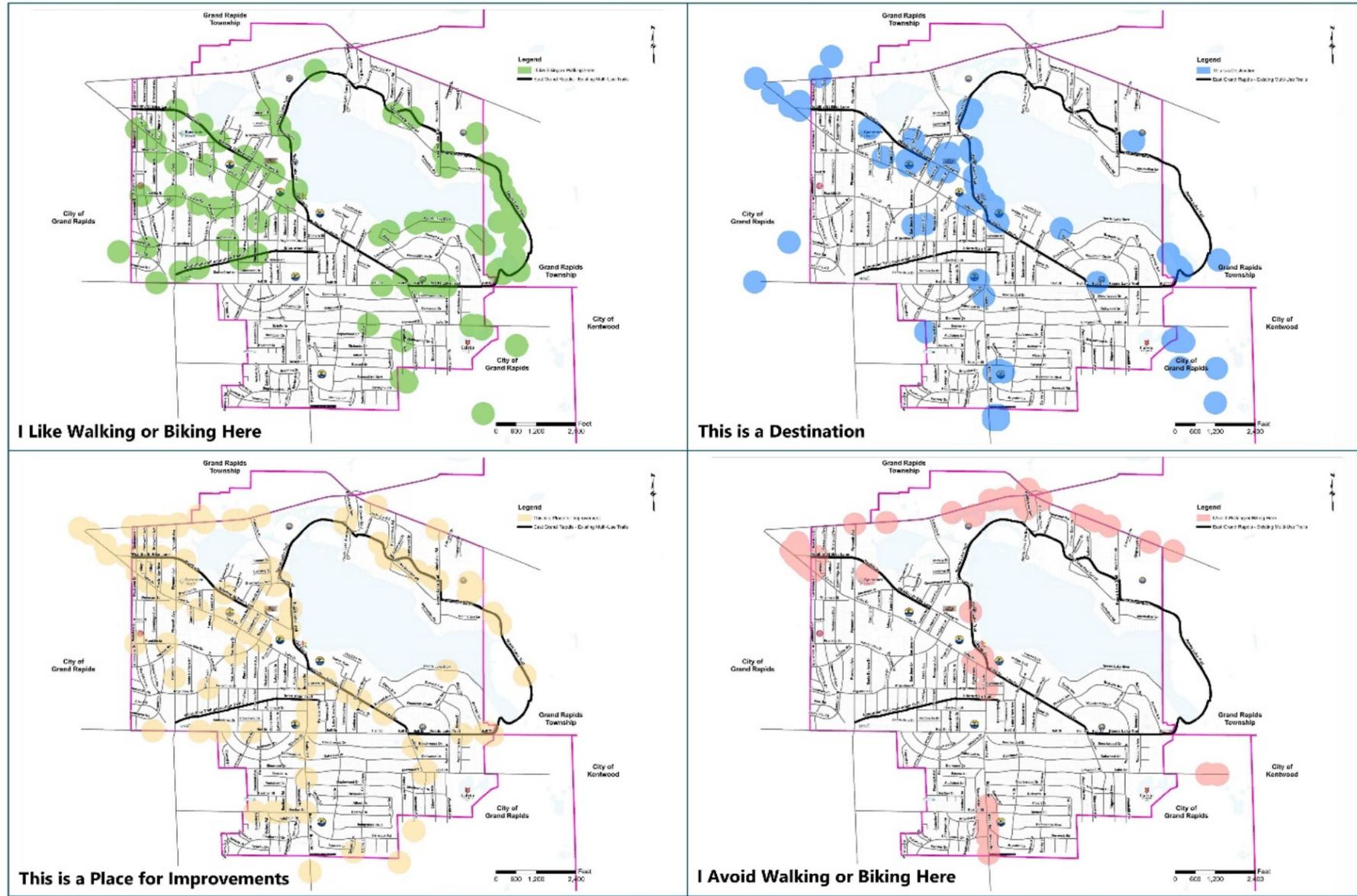
These ideas, along with the survey results, informed the second event, held in August 2020. The map was updated to show different types of streets based on physical characteristics such as width and the amount of traffic they typically move. About 25 people used this version of the map to identify priority places for cycling and walking oriented interventions.



At two mapping events, participants indicated where they bike and walk, and where they most want to see improvements. See Appendix (page 52) for a larger version.



These maps provide a detailed geographic view of feedback collected during public outreach.



**POTENTIAL MOBILITY NETWORK - PUBLIC ENGAGEMENT RESPONSES**  
**EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN**



While a lot of people in East Grand Rapids bike, virtually everybody walks or rolls, and they want to feel safe while doing so, especially around schools and community institutions such as the library.

Many recreational bicyclists prefer to ride on low-volume streets with slow traffic speeds. In East Grand Rapids, it is common to see family groups cycling on “Neighborhood” streets, especially around Reeds Lake. These preferences were highlighted during community outreach, when improvements around Reeds Lake and Lake Drive emerged as top priorities for both pedestrians and bicyclists. These facilities are the most heavily used and provide access to schools, athletic facilities, and shopping as well as the lake.

**Tactical Intervention**

The term “tactical urbanism” was coined about a decade ago by the Street Plans Collaborative. It’s used in planning to describe both iterative, incremental processes built on quick and easy interventions, and those interventions themselves.

Among the best-known examples were undertaken by New York City’s Department of Transportation under the leadership of Commissioner Janette Sadik-Khan during the Bloomberg Administration. Following Sadik-Khan’s success with temporary measures such as paint and moveable furniture and other street elements, many have become permanent features. “Test driving” potential improvements using tactical measures has become integrated into current mobility planning practice.



From NYC DOT

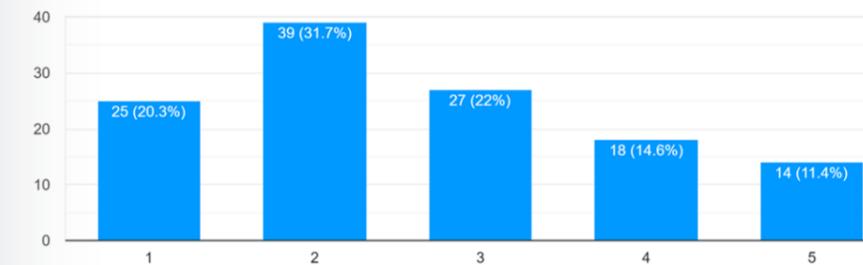
In East Grand Rapids, Progressive AE worked with Aligned Planning on a low-cost but high-impact experiment on Lake Drive, between Lakeside Drive and Reeds Lake Boulevard. The location has a history of pedestrian and bicycle conflicts owing to the irregular street geometry and poor sightlines for vehicles turning at the intersection.



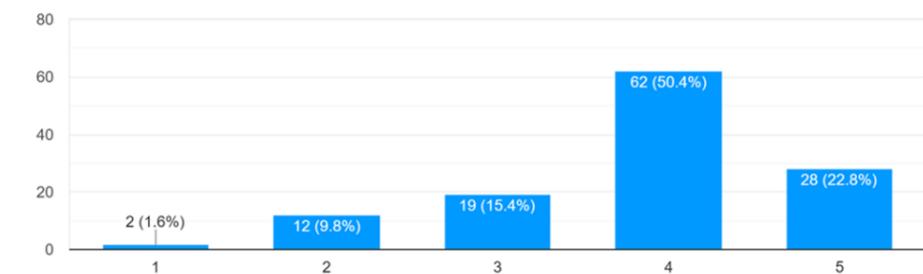
Using paint, cones, bales of hay, temporary signs, lightweight planters, and other inexpensive materials, an existing right-turn lane was repurposed into a bike/walk path segment representing a "Lake 2 Lake" trail connecting Fisk Lake and Reeds Lake.

The intervention stayed in place from October 15 until November 1, and community input was collected. Feedback indicated strong public support, with 65% responding that the improved elements should be made permanent.

How did you feel crossing the street in this location prior to this demonstration?  
 123 responses



How did you feel crossing the street in this location during this demonstration?  
 123 responses



A report describing the details of the intervention and the public response is included as an appendix to this plan.

## Surveys

At these events and in the City of East Grand Rapids e-newsletter, the community was invited to answer ten questions. 220 responses were collected at the mapping events and online, and 127 people responded to a survey about the tactical intervention. The results confirmed that residents understand and value their community's walkability, but also highlighted that they are ready for more modal infrastructure and travel. Some of the feedback:

*Please complete this statement:*

*"Pedestrian and bicycle facilities in East Grand Rapids will be \_\_\_\_\_ in five years."*



The East Grand Rapids 2018 Master Plan recommends "continuing the City's enviable walking network with added consideration for new facilities to make bicycle and foot travel a more convenient and safe choice. "What is important to you as we plan the network?"

### Safe

Separated from car traffic, not on sidewalks, for all ages and abilities

### Clear

Well-marked (signs and symbols), well maintained (free of snow and gravel), rules are understood

### Connected

Wide-spread to Gaslight Village, Reeds Lake, and surrounding trails and communities

### Convenient

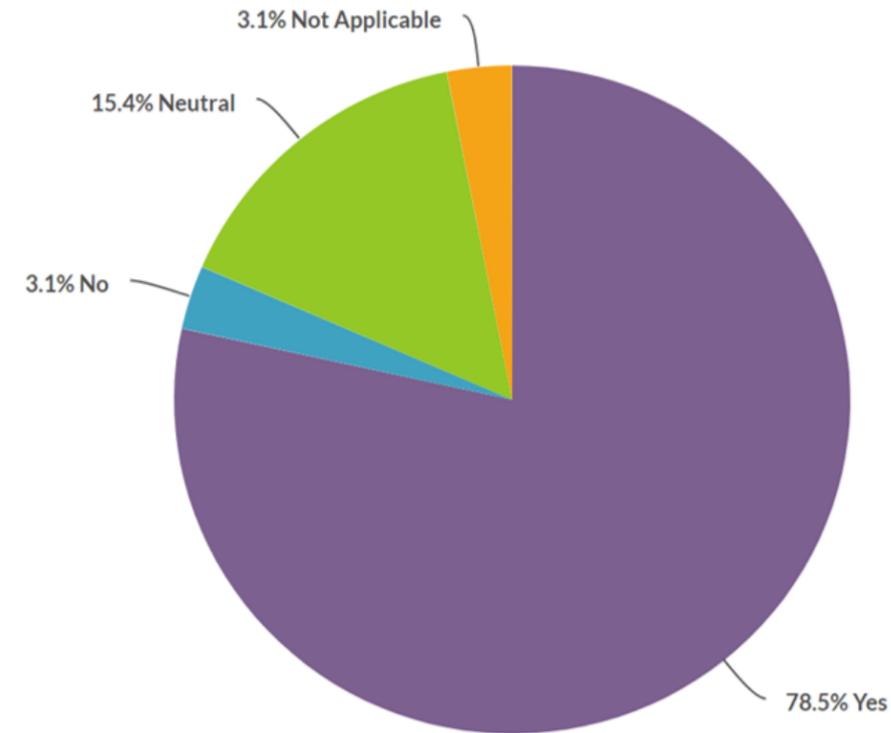
Easy to use, located nearby, arrive at destinations

### Continuous

Carries through intersections, not piecemeal

- Desire for separate bicycle and pedestrian facilities.
- Avoid hindering automobile travel.
- Educate riders on how to use facilities, enforce rules, and create a respectful environment.

“Would you like to ride a bicycle more than you do now?”



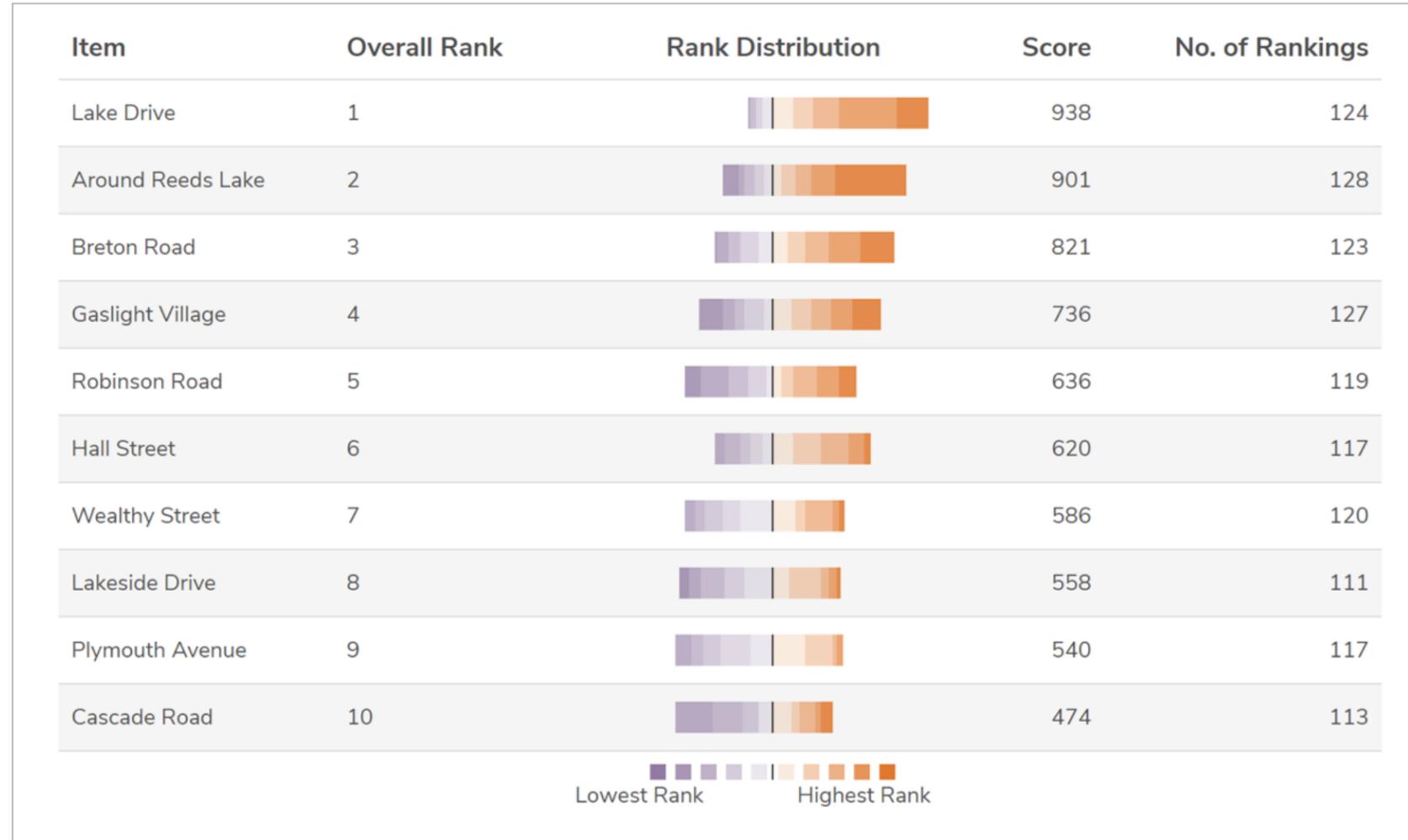
When asked what bicycle amenities are needed to make biking easier, nearly 2/3rds of respondents cited the need for more bike racks. Half of respondents desired to see a bike repair/filling station. Wayfinding signage was also a popular comment, which aligns with being “clear” about routing.

“Would you like to ride a bicycle more than you do now?”

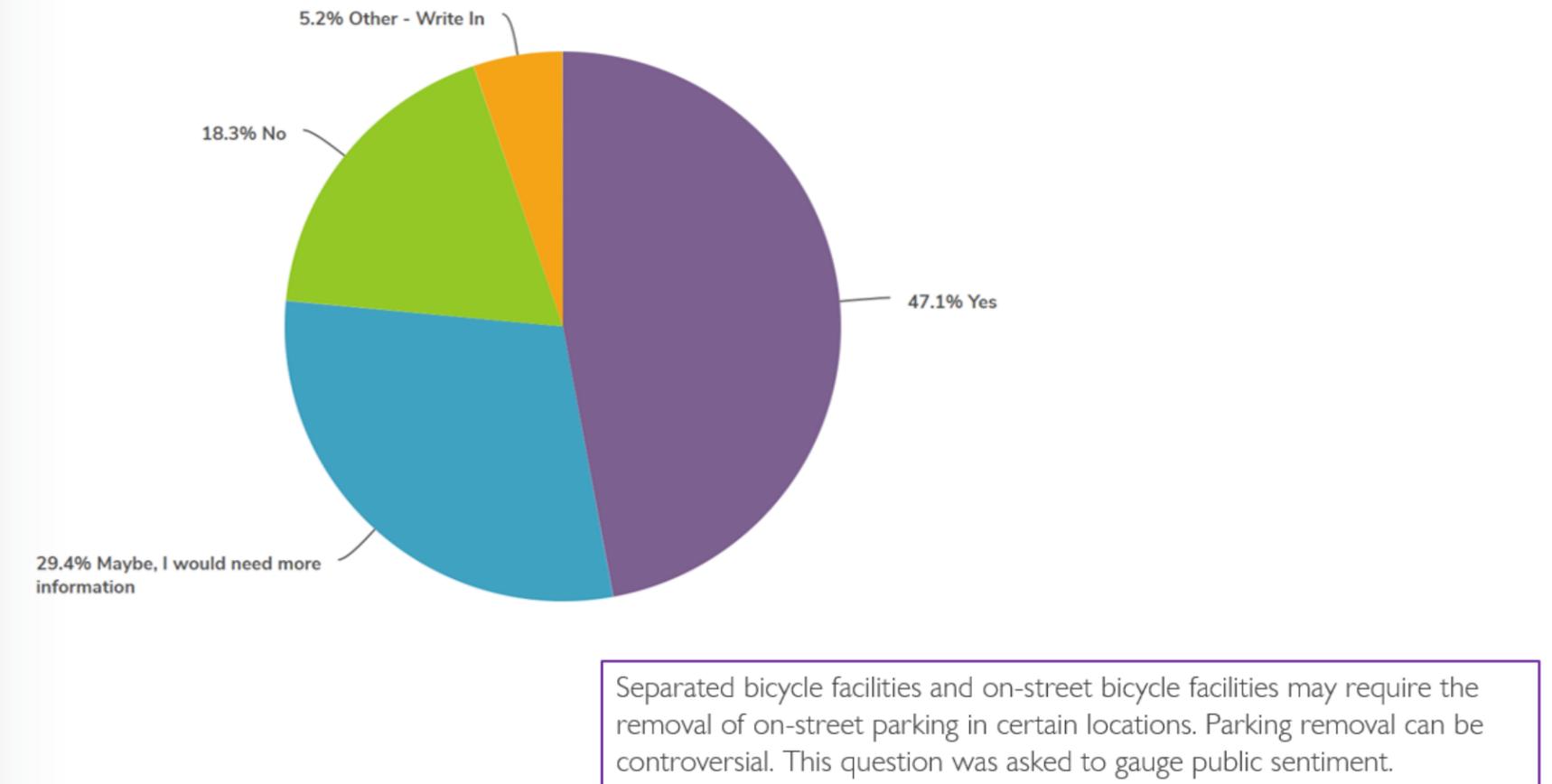
Value	Percent	Responses
Traffic drives too close to me	66.2%	43
Places I want to go are too far to ride	6.2%	4
Riding with my kids is difficult	21.5%	14
Possibly being hit by a motor vehicle	80.0%	52
Drivers go faster than the speed limit	56.9%	37
Streets are in poor condition (potholes)	38.5%	25
Streets need sweeping or plowing	18.5%	12
Poor weather	12.3%	8
<u>Other - Write In (click to view)</u>	23.1%	15

“Need bike lanes” and “construction” were common Other responses

“Would you like to see new and improved bicycle facilities?”



Would you be willing to have on-street parking removed for a protected bicycle lane in front of your house or business?



### Infrastructure Committee Meeting

To ensure that the emerging plan framework was in line with the City's asset management and investment strategy, it was presented to the Infrastructure Committee at their November 2020 meeting. These are public meetings, so the community also had another opportunity to engage as COVID-related restrictions on public gatherings remained in place.

*The presentation was scheduled as a quick update, but a longer discussion ensued as the Commissioners asked thoughtful questions and provided constructive feedback that fed into the further development of the plan.*

## Community Vision

The concerns, values, and aspirations articulated in the surveys and during outreach events suggest a broad vision for mobility in East Grand Rapids, building on the City's solid foundation of infrastructure and the community's embrace of active living:

*Our streets and trails will serve people throughout all phases of life and encourage an active and healthy lifestyle. Transportation options will be accessible and reliable to meet our community's travel needs.*

Safe cycling requires physical markers and changes to the built environment as well as a shift in culture that makes bike travel a mainstream choice. Data collected during outreach suggests that this is a choice many in the community are eager to make, with change guided by an inclusive vision:

*Our bicycle infrastructure will be safe, and we will foster a culture of respect between all travel modes. Implementation will be focused on making our bike system clear, connected, convenient, and continuous.*



# EGR Mobility & Bike Action Plan



### Goals to Guide a Multimodal Approach to Transportation Planning in East Grand Rapids

This plan was undertaken in part to better understand the community's views on cycling and its concerns, needs, and aspirations for cycling. The vision articulated by the community implies a set of high-level goals to inform and guide the City's future transportation planning as it considers all modes. It is broad and inclusive. To bring it to life, transportation projects in East Grand Rapids should, to the greatest extent possible, be planned to advance the goals that emerged during the outreach process.

### Safety

Safety emerged as the most prominent concern among survey respondents who want to bike more, with the most significant perceived threat coming from cars, more than half of respondents fear being hit (80%), believe that traffic is too close for comfort (66.2%), and that drivers regularly exceed posted speed limits (56.9%). Going forward under this plan:

- Pedestrian and bicycle facilities will be appropriately designed to serve persons of all ages and abilities.
- The bicycle network, and the design of bicycle facilities, will be geared toward riders who are "interested and concerned".
- Where feasible, bike infrastructure will be separated from car traffic.
- An education awareness campaign on how to ride safely (bicyclists) and not texting and driving (motorists) will be offered in the community.

### Respect

- Pedestrian facilities will adhere to accessibility standards and laws.
- Traffic laws for pedestrians, bicyclists and motorists will be shared with the community and where necessary, enforced.
- Enough room will be provided to pedestrians and bicyclists so that they feel comfortable when in mixed vehicular and non-vehicular traffic.
- Facilities for pedestrians and bicyclists will be designed for utility, comfort, and beauty; and may include shade, water, bicycle parking, transit shelter or bicycle repair station.

### Clarity

- A well-marked system with appropriate signage, symbols, and other visual cues will be executed to provide wayfinding.
- Bicycle facilities will be well-maintained: riding areas will be free of snow and gravel.
- The placement of on-street bicycle facilities will avoid using the gutter pan as part of the overall lane dimension.
- Rules of the road will be consistently enforced to appropriately set expectations about rider and driver behavior with the installation of new facilities.

### Connectivity

- Citizens can easily access local and regional destinations including Gaslight Village, Reeds Lake, surrounding trails, and adjoining communities.
- Residents and businesses of East Grand Rapids will be served by a seamless, integrated transportation system of pedestrian, bicycle, transit, and vehicular facilities.
- Non-motorized routes will be direct and connect to and through residential neighborhoods where feasible.
- A priority will be placed on facilities that are connected to elementary schools, located around Reeds Lake, and placed on cross-town streets.

### Continuity

- Implementation of the bike system will aim to ensure continuity and consistency as it is built out; where an opportunistic approach is appropriate, every effort should be made to continue investment in the vicinity.
- Bicycle facilities will carry through at intersections wherever practicable and safe.
- Gaps in existing pedestrian facilities will be remedied with the construction of new sidewalks to complete the sidewalk network consistent with City policy.
- Coordination with adjoining jurisdictions will occur to create a seamless cross-jurisdictional bicycle network.

# Framework

The community's vision is well aligned with modern transportation planning, which is much less auto centric than the approach that dominated in the 20th century. The most forward-thinking planners and jurisdictions fully integrate walking and biking into their plans, capital programs, and operations. Coincidentally, one of the lessons of the COVID-19 pandemic is that streets should be as flexible and welcoming as possible.

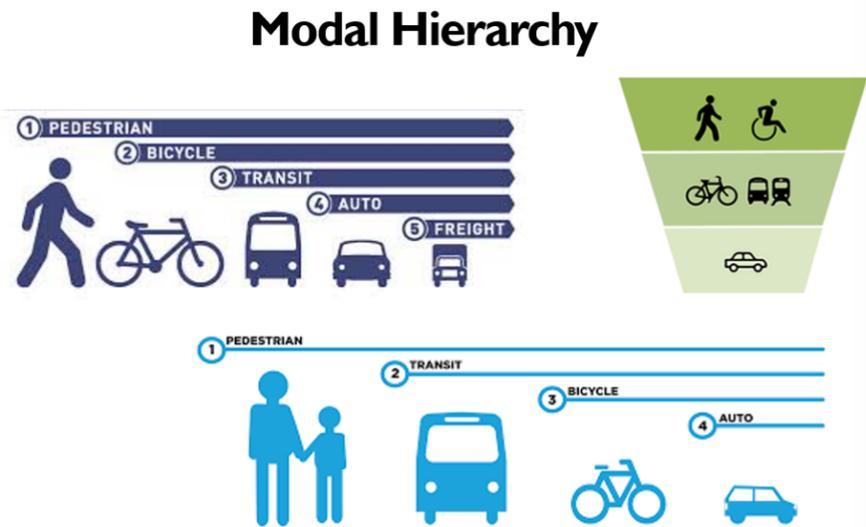
Bringing the vision to life will require a long-term process to evolve policies and practices, evaluate the impact of changes, and set and revisit priorities. It starts with a shift in thinking, not just about transportation, but about the built environment as a whole, and how it can best serve the people who live in, visit, and travel through East Grand Rapids.

## Philosophy: Plan and Build for All Users and All Modes

A truly multimodal approach to transportation planning requires a more expansive policy framework and a planning and design culture that considers and reflects multiple dimensions, not just transportation. It is a holistic undertaking that considers how streets, sidewalks, bike lanes, and other infrastructure fits into the larger community, how land is used, how projects are planned and prioritized, and which users are considered when those decisions are made. It requires an understanding that many people will bike and/or walk for some trips if they feel safe doing so. Prioritizing the most vulnerable and the most concerned in the “modal hierarchy,” and building a network that they can comfortably use, is a good way to start. This is also in line with the 2018 Master Plan, which states: “The City is interested in encouraging bicycling as a mode of transport and to improve the health of residents. One of the ways to support this goal is to provide a safe and convenient network that appeals not only to those who already use a bicycle, but also less experienced bicyclists, families, and children. Implementing a network of bicycle facilities can improve access to destinations such as parks, schools, and adjacent communities.”

Moving to such an approach from one focused on driving necessarily requires tradeoffs: maybe it will take drivers a few minutes longer to get to work if more kids are riding their bikes to school. Maybe bringing walking firmly into transportation planning will mean reminding pedestrians that they too have to follow the rules, or possibly face penalties, just like the driver who rolls past a stop sign. The speediest and most confident cyclists will have to accept that they are driving vehicles and that they need to drive them according to the rules of the road.

But just as undertaking regular scheduled road maintenance is more cost-effective over the long term than waiting for, and reacting to, disasters, planning with an eye to safe travel for the most vulnerable people ultimately protects and respects everyone, using every mode of travel. This approach is right in line with the community's vision, and the City's longtime prioritization of quality of life.



[Adapted from: How to Develop a Pedestrian and Bicycle Safety Action Plan, US Department of Transportation, Federal Highway Administration, FHWA-SA-17-050, August 2017.]

## Principles, Policies and Practices

Making a city safe for this modern vision by improving cycling and walking infrastructure requires consideration of these modes in contexts that go beyond transportation. A strong multimodal network is developed using a thoughtful and holistic approach across multiple dimensions. Below are examples of how such an approach can work in practice through different aspects of municipal policy and responsibility.

### Street Design

What: Recommended Principles

- Manage vehicle speeds.
- Reduce crossing distances for pedestrians.
- Provide adequate separation between motor vehicle traffic, bicyclists, and pedestrians.
- Improve visibility and conspicuity of pedestrians and bicyclists.
- Develop connected networks of walking and bicycling facilities.

How: Recommended Policies and Practices

- Determine desired vehicular speed, then make it the design speed for street reconstruction projects, adjusting travel lane width and pavement markings as needed.
- Use bulb-outs to reduce pedestrian crossing distance and increase their visibility.
- Examine available right-of-way, building setback requirements, and utilities to determine a preferred road cross-section for different street types and facility treatments.
- Be strategic, using every opportunity, even small ones, to develop the network, fill gaps, and bring multimodal changes to streets. Every new treatment is a step toward a more connected network. Incorporate guidance from organizations such as the US Department of Transportation's Federal Highway Administration (despite its name, the agency produces numerous excellent resources for bike and pedestrian planning; see [https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/docs/fhwasa20042.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa20042.pdf) and the National Association of City Transportation Officials, or NACTO, into planning and design processes.

Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts <sup>†</sup>	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000	Single lane each direction, or single lane one-way	< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
	≤ 500 – 1,500			Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000	Multiple lanes per direction	Buffered or Protected Bicycle Lane	
	≤ 3,000 – 6,000		Protected Bicycle Lane	
Greater than 26 mph <sup>†</sup>	Greater than 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
	Any	Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	≤ 6,000	Any	Any	Protected Bicycle Lane
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts	Any	Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane

NACTO bike facility matrix from <https://nacto.org/publication/urban-bikeway-design-guide/designing-ages-abilities-new/choosing-ages-abilities-bicycle-facility/>

## Network Connectivity

*What: Recommended Principles*

- Improve existing local street connectivity and circulation by adding sidewalks and shared use paths to connect dead-end streets and cul-de-sacs to other parts of the street network.
- Increase the number of access points to and from neighborhoods and other destinations, so not all trips are funneled through one or two large intersections or access points.

*How: Recommended Policies and Practices*

- Identify cul-de-sacs where pedestrian and bicycle facilities could be installed or enhanced to cut through and connect into the street network.
- Amend the Zoning Ordinance to require pedestrian and bicycle facility connections in new developments.
- Improve informal routes currently used by the community (abandoned rail rights of way, for example) to provide opportunities for low-stress paths. The National Association of City Transportation Officials, or NACTO, into planning and design processes.

## Site Design

*What: Recommended Principles*

- Make front building facades and door entries directly accessible from a conveniently located sidewalk or shared use path.
- Require building placement close to the street (with parking provided in the back) to create more pedestrian-oriented site developments that balance auto access with the needs of other road users.
- Establish building placement to allow sufficient space for bicycles and pedestrians along the street, taking into consideration the availability of on-street parking.

## How to Identify Gaps?

When thinking about how to identify gaps in your community, it is helpful to create a framework to classify the different types of gaps. Spot gaps are point-specific locations that lack adequate treatments to accommodate safe and comfortable bicycle and pedestrian travel. Connection gaps are missing segments (around ¼ of a mile or less) where inadequate or no treatments are provided that connect to an otherwise adequate facility. System gaps are where no or only a few facilities provide direct access to a neighborhood, district or specific area. This could also exist where no low-stress facilities provide access to the area. Examples of gaps are below. The impact of some gaps can be reduced through enhanced design.

### Spot Gaps

- Transition between facilities (routes, on-road to in-boulevard)
- Intersections and crossings
- Driveways and vehicle access routes
- Transit stops
- Car parking lane
- Sidewalk gaps

### Connection and System Gaps

- Standalone facilities (no connecting routes)
- Access to destinations
- High volume, stressful roads
- Neighborhoods with reduced access to parks and open spaces (on per capita basis)

*From Alta Planning/California Bicycle Coalition Quick-Build Guide: How to Build Safer Streets Quickly and Affordably <https://altago.com/wp-content/uploads/Quick-Build-Guide-White-Paper-2020-1.pdf>*

*How: Recommended Policies and Practices*

- Zoning Ordinance requirements for the commercial retail area in the Master Plan can use “required building lines (RBL)” or “build-to lines” to set specific requirements for building placement. Some ordinances (Grand Rapids, for example) establish the front setback dimension based on the type of road, the amount of space needed for safe and comfortable walking, and whether on-street parking is allowed.
- Require sidewalks and sidewalk connections to the front door in these new developments. Bike parking conveniently located near the main entrance should also be required.

*[example from Grand Rapids municipal code: “All off-street parking, stacking and loading areas shall be arranged for convenient access and safety of pedestrians, bicyclists, and vehicles, and designed so that they do not interfere with other on-site circulation, parking facilities, or pedestrian movements.”]*

## Land Use

*What: Recommended Principles*

- In step with the Master Plan, encourage mixed-use development with a range of housing types in Gaslight Village to help residents age in place and accommodate growing household types, such as single people living alone. Many younger people want more transportation options, and some older people would prefer to be closer to regular destinations and less reliant on driving.
- Reduce parking requirements and encourage shared use parking arrangements in this area to free up space for wider sidewalks and bike facilities.
- Understand land use synergies with transportation modes and leverage them creatively. For example, microbreweries use compressed air that can be provided with a bike repair station in lieu of meeting parking requirements.

*How: Recommended Policies and Practices*

- Modify zoning requirements to eliminate and/or provide for reductions or waivers of parking requirements where there is transit, enhanced bicycle facilities, bicycle amenities, mixed uses with different peak usage periods, or shared/public parking or parking facilities.
- Review the Zoning Ordinance to ensure that mixed-use development and higher-density residential development is appropriately located within and adjacent to destinations and activity nodes.

## Access Management

*What: Recommended Principles*

- Reduce the number of driveways along walking and biking routes where it is appropriate as the mixed-use development envisioned in the Master Plan comes to fruition.
- Design pedestrian refuge islands and medians to facilitate crossings at strategic locations where there is a history of crashes and/or where there are concentrations of vulnerable populations (young children, older adults, persons with mobility challenges).
- Any signal or traffic control improvements should consider bike and pedestrian traffic as well as auto traffic.
- Appropriately design intersections and medians to control turning movements, limit conflict areas, and assist pedestrians and bicyclists with crossings.
- Provide a secondary system to support mobility and circulation needs.

*How: Recommended Policies and Practices*

- Require, by ordinance, that primary access points shall be located on side streets and alleyways. Exceptions shall be allowed where there is no reasonable alternative.
- Create a “shadow system” for the non-motorized network in areas where direct, high-volume primary routes may not be able to provide a high level of safety and service.

### Facility Options

The menu of potential interventions to make cycling and walking easier and safer depends on the characteristics of the street. Easy, inexpensive measures such as signs and painted sharrows can signal to drivers on residential streets that cyclists are welcome.

On streets with a lot of fast-moving cars, people traveling by bike need more protection, more space, and possibly physical barriers. But whether these measures can be installed depends on several factors, including the space available in the roadway, available funding, and the community's willingness to accept change (such as giving up some existing parking to make space for bike lanes) to achieve broader goals and objectives.

Many treatment types can be used across multiple street types. The map of options identifies the generally preferred treatment types associated with each street type for East Grand Rapids. This chart is not intended to preclude the use of any given treatment on a street type that is appropriate, but rather to recommend preferences specific to East Grand Rapids for treatment types.





### Shared Lanes or Sharrow

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

**PROS:**

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

**CONS:**

- Cyclist must share the road with cars
- Cyclist and drivers must interact to avoid crashes
- Can create driver confusion

**Design Speed:** Under 25 mph

**Treatment Width:** Depends on road width

**Average Cost Per Mile:** \$



### Bike Boulevard

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

**PROS:**

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

**CONS:**

- Cyclist must share the roads with cars
- Can make exiting driveways difficult for residents
- Have to ensure the road isn't used as a lighter traffic thru-way

**Design Speed:** Under 25 mph

**Treatment Width:** Depends on road width

**Average Cost Per Mile:** \$



### Paved Shoulders

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

**PROS:**

- Offers space for cyclist 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 cycling lane
- Often has debris that has blown off the road
- Not identifiable as a cycling facility

**Design Speed:** 35-55 mph

**Treatment Width:** 4ft-6ft from edge line

**Average Cost Per Mile:** \$



### Bike Lanes

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

**PROS:**

- Creates an easily identifiable lane for cyclist
- Can be paired with on-street parking
- Easy to add to most existing roads
- Familiar to the public

**CONS:**

- Left turns can be difficult
- May require on-street parking to be removed
- Must be cleaned to remove debris from road

**Design Speed:** 25-45 mph

**Treatment Width:** 4ft-6ft from curb

**Average Cost Per Mile:** \$\$



**Buffered Bike Lanes**

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

**PROS:**

- More separation from vehicles
- More definition of the bike lane for vehicles 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 cleaned to remove debris from road

**Design Speed:** Greater than 25 mph

**Treatment Width:** 1.5ft - 3ft buffer, 8ft - 10ft lane

**Average Cost Per Mile:** \$\$



**Separated Bike Lanes or Cycle Tracks**

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

**PROS:**

- Permanent barrier 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

**Design Speed:** Greater than 25 mph

**Treatment Width:** 5ft - 7ft buffer, 8ft - 12ft lane

**Average Cost Per Mile:** \$\$\$\$\$



**Protected Bike Lanes**

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

**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 multi-directional

**CONS:**

- Left turns can be difficult for cyclists
- May require on-street parking to be removed
- Barriers may need to be replaced in time
- Must be kept clean of debris

**Design Speed:** Greater than 25 mph

**Treatment Width:** 1.5ft - 3ft buffer, 8ft - 10ft lane

**Average Cost Per Mile:** \$\$\$



**Multi-Use Paths**

*Used to create dedicated routes for cyclists and pedestrians; often times recreational*

**PROS:**

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

**CONS:**

- Large space requirements
- Requires road crossings for connections

**Design Speed:** Greater than 25 mph

**Treatment Width:** 10ft minimum, 12ft-16ft preferred

**Average Cost Per Mile:** \$\$\$\$\$

### Traffic Calming

Design features such as street trees, pedestrian-scale lighting, and landscaping can slow down travel speeds because vertical elements provide a sense of enclosure to a road and, in some cases, signal to drivers that pedestrians may be nearby. Traffic calming offers geometric strategies to reduce the volume or speed of vehicles traveling on a street. Examples of techniques that can be used to slow vehicles include bulb-outs, chicanes, speed tables, roundabouts, and volume control devices that reduce cut-through traffic.

Oftentimes pavement is replaced with plants and trees when traffic calming devices are installed. “Green Streets” can assist in managing stormwater, providing shade, and increase opportunities for prioritizing pedestrian and bicyclist travel, due to the mutual benefits of speed and volume management. The use of traffic calming devices as a strategy to make friendlier streets for people is particularly useful on neighborhood streets. It is not recommended on streets that carry higher volumes of traffic because cars will begin to seek alternative routes and divert into neighborhoods.



Speed Table



Chicane

<https://nacto.org/publication/urban-street-design-guide/street-design-elements/>

## Beyond Infrastructure

### Messaging

This Action Plan grew out the process of developing the City’s 2018 Master Plan and the City should highlight its responsiveness and further emphasize the culture change this plan represents. Leaders and staff should consider using their existing relationships with public relations and other experts to develop an active transportation specific communications strategy to highlight the need for everyone, whether driving a car, riding a bike, or walking to take responsibility for their own and others’ safety and to cultivate respect among users of all modes.

They should also work with advocates and community groups to highlight the Action Plan and early improvements through social media platforms, including, when appropriate, the “East Grand Rapids Neighbors” Facebook page.

But in the nearest term, adoption of the plan should be highlighted on the City website and in local news outlets. Utility bills can flag the plan for residents and provide safety tips and other information. Safe community events, such as information sessions and celebratory group bike rides, such as a “treasure-hunt” style event to introduce casual riders to low-stress routes, should be held as the plan is rolled out, including as part of holiday parades, local sports events, and other regular happenings.

Information about the plan, how it interacts with existing Michigan laws (such as the three-foot requirement for cars passing bikes), and how it will be implemented can be highlighted on a page on the city website, and in materials that can be distributed at public events, in schools, and in area businesses such as bike shops.

Signs and markers calling attention to new bike and pedestrian infrastructure can note that these improvements have been “Brought to You by the Mobility Plan.” The City can also use its existing assets to get the message out for example, vehicles including police cars, maintenance equipment, and even sanitation trucks could carry magnets or stickers signaling respect for cyclists and pedestrians.

More broadly and on a positive note, the City should remind the community of what it is already doing to promote active transportation. For example, data collected from community outreach found a high level of concern about pedestrian safety near elementary schools; messaging should note the improvements that have already been undertaken and other actions (such as the school crosswalk videos posted to the City website at the start of each school year) that enhance safety and walkability.

The City should also work with partners such as the Friends of the Reeds Lake Trail and bike advocacy groups to promote the benefits of biking and walking. These travel modes are free of cost and often promote sociability. They can offer an easy way to get more fresh air and exercise, even while COVID-19 restrictions are in place. For short trips, they might even be faster than driving. And by making it easier to travel this way, the City is working to make East Grand Rapids’ quality of life even better.

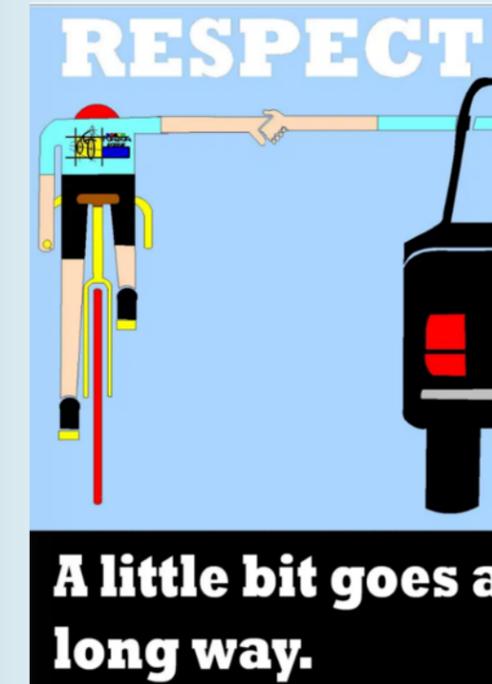


Image from <https://fastrunrobbie.wordpress.com/2014/02/04/respect-on-the-road/>



### Transit, Micromobility, and the Sharing Economy

The way we move is changing. More options are available today than ever before. With a smaller footprint, East Grand Rapids is a part of the regional transit system but not a focal point. Even with limited traditional transit options it is still a vital mode to many in the community. Additionally, it is anticipated that other last mile modes will continue to grow in popularity and become more prevalent over time. This includes innovations such as scooters, bike share, and electric skateboards. Grand Rapids has been experimenting with scooters and it will not be long before they are a part of East Grand Rapids either commercially or privately. Other mobility trends to consider are some of those that are a part of the sharing economy, such as ride hailing, car sharing, and short-term car rentals. With all these new mobility options it will be important to routinely revisit local policies and practices to properly embrace, encourage, and regulate mobility systems for the future of East Grand Rapids.

## Education

The City should also consider an educational campaign following up on the Action Plan. In addition to publicizing the plan, such a campaign would spread information about safety, courtesy and respect for all over the longer term as multimodal travel expands in East Grand Rapids. It could build upon existing efforts like the school crosswalk videos.

These kinds of campaigns have been undertaken by other cities with positive results. In Grand Rapids, the “Driving Change” campaign publicizing its safe passing ordinance, drivers must give cyclists at least five feet of space to the right of the car when passing, among other safety requirements was undertaken with MDOT and adopted in 2015. Crash data analysis showed that the law and campaign had significant impact on both perception and safety. Both total crashes and serious-injury crashes fell by double-digit percentages in the two years following the rollout of the campaign, and awareness of the passing law and public belief that Grand Rapids is a bike-friendly community rose substantially. Driving Change made national news and earned an Outstanding Traffic Safety Achievement Award from the Governor’s Traffic Safety Advisory Commission in 2018. In Fort Collins, Colorado, advocacy group FC Bikes and Fort Collins Police Services created Ride Smart, Drive Smart, an education, enforcement, and encouragement initiative (<https://www.fcgov.com/bicycling/files/ride-smart-drive-smart-brochure.pdf?1592509460>). Informational brochures from both of these campaigns are included as appendices.

The image shows three vertical informational brochures. The first is red and titled 'ROADWAYS', containing text about bicyclist safety, sharrow definitions, and intersection navigation. The second is yellow and titled 'BICYCLISTS', containing text about obeying signals, using turn signals, being visible, riding with traffic, and being predictable. The third is blue and titled 'MOTORISTS', containing text about not opening doors, watching for bikes, not parking in bike lanes, not driving in bike lanes, and leaving 5 feet of space when passing.

A review of safety campaigns by the Bikes Belong Foundation (available at <https://www.issueab.org/resources/3783/3783.pdf>) suggested that campaigns with an emotional component can be more effective than purely informational ones. But relying on fear as the emotional driver sends a message that biking is dangerous.

Instead, the review suggests personalizing and humanizing cyclists as regular people, not just elite athletes; directing education widely rather than targeting drivers, to emphasize that cycling is mainstream travel behavior; and generally encouraging cycling to promote “safety in numbers.”



Photo from Montgomery County, MD, Bicycle Master Plan

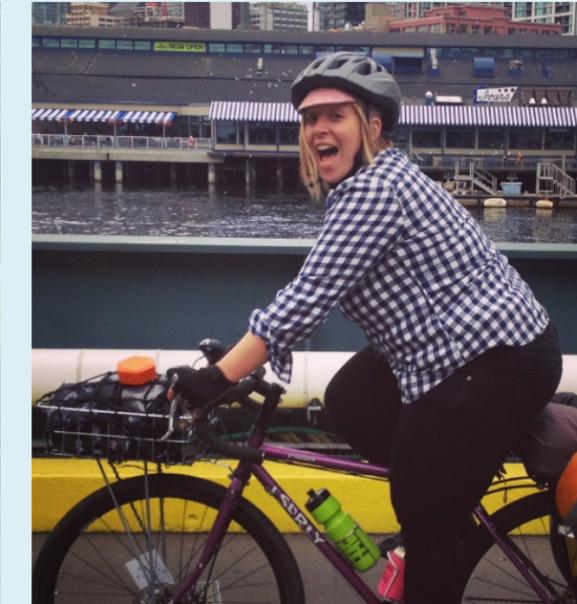


Photo from cyclingtips.com



Photo from vox.com ( <https://www.vox.com/science-and-health/2018/8/28/17789510/bike-cycling-netherlands-dutch-infrastructure> )

## Enforcement

East Grand Rapids’ high quality of life is reflected in its traffic enforcement – most drivers observe safe speeds and exercise caution, in part because of an enduring sense that the City takes safety seriously. But as bike and pedestrian travel increases, the City should signal that the rules apply to people using these modes as well as those driving cars.

This does not have to result in a lot of tickets for jaywalking or “salmoning” (riding a bike against the traffic flow), just reminding everyone of the rules, the fact that they apply everywhere and to all modes and raising the prospect of enforcement with respect to cyclists and pedestrians helps reinforce the safety message. It also reinforces the message that riding a bike and walking are mainstream travel options, with all the attendant rights and responsibilities, and helps establish a culture of accountability in a place where pride in community is valued.

# Implementation

East Grand Rapids' high quality of life is reflected in its traffic enforcement - most drivers observe safe speeds and exercise caution, in part because of an enduring sense that the City takes safety seriously. But as bike and pedestrian travel increases, the City should signal that the rules apply to people using these modes as well as those driving cars.

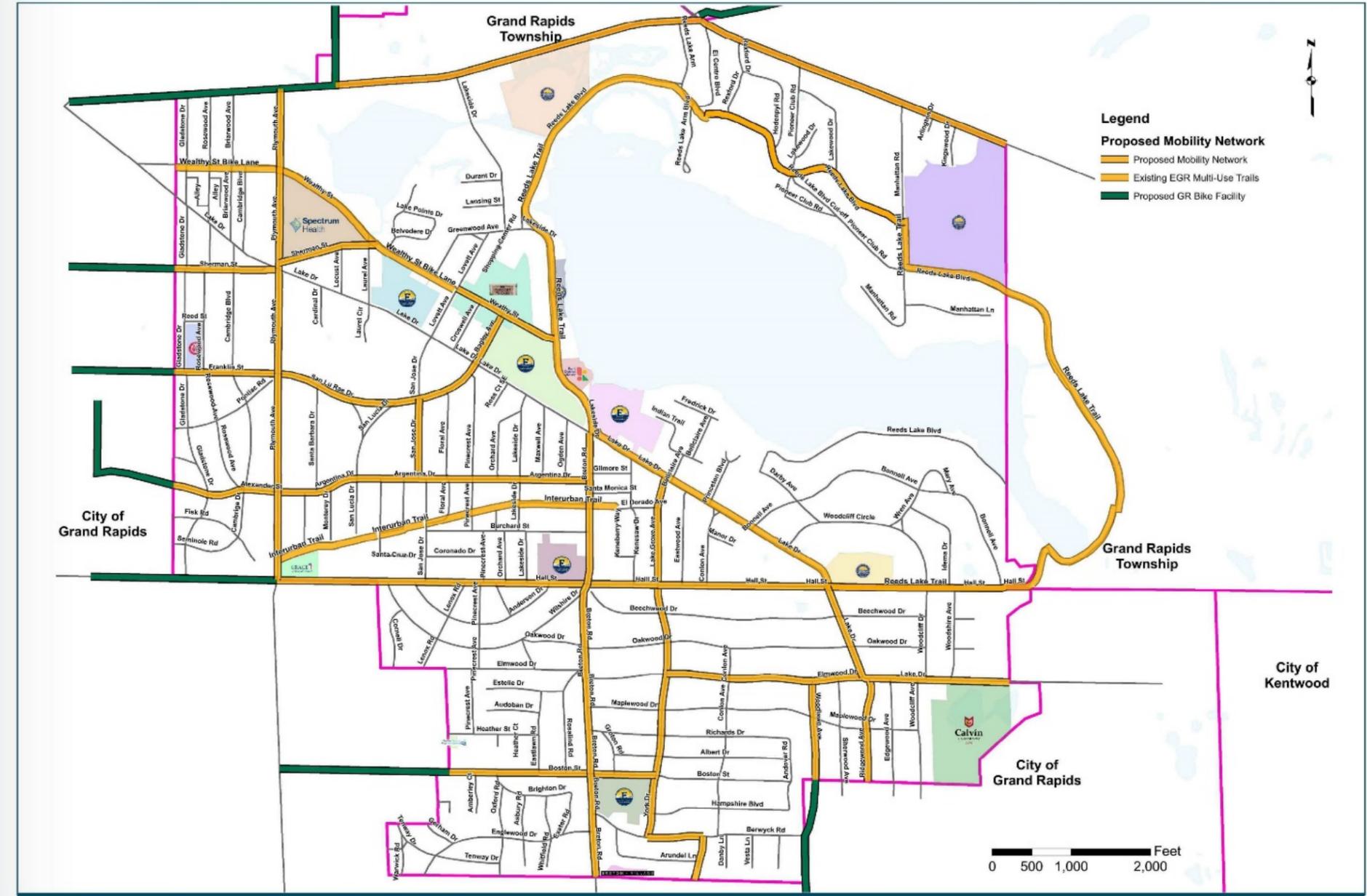
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## Approach

Building out a robust multimodal network takes time. There are various constraints on ambitious improvements requested by the community in the near term, such as separated facilities. City leaders can start changing the conversation and the culture with smaller project "wins" to establish the foundation for future progress. Education is also needed to emphasize the need to think of creating a network - which means that facilities must connect - and how safe multimodal networks benefit everyone.

When built out, East Grand Rapids will have a robust system that includes on-street bicycle facilities and improved connections for pedestrians. Trail development, particularly improvements around Reeds Lake, have been identified as a priority.

*East Grand Rapids has the opportunity to integrate multimodal planning, building, and maintenance into its responsible and respected asset management approach.*



## POTENTIAL MOBILITY NETWORK - FUTURE NETWORK EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

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Using the matrix of street characteristics and potential interventions/facility types, the City can take advantage of upcoming street improvements to start incorporating bike infrastructure into projects as a matter of course, signaling a commitment to expanding East Grand Rapids' mobility options. The following process can be used to implement the recommendations of this plan:

*Project prioritization should be defined by five factors:*

**Safety**

Information on crash locations and severity can be used to identify critical safety hotspots that can be addressed through the design of infrastructure. Other considerations may include areas where there are excessive vehicle speeds, high levels of pedestrian or bicyclist traffic, or incompatible speeds between modes (which may include pedestrians and bicycles sharing close quarters).

**Asset management**

A PASER rating (Pavement Surface Evaluation and Rating) measures pavement condition. The Grand Valley Metropolitan Council collects this common metric on behalf of the region. Preventative maintenance, rehabilitation, and reconstruction provide different opportunities for change to a roadway.

**Proximity to schools**

Ranked highest in priority by the community in planning surveys, the Safe Routes to Schools process of survey and partnership can be used to create enhanced crossing areas for the community's most vulnerable population.

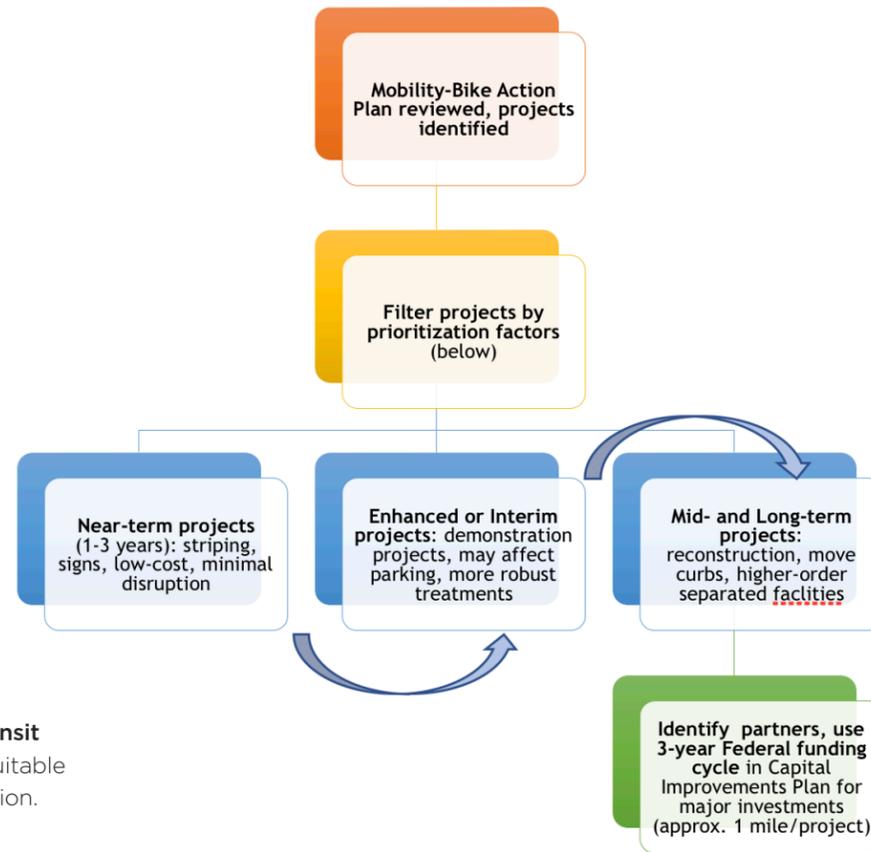
**Completion of safe walking and bicycling routes, and connection to transit**

Ensuring the connection of multi-modal facilities provides for a more equitable community by ensuring that everyone has access to get to their destination.

**Connection to destinations**

Projects may be prioritized to provide access to community destinations and amenities like parks, hospital, and shopping districts. Opportunity mapping done as part of the creation of this plan assisted in identifying preferred routes.

Implementing an expansive approach to capital planning by fully integrating bicycle and pedestrian infrastructure into asset management and maintenance program should also be a consideration. These amenities require, and deserve, the same level of planning and care as streets do. Recognizing this infrastructure as an asset class, assigning the resources to operate and maintain it annually, and making it a line item in the budget is fully aligned with the City's existing high standards for asset management and would set a precedent in the region for both ambition and responsibility in multimodal transportation planning and operations. This approach may affect the ability to aggressively install new facilities as resources should also be invested in maintenance.



**Community Input Opportunities**

The installation of facilities is not “one size fits all”. Projects focused on painting and signs on neighborhood streets are low-cost, simple, and not disruptive. These changes do not require extensive community dialogue. There will be times, however, when changes may be potentially disruptive to residents or businesses. The Community Engagement Matrix assists in identifying what types of changes would initiate different types of notification and communication opportunities for stakeholders who may be affected by a change to their street.

LEVEL OF ENGAGEMENT	TYPE OF STREET PROJECT	METHODS
Light <i>Informative Approach</i>	Road maintenance like cape and crack sealings and wedgings  Rotomill and resurfacings and reconstructions that return road to previous state	<ul style="list-style-type: none"> <li>• Postcard</li> <li>• Website</li> </ul>
Medium <i>Design Input Needed</i>	Rotomill and resurfacings or reconstructions where curbs or road geometry is unchanged	<ul style="list-style-type: none"> <li>• Letter</li> <li>• Website</li> <li>• Concept design meeting</li> <li>• Preferred design meeting, if needed (based on results of first meeting)</li> <li>• Construction preparation meeting</li> </ul>
Heavy <i>Design Input Needed</i>	Rotomill and resurfacings or reconstructions that move curbs or that change road geometry (parking removal, lane configuration changes, bike lanes, etc.)	<ul style="list-style-type: none"> <li>• Information sign</li> <li>• Same as above but the preferred design meeting is usually not optional</li> </ul>

# Hall Street Case Study

### Network effect

Hall Street is classified as a “Network” street; only 12 percent (5.4 miles) of streets fall into this category. The preferred treatment options for Network streets are bike lanes and buffered bike lanes.

### Leveraging existing infrastructure

Bike lanes can be a major step forward for regional access, as they would connect directly to existing bike lanes on Plymouth Avenue in the City of Grand Rapids. The Grand Rapids Bicycle Action Plan has also identified Hall Street to the west of Plymouth Avenue for additional future bike lanes.

### Available space

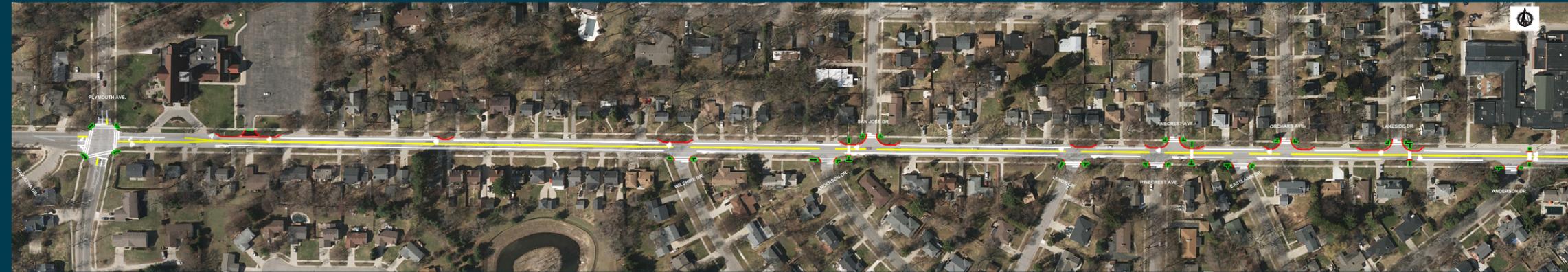
Hall Street is wide enough to build on-street bike lanes on the existing roadway with a short section (about 650 feet) of sharrows. Implementation would, however, require eliminating some on-street parking. A Moore and Bruggink study undertaken as part of the planning process showed that parking is significantly underused (a maximum of 13% of available on-street spaces are typically used during drop-off/pick-up times for Lakeside Elementary School; during other hours only 6-8% are used).

### Fear of change

Despite the very low utilization rate, some community residents opposed the elimination of on-street parking, as is typical in the earlier stages of ambitious mobility planning. Survey data collected for this plan suggests that a significant number of residents are open to removing some parking to accommodate bike infrastructure (47.1 percent of respondents said “yes” and 29.4 percent said “maybe”). Bike lanes and sharrows can often be implemented without any reduction in parking but removing some existing, rarely used parking would enable more separation between cars and cyclists, which enhances perceived and actual safety.

### Implementation

As a result of opposition to the originally proposed designs, the street configuration was changed. Bicycle facilities will include dedicated bike lanes and sharrows to preserve parking on both sides. A network perspective in implementation is important, as is community education to advance more robust bicycle facility infrastructure particularly on higher-order streets and where on-street parking will be affected, even where it is rarely used.



**Near Term Actions**

City staff have already begun factoring multimodal improvements into planned capital projects. During the upcoming construction season, wayfinding and “share the road” signs and painted treatments (sharrows, bike boulevards, shoulders) should be incorporated into most resurfacing projects which will eventually fit into an expanded network. This approach requires little extra funding and no significant changes to projects on the boards. Analysis undertaken for the Action Plan identified “low stress” streets based on daily traffic averages; many of these are near or tie directly into existing bike and pedestrian infrastructure.

Bike infrastructure on these streets can form the basis of a network designed to invite the “interested but concerned” cyclists and potential cyclists who will bring bike travel into the mainstream. Municipal leaders and advocates have noted repeatedly that making “regular” people comfortable riding a bike is the critical component of a successful program.

Using paint and signs to alert riders to these routes and connections will provide a focal point for monitoring the community’s use of new infrastructure and an opportunity to build the foundation for an increasingly robust network. The City can build on discrete network improvements like this by prioritizing long-term improvements to close gaps, enhance connections, and signal its commitment to a new approach.

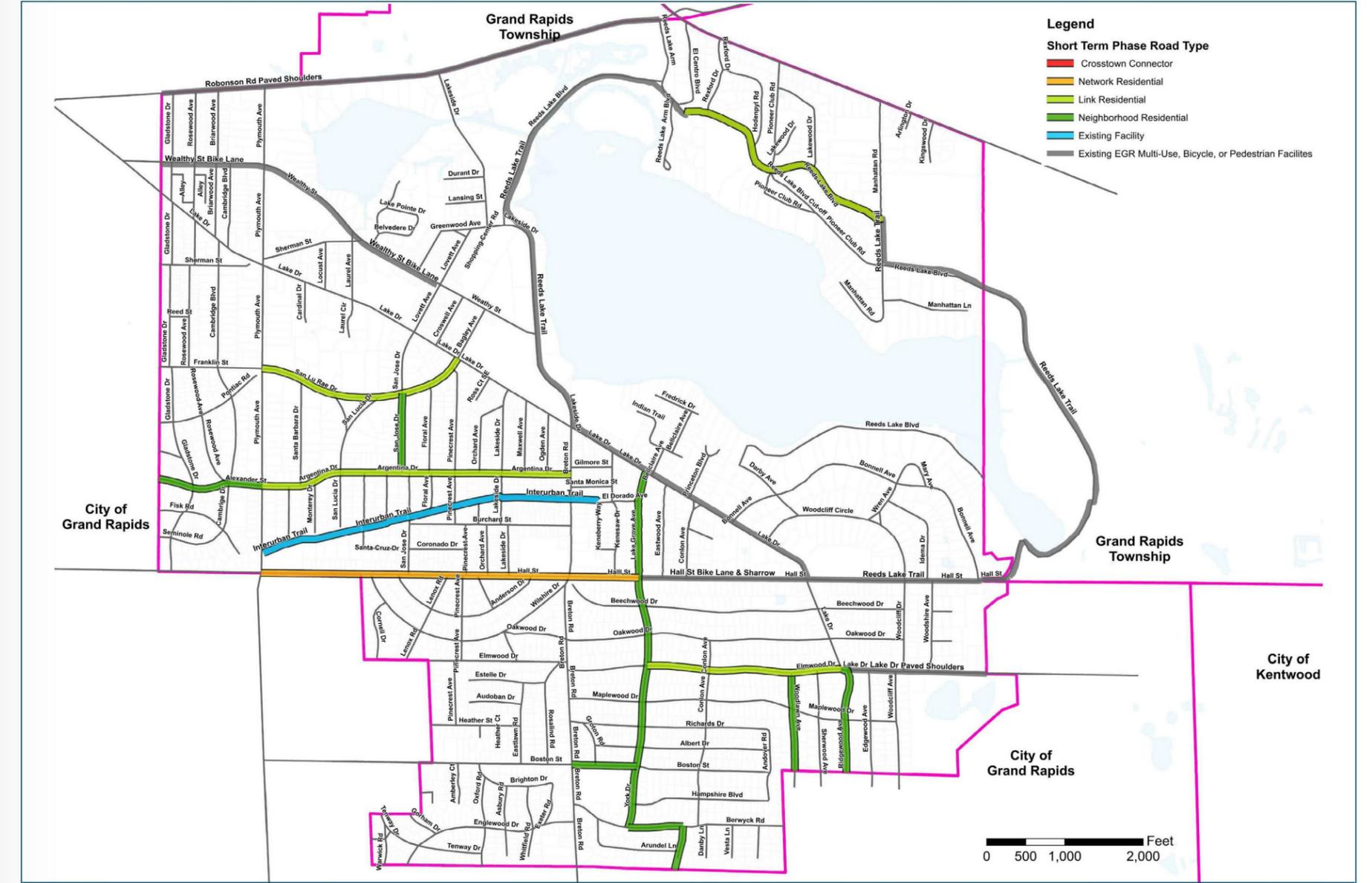
*The streets highlighted in green in the map above are appropriate candidates for near-term interventions as capital project work is undertaken or small amounts of funding become available.*

**Enhanced or Interim Actions**

Projects undertaken during the near-term implementation phase may, over time, evolve into more “enhanced” projects that take the original design concept further as lived experience is gained with facility options. For example, implementation of a typical near-term bicycle facility on a Link Residential street might consist of striping and signs denoting a bike route. Future actions could include taking that same residential street and undertaking extensive traffic calming to create a green street that adds vertical or horizontal interventions that favor traveling by bike or walking more than driving a car. It is important to think of building out the network as an iterative process that will continue to evolve over time.

Enhanced and interim projects provide the opportunity to grow and evolve the mobility system. Methods to test and evaluate tools, devices, and practices that are intended to best meet the community’s needs can be accessed. Utilizing pilot installations to gather data, pursue public input, and experience real world scenarios is an extremely valuable approach. A drawback may be the time and resources needed to implement and evaluate an interim/pilot deployment. However, the observations, feedback, and data gathered could far outweigh any infrastructure adjustments that may be required after implementation (for example changing a curb radius) and/or public rejection of the implemented permanent solution.

The ability to utilize industry best practices, test emerging tools and treatments, and gather feedback in a very cost-effective manner is a low-risk approach to evaluating mobility infrastructure. These implementations have the potential to demonstrate quick action, make swift adjustments to scenarios, and build public trust prior to more costly mid- and long-term installations. With electric vehicles, micro-mobility devices, shifting travel patterns, ride hailing services, and eventually self-driving vehicles, it seems more paramount than ever to have the ability to dynamically test and adjust infrastructure to best meet the mobility needs for the future of East Grand Rapids.



**POTENTIAL MOBILITY NETWORK - SHORT-TERM PROJECTS & TYPOLOGY** progressive|ae  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

**Medium Term**

It is ironic but true that the City's strong asset management culture can in some respects limit opportunities for near-term change. Most City streets are in good shape and nowhere near their end of useful life, and most projects take the form of routine maintenance and resurfacing. And as noted in the Master Plan, there is limited right-of-way and curb-to-curb space available on existing streets to install treatments that offer the highest level of protection.

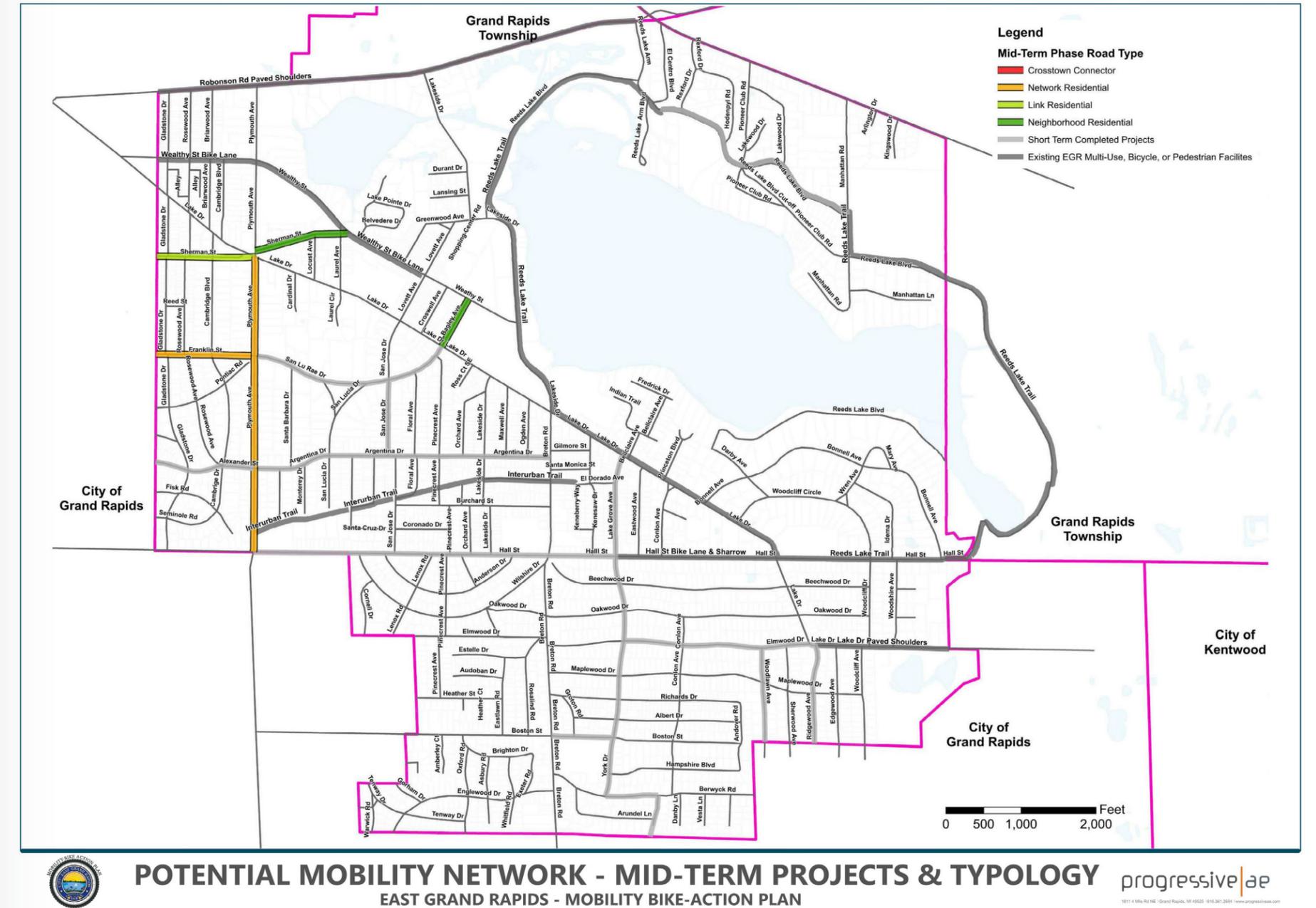
But there will be opportunities to consider more robust options in future capital projects. Taking advantage of these opportunities will likely entail more difficult decisions and more disruption to the existing environment. Such decisions will require a process in which options are vetted internally and explored in consultation with the community.

Even sought after and agreed upon improvements will involve trade-offs, and City leaders must make them, and the justification for proceeding clear to the community. For example, as seen during the discussion of the Hall Street facilities community concerns about parking even when surplus space is dedicated to it can run deep. In these kinds of situations, it can be helpful to note that even the Federal Highway Administration states that "(a) roadway's primary function is to move people and goods rather than to store stationary vehicles. When parking is removed, safety and capacity are generally improved." (from [https://safety.fhwa.dot.gov/PED\\_BIKE/univcourse/pdf/swless20.pdf](https://safety.fhwa.dot.gov/PED_BIKE/univcourse/pdf/swless20.pdf)).

The City should stress, both internally and in public-facing settings, that the public right-of-way, including the amount of on-street parking, is an asset that must be thoughtfully planned, managed, and used. What constitutes an appropriate amount of on-street parking is a determination that evolves over time and should be revisited regularly. This will involve education and messaging to make sure that public expectations evolve along a similar timetable.

Other lessons from cities that have successfully removed some parking to install bike infrastructure include describing parking in terms of spaces available within walking distance (so removing parking from one side of the street isn't removing "half of the spaces" if plenty of spaces are available around the corner); installing more temporary interventions to help envision other possibilities for public space currently allocated to parking; and making sure that the wider community, not just property owners on a particular block, factors into land use decisions (see <https://usa.streetsblog.org/2015/04/14/10-tips-for-cities-ready-to-replace-car-parking-with-safe-space-for-biking/>).

Thinking in these kinds of terms, expanding a network as a consultative process, not just a one-time identification of routes and treatments will enhance community buy-in and give the City the flexibility to adapt to changing conditions.



The map below shows the near-term improvements discussed above as part of the future built mobility network. Locations appropriate for more robust interventions are shown in green here.

**Long Term Actions**

Over the longer term, the City should consider integrating the community’s vision and priorities for safe and connected multimodal travel into bigger projects. This would involve, for example, integrating features such as separated bike lanes or neckdown treatments at intersections, adding sidewalks where they have not been built, and looking for ways to expand a shadow network for non-motorized travel where the street network was designed with dead ends and cul-de-sacs.

Some of the most potentially impactful opportunities for example, improvements to Cascade Road, identified during outreach as a community priority would involve coordination with neighboring jurisdictions and engagement with neighboring communities. Adding a sidewalk and bike facilities to Cascade Road would be expensive, and East Grand Rapids would not have complete control over the solution or the design. But adopting the approach recommended in this Action Plan would give the City the experience and data needed to show other municipalities the benefits of multimodal planning.

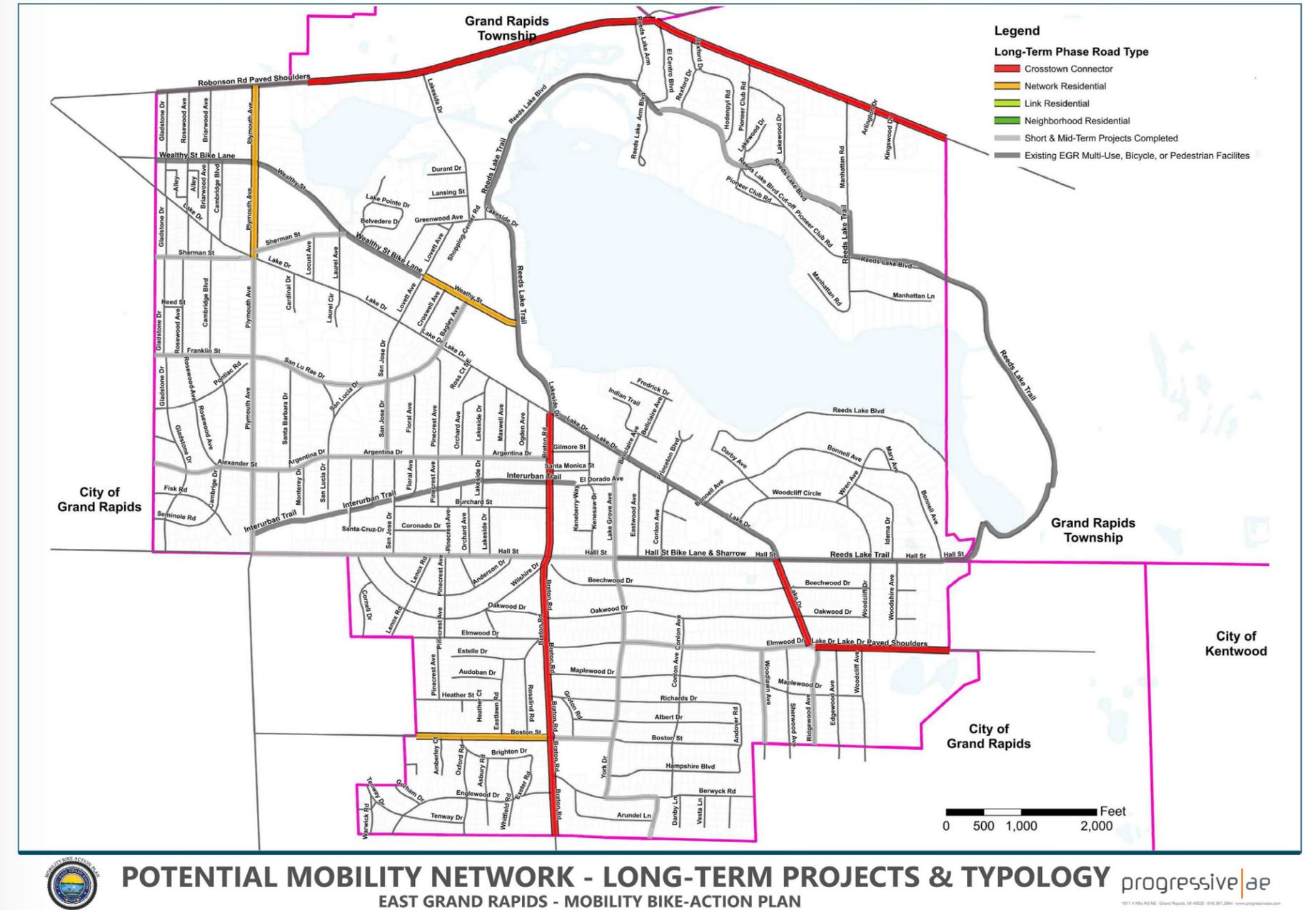
It was no surprise that during outreach the community prioritized the trail around Reeds Lake for improvements. East Grand Rapids is rightly proud of this gem, but it does not adequately serve the high demand. Where there is a separated path, it is not quite wide enough to safely and comfortably accommodate both biking and walking. In some places, the route changes to the sidewalk or temporarily disappears (such as at Pioneer Creek). The trail is not well-marked in general. Part of this is the product of the trail’s status as a shared path with the Kent County Road Commission and Grand Rapids Township.

Widening the trail, in coordination with these jurisdictions, would showcase a new approach while bringing a major component of the community’s vision to life. Ideally, it should be 14 feet wide at its narrowest points, but even 10 feet would ease the pressure of heavy use compared to the six- or eight-foot width that exists today. Introducing markers would make it easier and more intuitive to use, and wayfinding signs could “brand” such a project as both modern transportation planning and an important East Grand Rapids asset. Better marking and wayfinding are also consistent with recommendations in the City’s Community Park, Recreation, Open Space, and Greenway plan.

The issue of the trail’s status and potential improvements raises a broader policy question about funding. Currently, trails are considered part of the City’s park and recreation assets. As a policy matter, an argument can be made that this makes sense, trails are currently used primarily for recreation. Funding these kinds of improvements through a recreation millage is also be flexible, without requirements to consult various guidance documents, such as the federal Manual on Uniform Traffic Control Devices that applies to transportation projects. The East Grand Rapids Community Foundation has a trail fund, and a recreation-oriented friends’ group for Reeds Lake Trail raises additional funds for improvements. But overall, the level of available funding has not been sufficient to pay for the kinds of improvements that would accommodate community demand and the vision of expanded access to active transportation articulated in this planning process.

Whether trail improvements could be funded through the roads millage is currently unclear. But given the City’s valuation of and pride in its trails and its commitment to maintaining its infrastructure to a very high standard, a strong argument can be made for clarifying the issue by explicitly including trails in road funding when the millage comes up for renewal in 2025.

This would not only provide access to a reliable funding stream, it would signal both within the City’s government and operations and to the community at large, that trails are not “frills” or afterthoughts. They are part of the transportation network and as valuable and important as streets. It would also more firmly integrate multimodality into transportation planning and operations and show support for biking and walking as travel modes, even though some desired improvements in infrastructure will take time to implement.



As the multimodal network is built out, the City can work with the community and neighboring jurisdictions to identify more ambitious projects to enhance connectivity, continuity, and direct access; the streets shown in green would be good places to consider for such projects.

This table identifies the streets recommended for near, mid, and long-term implementation as funding becomes available.

**Near Term Phase**

ROAD	ROAD TYPE	FROM	TO
Argentina Drive	Link Residential	Plymouth Avenue	Breton Road
Elmwood Drive	Link Residential	Lake Grove Drive	Lake Drive
Reeds Lake Boulevard	Link Residential	El Centro Boulevard	Manhattan Road
Sab Lu Rae Drive	Link Residential	Plymouth Avenue	Lake Drive
Alexander Street	Neighborhood Residential	City Limit	Plymouth Avenue
Berwyck Road	Neighborhood Residential	York Drive	Conlon Avenue
Boston Street	Neighborhood Residential	Breton Road	Lake Grove Avenue
Lake Grove Avenue	Neighborhood Residential	Lake Drive	Boston Street
Ridgewood Avenue	Neighborhood Residential	Elmwood Avenue	City Limit
San Jose Drive	Neighborhood Residential	San Lu Rae Drive	Argentina Drive
Woodlawn Avenue	Neighborhood Residential	Elmwood Avenue	Edge of City
York Drive	Neighborhood Residential	Boston Street	Berwyck Road
Hall Street	Network Residential	Plymouth Avenue	City Limit

**Mid Term Phase**

ROAD	ROAD TYPE	FROM	TO
Sherman Street	Link Residential	City Limit	Plymouth Avenue
Bagley Avenue	Neighborhood Residential	Lake Drive	Wealthy Street
Sherman Street	Neighborhood Residential	Plymouth Avenue	Wealthy Street
Franklin Street	Network Residential	City Limit	Plymouth Avenue
Plymouth Avenue	Network Residential	Lake Drive	Hall Street

**Long Term Phase**

ROAD	ROAD TYPE	FROM	TO
Breton Road	Crosstown Connector	Lake Drive	City Limit
Cascade Road	Crosstown Connector	Robinson Road	City Limit
Lake Road	Crosstown Connector	Hall Street	City Limit
Robinson Road	Crosstown Connector	Plymouth Avenue	Cascade Road
Boston Road	Link Residential	City Limit	Breton Road
Plymouth Avenue	Link Residential	Lake Drive	Robinson Road
Wealthy Street	Link Residential	Lovett Avenue	Lakeside Drive

## Measuring Success

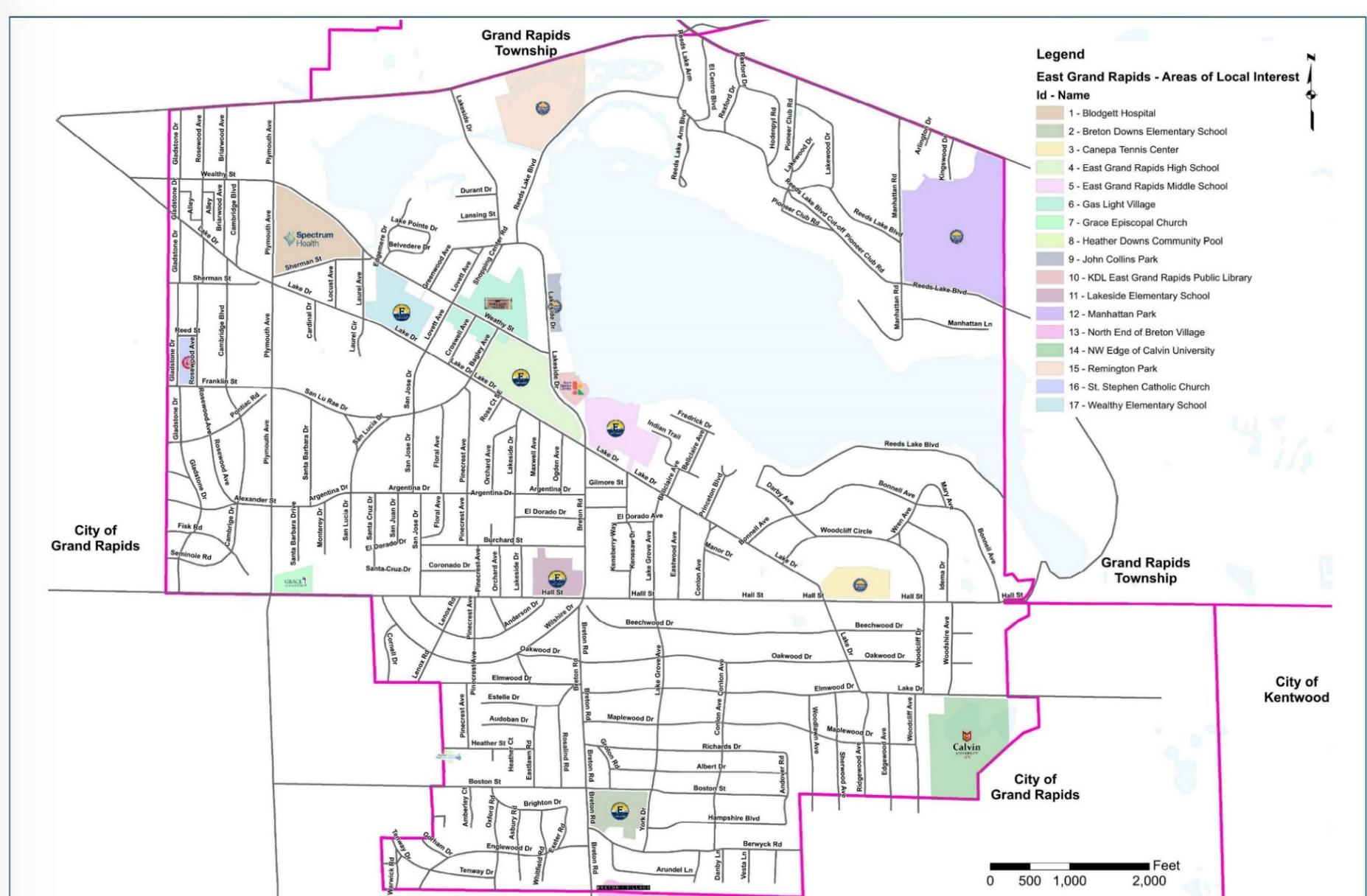
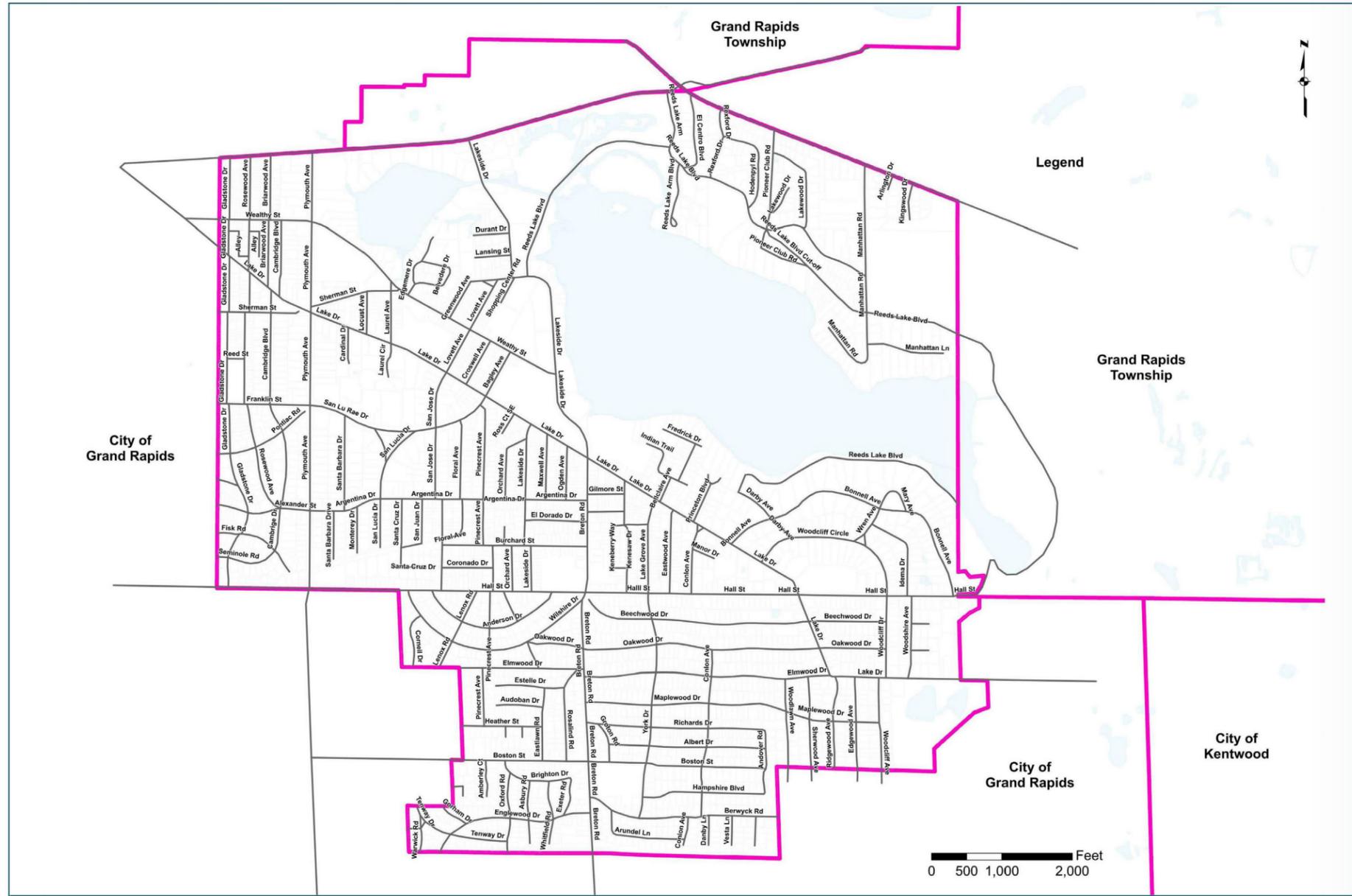
As the City continues to build out the multimodal network and implement the Action Plan, leadership and staff should collect and monitor data to measure progress and understand how the community is using new infrastructure.

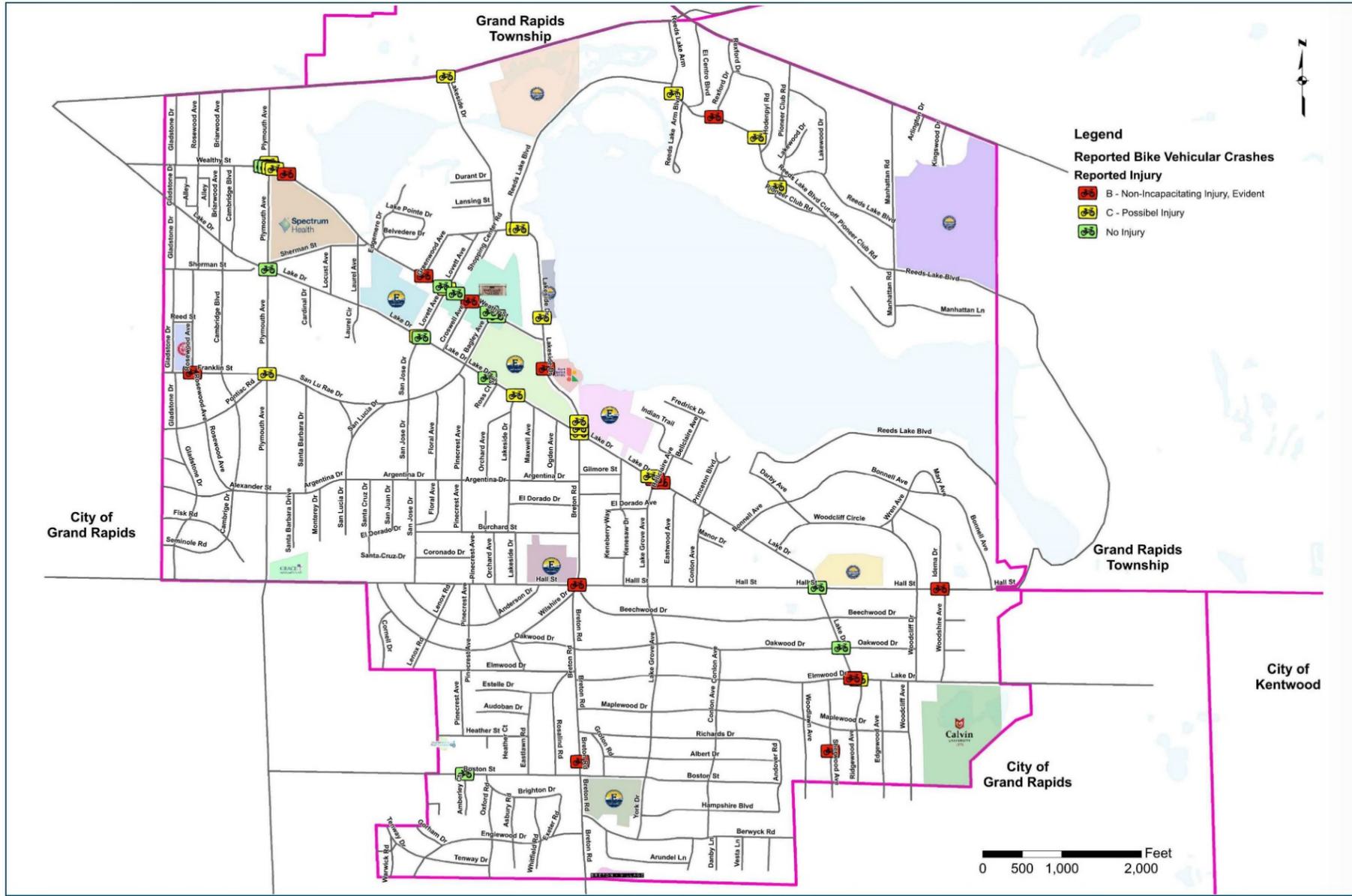
- Track and publicize the miles of facilities installed.
- Track the number of new connections and publicize them on a regularly updated map.
- Monitor the amount of funds spent on maintenance to understand usage and lifespan and to integrate multimodal facilities most effectively into the asset management program.
- Conduct an annual survey to gather feedback on user perceptions and experience.
- Undertake annual bicycle and pedestrian counts at three key locations to understand how and to what extent facilities are used.
- Monitor crash data changes as the extent of infrastructure is ramped up and more people use it, understanding that more use could increase the total number of conflicts.

Above all, be mindful that the shift that this Action Plan represents is not just about infrastructure. It is a road map toward a culture of expansive mobility options, respect for others' needs and choices, place-based and human-scale design, quality of life, and responsible stewardship. It is a commitment to consider in every capital project in the right-of-way whether bike facilities and/or pedestrian improvements should be part of the project. The answer will not always be "yes," but such an analysis should be part of the process.

Implementing some of the specific recommendations made here will help the City move in that direction. There will be tradeoffs along the way, and part of the journey will involve helping the community understand how decisions are made, and why decisions made now might be different than similar choices made in the past. But the most effective step the City can take is to use the adoption of the Action Plan as a marker for an annual evaluation of resources and opportunities to further that culture change, not just with concrete and paint, but with the same kind of thoughtful governance that East Grand Rapids is known for applied to transportation with a modern and equitable vision in line with leading practices.

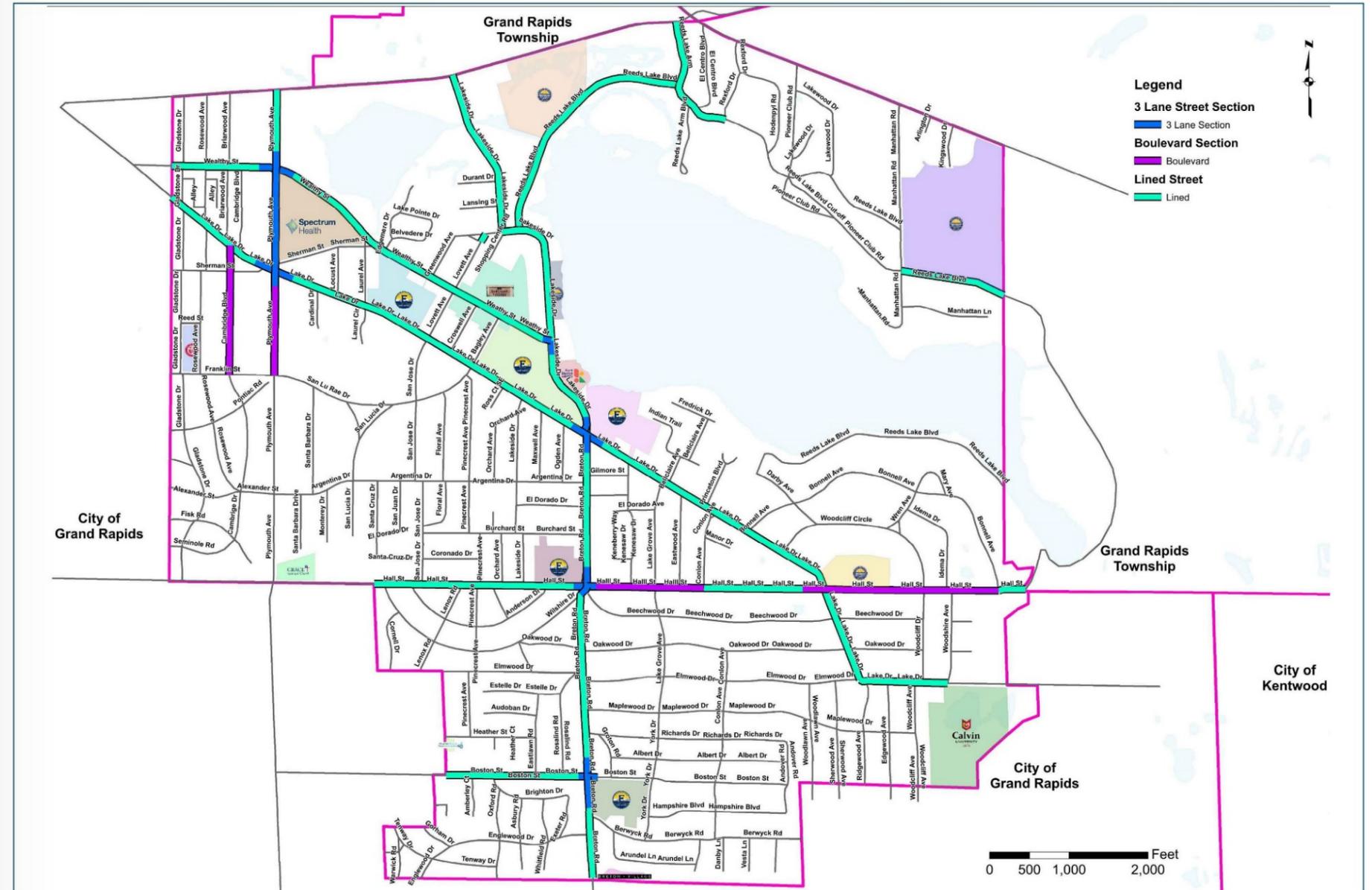
Appendix I - Maps





**POTENTIAL MOBILITY NETWORK - RECORDED BIKE CRASHES**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

progressive|ae

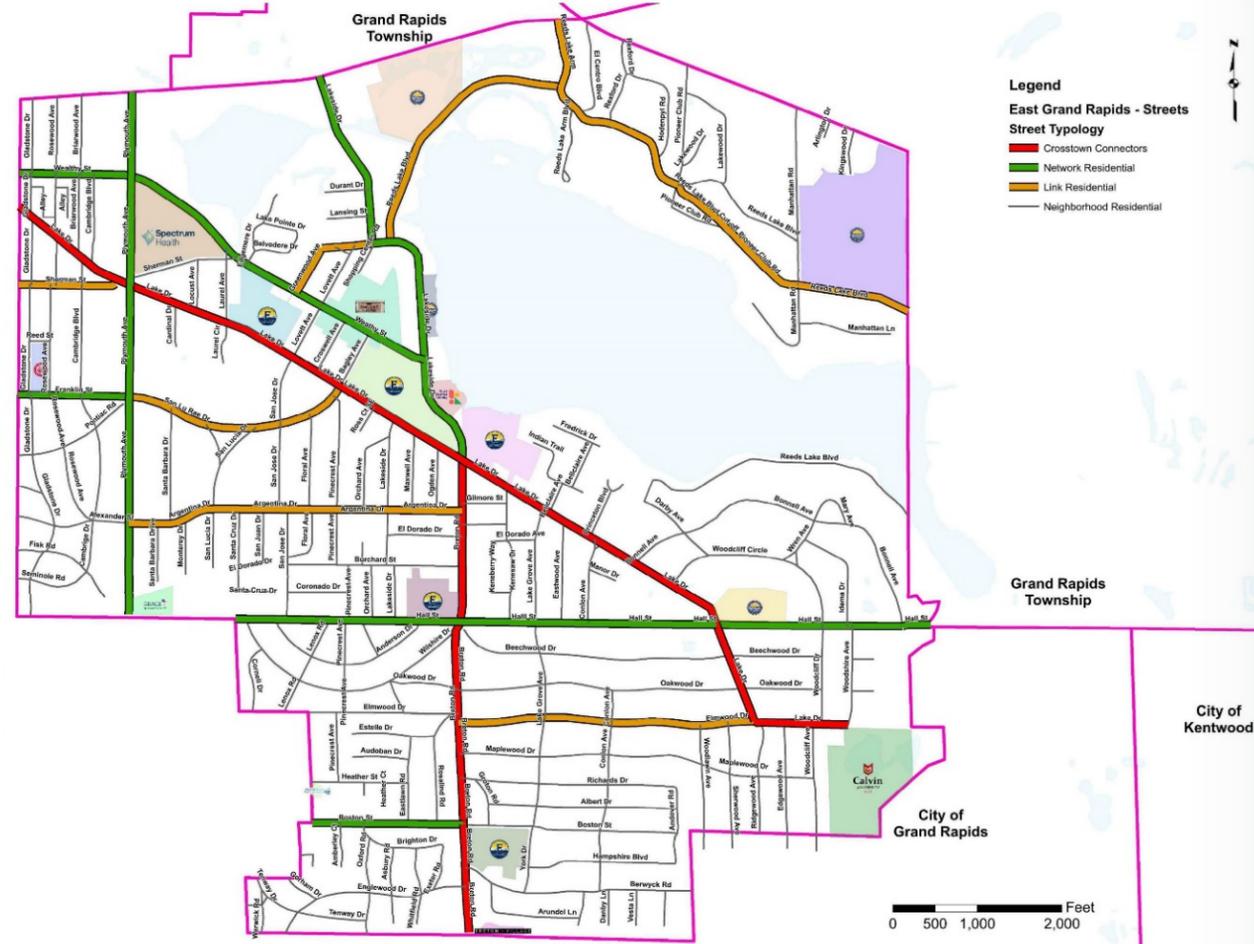


**POTENTIAL MOBILITY NETWORK - STREET LANE TYPE AND LINING**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

progressive|ae



COMMUNITY ENGAGEMENT MAP



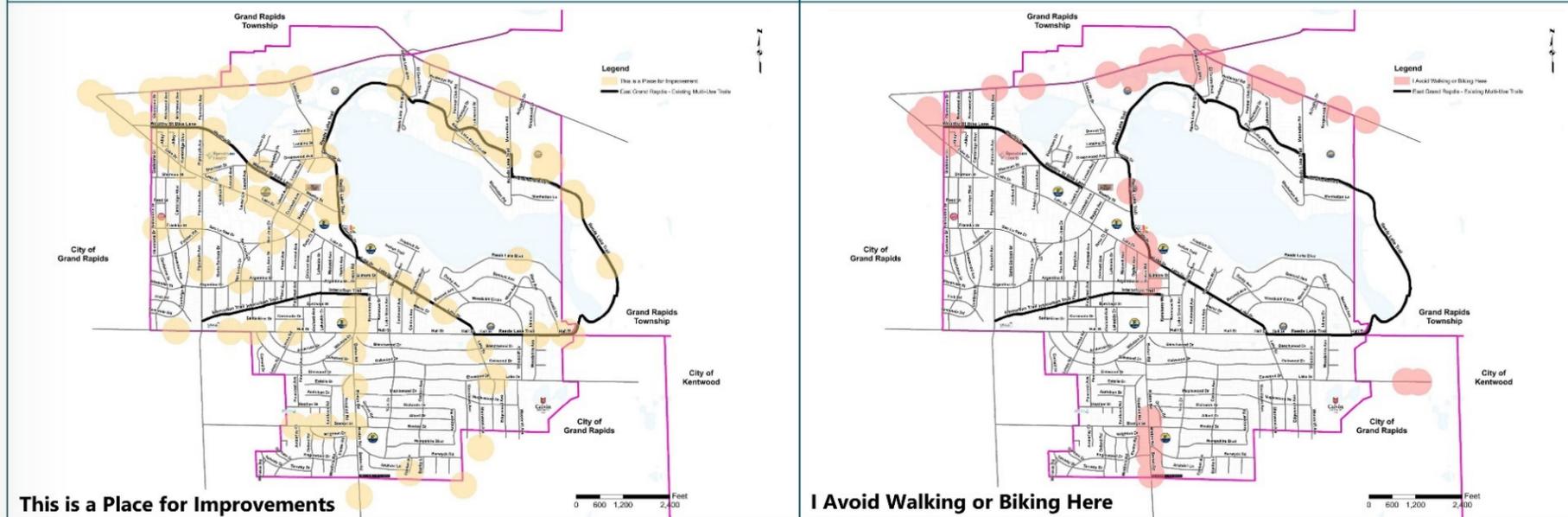
**POTENTIAL MOBILITY NETWORK - STREET TYPOLOGY**  
EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

progressive|ae  
1514 KATAWEE DR. GRAND RAPIDS, MI 49503 (616) 361-2864 www.progressiveae.com



I Like Walking or Biking Here

This is a Destination

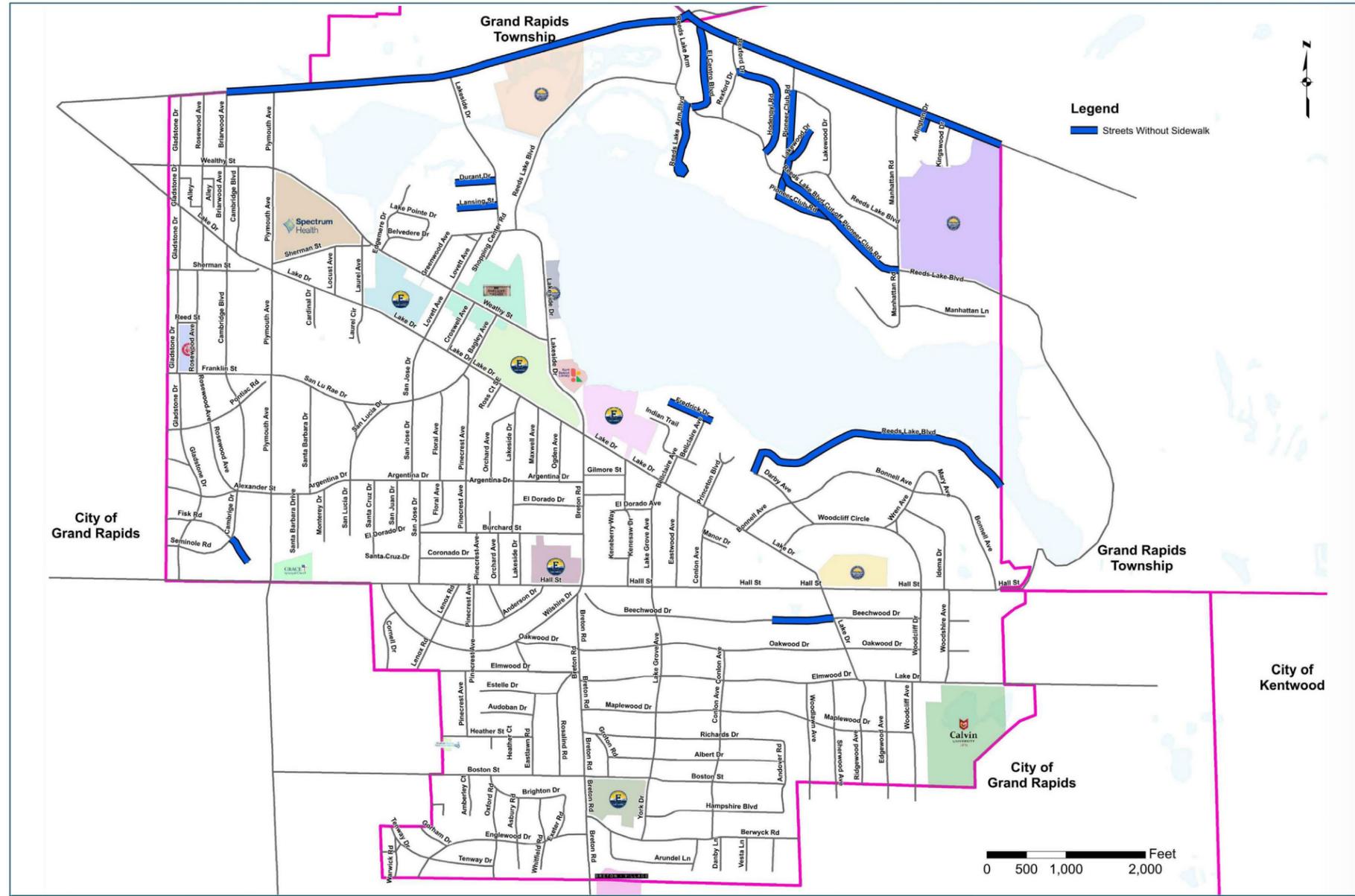


This is a Place for Improvements

I Avoid Walking or Biking Here

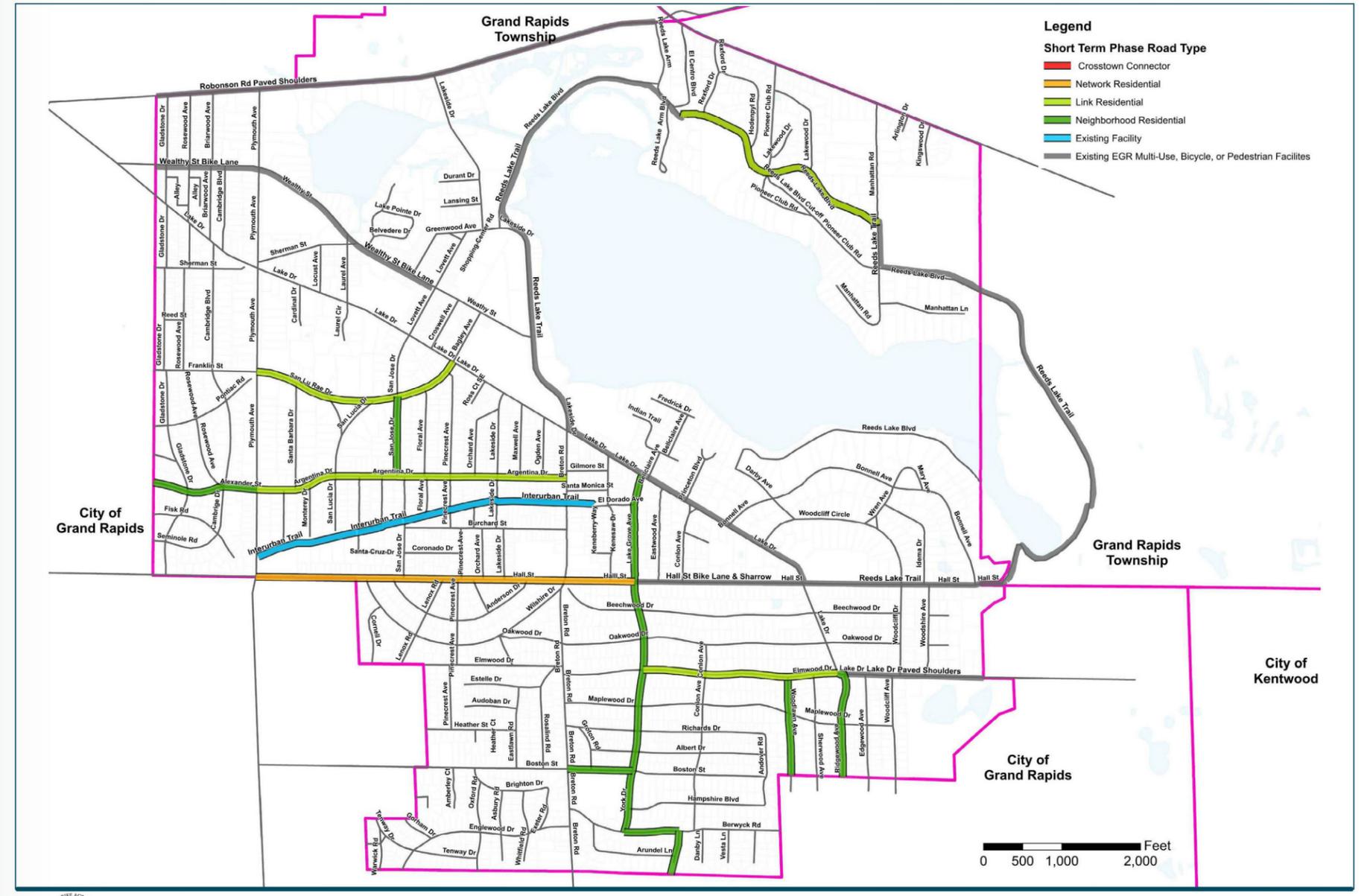
**POTENTIAL MOBILITY NETWORK - PUBLIC ENGAGEMENT RESPONSES**  
EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

progressive|ae  
1514 KATAWEE DR. GRAND RAPIDS, MI 49503 (616) 361-2864 www.progressiveae.com

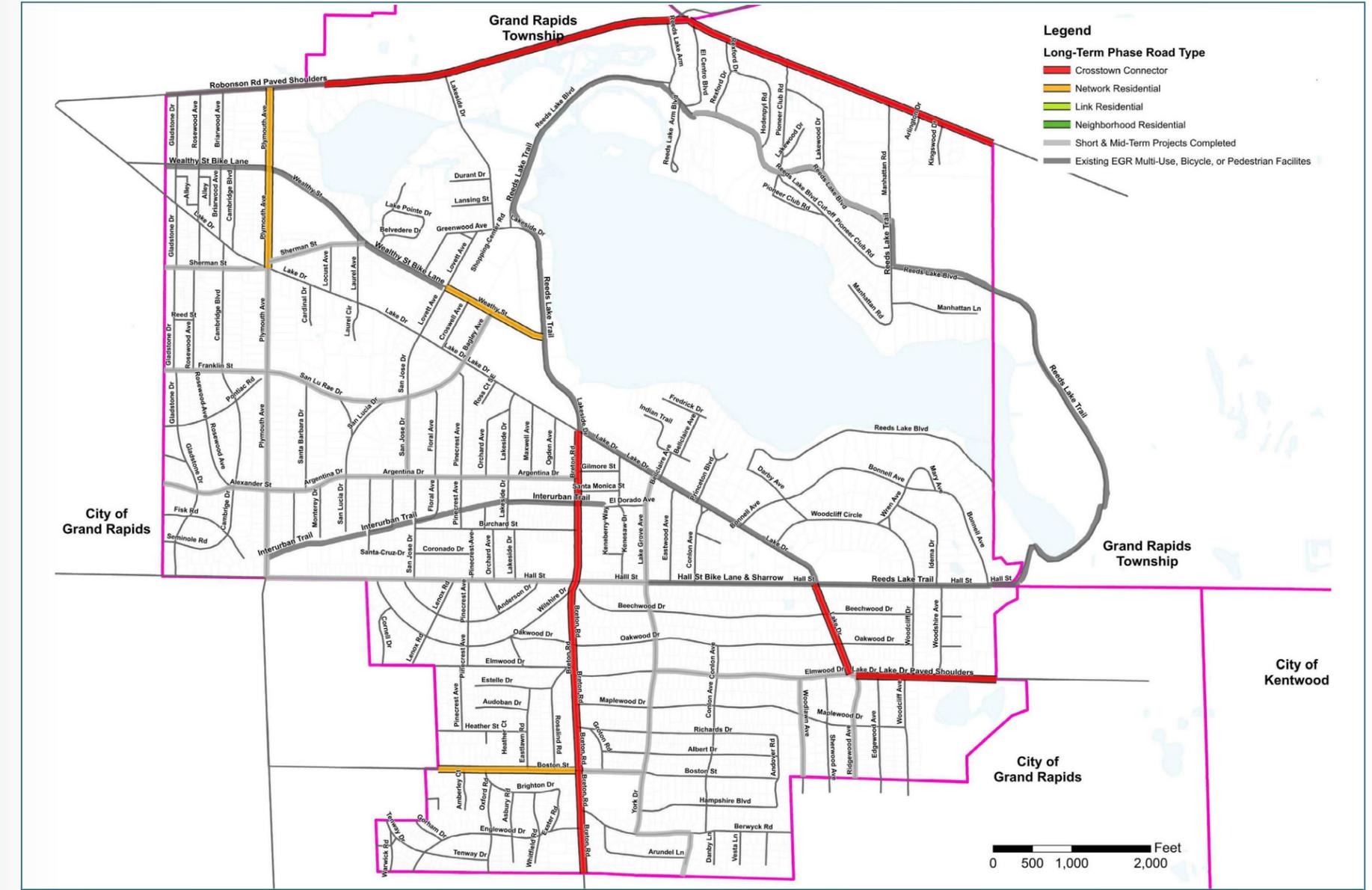
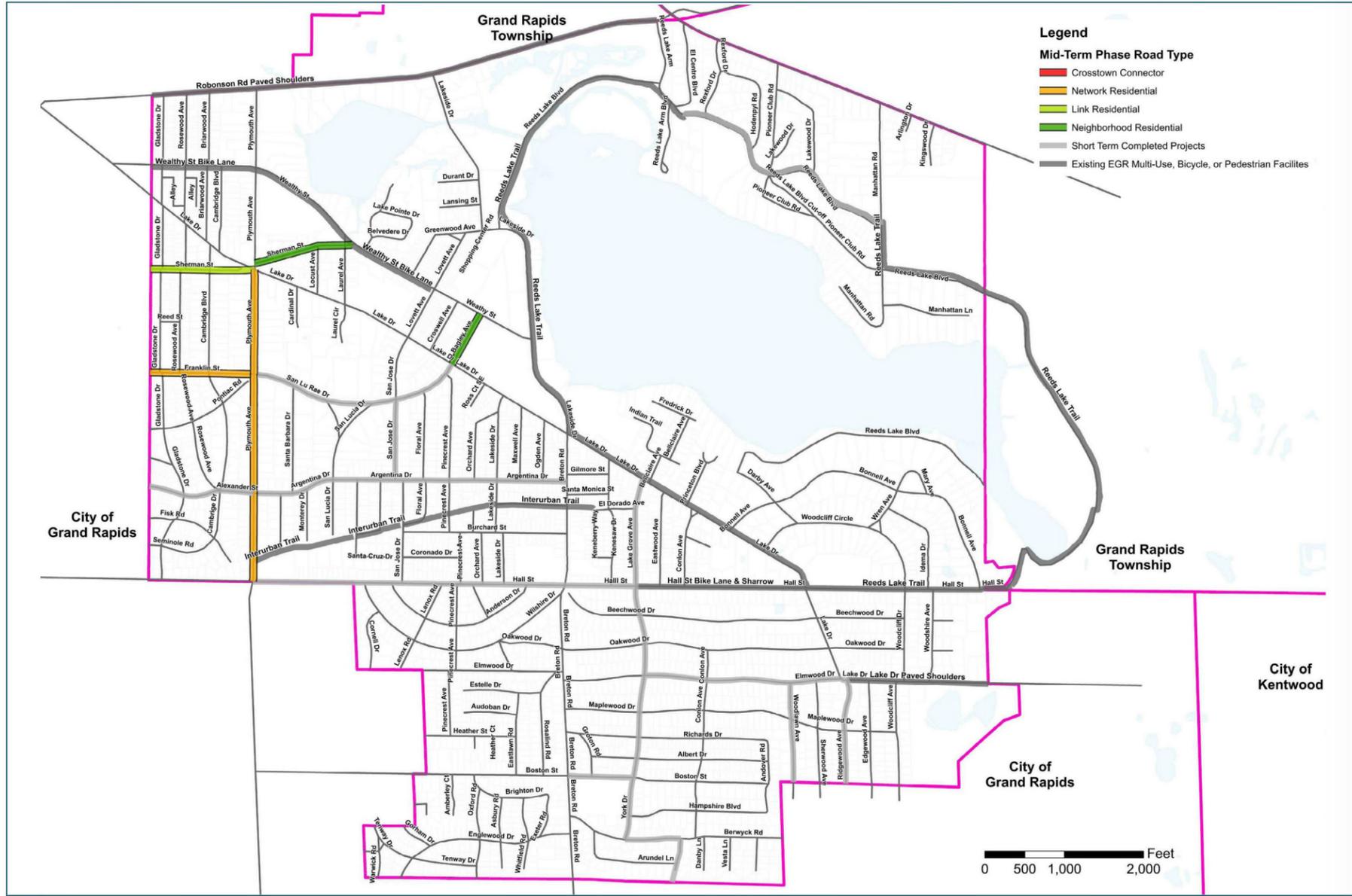


**POTENTIAL MOBILITY NETWORK - STREETS WITHOUT SIDEWALK**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

progressive|ae



**POTENTIAL MOBILITY NETWORK - SHORT-TERM PROJECTS & TYPOLOGY**  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN



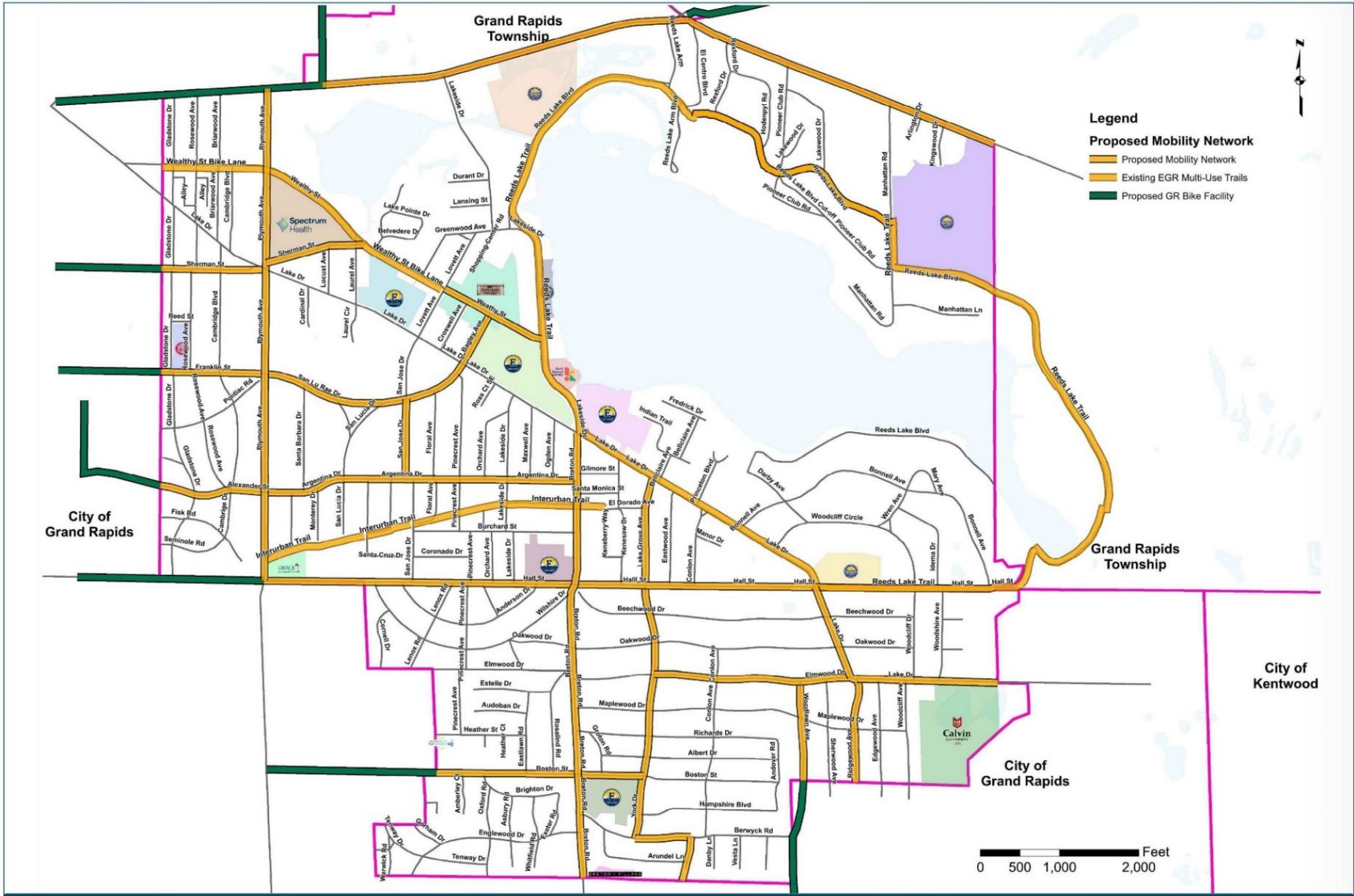
**POTENTIAL MOBILITY NETWORK - MID-TERM PROJECTS & TYPOLOGY** progressive|ae  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

1011 13th St NE Grand Rapids, MI 49503 (616) 261-2664 www.progressiveae.com



**POTENTIAL MOBILITY NETWORK - LONG-TERM PROJECTS & TYPOLOGY** progressive|ae  
 EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN

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**POTENTIAL MOBILITY NETWORK - FUTURE NETWORK**  
**EAST GRAND RAPIDS - MOBILITY BIKE-ACTION PLAN**

progressive|ae

1011 Lake Park Dr., Grand Rapids, MI 49503 | 616.233.2001 | www.progressiveae.com

Appendix II  
 Summary Report  
 Lake 2 Lake Tactical Intervention  
 Aligned Planning and Progressive AE





LAKE 2 LAKE  
CITY OF EAST GRAND RAPIDS



Aligned Planning & Progressive AE

Lake 2 Lake



P 73

SUMMARY

The Lake 2 Lake East Grand Rapids Safe Street Demonstration took place from October 15th through November 1st, 2020. The site is located along the north side of Lakeside Drive, immediately west of Reeds Lake Boulevard. The chosen site was informed by community surveys as well as feedback at a July public workshop earlier in the year.

The selected project site has two main two-way stop intersections along Lakeside Drive (Greenwood Avenue and Reeds Lake Boulevard). Lakeside Drive currently has no stop signs, which creates a confusing intersection for turning vehicles. Vehicles traveling through Lakeside Drive were clocked at going 30 miles per hour, an extremely hazardous speed for non-motorized transportation. This project scrutinized human-scaled infrastructure to understand current and existing conditions, while simultaneously inviting the community to participate and submit their feedback.

During to this installation, average vehicle through speeds were 13 MPH, a decrease of 44% during the safe street demonstration. In addition to calming traffic speeds, this demonstration added:

- 180' vegetative buffer
- 2 curb bulb outs (slower turn radius)
- 1 added crosswalk
- 2 accessible ramps
- 4 added stop signs
- 30% decrease in vulnerable crossing space
- 1 lane in Lakeside Drive.

P 3

Lake 2 Lake



**SAFETY**

Lakeside Drive crosswalk caused a 30% decrease in vulnerable crossing distance and 100% increase in crossing.

**SPEED**

Through speeds decreased 44%, turning speeds decreased 13%.

**ACCESSIBILITY**

2 new ramps and hard surface paths increased human-scale crossing intuition

**PREDICTABILITY**

Street alignment created a predictable design, resulting in less confusion and no accidents!



BEFORE

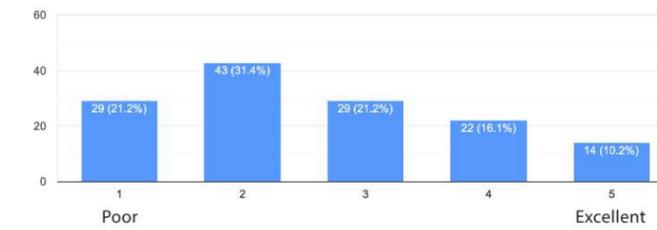


AFTER

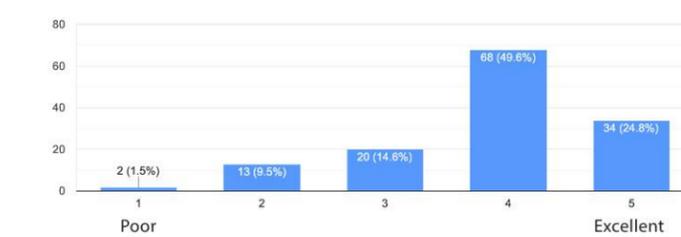
**SURVEY DATA**

The Mobility Bike-Action Plan online survey was open to the community for feedback from October 13th through November 11th. The survey was posted on project fliers on-site, as well as on East Grand Rapid's website and Facebook page. The survey received 143 responses, each with informative feedback.

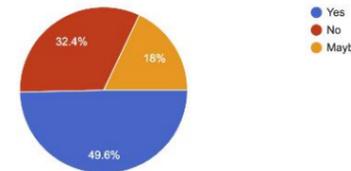
How did you feel crossing this street in this location prior to this demonstration?



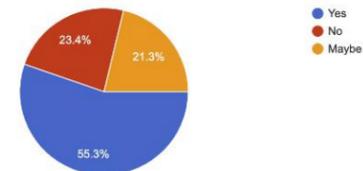
How did you feel crossing the street in this location during this demonstration?



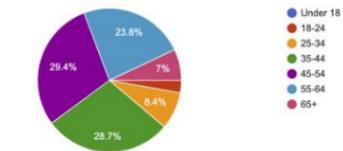
Are you more likely to traverse this area with this demonstration?



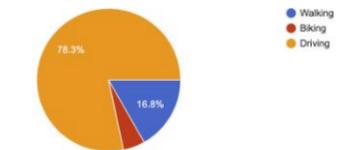
Would you like to see this demonstration become a permanent feature of this area?



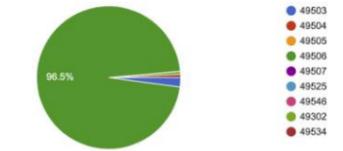
What is your age?



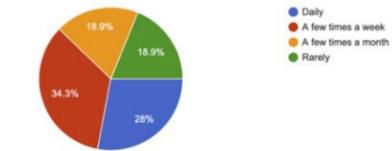
What is your primary mode of transportation?



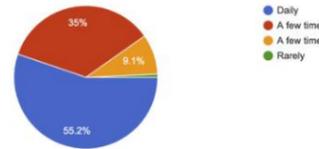
Where do you currently reside? Please select your zip code.



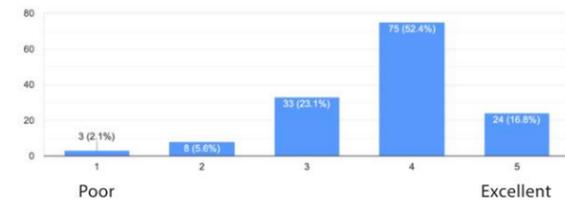
How often do you walk near this demonstration?



How often do you drive near this demonstration?



How do you view the overall mobility of East Grand Rapids?



- Lovett and Lake Drive 1
- Bagley and Lake Drive 2
- Plymouth and Robinson 3
- Hall and Lake Drive 4
- Englewood and Whitfield Road 5

**5**  
PLACES  
IDENTIFIED BY THE  
COMMUNITY FOR  
IMPROVEMENT



Lake2Lake Safe Street Demonstration Video: <https://www.youtube.com/watch?v=ntarNaM84d4&feature=share&fbclid=IwAR0AmKi2T-q1xitYbT2SLUY7ehNA1iWMSrLfPPg3WBFU91haBMOldRtzmAo>



Appendix III  
Educational Brochures  
Driving Change (Grand Rapids, MI)  
Ride Smart, Drive Smart (Fort Collins, CO)

## ROADWAYS

### Bicyclists are safer on the road.

This makes bicyclists more visible to motorists.

### What is a sharrow?

Sharrows are shared lane markers that indicate proper lane positioning for bicyclists.



### How should bikes and cars navigate through an intersection with a bike lane?

MOTORISTS turning right should wait to move into the right-hand turn lane until the bike lane becomes a dashed line, if present, and then carefully check the bike lane for bicyclists before merging into the right-hand turn lane. Allow the bicyclist to continue straight before completing your turn.

BICYCLISTS going straight through the intersection should follow the bike lane as it shifts from the right side of the road to the left side of the right-turn lane, being cautious to be seen by all motorists at the intersection.

## BICYCLISTS

### Bicyclists must obey all signals and signs.

Just like any other driver on the road, bicyclists must stop at stop signs and red lights.

This makes them more predictable to drivers, and safer on the road.



### Bicyclists must use turn signals.

By extending your left or right arm out to the side, communicate your intentions to motorists.

### Must be visible.

Equipping your bike with front and rear lights and wearing brightly colored clothing will make you more visible to motorists.



### Bicyclists should ride with traffic.

### Be predictable.

Ride in a straight line and do not swerve between cars. Use hand signals and check behind you before you turn or change lanes.

## MOTORISTS

### Do not open vehicle doors in a way that blocks bicycles.

Watch for approaching bicyclists before you open your door.

### Watch out for bicycles, especially when turning right.

Bicycle-related crashes frequently happen when vehicles are turning at intersections and out of driveways and do not notice a smaller, less visible bicyclist.



### Do not park in the bike lane.

### Do not drive in bike lanes.

### Leave 5 feet when passing a bicyclist.

Even if you have to slow down and wait for enough room to pass the bicyclist, leaving 5 feet of space is required.



## IMPROVE YOUR ROAD RELATIONSHIPS

If you've been on the roads in Grand Rapids, you've probably noticed some changes in the past few years. New bike lanes have been added to many streets in order to:

- Improve safety for bicyclists
- Help clarify where bicyclists should be on a road
- Improve predictability of all road users

The introduction of new bike lanes has led to a lot of discussion and often confusion about how motorists and bicyclists should interact on the roads.

The Driving Change campaign is part of an ongoing effort to help decrease the number of crashes and fatalities.

As part of that effort, please use this guide to learn more about rules and best practices for safe riding and driving.

Whether you're in a car or on a bicycle, we are all drivers on our roads. Together, we can work to improve our road relationships and drive change in Grand Rapids.



## DRIVING CHANGE

Visit [GRDrivingChange.org](http://GRDrivingChange.org) to learn more about this initiative.



## DRIVING CHANGE

[GRDrivingChange.org](http://GRDrivingChange.org)



### TAKE A BRAKE

Stopping at stop signs and traffic signals is required by law.

2101 - \$50

**TIP** Take advantage of the brief stop to catch your breath and say hi to fellow cyclists.

### GO WITH THE FLOW

Ride with the flow of traffic. Wrong-way riding on the road is against the law and is a leading cause of crashes.

2101 - \$50



### LEAVE SIDEWALKS TO PEDESTRIANS

Bicycling on the roadway is typically the safest option for people on bikes. If a sidewalk is the only option, use extra caution when entering streets, driveways and crosswalks especially if traveling against the flow of roadway traffic. Slow down and make eye contact with road users that might not see you. Dismount and walk through marked dismount zones.

2104 - \$50

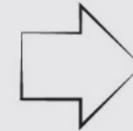
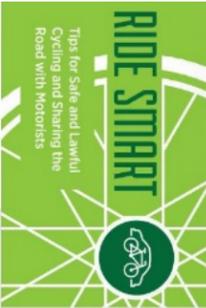


### RIDE BRIGHT

At night or when visibility is poor cyclists are required to use a front white light and rear red reflector.

2107 - \$50

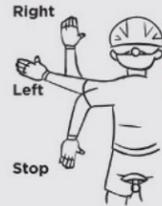
**TIP** A rear red light and bright clothing with reflective elements are recommended to increase visibility.



### DO THE "RIGHT" THING

Use rightmost lane that serves your destination. This may be the left-turn lane if you are turning left.

2104 - \$0



### SIGNAL YOUR MOVEMENTS

People riding bicycles are required by law to use hand signals to indicate when they intend to change lanes, turn or stop.

2105 - \$50

### GIVE YOURSELF SOME SPACE

Take the full travel lane when warranted and move back over to the right as soon as it is safe to do so. Ride no more than two abreast and single up if faster moving traffic is backing up behind you.



### BE GLARE AWARE

The low-angle sun can make it difficult for motorists to see you.



### PROTECT YOUR BRAIN

Wearing a helmet properly reduces your risk of head or brain injury by over 85%. Your helmet should sit level on your head with the chin strap fastened. It should be snug, but comfortable.

### LINE UP

Avoid squeezing between parked or moving cars. If there is no bike lane approaching an intersection, or when there are turning vehicles in the bike lane, wait in line with the cars rather than squeezing through on the right.

### WALKERS GO FIRST

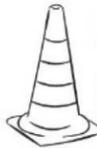
Yield to pedestrians at intersections, mid-block crossings, and on sidewalks and trails.

2106 - \$50

### HAPPY TRAILS FOR ALL

Share the trail - slow down, indicate you are passing with a bell or your voice, and pass on the left when safe to do so.

2106 - \$50



### RESPECT THE CONE

Obey traffic control signs in construction zones, and follow signed detours.

2101 - \$50



### STAY CALM, AND RIDE ON

Pedal the City's low-stress bikeway network. Check out the Fort Collins Bike Map at fcgov.com/fcbikes for the best routes to get around town quickly, conveniently and safely.

### DRIVE YOUR BIKE

Your bike is a vehicle; as the driver you must follow the laws and ride predictably to help other road users know what to expect.

2101 - \$50



### THINK WHEN YOU DRINK

Cycling under the influence is against the law. Get a ride from a friend, take a cab or dial a ride. The fine for DUI on a bike is the same as for DUI in a motor vehicle.

42-4-1301 (1a) - \$1000+

### WE'RE ALL PEOPLE

No matter how we choose to travel, all road users deserve equal respect.

TRAFFIC LAW   FINE	
239 - \$100 fine	2101 - \$50 fine
603 - \$100 fine	2104 - \$50 fine
903 - \$50 fine	2105 - \$50 fine
1003 - \$75 fine	2106 - \$50 fine
1108 - \$50+ fine	2107 - \$50 fine
42-4-1301 (1A) - \$1000+ fine	

visit [RideSmartDriveSmart.org](http://RideSmartDriveSmart.org) to learn about bicycling classes.

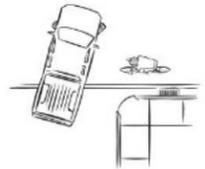


### ALL LANES ARE BIKE LANES

People on bikes have the legal right to "take the lane" to keep themselves safe when necessary to avoid hazards or when the lane is too narrow to share safely with another vehicle.

### MOVE RIGHT TO TURN RIGHT

When turning right, move as far right as is practical. When there is not a dedicated turn lane, check for people on bikes then use the bike lane like a right turn lane to prevent right-hook crashes.



### SAVE THE DAY-LOOK BOTH WAYS

The most common crash in Fort Collins occurs at intersections when motorists don't see people on bicycles who are riding against the flow of traffic. Be sure to check to the left and right for cyclists before turning or entering roadways.



### MELLOW YOUR SPEED

Driving fast narrows your field of vision and increases the chance of causing serious injury in a crash. Drive at or below the speed limit.

1108 - \$50+



### CHILL FOR CHILDREN

The majority of crashes involving children on bikes happen because a child does something unexpected. Pay particular attention and slow down when driving in places where children can be expected such as school zones, in neighborhoods and near parks.

### BE FLASHY

Signal all turns and lane changes so other road users know what to expect.

903 - \$50



### ORANGES ARE FOR SQUEEZING

Avoid squeezing past a person on a bike. Colorado law requires motorists to give a minimum of 3' of space when passing. It is acceptable to cross a double-yellow line to pass a cyclist as long as the opposite lane is clear of oncoming traffic.

1003 - \$75



>3 FEET



### CUTTING IS FOR KNIVES

Avoid cutting off a person on a bike at intersections, especially when turning. Remember - cyclists may be traveling faster than you think.

1003 - \$75



### IT CAN WAIT

Distracted driving (ex., texting, talking on the phone, eating, grooming) increases the likelihood of being involved in a traffic crash. Concentrate on driving; the rest can wait.

239 - \$100

### BE INTERSECTION AWARE

Eighty-nine percent of bicycle vs motor vehicle crashes take place at intersections or driveways. Be sure to check roadways, sidewalks, blind spots and mirrors for cyclists. Make eye contact to make sure other road users are aware of your presence and intentions.



### BE ALERT IN THE CONE ZONE

Obey traffic controls in construction zones, and watch for people on bikes that may need to "take the lane" and merge with traffic through "cone zones."

603 - \$100



### BE GLARE AWARE

Travel with extra caution when sun glare affects your ability to see people on bikes.

### WE'RE ALL PEOPLE

No matter how we choose to travel, all road users deserve equal respect.

TRAFFIC LAW   FINE	
239 - \$100 fine	2101 - \$50 fine
603 - \$100 fine	2104 - \$50 fine
903 - \$50 fine	2105 - \$50 fine
1003 - \$75 fine	2106 - \$50 fine
1108 - \$50+ fine	2107 - \$50 fine
42-4-1301 (1A) - \$1000+ fine	

Learn how to become a certified Bicycle Friendly Driver at [RideSmartDriveSmart.org](http://RideSmartDriveSmart.org)



