CITY OF ROCHESTER

# COMPREHENSIVE ACCESS AND MOBILITY PLAN

# TABLE OF CONTENTS




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# OVERVIEW

**The Rochester Comprehensive Access and Mobility Plan envisions a transportation system that improves the quality of life of people in Rochester by enabling efficient, safe, and comfortable access and connectivity among destinations and neighborhoods. Its ultimate goal is to facilitate transportation improvements that make Rochester a better place to live, do business, travel, and enjoy for all.**

**An extensive planning and engagement process informed the development of this plan, ensuring that a wide range of local stakeholders played a role in shaping this vision for the future of the city's transportation system. The plan focuses on understanding the shortcomings of and opportunities for the transportation system in five key focus areas: walking, bicycling, transit, goods movement and emergency services, and transportation demand management. Rochester can implement policies to improve its transportation system across these dimensions, and several focus area reports were produced to assess the challenges and opportunities for the City to do so. An additional street design guide provides information and guidance on upgrading the city's street network to accommodate all road users in a coordinated and equitable way. Building off the work conducted for the project, a Priority Projects document, outlines several key interventions the City could take to enhance its transportation system in line with its goals of comprehensive access and mobility. This final report presents a synthesis of these previous documents and outlines the means by which Rochester can develop a transportation system the works well for all who use it.**

The concept of comprehensive access and mobility encompasses the idea that a city's transportation system should facilitate **easy, safe, and reliable travel for all** users. Cities that promote comprehensive access and mobility are cities in which all people, regardless of gender, age, or ability, can travel to convenient destinations via a **variety of transportation modes**, and can do so in ways that are safe, efficient, and comfortable.

# VISION FOR TRANSPORTATION

Rochester's transportation system improves quality of life for all Rochesterians by enabling safe, convenient, and comfortable access to work, life, and play, and enabling connectivity between neighborhoods. The system works for users of all ages and abilities whether they walk, bike, drive, or take public transportation, and supports Rochester businesses by enabling the movement of goods and people. The system activates transit- and pedestrian-oriented design to create a city of short distances, and is clear and user-friendly, with the highest standards of sustainability, design, and maintenance.

*This vision was developed in consultation with stakeholders and the general public.*

# PLAN DEVELOPMENT

The development of the Comprehensive Access and Mobility Plan took place over the course of more than a year, and incorporated the work of diverse stakeholders and the general public early in the process. The first product was a Factbook outlining the existing transportation conditions, and Rochester's vision for its future. Pop-up events and public surveys were then conducted to gather stakeholder input on what Rochester's future transportation system should look like. Input was organized around five key transportation themes: walking, bicycling, transit, goods movement and emergency response, and transportation demand management. Focus area reports were produced to assess the challenges and opportunities pertaining to the improvement of the transportation system in these areas. Additional public outreach and engagement gathered feedback on these planning documents, and ultimately informed the development of this final plan.

# PUBLIC & STAKEHOLDER INPUT

**Many individuals and stakeholder groups contributed to the development of this plan. Public engagement efforts sought input from a diverse range of stakeholders representing a wide cross section of the Rochester community with a special focus on the most vulnerable travellers - the youth, the elderly, and the disabled. These individuals and organizations were able to provide their input through a variety of channels.**

## STAKEHOLDER INTERVIEWS

The Project Team identified key representative stakeholders in cooperation with the City, and conducted phone interviews with them to understand their perceptions of the transportation system.

## POP-UP EVENTS

Pop-up events were held at community events and served to share information from the Factbook and gather public input on transportation in Rochester. Participants were also invited to share their ideas for the future of Rochester's transportation system.

## ONLINE SURVEYS

Multiple online surveys were conducted in partnership with the City. They allowed members of the public to express their preferences and experiences regarding transportation in Rochester, and to indicate their priorities for future improvements.

## FOCUS GROUPS

Stakeholder focus groups were consulted at multiple meetings to gather feedback on the selection of priority projects and the development of components of the overall plan.

## STREET DESIGN WORKSHOP

The Project Team conducted a half-day workshop at which attendees reviewed existing design standards and made recommendations on adapting them to Rochester's transportation goals and context.

# RELATIONSHIP TO OTHER PLANS

Previous and ongoing land use, transportation, and corridor planning efforts In Rochester inform and frame the Comprehensive Access and Mobility Plan. The plan builds on past and concurrent work to enable safe, convenient, and comfortable access for users of all transportation modes. The following select plans and policies address concepts found within the plan.

- **Rochester 2010: The Renaissance Plan (2000)** outlines City goals, principles, and actions related to economic development, environmental management, infrastructure, land use, and mobility planning.
- **Complete Streets Policy (2011)** ensures that street design efforts will consider the safety and comfort needs of pedestrians, bicyclists, transit users and persons with disabilities.
- **Center City Pedestrian Circulation and Wayfinding Study (2012)** improves the visitor wayfinding experience within Rochester's Center City by providing clear and direct orientation and connections.
- **Center City Master Plan (2014)** identifies a fundamental vision of lively streets and highlights the importance of the Genesee River, Main Street, and a connected downtown.
- **New York State Pedestrian Safety Action Plan (2016)** recommends engineering, education, and enforcement measures to improve pedestrian safety over five years.
- **Roc the Riverway (2018)** plans seamless pedestrian and bicycle connections along both sides of the river via the Genesee Riverway Trail.
- **Bicycle Master Plan (2011)** serves as a framework for the City's future investment in bicycle infrastructure.
- **Bicycle Boulevard Master Plan (2015)** outlines plans for a 50-mile-long network of low-stress bicycle priority streets.
- **Reimagine RTS (2018)** refocuses the transit system to provide more frequent, direct, and connected service.
- **Transit Supportive Corridors Study (2018)** identifies corridors for transit supportive development and recommends associated land use strategies.
- **Bus Stop Optimization Study (2015)** makes recommendations to improve the placement of bus stops.
- **Signal Prioritization Study (2010)** recommends transit signal prioritization on Lake and Dewey Avenues.
- **Satellite Transit Centers Study (2009)** evaluates potential sites for satellite transit centers.
- **Rochester 2034 Comprehensive Plan Update (forthcoming 2019-2020)** outlines the vision and goals for growth, placemaking, and equity leading to the City's 200th birthday.

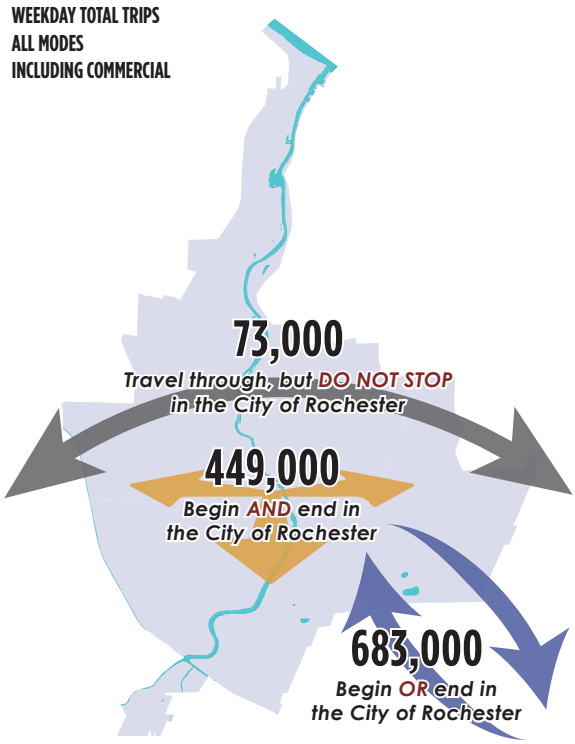
# ROCHESTER TODAY

# REGIONAL RELATIONSHIP

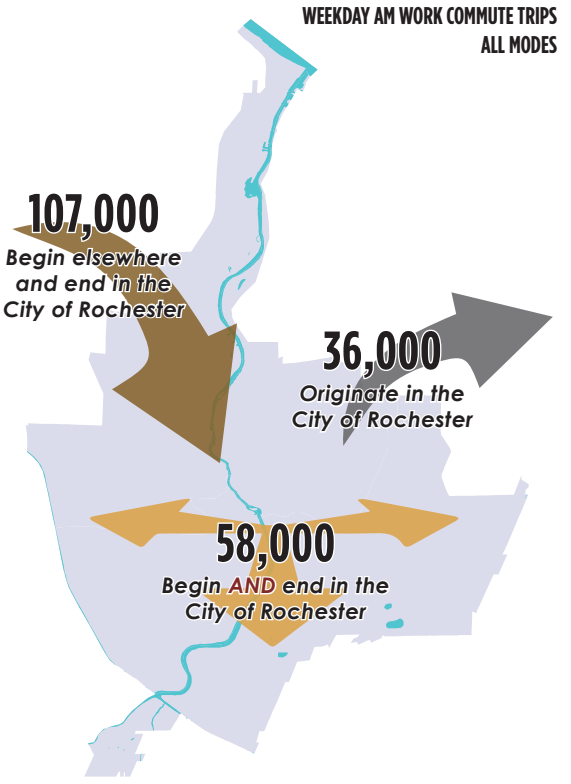
Rochester is the primary urban center of the Genesee-Finger Lakes Region of New York, and plays an important role in the regional, state, and national economy. By population, it is the largest municipality in the Region and the third largest city in New York State. Rochester businesses employ 25 percent of regional workers, and the city is home to emerging industries including photonics, biotechnology, food and beverage processing, and green technologies.

Rochester's transportation system is used extensively by residents and non-residents. Over 1,200,000 trips are made each day in Rochester including people coming to the City, leaving the City, passing through, and those traveling from one part of the city to another. Over 100,000 people commute into Rochester every day but concurrently, 38 percent of Rochester residents' commute trips end outside of the City, demonstrating the existence of a substantial reverse commute pattern.

As in many metropolitan areas, the majority of Rochester residents work far enough from home to make walking impractical. The average commute to work for a city resident who drives or takes transit to work is over four miles, too far for most practical walking commutes, but viable for a bike commute if the network is safe and attractive. Furthermore, commute travel makes up only one-sixth of daily trips in the region. Other trips are typically shorter than commutes–meaning walking and biking are potentially more attractive and viable options.

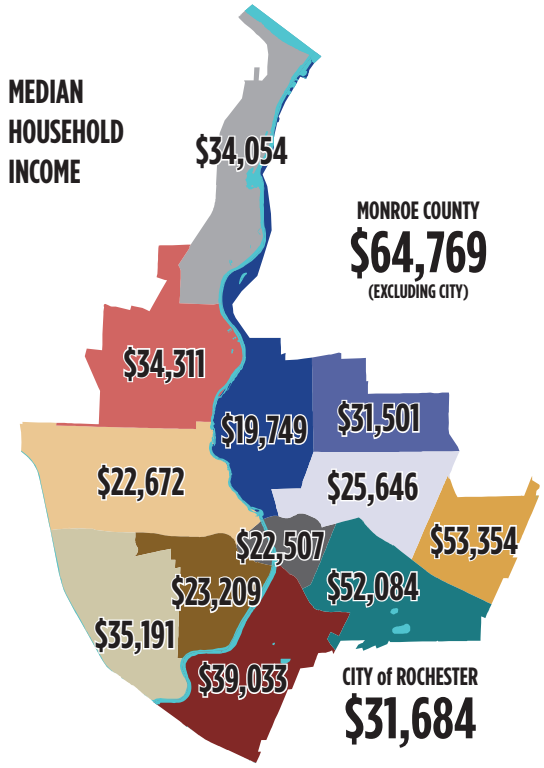

Source: GTC Regional Travel Demand Model v3.4, 2010




Source: GTC Regional Travel Demand Model v3.4, 2010

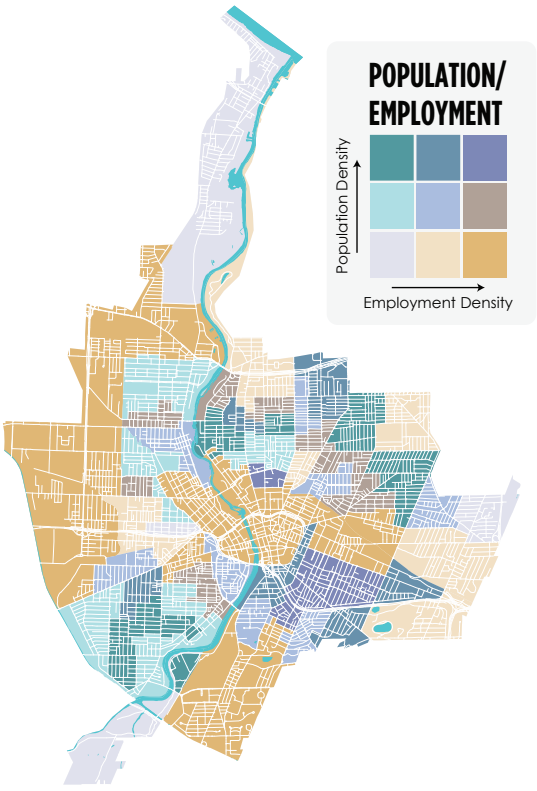
# DEMOGRAPHICS

Rochester is home to over 200,000 people and approximately 150,000 jobs. Residents of the city are relatively young and are primarily low to middle income. The City's median income is $31,000, less than half that of the surrounding county. Some areas of Rochester, notably central, western, and northeastern districts, are areas of concentrated poverty. The median income of on section of Northeast Rochester for example, is less than $20,000.




Source: American Community Survey Dataset B01001, 2016

Large areas of Rochester consist of high employment or population densities, though few areas exhibit a strong mix that simplifies primary transportation needs. Exceptions include the Park Avenue, Monroe Avenue, and South Clinton Avenue Corridors as well as Upper Falls Boulevard.




Sources: American Community Survey Dataset B01003, 2016, LEHD 2015

Most people in Rochester travel by car, although over one-quarter of households do not own a private vehicle and a sizeable minority of residents frequently rely on other modes of transportation. In fact, more than 15 percent of city residents commute via an active mode of transportation.

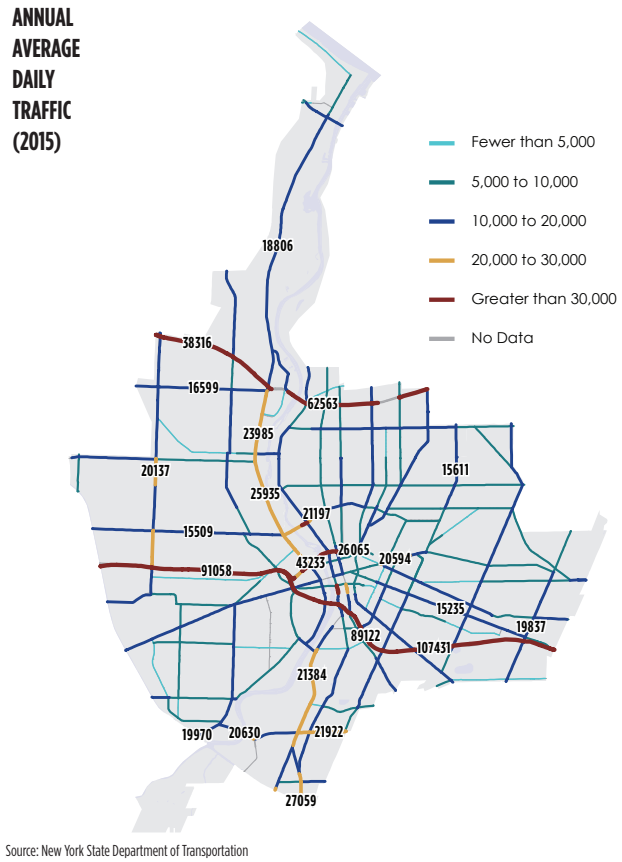
**CITY of ROCHESTER**

- 70% DRIVE ALONE
- 10% CARPOOL
- 9% BUS
- 7% WALK
- 1% BIKE
- 2% WORK FROM HOME

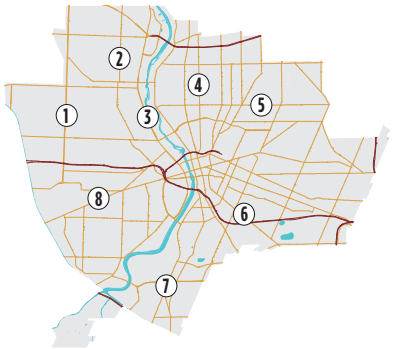
# TRANSPORTATION NETWORK

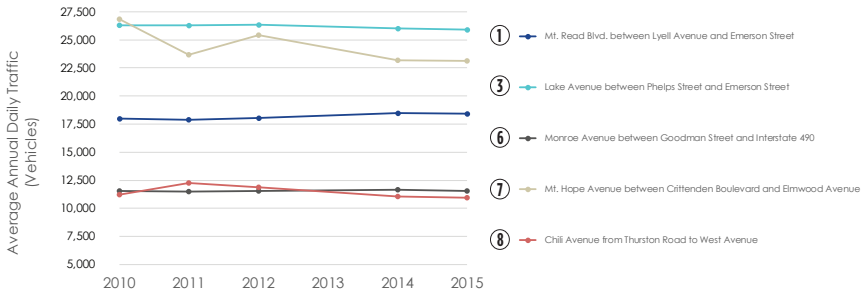
Rochester's transportation system is primarily oriented around a grid-like network of roadways that support private automobile usage, bus transit service, bicycling, walking, and freight truck transportation. Major expressways carry high east-west vehicular traffic volumes, while major streets carry high north-south volumes. Railways traverse the city as well, and carry some passenger traffic as well as more substantial freight traffic volumes. Rochester's bicycle network has been growing since 2011 and is centered on river- and canal-side trailways.

Rochester's roadway network experiences levels of use that are consistent with a city of its size. Major east-west expressways carry up to 110,000 vehicles per day. Major north-south arterials carry up to 27,000 vehicles per day. The highest volumes are seen along West Ridge Road, Lake Avenue, Mt. Hope Avenue, Upper Falls Boulevard, Mt. Read Boulevard, and Elmwood Avenue; most of these are four lanes wide along their entire length. Daily vehicular traffic on major roads has remained relatively stable in recent years, and relatively few roads experience periods of congestion.

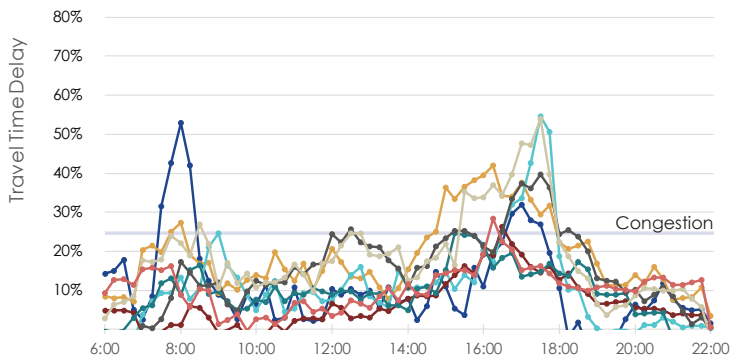



Source: New York State Department of Transportation



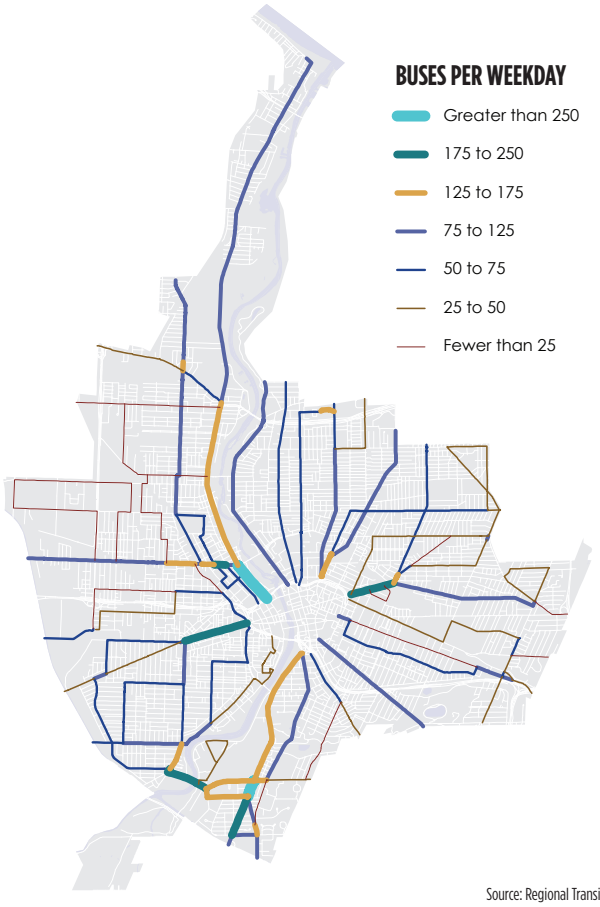

1. Mt. Read Blvd. between Lyell Avenue and Emerson Street
2. Dewey Avenue between Driving Park Avenue and Ridgeway Avenue
3. Lake Avenue between Phelps Street and Emerson Street
4. Joseph Avenue between Clifford Avenue and Avenue D
5. Clifford Avenue between Portland Avenue and Goodman Street
6. Monroe Avenue between Goodman Street and Interstate 490
7. Mt. Hope Avenue between Crittenden Boulevard and Elmwood Avenue
8. Chili Avenue from Thurston Road to West Avenue



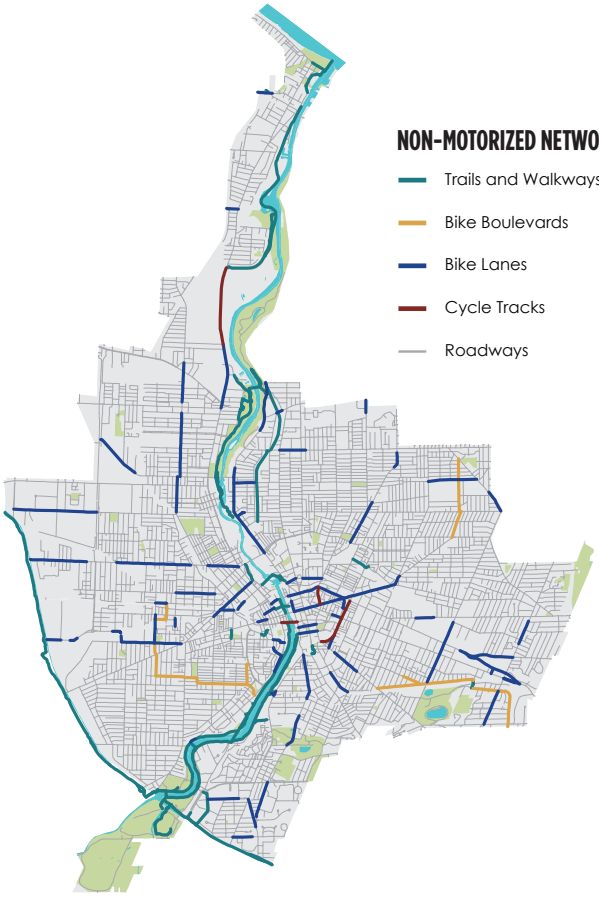
Rochester's transit system provides over 40,000 trips per day, and carries more riders per service hour than peer city transit systems. Consistent with national trends however, transit ridership has declined since 2015. The introduction of express routes to downtown Rochester and other popular destinations has seen ridership increase on those routes. Transit coverage and service frequency is highly variable within the Rochester transit system. Certain corridors in Rochester, such as Lake and Mount Hope Avenues, are served by over 125 transit buses each weekday. Other corridors, such as Plymouth and University Avenues, see fewer than 50 buses each day.

Approximately $1 trillion worth of goods move into, out of, within, and through the Genesee-Finger Lakes Region annually. This freight transportation occurs primarily on Rochester's expressways, arterials, and railways. The highest truck volumes are seen on I-490, Mt. Hope Avenue, and Mt. Read Boulevard. Freight rail movement takes place at the CSX yard in central-eastern Rochester, and on mainline tracks at the western edge of the city.

The transportation trends seen in Rochester are reflective of land-use patterns. Most of the city is zoned for low-density residential development, and commercial, high density, and industrial zoning areas are not within close distances to much of the population. Low-density development and this separation of land uses encourages driving and makes transit, bicycling, and walking less viable options for many people. This has a negative environmental impact. Vehicles account for a quarter of Rochester's greenhouse gas emissions, and contribute to Rochester having higher per-capita greenhouse gas emissions than other cities in New York state.




Source: Regional Transit Service




Sources: Genesee Transportation Council, City of Rochester

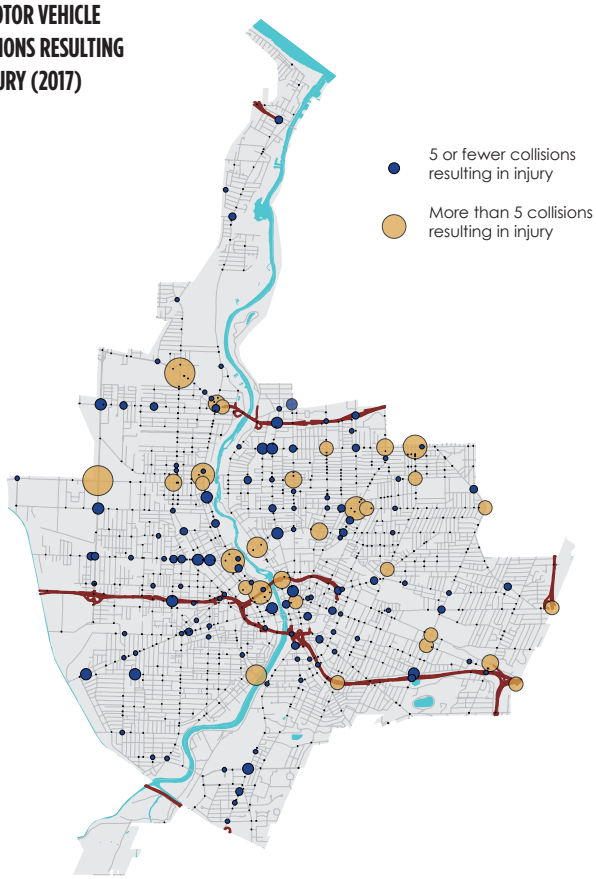
# SAFETY

The safety of Rochester's transportation system is tied to the design of transportation infrastructure and the regulation of travel behavior, particularly vehicle speeds. While few exceptions exist to Rochester's 30-miles-per-hour speed limit, permanent exceptions include park roads in Seneca and Highland Parks, and areas in certain school zones. Even with a nearly universal 30 miles-per-hour speed limit across the city, roadway design can encourage excessive speeds, increasing the risk of collision with other vehicles, pedestrians, and cyclists.

Collisions involving motor vehicles are far more likely to result in injuries on wider roadways that encourage higher-speed driving such as West Ridge Road, Lake Avenue, Mt. Read Boulevard, Norton Street, Upper Falls Boulevard, and the Inner Loop. Collisions involving pedestrians or cyclists, which make up 15 percent of all collisions, occur across the city.

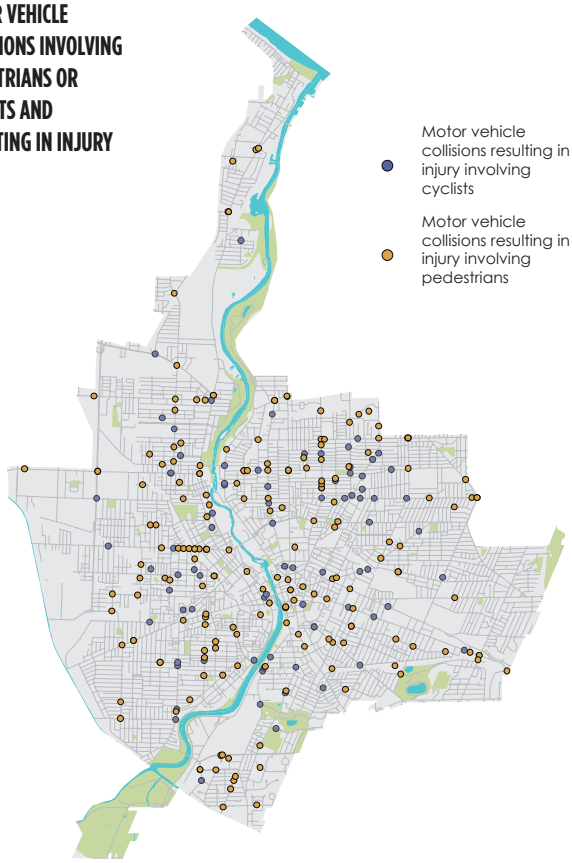
In addition to facing safety risks on higher-speed roadways, people using non-motorized forms of transportation face physical barriers and uncomfortable travel environments at conflict points with limited access freeways, multiple lane arterials, and frontage or one-way roads that limit pedestrian movement.

**ALL MOTOR VEHICLE COLLISIONS RESULTING IN INJURY (2017)**




Source: NYSDOT Accident Location Information System, 2017

**MOTOR VEHICLE COLLISIONS INVOLVING PEDESTRIANS OR CYCLISTS AND RESULTING IN INJURY (2017)**




Source: NYSDOT Accident Location Information System, 2017

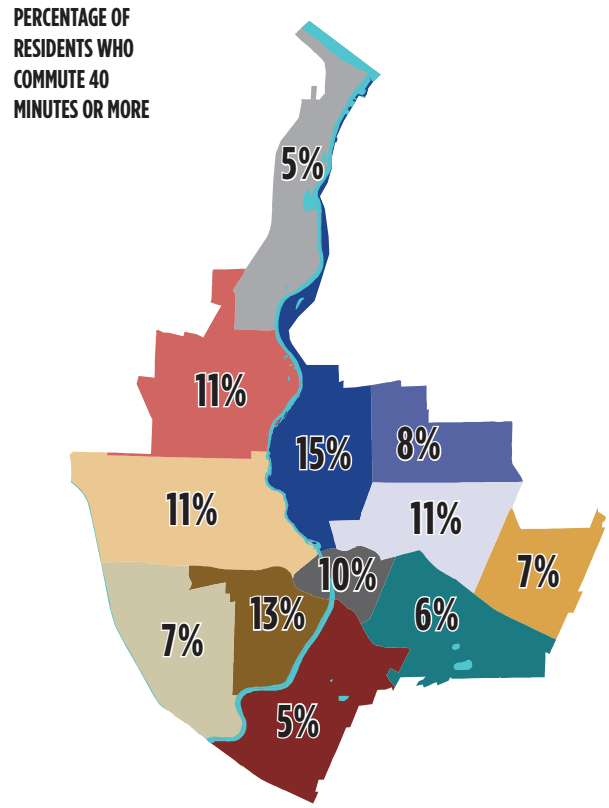
# ACCESS

Rochester's transportation system is particularly challenged by the disparity between where residents live and where they can fulfill basic needs. Sprawl and the separation of land uses locate most residents far from destinations. Few are able to walk from their homes to shops or offices, though an improving bicycle network puts many within reach of basic services. This accessibility issue applies to the wider region, forcing the lowest income workers to spend more of their time commuting.

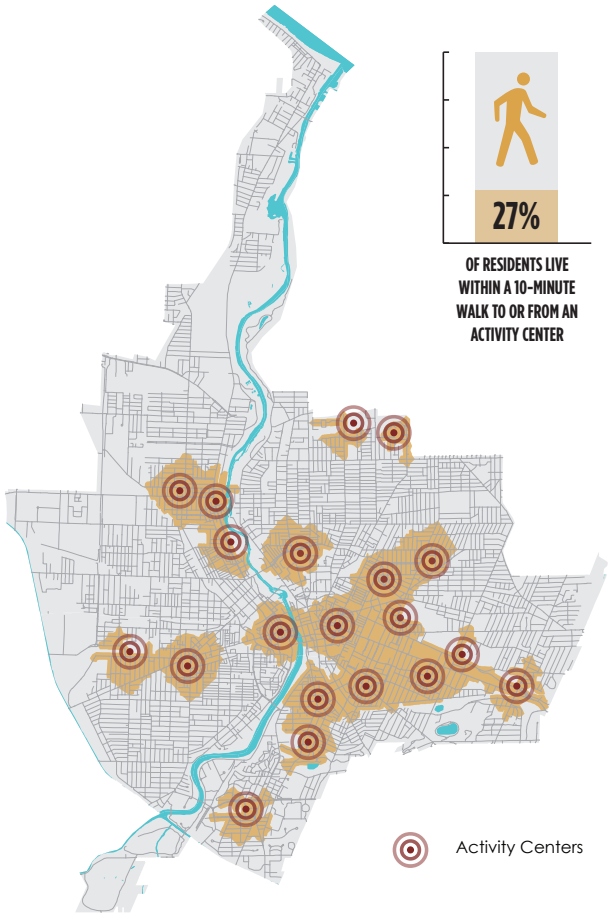
Access to employment is an important indicator of accessibility challenges within an urban transportation network. In Rochester, areas home to low income residents typically face long commute times of 40 minutes or more. In the north and north east of the city, between eight and 15 percent of residents experience such commute times, largely because low-wage employers are located in suburban areas further from the city.

More detailed assessments of levels of accessibility reveal many shortcomings of Rochester's transportation and land-use planning. Analysis of proximity to activity centers, areas identified as clusters of grocery stores, pharmacies, medical offices, and social services, indicates that almost three quarters of city residents are unable to walk to these activity centers. Most city residents are within a ten minute bicycle ride of activity centers, though many of the most direct travel routes lack dedicated, safe bicycle infrastructure.

Pedestrian access to transit and green spaces is somewhat better. Three quarters of residents can walk to a park or trail within ten minutes, and almost 90 percent can walk to a bus stop within five minutes. Gaps in the park and trail system, and sometimes infrequent or poorly connected transit service play a role in the overall viability of both the green space and public transit network. For example, fewer than ten percent of residents live within a single transit trip of Rochester's main intercity rail or bus stations.




Source: American Community Survey Dataset B08303, 2016



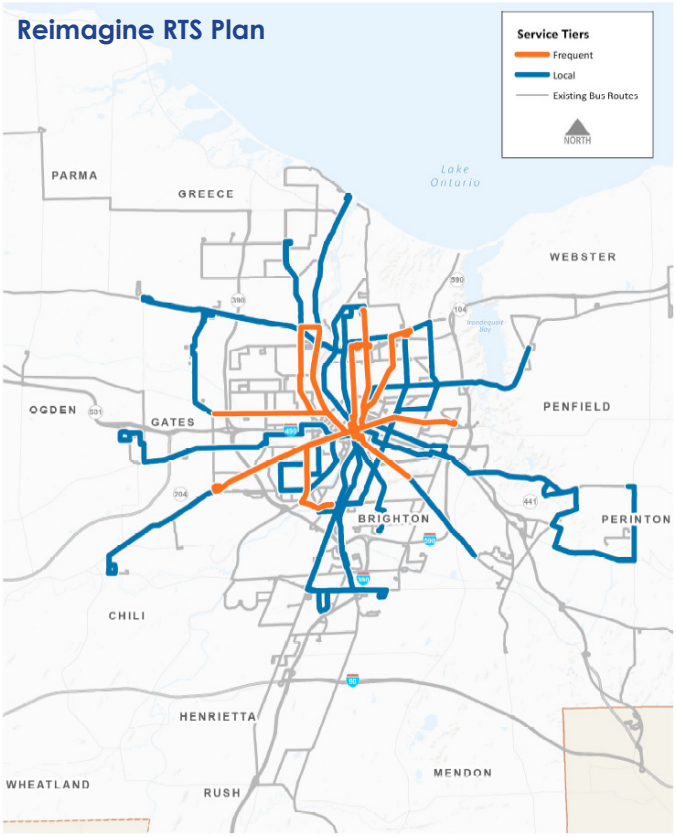
# PLANNED IMPROVEMENTS

Rochester is expanding mobility options through transformative transportation projects. These projects will improve the RTS transit system, make streets safer, and expand the pedestrian and bicycle realm.

***Reimagine RTS*** is a project to refocus the transit system around a comprehensive network of frequent, all-day core service routes and simplified local routes. The project focuses on growing ridership through more frequent and direct service along with the introduction of mobility hubs to increase the diversity of services available for last-mile connections. It has the potential to significantly boost transit riders' access to frequent, all-day service.

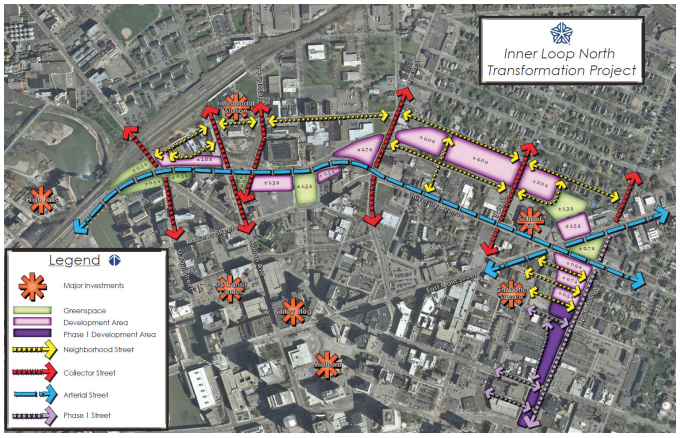
***ROC the Riverway*** is a bold vision for enhancing access to and the vibrancy of the city's Genesee riverfront. ROC the Riverway seeks to implement multimodal access improvements on both sides of the river and bring more activity to its banks. Key Phase 1 investments include new and upgraded parks and trails all along the river and the start of the process for removing vehicular traffic from the Broad Street Bridge.

The ***Inner Loop East*** project recently converted a section of the Inner Loop, an expressway that rings downtown Rochester, between Chestnut Street and Charlotte Street into a traditional urban street. This helps reconnect the downtown street grid with surrounding city neighborhoods, and opens up land for development. The City is now planning for the potential removal of the Inner Loop's northern segment. The City will initiate the scoping phase in 2019.

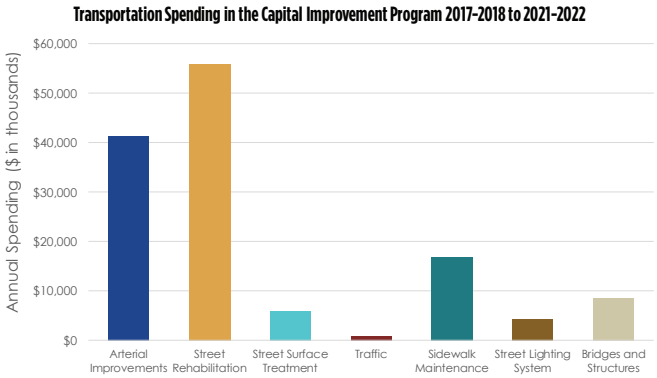




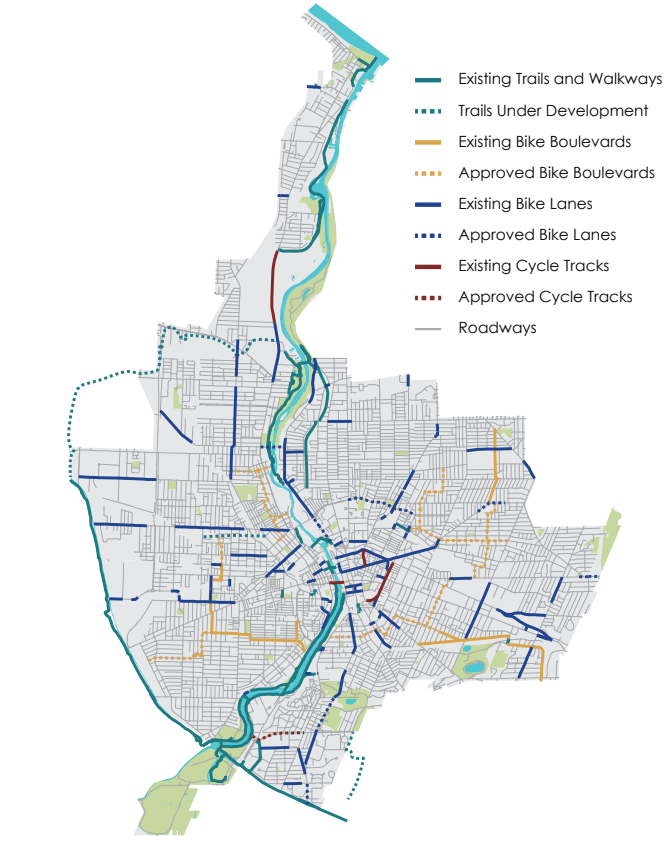
Inner Loop East Project



The City's ***Capital Improvement Program*** also knits together neighborhoods through street improvements that prioritize safety for people walking and biking in 2018. $134 million, or 30 percent of expenditures listed in the program, was allocated for the reconstruction and rehabilitation of transportation facilities. Many of the street projects funded by this allocation create safer conditions for people who walk and bike. Corridors such as Broadway, South Avenue, Dewey Avenue, Mount Hope Avenue, and Seneca Avenue will be reconstructed as part of the CIP.




Funding from the City, through the Capital Improvement Program or other sources, may also be used to fund ongoing and planned expansions to the non-motorized transportation network. These include multi-use trails that separate bicycles and pedestrians from vehicles, on-street bicycle facilities (including dedicated bike lanes, bike boulevards on lower volume roads, and protected cycle tracks), and sidewalk replacements.




Sources: Genesee Transportation Council, City of Rochester

# CHALLENGES AND OPPORTUNITIES

# FOCUS AREAS

**In order to develop a comprehensive and long-term approach to planning Rochester's transportation network, the city's transportation system must be understood as a sum of its component parts. This plan is structured around five focus areas, allowing for more granular level of analysis of key components of the transportation system in order to understand system-wide challenges and opportunities. These focus areas, outlined below, reflect transportation planning priorities and guide the development of the proposed actions and outcomes of this plan.**

## WALKABLE CITY

Rochester has a relatively extensive sidewalk network, but is focused on enhancing the comfort, safety, and accessibility of the pedestrian realm at key locations. This area seeks to quantify pedestrian demand and the quality of the pedestrian realm to work towards safer walking conditions that prevent fatalities and injuries.

## BIKEABLE CITY

Most Rochester residents live within a moderate distance of commercial or employment centers. The development of quality bike facilities could make short bike trips to these destinations more attractive. Rochester has made progress towards improving bikeability in the city, but does not yet have a fully connected, safe, and comfortable bike network.

## TRANSIT READY CITY

Regional Transit Service (RTS), Rochester's transit operator, is currently redesigning Rochester's bus system to provide high-frequency, high-capacity service on key corridors. The City wishes to support the improvement of transit by planning for transit-supportive development, and working to address last-mile issues.

## GOODS MOVEMENT/EMERGENCY SERVICES

As online retail has grown, so too has the number of trucks on Rochester's streets. The City seeks to plan for truck traffic in a way that balances land-use, safety, and transportation goals with businesses' needs, likely involving designated loading zones and delivery regulations. Street designs must also ensure emergency access

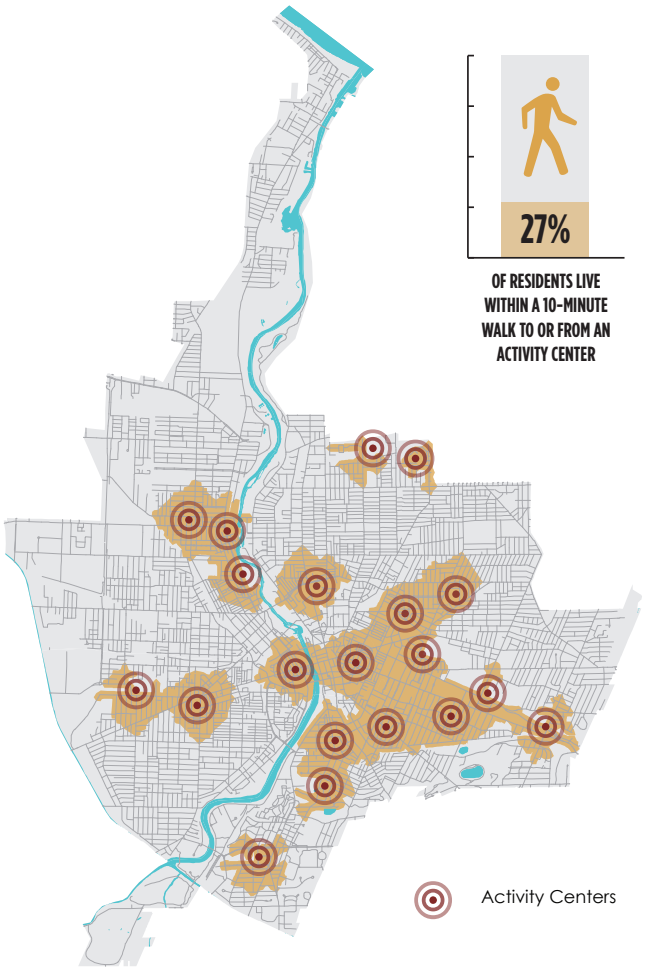
## TRANSPORTATION DEMAND MANAGEMENT

Development is increasing in Rochester, amplifying parking and congestion concerns. The City intends to maximize the utility of its existing parking and roadway capacity rather than build new infrastructure by incentivizing alternatives to driving alone.

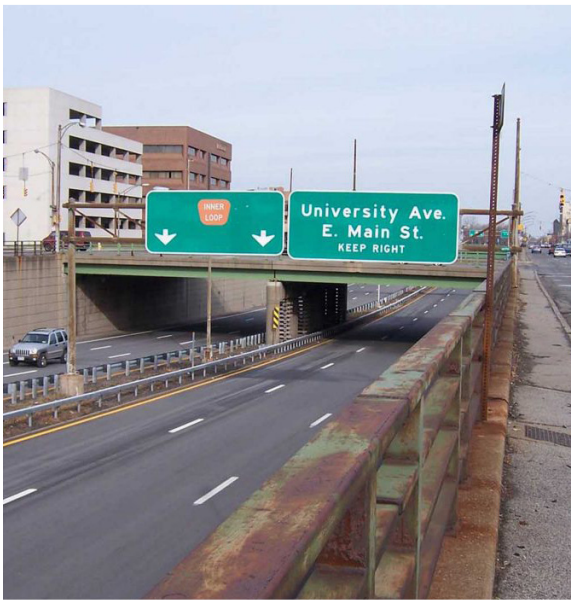
## Most Rochester residents live too far from destinations to walk to them conveniently.

Only one-quarter of Rochester residents are able to walk to essential services or activity centers in ten minutes or less. Demand analysis shows expected areas of high pedestrian activity exist further from activity centers while public outreach indicates that perceived distance is one of the biggest factors discouraging more people from walking.

Despite this challenge, Rochester has the opportunity to substantially increase the rate of walking to major destinations. Fully two-thirds of residents live within a 20-minute walk of those same activity centers. Rochester can encourage walkers to go the literal 'extra mile' by improving the pedestrian environment, making walking a more rewarding and comfortable experience. Rochester can also plan for future infill development that will increase the percentage of residents who can reach destinations via shorter walks. It has already done so successfully in its redevelopment of the Inner Loop.




Inner Loop before 2014




Source: Stantec

Inner Loop after transformation (2018)

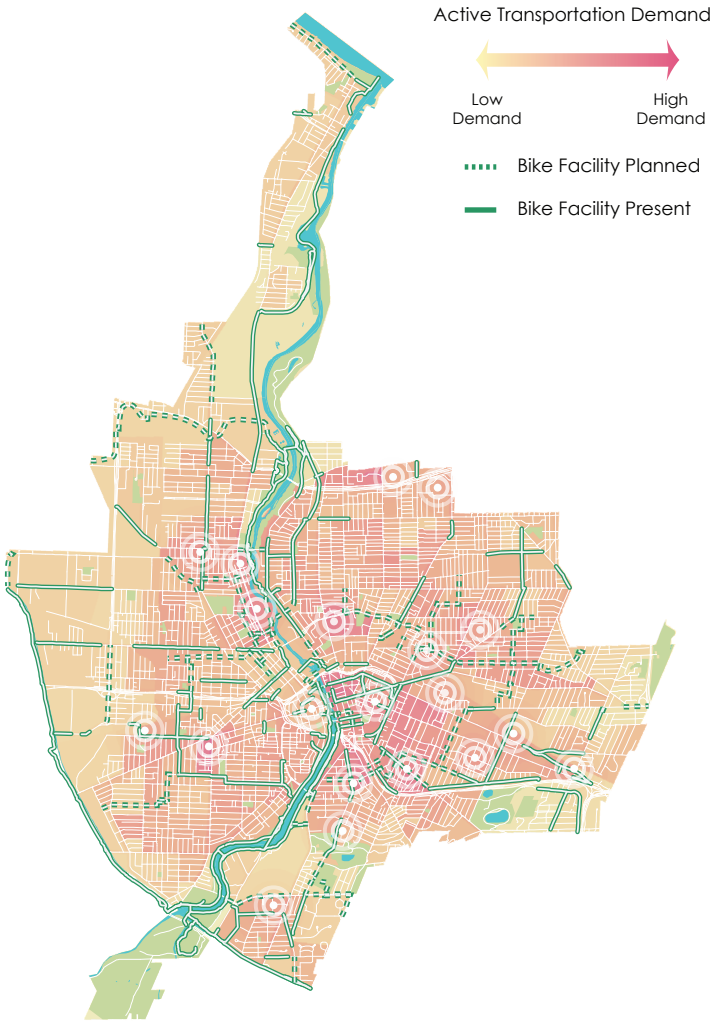
Source: Stantec

## Rochester's bicycle network is not yet fully connected or safe enough to encourage many people to bike.

Three-quarters of Rochester residents live within a ten-minute bike ride of an activity center but relatively few routinely bike to major destinations. Only around one percent of residents commute by bike.

Public outreach indicates that residents view the bicycling environment as hostile due to dangerous driving behaviors and high traffic volumes. While the City has built portions of a bicycle network, there are many gaps that limit the utility of the network.

Rochester can improve its bicycle network by filling in gaps in connectivity along existing bicycle corridors, prioritizing the development of bicycle infrastructure in areas where people need it most, and by adding traffic calming and safety features along the bike network as it is expanded. As much as possible, bike facilities should be upgraded to protected bike lanes and infrastructure should extend through intersections.



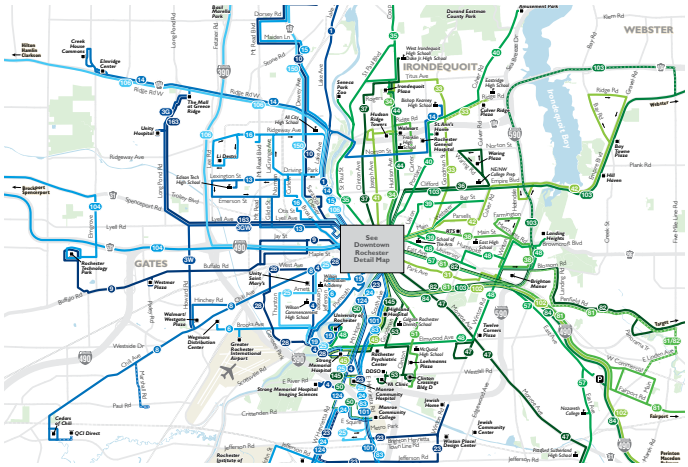

Sources: Genesee Transportation Council, City of Rochester

## The frequency and span of transit service is inconsistent, making transit uncompetitive.

Rochester's RTS transit system does well in terms of ridership and cost performance relative to peer cities in the US. However, long wait times and inconvenient service spans make riding transit less appealing than it could be for many potential customers. Furthermore, the current configuration of routes concentrates on service to and from downtown Rochester, making it difficult for customers to transfer between services in outlying areas. The difficulty of transferring limits the utility of the overall network to customers wishing to make trips to destinations other than those along their immediate route.

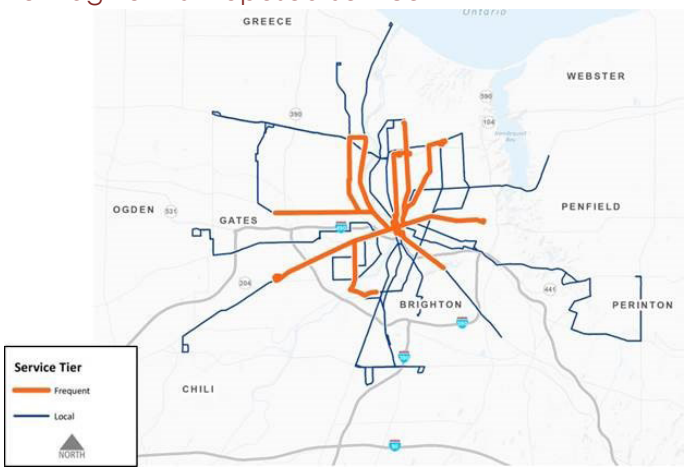
Rochester has, and is seizing, the opportunity to reallocate service from under performing routes to high priority corridors. By increasing service frequencies and making service along such corridors more direct, RTS will enable riders to use the transit system independent of any schedule, and will increase the ease of transferring between routes by reducing wait times. The efficacy of this future network can be further improved by developing planned transfer stations in outer areas of the city. The condition of bus stops and access to them varies widely across the city. As RTS creates more attractive service, the City should strive to ensure travellers have safe access and convenient amenities at key locations.

Current RTS Service




Source: RTS

Reimagine RTS Proposed Service

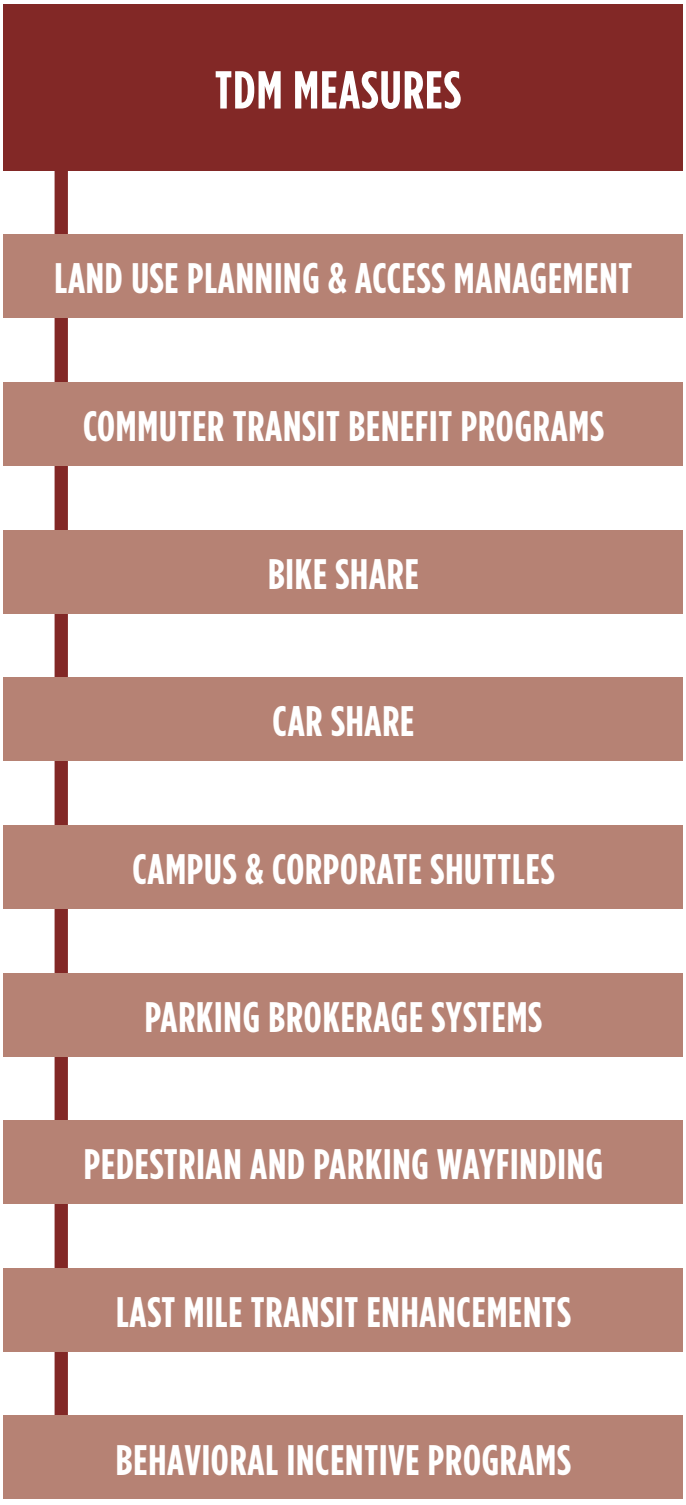



Source: RTS

## The City of Rochester does not have any transportation demand management programs in place to reduce the amount of driving.

The City of Rochester does not currently have any implemented TDM policies, nor any TDM requirements in the City's municipal code. The City Code does include some TDM-supportive policies, namely, exemptions for parking minimums in certain districts and bike parking requirements for certain land uses. This lack of substantial TDM programs means that Rochester falls behind peer cities in taking steps to reduce the rate of driving, and is not managing its transportation and parking infrastructure as efficiently as it could.

A citywide TDM policy, and area-specific plans, would help lay the groundwork for more meaningful efforts to reduce driving and shift trips to other modes of transportation. The City, and other local governments, could create a transportation management association (TMA) to oversee TDM programs on a municipal or regional scale. A TMA could help facilitate commuter benefit programs, parking management programs, wayfinding improvements, and even direct provision of alternative transportation services. Ultimately, municipal TDM leadership would help Rochester make more efficient use of its existing transportation infrastructure, and help shift transportation demand to more efficient, sustainable, and safe modes.



## Freight and emergency services transportation are not well considered in Rochester's transportation planning process.

The movement of goods and emergency vehicles is not prioritized in transportation planning processes in Rochester, and receives little attention in the City's capital improvement program. This lack of attention limits the allocation of funding towards projects and measures that enhance the transportation network for freight and emergency service vehicles.

In order to improve upon this situation, and improve the transportation system for all users including freight and emergency service vehicles, the City should develop planning frameworks that incorporate these two additional categories of transportation. Planning efforts should assess transportation infrastructure projects against criteria that evaluate their benefits to freight and emergency service vehicle movement, as well as how those projects mitigate the negative environmental and safety impacts of large vehicles often used for freight or emergency services. As part of this improvement, Rochester could consider classifying streets for freight or emergency service vehicle movement and could begin monitoring the impacts of large freight and emergency service vehicles.


Source: T.Y. Lin International


Source: Jefrey Arnold via Flickr

# DESIRED OUTCOMES AND ACTIONS

# WALKABLE CITY

Rochester is already a walkable city in that it has an extensive sidewalk network covering much of the city. It is not however, a city in which walking is easy, comfortable, or convenient for a majority of residents. Very few Rochester residents walk to work or to basic services because often their destinations are far away by foot, or the pedestrian environment is compromised in terms of comfort or safety.

In order to become a highly walkable city, Rochester must achieve three key outcomes. It must put into place policies that prioritize pedestrian activity, it must develop means to understand and prioritize the need for pedestrian infrastructure improvements, and it must actively build infrastructure to create a high-quality pedestrian environment. The actions described below can help Rochester improve its pedestrian environment and make walking a more integral part of its transportation system.

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| **WALKABLE CITY OUTCOME 1:** | City policies that further emphasize pedestrian safety, connectivity, balance between modes, and built environment best practices that encourage walking. |
| **ACTION 1.1** | Match the design speeds of reconstructed streets to their posted speeds, especially where road diets have already been applied via striping. Modify street design standards to achieve lower vehicular traffic speeds. |
| **ACTION 1.2** | Create a winter maintenance policy that coordinates sidewalk and roadway snow removal or better defines and enforces sidewalk snow clearing responsibility. Options and considerations include: |
| 1.2.1 | Replacing contracted sidewalk plowing with a municipal operation that responds to all snow events. |
| 1.2.2 | Creating a sidewalk hierarchy to limit operational scope. Define classes of sidewalk, prioritize a clearance sequence, and define minimum service levels and clearance time frames for each class. |
| **ACTION 1.3** | Create a Unified Development Ordinance to harmonize street design and building design standards and to create a more appealing and convenient pedestrian environment. |
| **ACTION 1.4** | Create an active transportation program as part of Transportation Demand Management efforts to streamline funding allocation to pedestrian projects. |
| **ACTION 1.5** | Replace alternate side parking policy to allow for parked cars on both sides of the street to act as traffic calming elements. |

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| **WALKABLE CITY OUTCOME 2:** | An effective programmatic approach to understanding the highest-need locations for pedestrian safety and amenity improvements. |
| **ACTION 2.1** | Conduct additional intersection PLOS analyses to identify worst pedestrian delays and highest likely exposure to collisions due to non-compliance. |
| 2.1.1 | Follow up with pedestrian counts to complete the pedestrian network database and to help identify specific improvement locations. |
| 2.1.2 | Work with Monroe County DOT to implement LPI where not already implemented and where PLOS level is Grade D or lower. |
| 2.1.3 | Reconfigure identified intersections to align crosswalks with state standards, reduce crossing distances, and reduce turning speeds by tightening curb radii. |
| **ACTION 2.2** | Conduct a pedestrian environmental quality and facility condition assessment as an initial input to a pedestrian network database. |
| **ACTION 2.3** | Perform pedestrian volume and flow direction counts to increase understanding of pedestrian needs. |
| **WALKABLE CITY OUTCOME 3:** | A quality pedestrian environment achieved through implemented pedestrian safety, wayfinding, and amenity improvements. |
| **ACTION 3.1** | Install accessible RRFBs to facilitate mid-block crossing along long intervals with no controlled intersections, and where appropriate criteria are met. |
| 3.1.1 | Consider locations experiencing high traffic volume and/or large number of lanes on surface streets where the interval between signalized intersections exceeds 1,000 feet for appropriateness screening. |
| **ACTION 3.2** | Install pedestrian improvements, prioritized based on areas of low car ownership and/or high pedestrian traffic, spatial concentration of disabled and elderly populations, and conflict points at expressway interchanges. |
| 3.2.1 | High-value implementations include curb ramp redesign emphasizing accessibility, street furniture, crosswalk visibility, raised crosswalk or raised intersection treatments. |
| **ACTION 3.3** | Expand the pedestrian wayfinding system to simplify navigation on foot within and between neighborhoods. |

# BIKEABLE CITY

In the past decade, Rochester has begun to develop a safe and convenient bicycle network. In that time, the city has also launched a bike-share system and made efforts to improve bicycling conditions. The bicycle network however, is still underdeveloped, and bicycle conditions are uncomfortable and unsafe in many parts of the city, discouraging widespread bicycle use. In order to become a bikeable city, Rochester must create an extensive and connected bike network that helps people on bikes overcome conflict points, ensures their safety, and helps build the culture of bicycling in the city.

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| **BIKEABLE CITY OUTCOME 1:** | Realization of a fully connected bicycle network; one that connects more home locations and activity centers. |
| **ACTION 1.1** | Expand the dedicated bicycle facility network using the needs assessment methodology described in the Bikeable City Focus Area Report |
| 1.1.1 | Upgrade sharrows to dedicated lanes in locations that would link existing portions of the network. This may require curb relocation to achieve the desired roadway width. Reference the Bikeable City Focus Area Report to identify highest priority upgrade locations. |
| 1.1.2 | Fill in short gaps between existing facilities. Reference the Bikeable City Focus Area Report to identify highest priority upgrade locations. |
| 1.1.3 | Reconsider previously planned facility implementations that do not overlap the highest or secondary priority implementation locations in favor of newly identified highest priority upgrades. |
| 1.1.4 | Further define the low-stress bicycle network. |
| 1.1.5 | Revisit previously implemented bicycle facilities and consider upgrades to match more recent standards. |
| 1.1.6 | Knit together fragmented portions of the Genesee Riverway Trail in Northwest Rochester. Complete bridge connections over the Genesee River north of Downtown. |
| 1.1.7 | Prioritize the projects identified above when located in low income communities with low car ownership, a high youth or senior population percentage, and near activity centers. |
| **ACTION 1.2** | Determine the optimal routing of a primary east-west shared-use path to complement the currently emphasized north-south Genesee Riverway Trail. Integrate this proposed route with connections proposed as part of ROC the Riverway as well as other trail and roadway configuration projects. |

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| **BIKEABLE CITY OUTCOME 2:** | A fully integrated network that responds effectively to conflict points and temporary disruptions. |
| **ACTION 2.1** | Create a closure/ construction interference detour policy that specifies maximum deviation, signage standards, potential necessary roadway provisions, and ability to repurpose parking lanes when bicycle facilities are temporarily interrupted. |
| **BIKEABLE CITY OUTCOME 3:** | Context-suited facilities with safety elements and amenities appropriate to unique cycling environments. |
| **ACTION 3.1** | Adopt street design policies intended to reduce standard design speed to match posted speed limits. |
| **ACTION 3.2** | Install and maintain rest rooms/water fountains/repair stations along trails. |
| **ACTION 3.3** | Replicate the St. Paul Street railroad underpass lighting scheme in other railroad underpasses featuring bicycling facilities. |
| **BIKEABLE CITY OUTCOME 4:** | Improved adoption and acceptance of cycling through best practice marketing, wayfinding, maintenance, enforcement, and performance measurement efforts. |
| **ACTION 4.1** | Continue to participate in regional planning efforts to increase connectivity in the regional road, transit, and trail networks. |
| **ACTION 4.3** | Create a bicycle facility maintenance policy that goes beyond winterization to include restriping and pooling water/drainage issues, which will require coordination with Monroe County. |
| **ACTION 4.4** | Make bicycling education an element of the Rochester City School District curriculum, including vehicle awareness training for riding on unmarked city streets. |
| **ACTION 4.5** | Create a bicycle citizen advisory committee to serve as a primary stakeholder resource for City planning efforts and a bicycle crimes unit within the RPD to more actively prosecute bicycle thefts. |
| **ACTION 4.6** | Introduce and employ a notification program that allows riders to dynamically report conflicts such as unmitigated vehicle parking or construction in bike lanes. |

# TRANSIT READY CITY

Rochester's transit system already outperforms those in many peer cities, but the overall rate of transit ridership in the city remains relatively low. For many people, the limited service span or infrequency of service make transit uncompetitive with driving.

Rochester and RTS, the transit operator, are undertaking major efforts to redesign the transit system with a focus on efficiency and connectivity. In order to build on this effort, Rochester must also improve the transit customer experience, support efficient operations with dedicated transit infrastructure, and better enable development that supports transit use.

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| **TRANSIT READY CITY OUTCOME 1:** | Direct involvement in the bus station and stop improvement process as the primary entity responsible for the public right-of-way. |
| **ACTION 1.1** | Working with RTS, develop a stop hierarchy including an amenity checklist and universal design standards. |
| **ACTION 1.2** | Help RTS to identify options for Transfer Point installation within the proposed new network. Note corridors where transit-supportive development potential is high and reference locations listed in the Transit Ready City Focus Area Report. |
| **ACTION 1.3** | Continue to support RTS' goal to convert a portion of the Mortimer Street Garage into an improved extension of the Transit Center focusing on connections to non-fixed route mobility services. |
| **TRANSIT READY CITY OUTCOME 2:** | Physical facilities and street designs that support the transit system and planned regional transit investments. |
| **ACTION 2.1** | Assess locations along the frequent network where right-of-way treatments such as curb extensions, bus turn outs, transit lanes, and queue jumps would have the greatest positive effect for transit riders in terms of safety as well as travel delay. |
| **ACTION 2.2** | Prioritize Capital Improvement Program investments along transit-supportive corridors. |
| **ACTION 2.3** | Assess technical and capital requirements of providing transit signal priority with interconnected traffic controllers and vehicle detection. Work with RTS to determine locations where transit signal priority implementation has the greatest potential benefit for operations. |

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| **ACTION 2.4** | Accommodate bus layover and staging areas by reallocating curb space authority, permitting bus turnouts, and/or assisting with on-site driver and rider amenities. Reference potential priority locations listed in the Transit Ready City Focus Area Report. |
| **ACTION 2.5** | Compare the locations of current bikeshare stations with the proposed locations of enhanced stops and transfer points. Subsequently add stations to the bikeshare network where mismatches between these intermodal connections occur. |
| **ACTION 2.6** | Assume responsibility for snow removal at bus stops within the city, especially those in frequent use by the elderly or disabled. Consider an adoption program similar to fire hydrant adoption to ensure that stops are kept clear of snow and remain accessible. |
| **ACTION 2.7** | Determine the process necessary to support private operators with proposed right-of-way and stop improvements. |
| **TRANSIT READY CITY OUTCOME 3:** | Transit supportive development along priority transit corridors built in a manner that enables and encourages transit use by future residents, customers, or visitors. |
| **ACTION 3.1** | Update the City's zoning code to support higher-density mixed-use transit supportive development along identified priority transit corridors. Use the Rochester Street Design Guide as a basis for a Unified Development Ordinance that intertwines zoning and right-of-way policy in a complementary and context-sensitive fashion. |

# GOODS MOVEMENT/EMERGENCY SERVICES

Like many cities, Rochester does not focus significantly on the movement of freight or emergency service vehicles in its transportation planning processes. Relatively little is known about the needs of these unique types of transportation, which typically operate large vehicles. Planning for these non-person trips is nonetheless critical to the social and economic vitality of the Rochester area.

In order to ensure that its transportation system works well for goods movement and emergency services, Rochester must work to proactively assess and plan for the needs of these types of transportation. It is also important that the city balance the needs of the freight industry and emergency service responders with the safety, connectivity, environmental, and quality-of-life concerns of the entire transportation system.

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| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 1:** | Freight carrying infrastructure that is enhanced proactively, rather than due to capacity constraints |
| **ACTION 1.1** | Implement context-sensitive improvements to support economic development |
| **ACTION 1.2** | Further incorporate freight & emergency services into capital programming criteria |
| **ACTION 1.3** | Resolve existing bridge clearance issues |
| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 2:** | A better understanding of freight movement and staging demands at multiple shipment size levels |
| **ACTION 2.1** | Track traffic patterns to determine need for delivery windows/ restrictions |
| **ACTION 2.2** | Track citywide truck movements to determine need for designated truck routes |
| **ACTION 2.3** | Monitor complaints to determine need for designated truck parking facilities |
| **ACTION 2.4** | Promote the deployment and use of freight-specific Intelligent Transportation Systems components |

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| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 3:** | A freight delivery system that is as safe as it is efficient due to operator emphasis on safe practices |
| **ACTION 3.1** | Develop informational resources to increase safe operation of large vehicles and other modes |
| **ACTION 3.2** | Identify areas in need of increased enforcement of speed limit, parking, and idling laws |
| **ACTION 3.3** | Inventory and monitor maintenance of at-grade rail crossings |
| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 4:** | Enhanced corridors for regional travel and better connections to regional networks and destinations. |
| **ACTION 4.1** | Define freight roadway and emergency response corridor classifications |
| **ACTION 4.2** | Identify opportunities that meet both city street design principles and the International Fire Code |
| **ACTION 4.3** | Eliminate potential conflicts with bicycle lanes & transit stops |
| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 5:** | Freight movement and emergency response systems that recognize the importance of, and strive for, increased sustainability |
| **ACTION 5.1** | Assist shippers and carriers in transitioning to cleaner vehicle fleets |
| **ACTION 5.2** | Assess opportunities for the Rochester Fire Department to utilize smaller, safer fire engines and fire trucks |
| **ACTION 5.3** | Support pick-ups and deliveries by bicycles |
| **URBAN GOODS MOVEMENT/EMERGENCY SERVICE OUTCOME 6:** | A freight movement and emergency response system that is managed through understanding, respecting the needs of operators and residents alike |
| **ACTION 6.1** | Establish a freight advisory committee |
| **ACTION 6.2** | Work with employers, shippers, and carriers on routing options |
| **ACTION 6.3** | Participate in regional freight planning efforts |
| **ACTION 6.4** | Identify opportunities for city residents in freight-related jobs |

# TRANSPORTATION DEMAND MANAGEMENT

Rochester does not currently implement any TDM policies to reduce the number of drive-alone trips and make better use of its transportation and parking infrastructure. While it lags behind in this aspect of transportation planning, Rochester has the opportunity to use TDM strategies to meet many of its transportation goals. The development of TDM policies can help the City shift travel demand away from driving towards transit, bicycling, and walking, and can help make better use of existing road and parking infrastructure, thereby minimizing the need to invest in costly new infrastructure.

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| **TDM OUTCOME 1:** | | Realization of City mode split goals through a citywide Transportation Demand Management policy that provides clear guidance to areas of the City experiencing constrained parking resources or anticipating development. |
| **ACTION 1.1** | | Develop and adopt citywide and area-specific policies and plans that are measurable and enforceable |
| **ACTION 1.2** | | Revise the municipal zoning code to promote increased density as well as transit-oriented and mixed-use development and link code revisions to any traffic mitigation requirements already found in the code. |
| **ACTION 1.3** | | Create licensing, zoning, and tax incentives to influence travel behavior and the number of car trips through development site selection. |
| **TDM OUTCOME 2:** | | Strong commuter alternatives programs that encourage and reward behavior associated with transportation mode split goals. |
| **ACTION 2.1** | | Directly provide, promote and encourage employers and private facility owners to provide the following commuter programs: |
| | 2.1.1 | Parking cash-out |
| | 2.1.2 | Carpool, rideshare, and ride-matching programs |
| | 2.1.3 | Vanpool program expansion |
| | 2.1.4 | Guaranteed ride home |
| | 2.1.5 | Homebuyer programs |
| | 2.1.6 | Employer shuttles |

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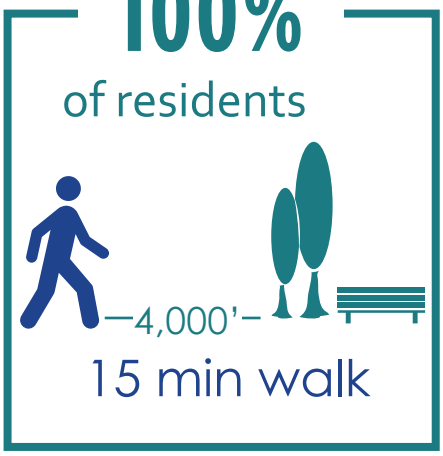
| | 2.1.7 | Pre-tax transit/vanpool passes |
| | 2.1.8 | End-of-trip bicycle amenities |
| **ACTION 2.2** | | Help to create a Transportation Management Association (TMA), leveraging public and private funding sources, to administer enhancements that increase the effectiveness of TDM programs, such as: |
| | 2.2.1 | Standard and guidelines development |
| | 2.2.2 | Coordination and facilitation between employers and public agencies |
| | 2.2.3 | Data sharing and reporting policies |
| | 2.2.4 | Marketing and promotion |
| | 2.2.5 | Wayfinding and multimodal navigation tools |
| | 2.2.6 | Increased program accessibility for the disabled |
| | 2.2.7 | Dynamic parking pricing and shared parking brokerage |
| | 2.2.8 | Consumer incentives to walk, bike, or take transit to popular destinations |
| **ACTION 2.3** | | Create a Mobility Coordinator position to oversee policy initiatives and administer TDM, pedestrian, and cycling programs. |
| **TDM OUTCOME 3:** | | A transportation system that takes advantage of new mobility service providers while maintaining control over their use and their impact on the public realm. |
| **ACTION 3.1** | | Create a transportation technology adoption pipeline to attract new mobility modes while acting as a clearing house with the authority to set terms and conditions on operators. |
| **ACTION 3.2** | | Create a City car share program with a high degree of accessibility options. |
| **ACTION 3.3** | | Install and make available additional charging stations for electric vehicles |

# PERFORMANCE METRICS

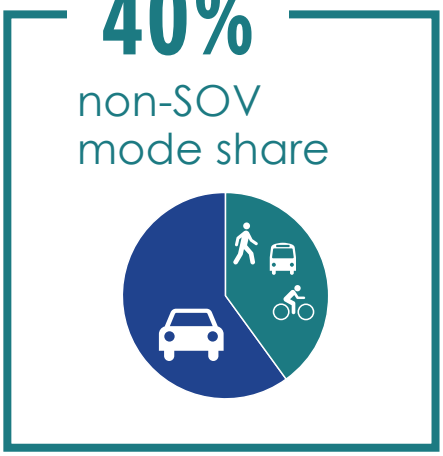
**The Rochester Comprehensive Access and Mobility Plan seeks to provide the framework for a system that serves the values of the community and achieves the desired outcomes of the plan. Attainment of the overall vision will be measured against four key targets to be achieved by 2034.**

- **Create a city of 10-minute neighborhoods** – at least double the percentage of residents who can access a local activity center via a safe 10-minute walk from home (currently 27%).
- **Strive for 100% of residents to be connected to green space**, trails, or open space via a safe 10-minute walk of home (currently 74%).
- **Nearly all (95%) of residents have access to transit** by providing a transit stop within a safe 10-minute walk of each residence (currently 87%).
- **Increase choice, reliability, and efficiency** in travel by achieving at least a 40% non-drive alone mode share for commute to work trips (currently 30%)*.

* American Community Survey Dataset B08301, 2016





# CONCLUSION

The City of Rochester has a proud transportation history, beginning with the development of the Erie Canal in the early 1800s. As the City developed, its residents and businesses relied on a network of streets scaled to make walking, and later cycling and transit, easy and reliable. As the automobile came to dominate in the mid-20th century, streets were widened and eventually transit reduced in deference to sprawling suburban development and driving commuters. Present-day Rochester retains a multimodal transportation system on par with other cities of its size, but that system serves some travelers better than others.

The Comprehensive Access and Mobility Plan focuses attention on providing safe, convenient, affordable choices to all Rochesterians. The Factbook developed to support the Plan highlights the current state of the transportation system – its streets and paths, including walking and biking components, plus its transit service, accommodation for freight and emergency services, and demand management policies. Extensive engagement of stakeholders and the public prioritized outreach to the most vulnerable travelers – youth, the elderly, and people with disabilities. Strong preferences emerged that support continued investment in several areas: streets designed to prioritize walking, biking, and transit while managing vehicle speeds; transit service and stops that are accessible year-round; and policies that support decreasing the need for driving.

Within the five focus areas – Walkable City, Bikeable City, Transit-Ready City, Goods Movement/Emergency Response, and Transportation Demand Management – the plan identifies specific priority projects and programs that when enacted will help Rochester achieve its vision for transportation. A Street Design Guide developed as a component of this plan will, when adopted and implemented, help the City continue to transform its streets to meet the needs of all travelers. Importantly, this plan also recommends specific metrics to evaluate progress toward the vision: residents have 10-minute neighborhoods with access to parks and transit, and a continuing reduction on reliance on driving.

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