STATE OF THE CITY
TRANSPORTATION SYSTEM

FACTBOOK

Believe.

200 Years of Douglass
1818
2018
CITY OF ROCHESTER, N.Y.

Lovely A. Warren, Mayor
Rochester City Council

DRAFT

TABLE OF CONTENTS

PREFACE....iii
REGIONAL RELATIONSHIP....1-1
DEMOGRAPHICS....2-1
TRANSPORTATION NETWORK....3-1
SAFETY....4-1
ACCESS....5-1
PLANNED IMPROVEMENTS....6-1
DATA SOURCES AND METHODLOGY....A-1

PREFACE

A safe, reliable transportation system that serves all users regardless of age, income, or ability is critical to quality of life and economic development. Identifying improvements to the transportation system requires a thorough understanding of the infrastructure and services that comprise it, and how well they provide access to jobs, schools, medical facilities, shopping, and other vital community functions.

The Rochester Comprehensive Access and Mobility Plan Factbook presents a clear, concise, and comprehendible picture of transportation in the city. This document serves as the foundation for working with stakeholders to determine what projects and programs will continue the transformation of the city's transportation network to a better-balanced, more equitable one.

1

REGIONAL RELATIONSHIP

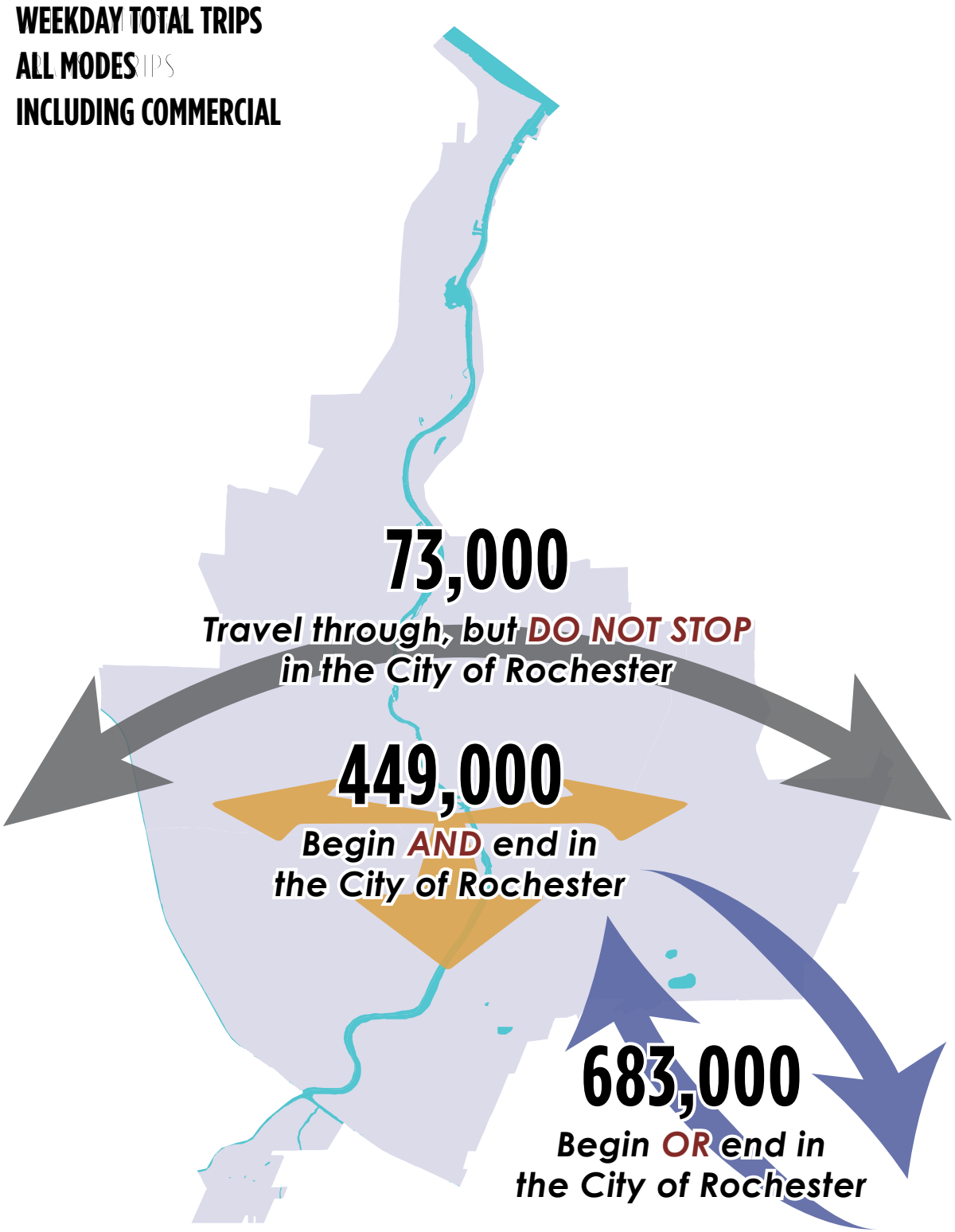
As the primary urban center of the Genesee-Finger Lakes Region, Rochester's transportation system is used extensively by residents and non-residents. Significant numbers of trips start in Rochester but end outside of the City, and vice versa. At the same time, many trips stay within the city.

As in many metropolitan areas, the majority of Rochester residents work far enough from home to make walking impractical. As the regional climate places limitations on cycling, the majority of residents rely on other modes to make their daily commute. Still, commute trips only make up one-sixth of daily travel–other trips are typically shorter than commutes–making walking and biking potentially more attractive and viable options.

ROCHESTER'S PLACE IN THE REGION

Rochester plays a vital role in the regional, state, and national economy. By population, it is the largest municipality in the Genesee-Finger Lakes Region, third largest city in New York State, and the Census-defined metropolitan area is the 51st largest in the country.

City-based businesses employ 25 percent of all workers in the region and represent 30 percent of employers with 500 or more employees in region. Rochester and the region are home to emerging industries including photonics, biotechnology, food and beverage processing, and green technologies.



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

DAILY TRIPS TO, FROM, AND THROUGH ROCHESTER

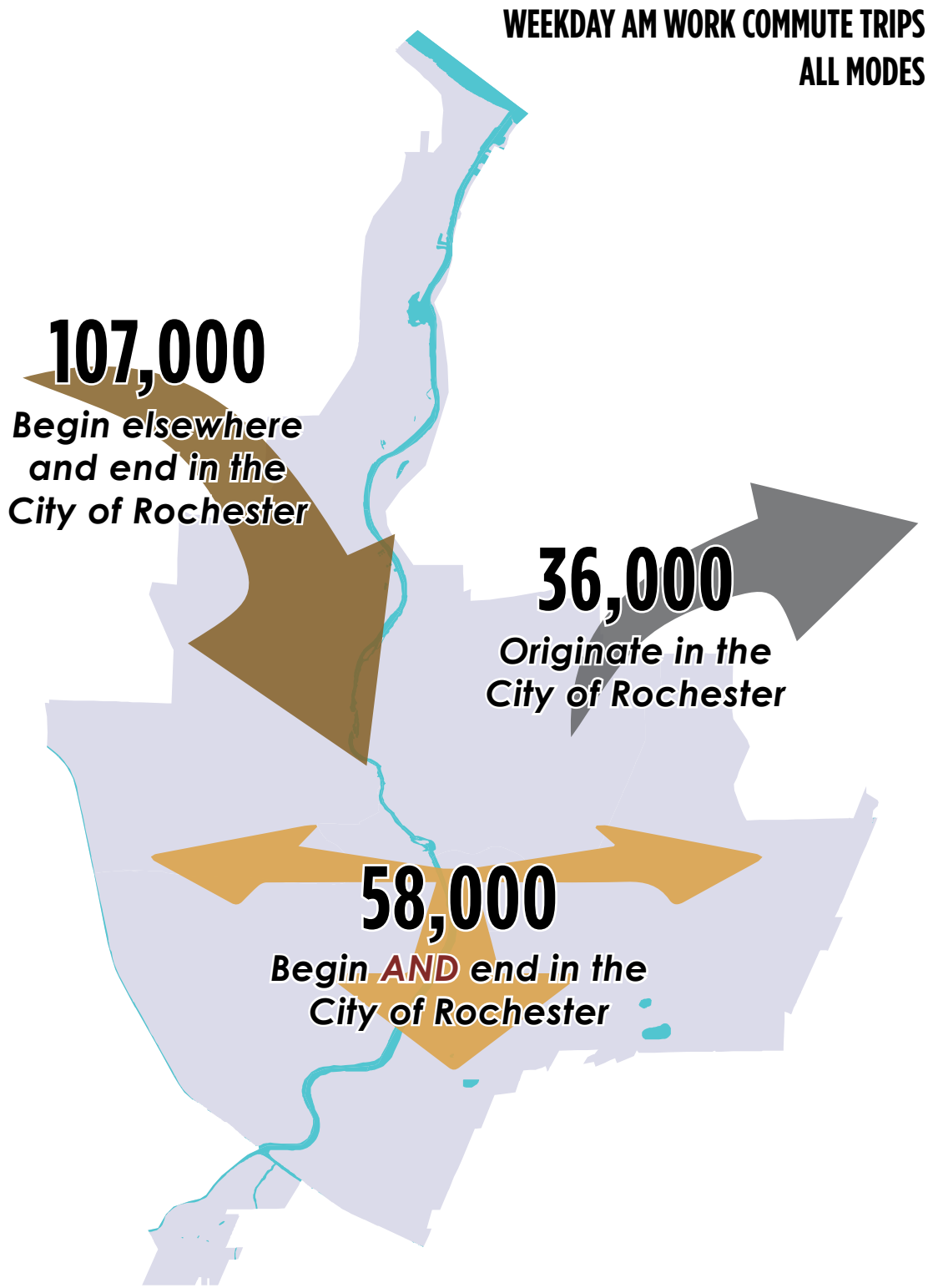
Over 1,200,000 daily trips are made each day in the City of Rochester including people coming to the City, leaving the City, passing through, and those traveling from one part of the city to another.

According to the Genesee Transportation Council's 2011 Household Travel Survey, the most common trip purposes are work-related commutes (37%) and family/personal business (32%).

WORK-RELATED COMMUTE

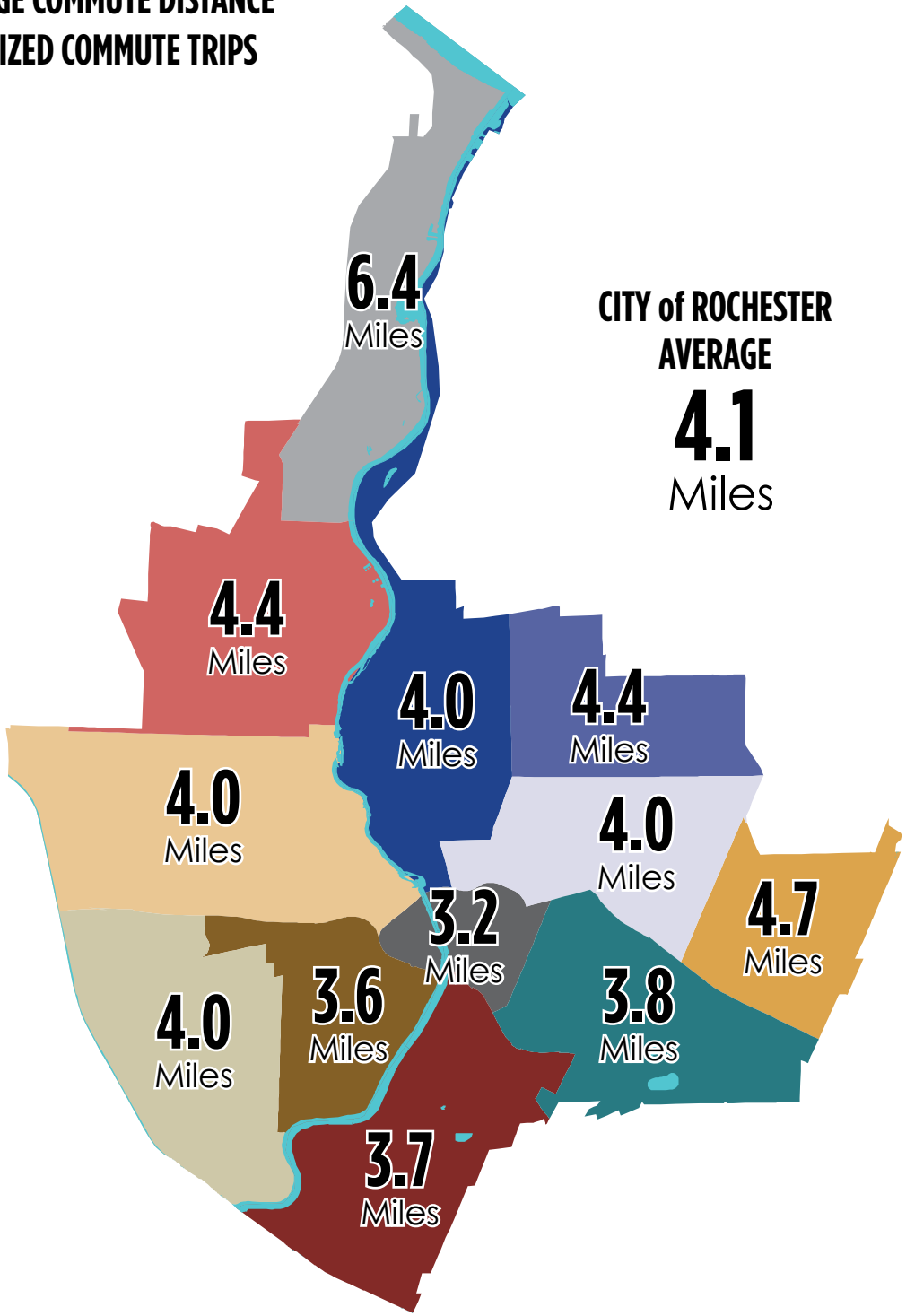
Over 100,000 people commute into Rochester every day, demonstrating the importance of the City's transportation system to the regional economy.

Despite Rochester's role as a regional economic center, 38% of residents' commute trips end outside of the City, demonstrating the existence of a substantial reverse commute pattern.



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

AVERAGE COMMUTE DISTANCE MOTORIZED COMMUTE TRIPS



CITY of ROCHESTER AVERAGE

4.1 Miles

CITY RESIDENT COMMUTE DISTANCES

The average commute to work for a city resident who drives or takes transit to work is over four miles, a distance too long for most practical walking commutes, but viable for a bike commute if the network is safe and attractive.

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

2

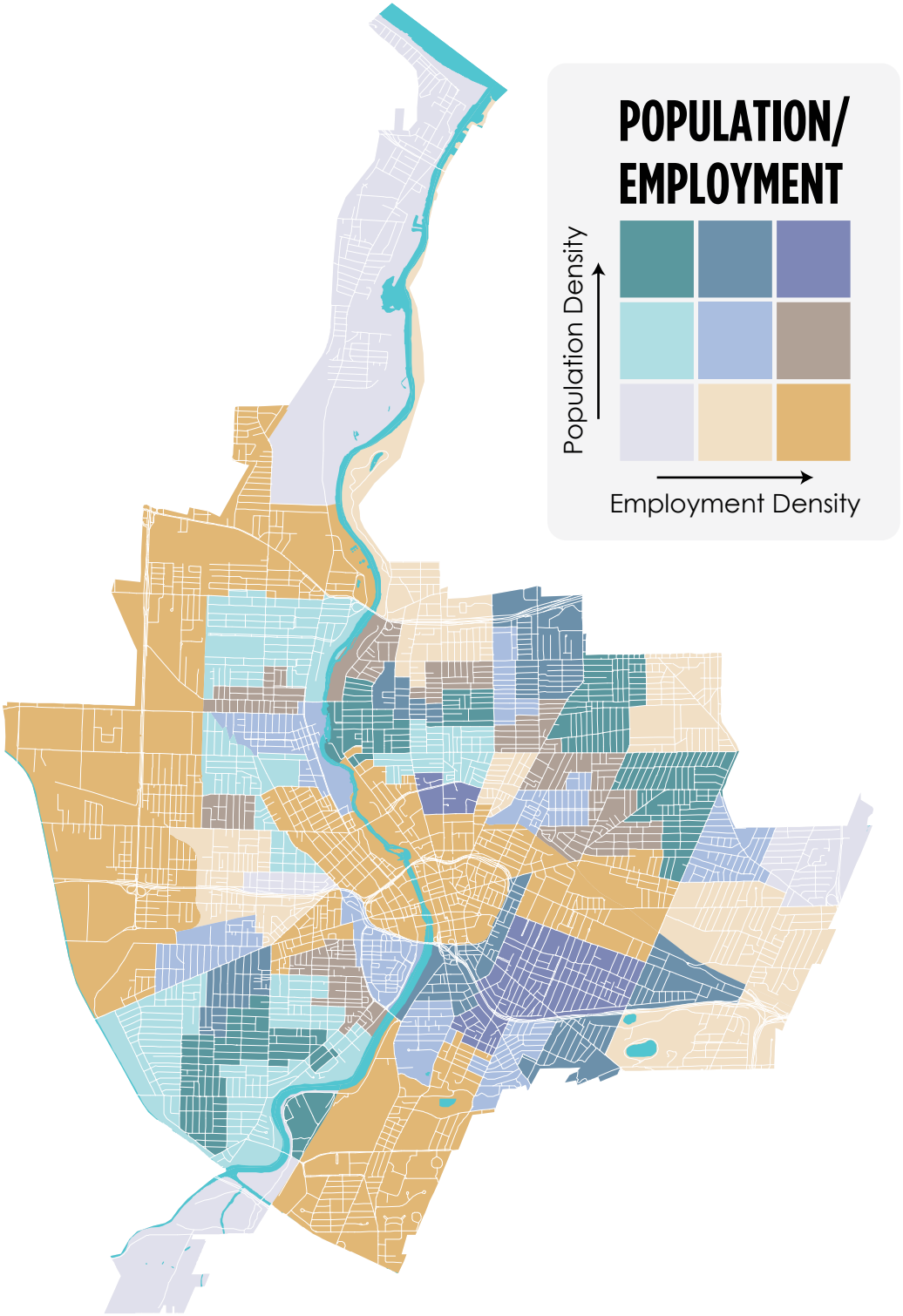
DEMOGRAPHICS

Rochester is home to over 200,000 people and approximately 150,000 jobs. Residents of the city are relatively young. The Millennial generation represents a larger percentage of the City's population than the national average. Residents are primarily low to middle income, highlighting the socioeconomic disparity between the City and other parts of the region. The City's median income is less than half of that of the surrounding county. Most people travel by car, although a sizeable minority of residents rely on other modes of transportation. Over one-quarter of households do not have access to a private vehicle.

POPULATION AND EMPLOYMENT DENSITY

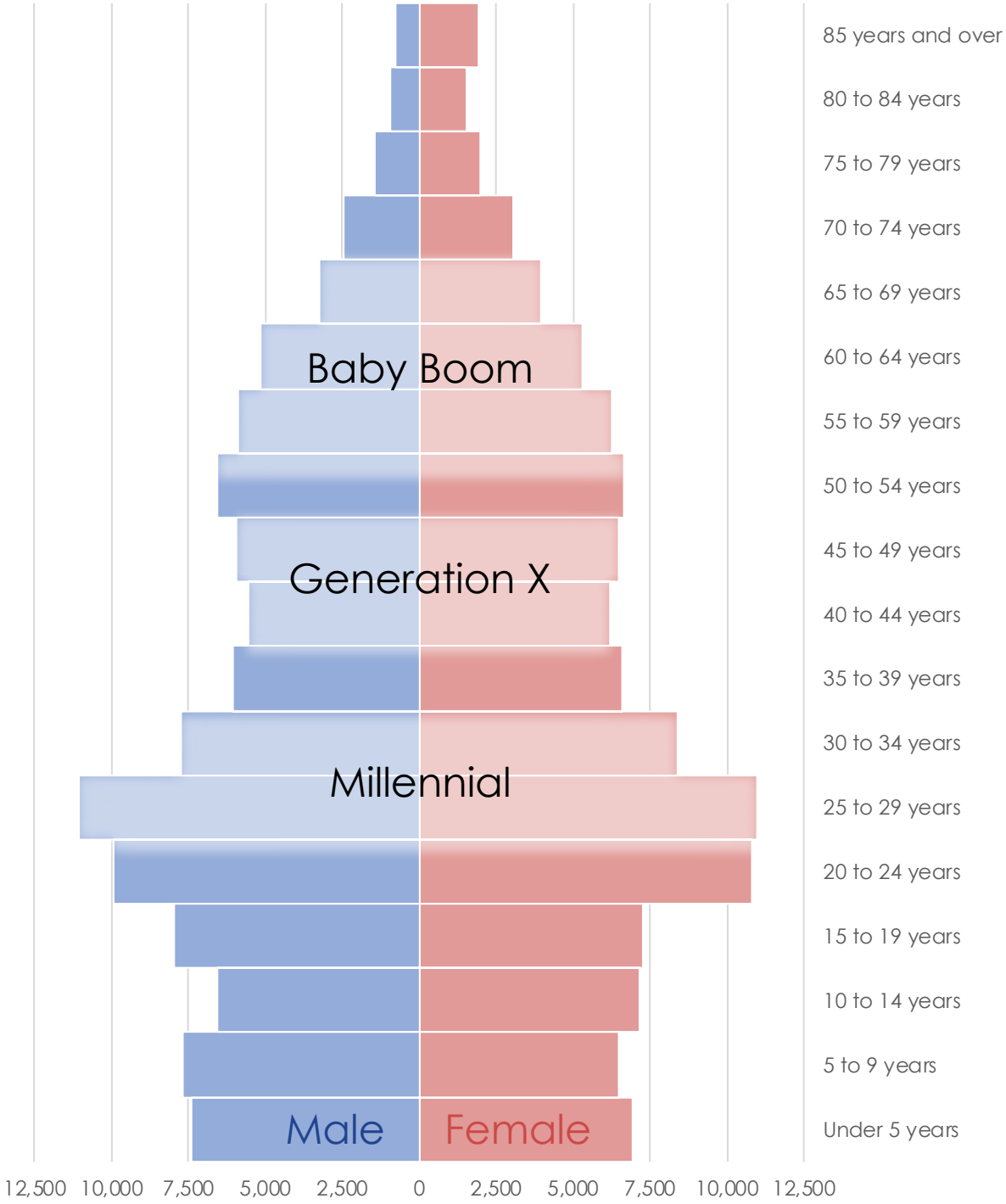
Large areas of Rochester consist of high employment or population densities, though few areas exhibit a strong mix that simplifies primary transportation needs.

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

2016 Total Population: 210,291



Source: American Community Survey Dataset B01001, 2016

AGE, GENDER, AND GENERATIONS

Rochester is a young community. 24% of residents are between 22 and 34 years old compared to the 18% national average.

Residents aged 40 to 69 make up 32% of the city population compared to 37% nationally.

Women outnumber men by approximately 5,400 citywide.

COMMUTE MODE SHARE

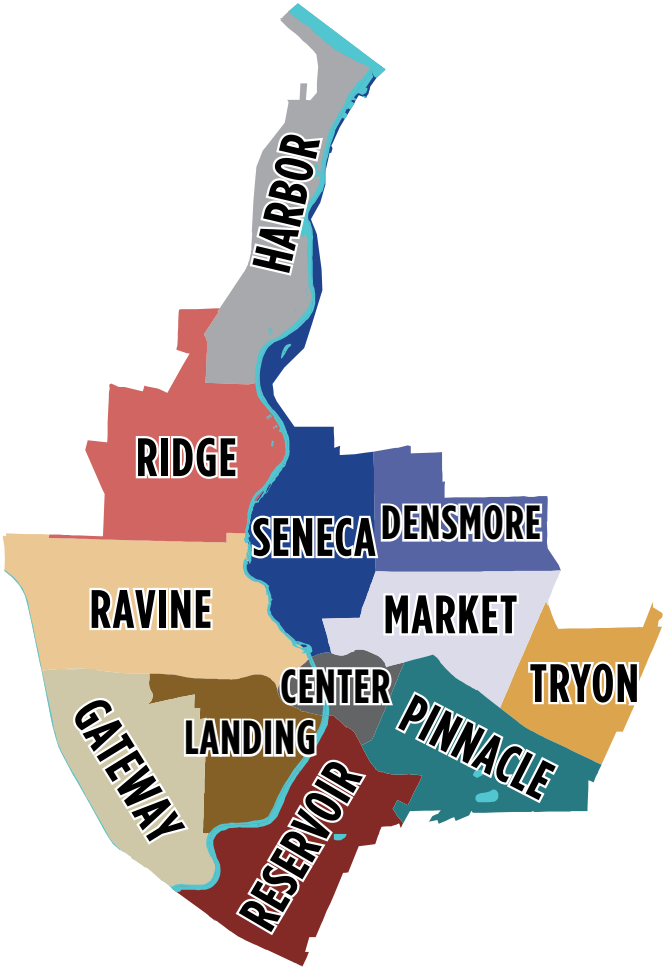
More than 15% of city residents commute via an active transportation mode.

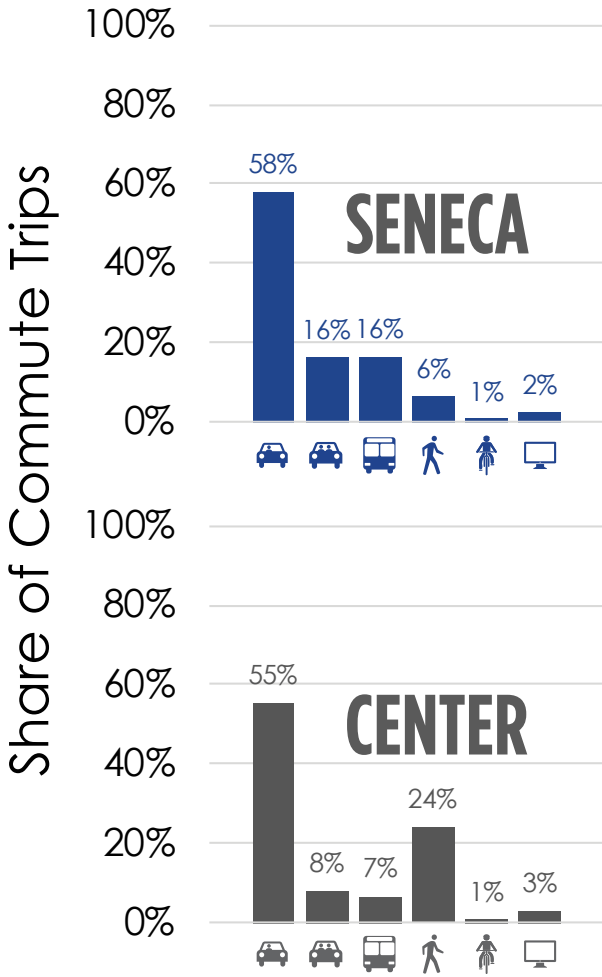
Almost one-quarter of residents who live within divisions that contain the Downtown and University of Rochester Medical Campus employment centers walk to work.

CITY of ROCHESTER

70% DRIVE ALONE

10% CARPOOL



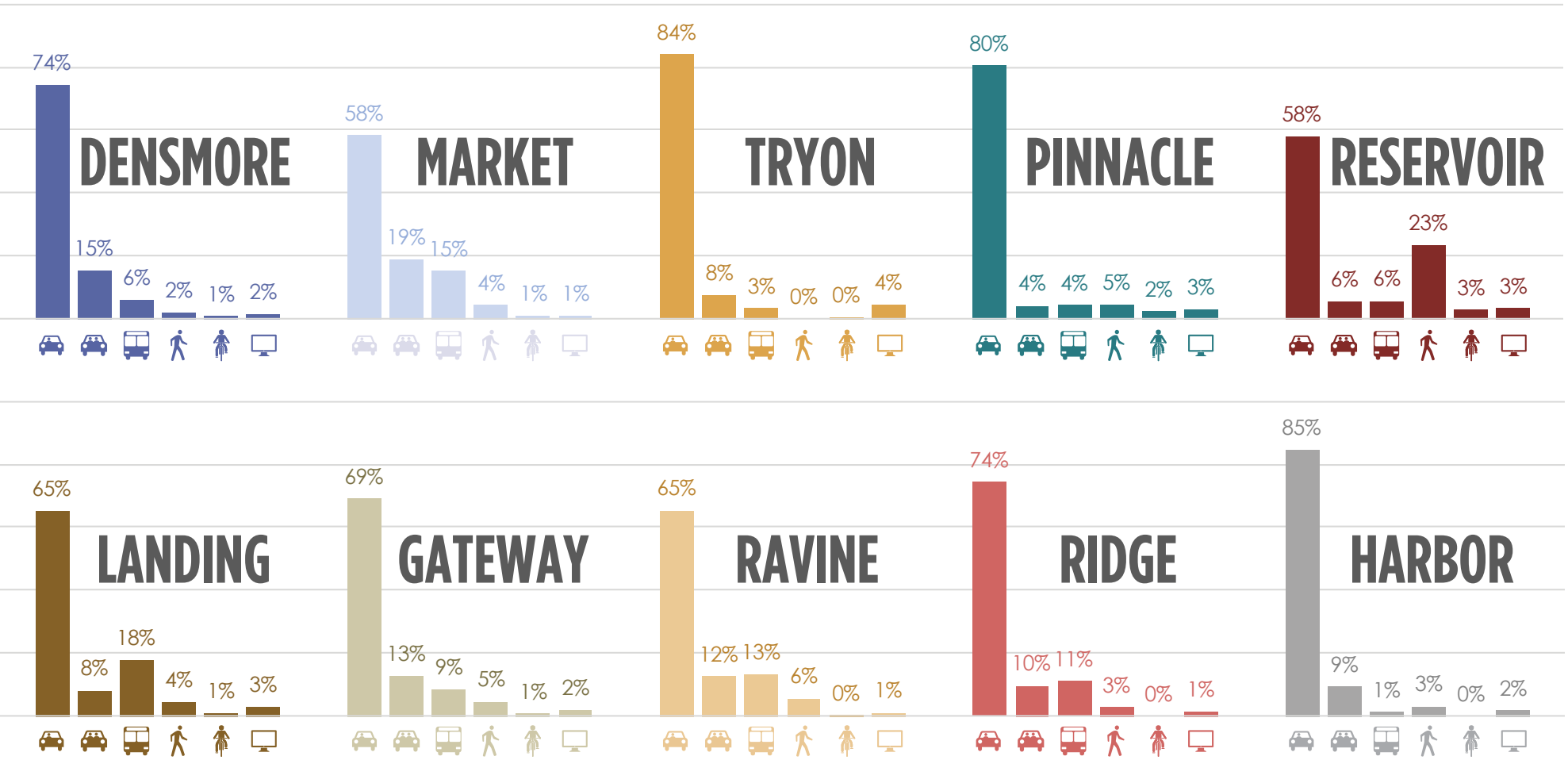


9% BUS

7% WALK

1% BIKE

2% WORK FROM HOME

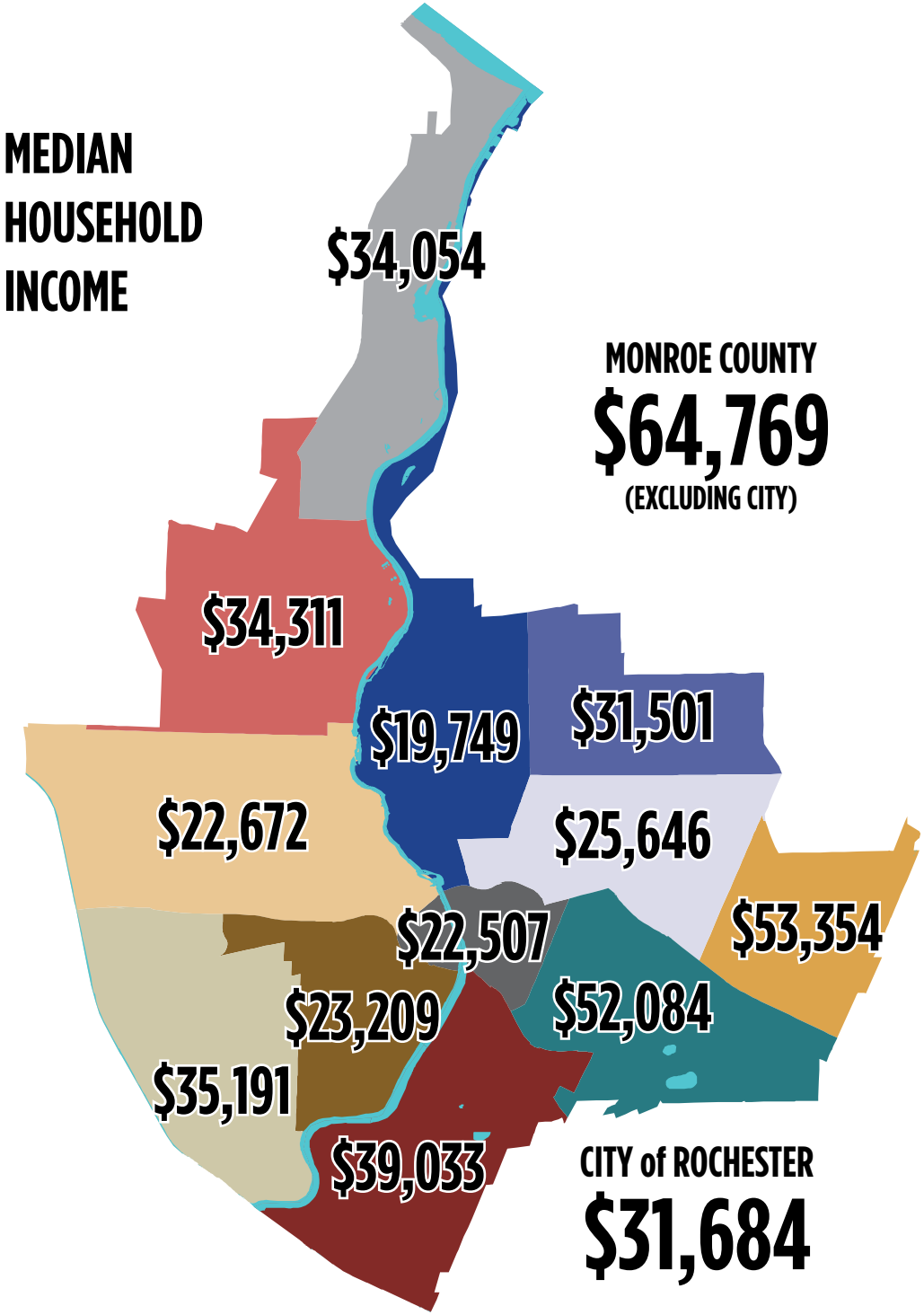


Source: American Community Survey Dataset B08301, 2016

HOUSEHOLD INCOME

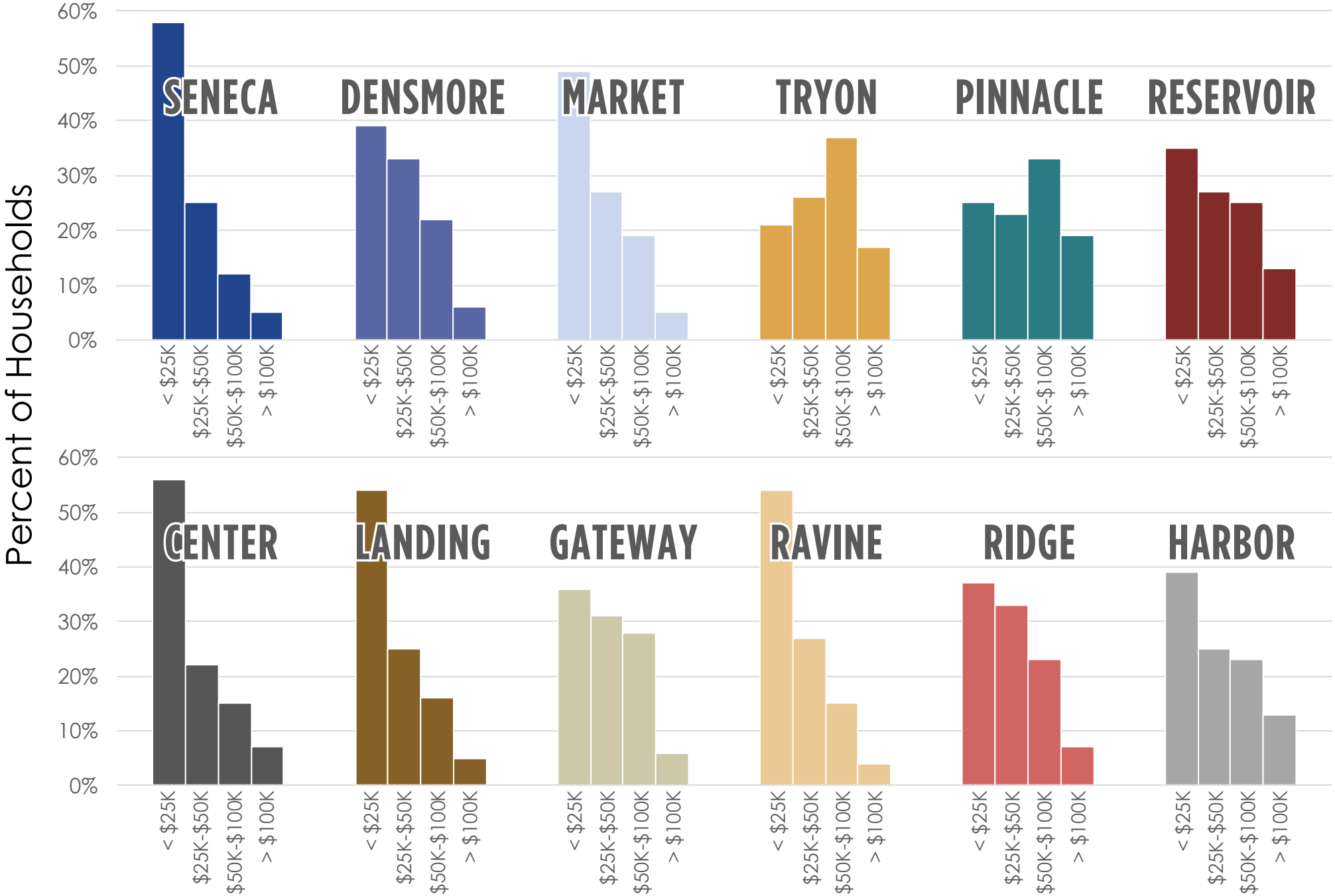
Rochester exhibits lower household incomes than the surrounding suburbs. Transportation directly affects household budgets as the most convenient transportation options often are the most expensive.

Income in the southeast divisions exceeds that of the city as a whole. Downtown and adjacent neighborhoods to the north and west lag far behind the median.



Source: American Community Survey Dataset B01001, 2016

Household Income

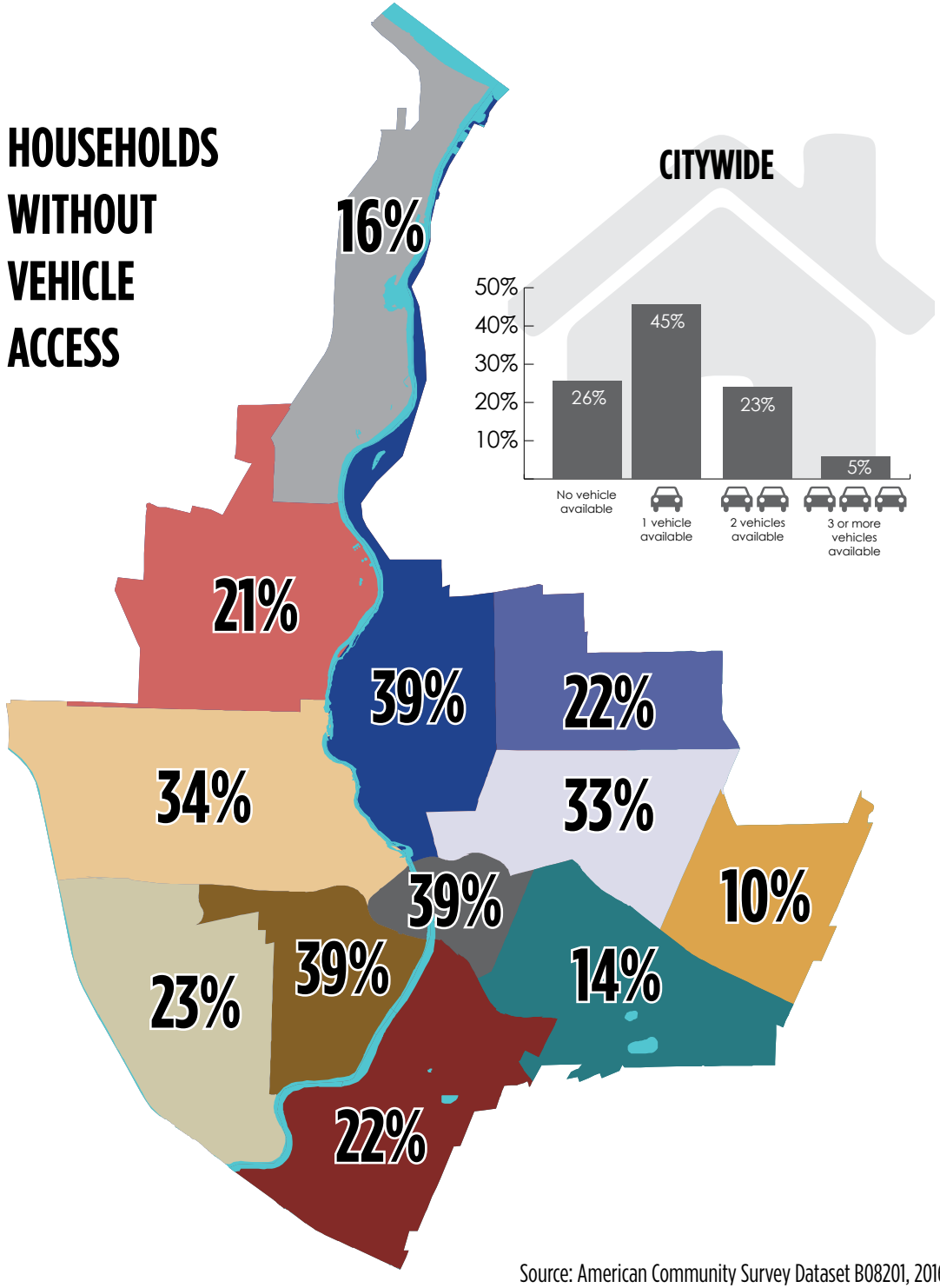


Source: American Community Survey Dataset B19001, 2016

PRIVATE VEHICLE ACCESS

Over one-quarter of all city households, approximately 22,000, as well as over one-third of households in Downtown and most downtown-adjacent neighborhoods do not have access to a private vehicle.

Whether out of choice or necessity, these households rely on transit, walking, biking, and other means to meet their daily needs.



Source: American Community Survey Dataset B08201, 2016

3

TRANSPORTATION NETWORK

Rochester's transportation system is arranged around a network of streets of varying types that support commercial corridors and employment centers. Automobile traffic is greater on north-south major streets as expressways carry the highest east-west volumes. Motorized transportation activity accounts for almost one-quarter of the City's greenhouse gas emissions.

A burgeoning bicycle network, implemented mostly within this decade, attempts to increase the overall level of cycling in the city by providing lower stress routes for cyclists. Additionally, a bikeshare system was launched in the summer of 2017 and expanded in 2018.

Rochester features a robust transit system within city limits, with core routes operating more than 18 hours per day. However, certain corridors within the City are underserved from a frequency standpoint. School transportation policies result in further use of the transit network.

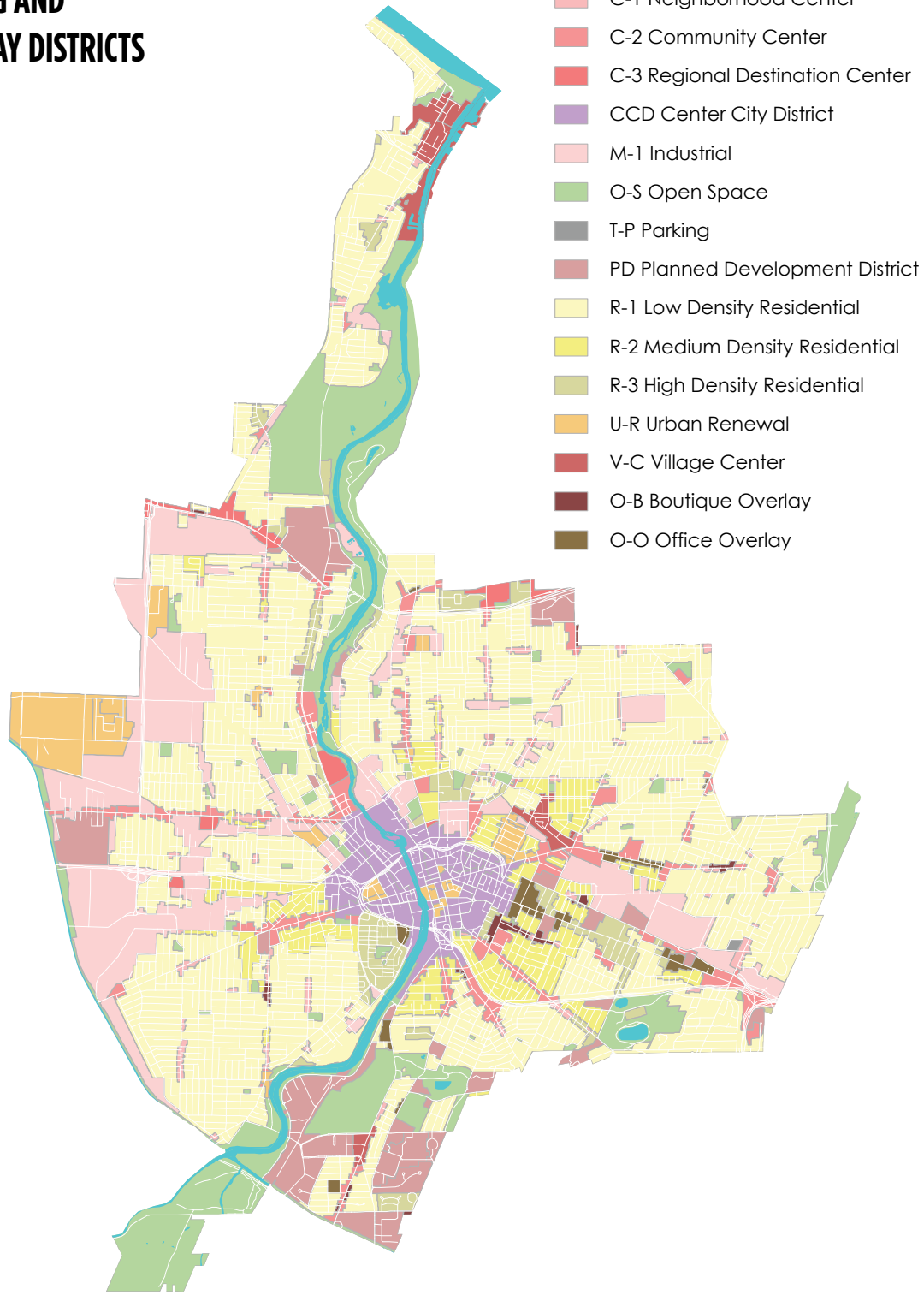
As a regional center, Rochester is the focus of a high amount of freight transport activity both on the street network as well as via rail.

ZONING/LAND USE

Most of Rochester is zoned for low density residential development. Areas along major corridors are zoned for commercial and higher density residential use. Industrial zoning is located along existing and former rail corridors.

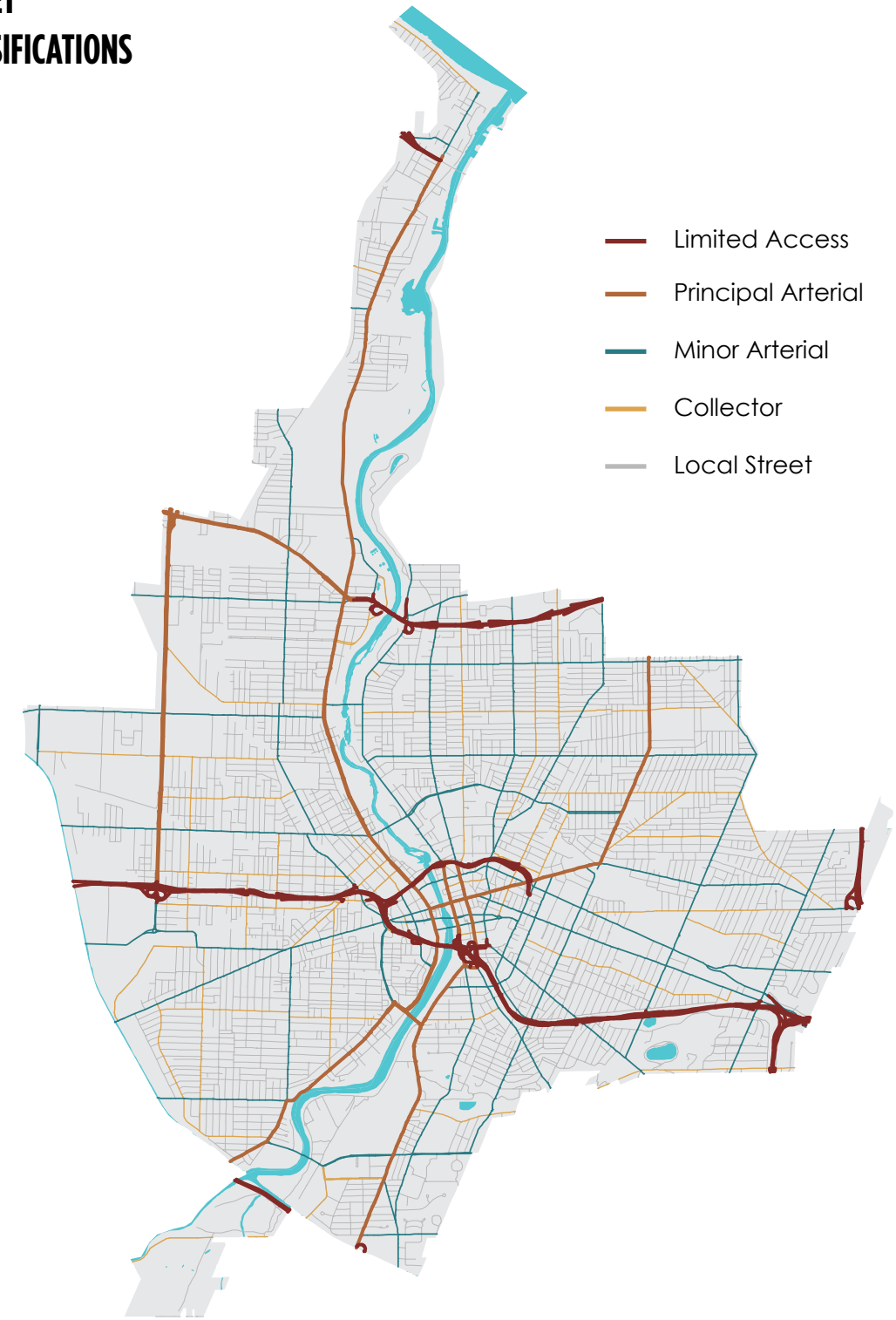
Zoning designations encourage and preserve office and higher-density residential development downtown and in many neighborhood centers.

ZONING AND OVERLAY DISTRICTS



Source: City of Rochester

STREET CLASSIFICATIONS



Source: City of Rochester

ROADWAY CLASSIFICATION

Functional classification groups streets and roadways into the roles they are expected to play within the motorized transportation network.

The streets that make up Rochester's roadway network have been recently reclassified.

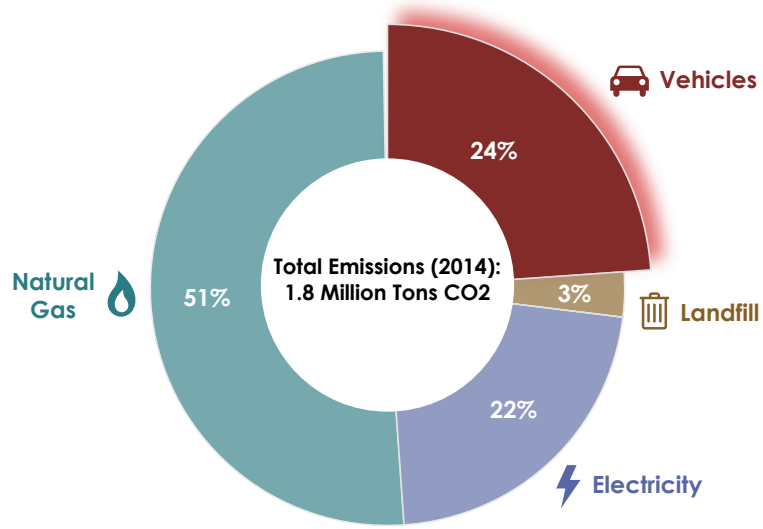
Further consideration should be given to other transportation modes and to the character of the corridor.

GREENHOUSE GAS EMISSIONS

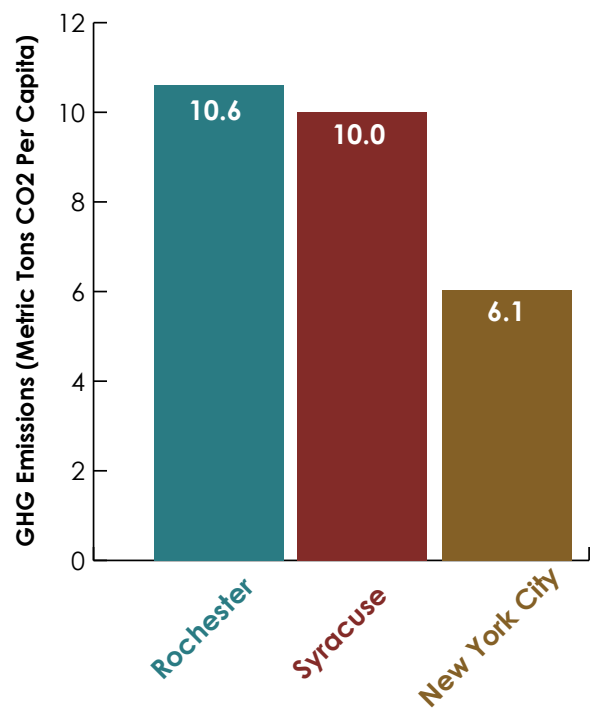
On-road vehicles generate around a quarter of annual emissions in Rochester, which has a higher per-capita carbon footprint than other cities in New York.

While emissions associated with ground transportation may fluctuate due to changes in vehicular travel and improved vehicle efficiency, climate change continues to pose a serious threat to the integrity of the transportation system in Rochester.

GREENHOUSE GAS EMISSION SOURCES

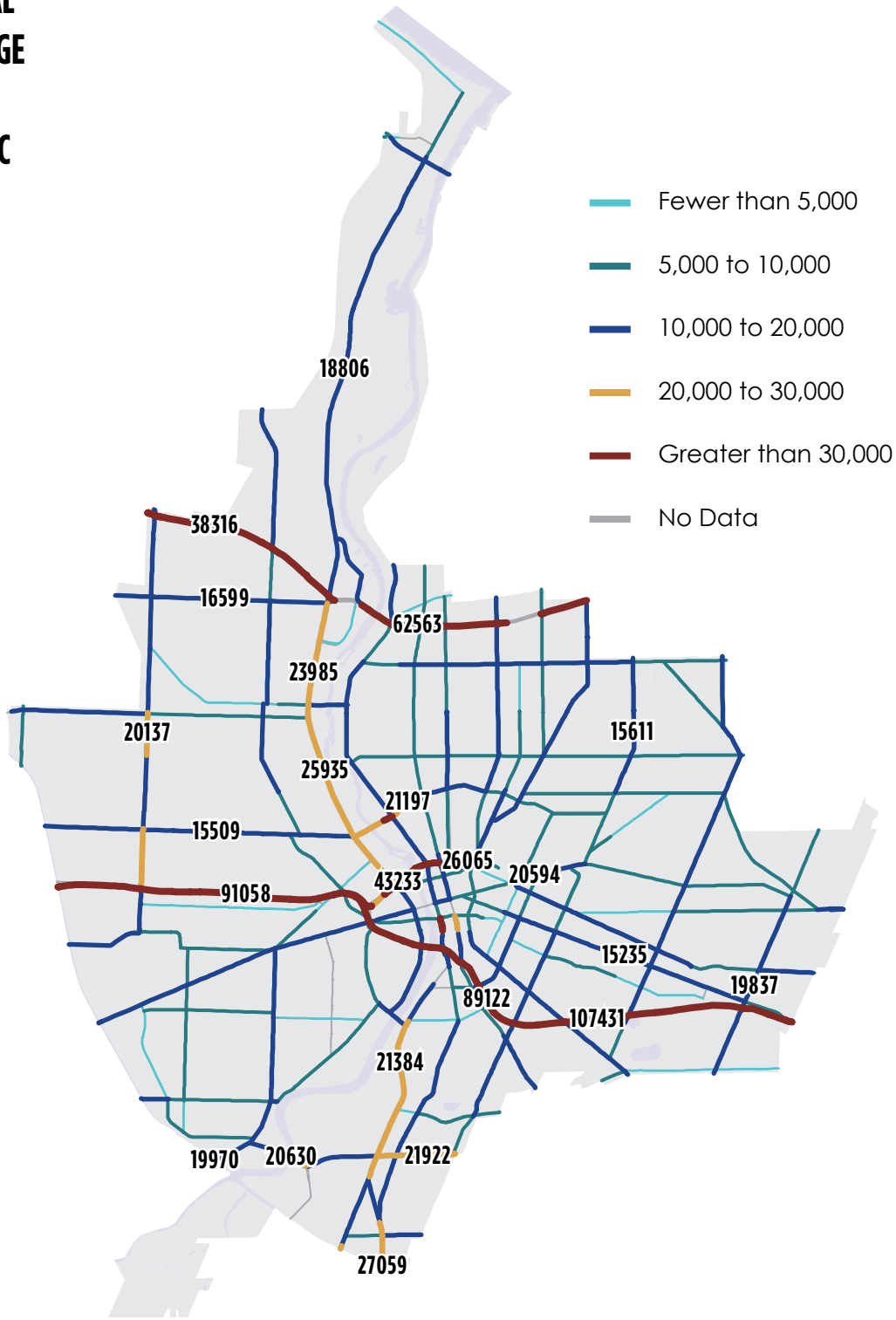


GREENHOUSE GAS EMISSIONS BY CITY



Source: Rochester Climate Action Plan, 2015 Energy Master Plan

ANNUAL AVERAGE DAILY TRAFFIC (2015)



Source: New York State Department of Transportation

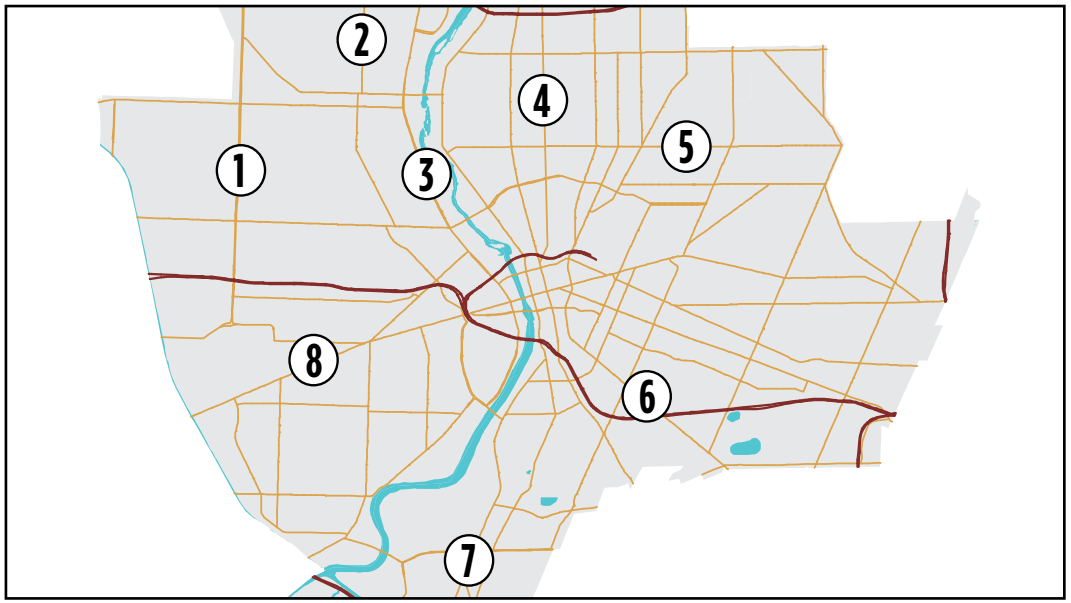
VEHICLE VOLUMES

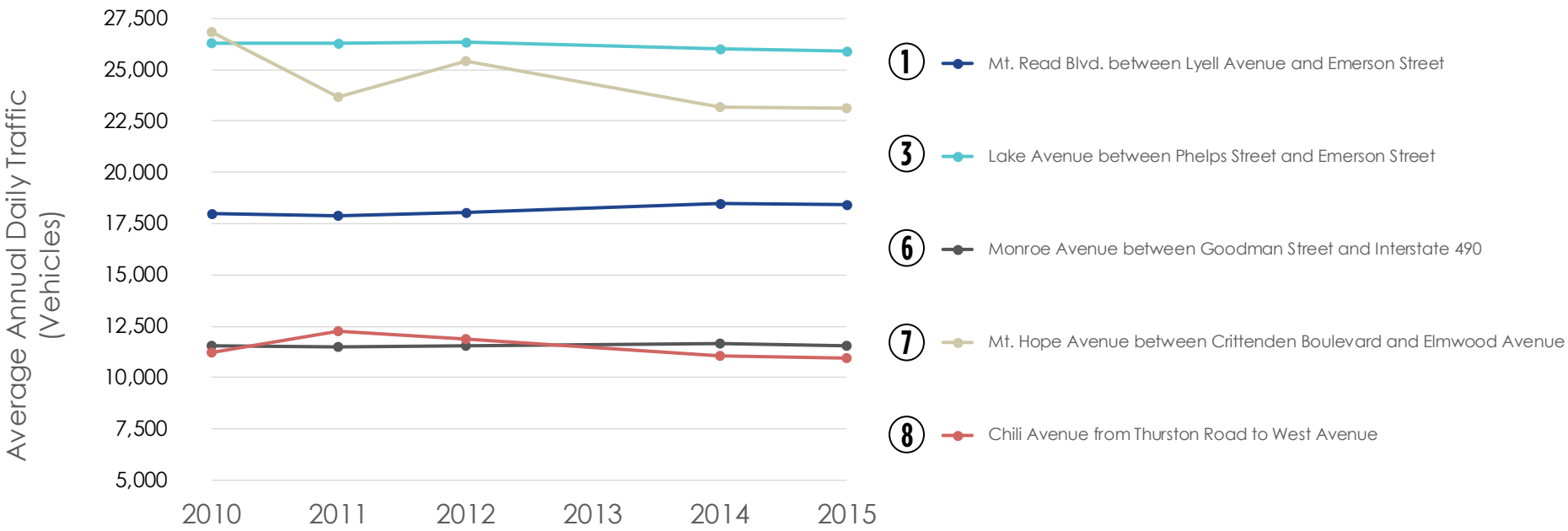
Traffic volume is significantly higher on north-south arterials than other surface streets due to the alignment of limited access expressways.

The highest volumes are seen along Ridge Road, Lake Avenue, Mt. Hope Avenue, Upper Falls Boulevard, Mt. Read Boulevard, and Elmwood Avenue; most of these are four lane roads for their entirety.

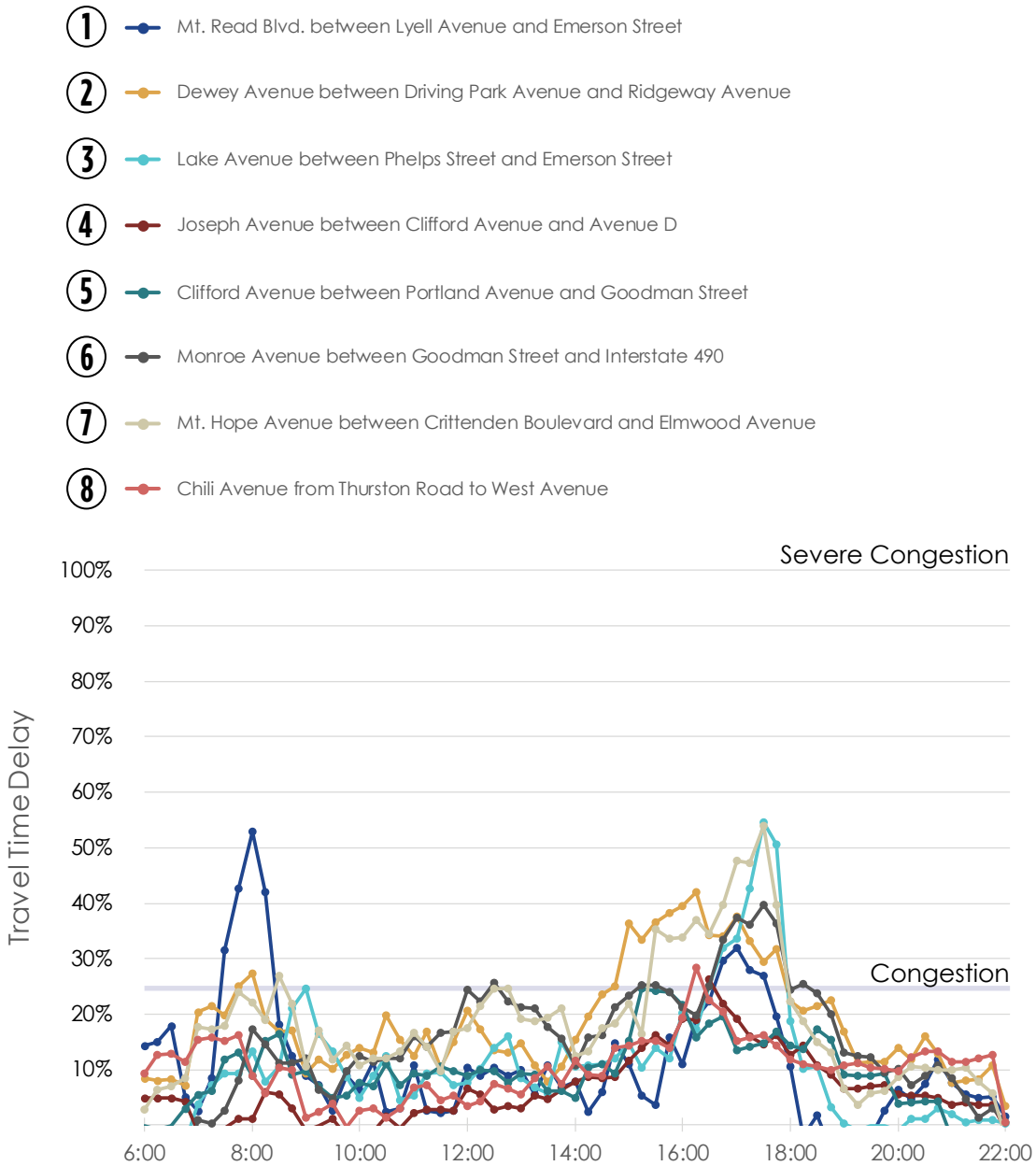
VEHICULAR TRAFFIC TRENDS

Daily vehicular traffic on city arterials has remained relatively stable year over year.





Source: New York State Department of Transportation



Source: INRIX, September 2017

DAILY TRAFFIC TRENDS

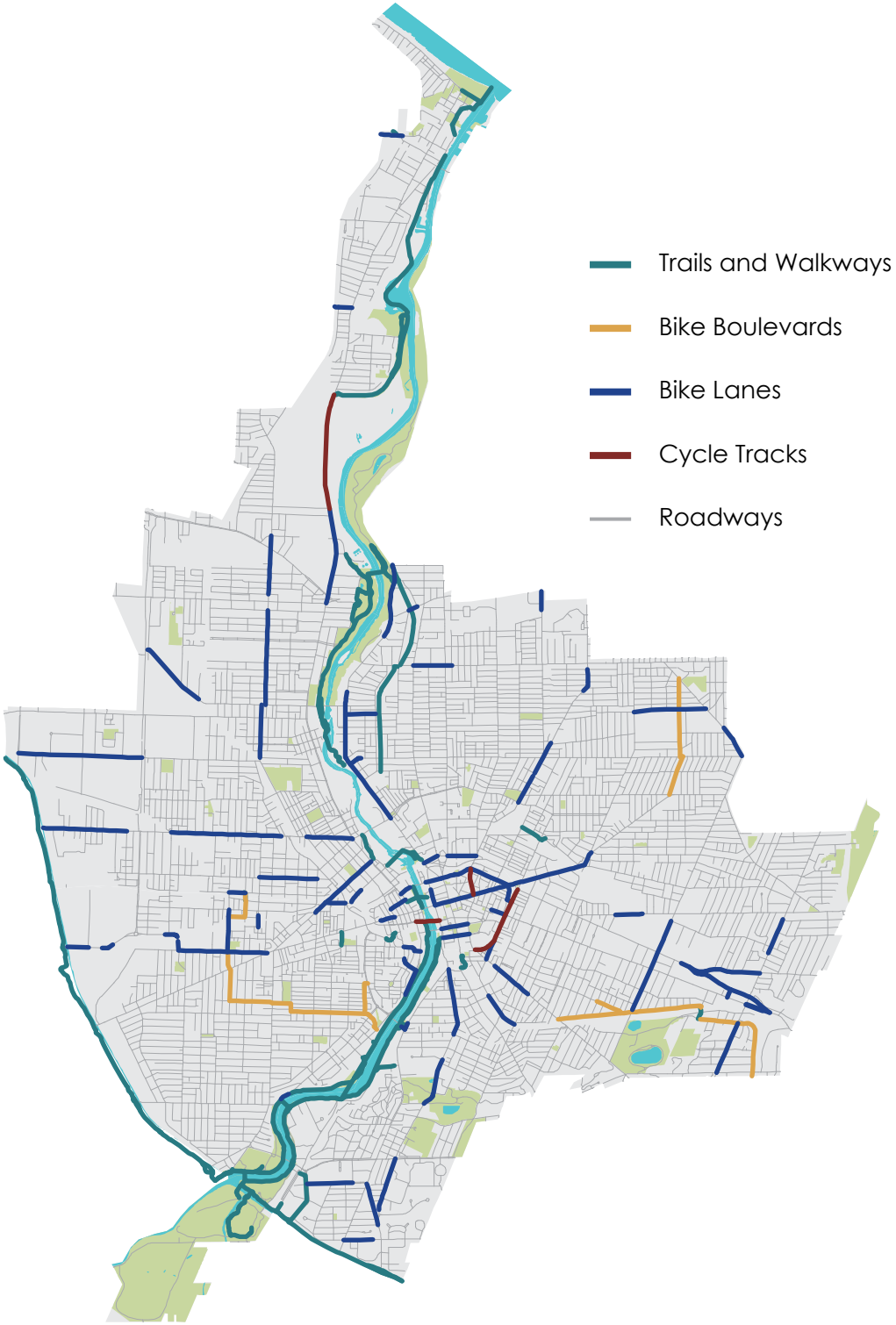
The Genesee Transportation Council's Congestion Management Process defines congestion where a trip would take one-quarter longer than it would under uncongested conditions. Severe congestion is defined as a trip that takes twice as long.

Certain Rochester arterials experience short periods of congestion during peak travel times, but do not approach severly congested conditions.

NON-MOTORIZED NETWORK

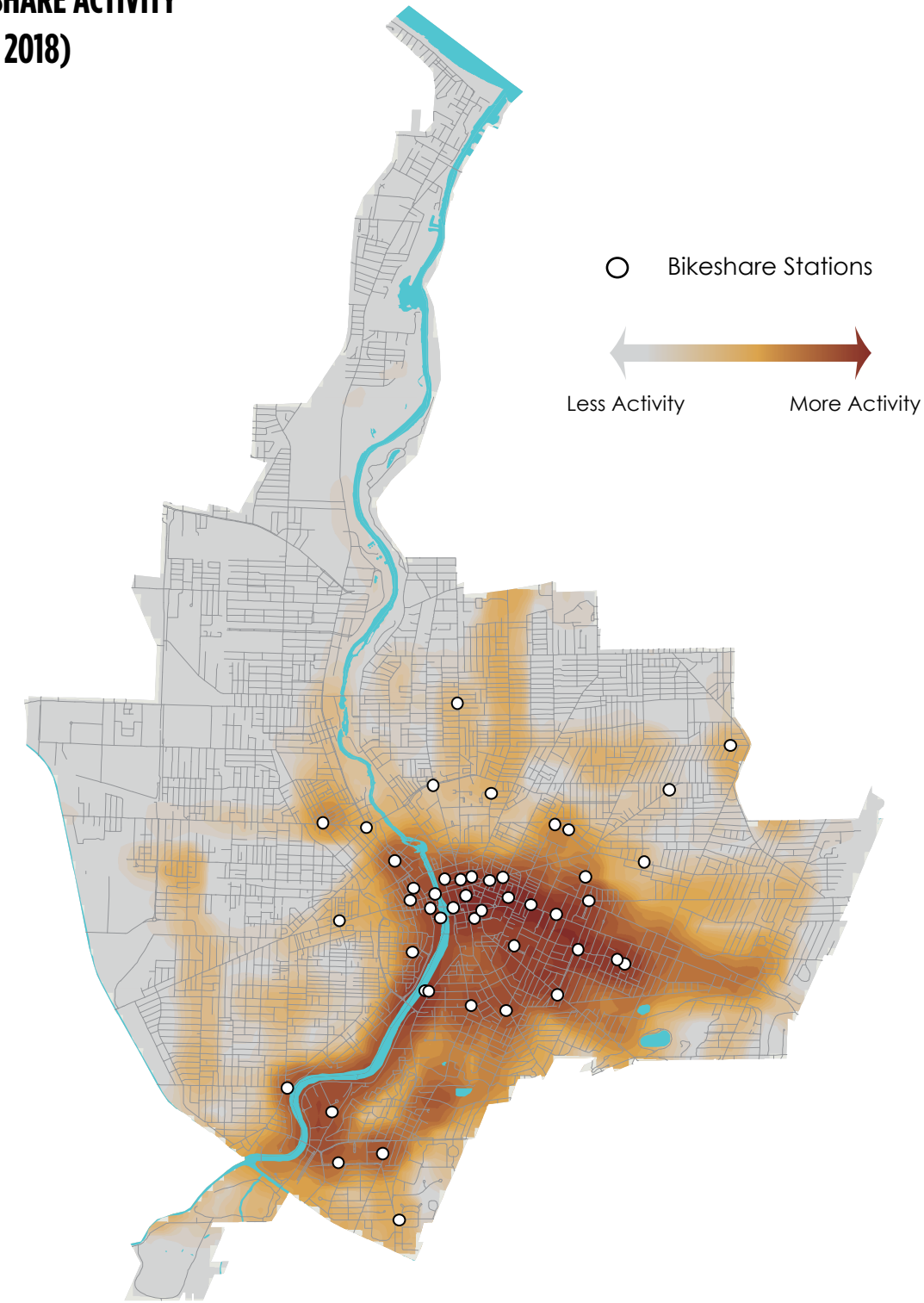
The El Camino and Rochester Riverway Trails allow pedestrians and cyclists to travel easily along most of the Genesee River corridor. The Erie Canalway Trail provides an important non-motorized link along the city's edge.

Meanwhile, Rochester's streets are home to over 50 miles of bike lanes and cycle tracks, all of which have been implemented since November 2011.



Sources: Genesee Transportation Council, City of Rochester

BIKESHARE ACTIVITY (MAY 2018)



Sources: City of Rochester, Zagster

BICYCLE TRAVEL

In July 2017, the City launched a new bicycle sharing service.

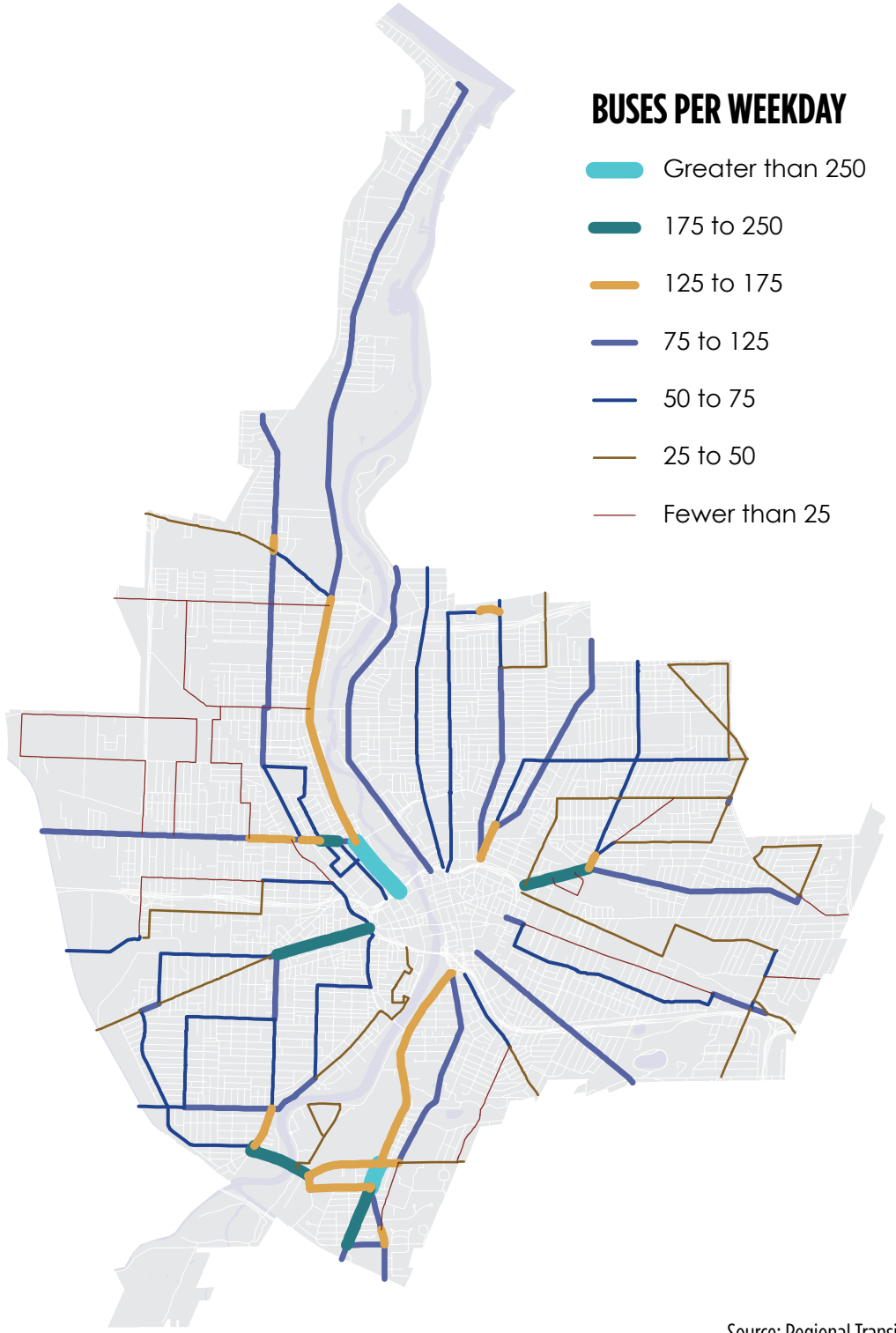
The average trip length during the first operating year was just over 2.5 miles and most activity remained near station locations.

A change in the service model for 2018 that allows users to lock bikes in any location without incurring a penalty has already resulted in greater levels of activity in areas not yet served by stations.

TRANSIT COVERAGE

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.

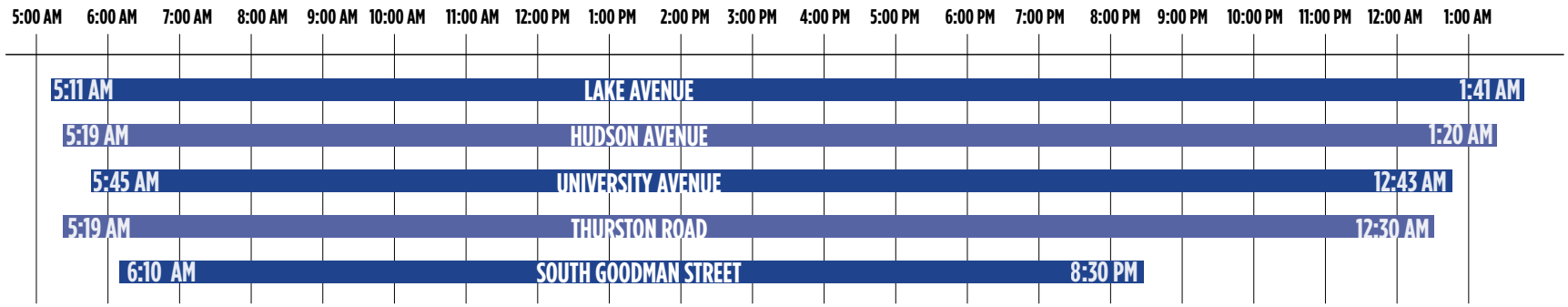


Source: Regional Transit Service

TRANSIT SERVICE DAY AND FREQUENCY

The time of day that transit service is available varies between routes, though most city corridors are served continuously from prior to 6:00 a.m. until later than midnight.

Corridors without augmented express service often see long average wait times throughout the service day. Waits can be especially long after 7:30 p.m and on weekends.



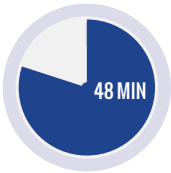
LAKE AVENUE
AVG FREQUENCY

NIGHT FREQUENCY
46 MINUTES

HUDSON AVENUE
AVG FREQUENCY

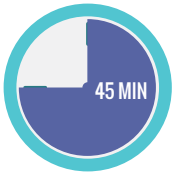
NIGHT FREQUENCY
70 MINUTES

UNIVERSITY AVENUE
AVG FREQUENCY



NIGHT FREQUENCY
76 MINUTES

THURSTON ROAD
AVG FREQUENCY



NIGHT FREQUENCY
108 MINUTES

S. GOODMAN STREET
AVG FREQUENCY

NIGHT FREQUENCY
NO SERVICE

Source: Regional Transit Service

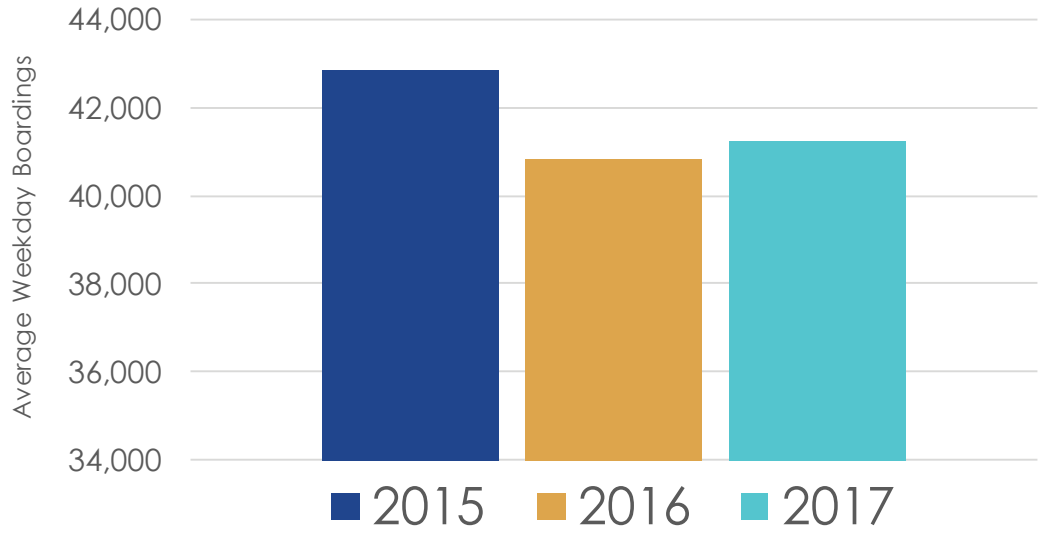
TRANSIT RIDERSHIP

The transit system in Rochester serves over 40,000 trips per day.

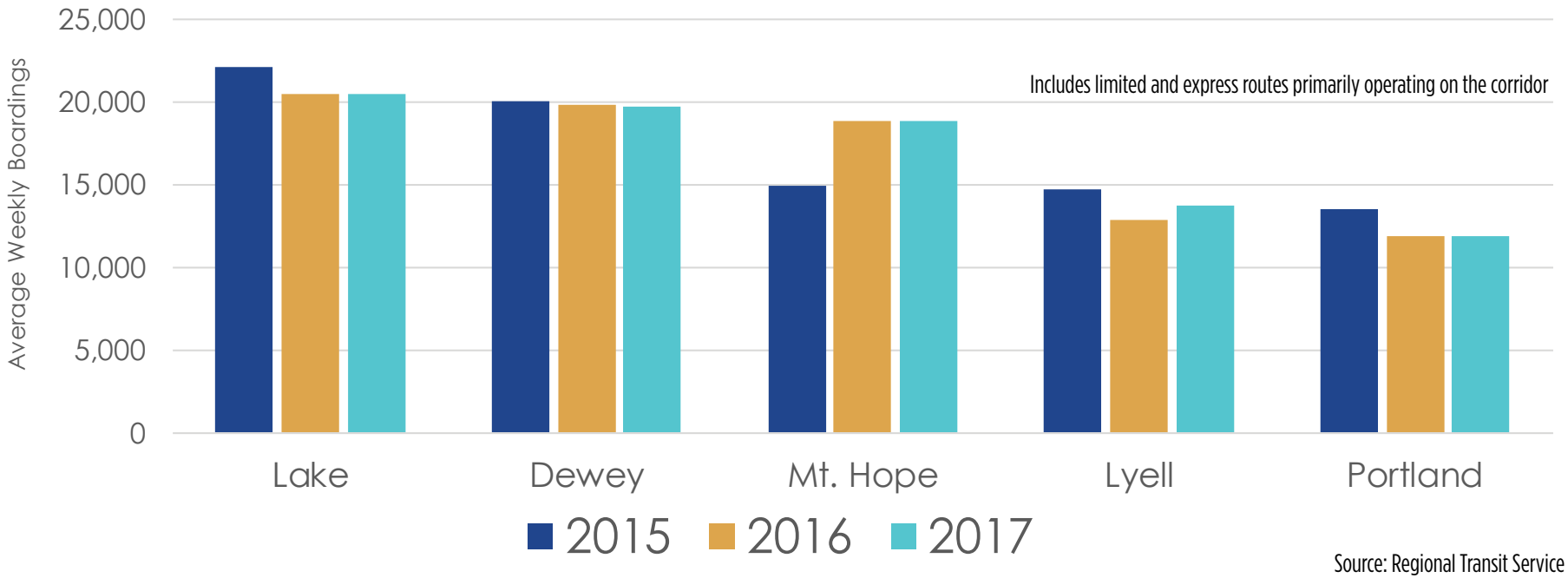
Consistent with nationwide trends, total ridership has decreased since 2015. However, ridership for routes serving the City is increasing due to the introduction of express ROC-it routes to popular destinations.

Rochester's buses are carrying more people than its peers in New York State.

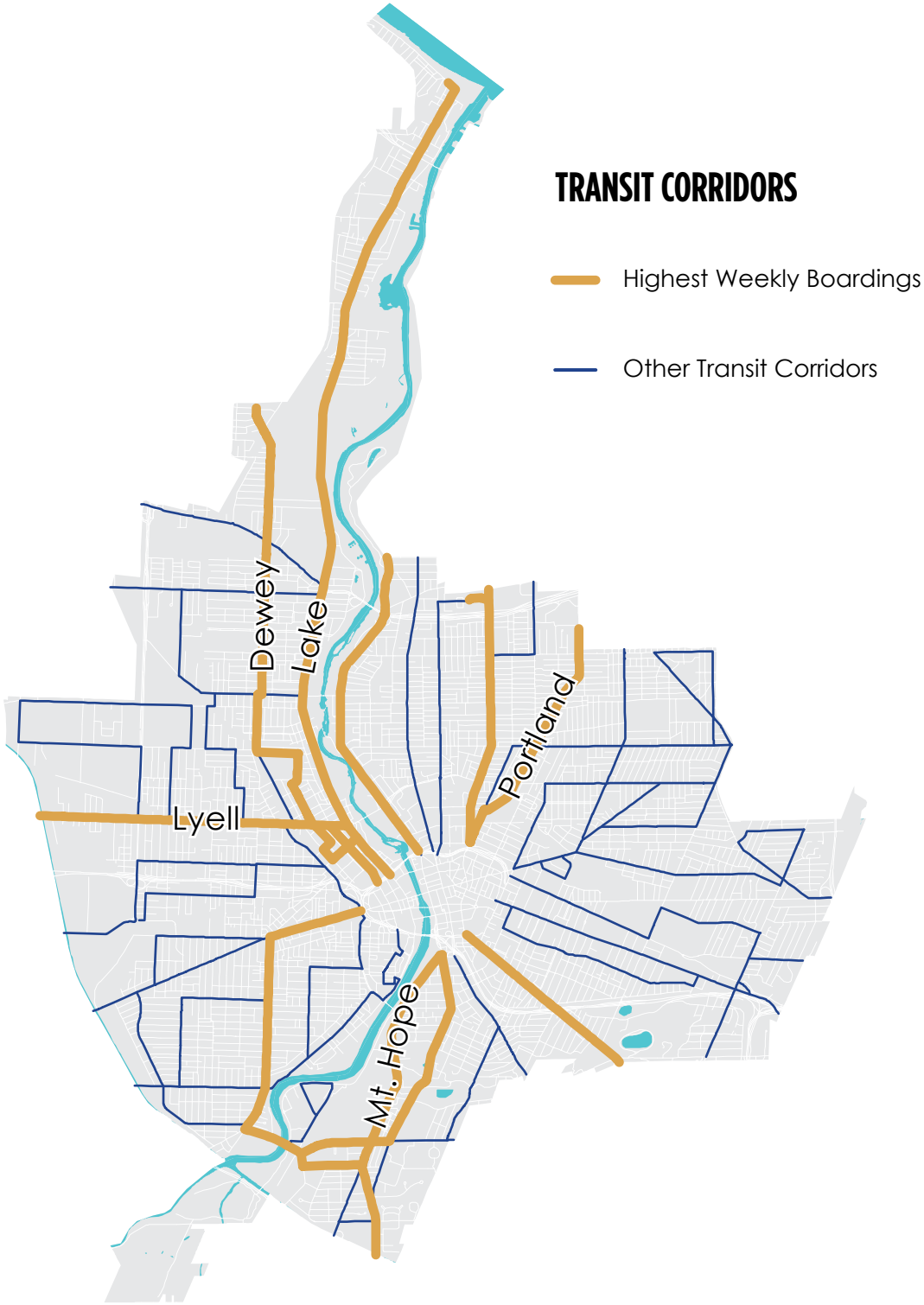
ALL ROUTES EXCLUDING SUBURBAN EXPRESS



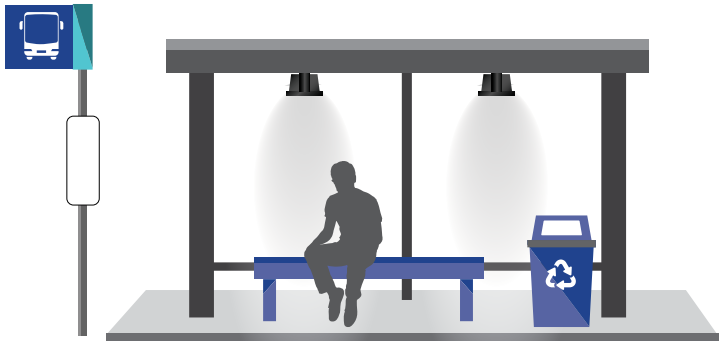
HIGHEST RIDERSHIP CORRIDORS

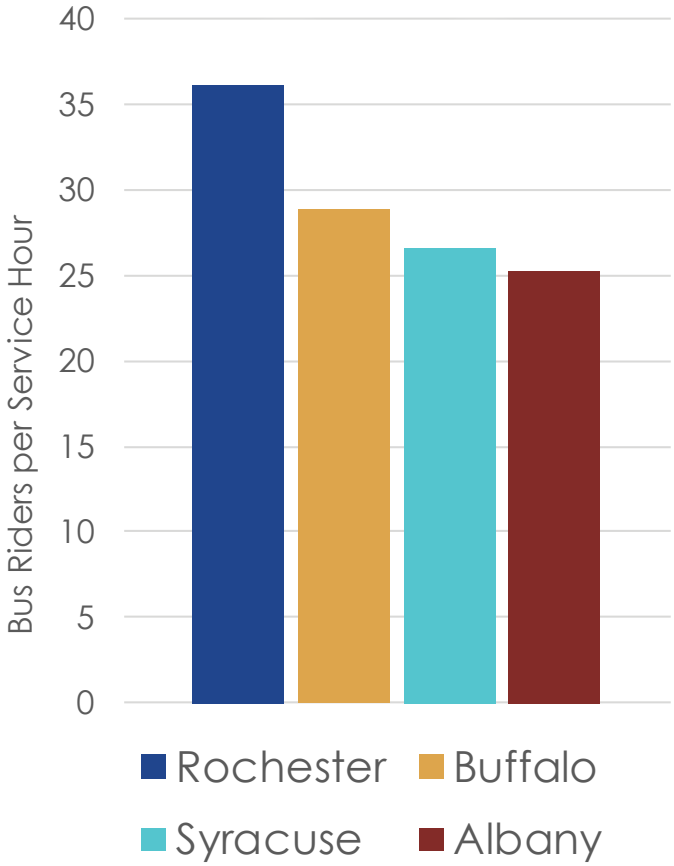


Source: Regional Transit Service



Source: Regional Transit Service, 2017





Source: National Transit Database, Federal Transit Administration, 2016

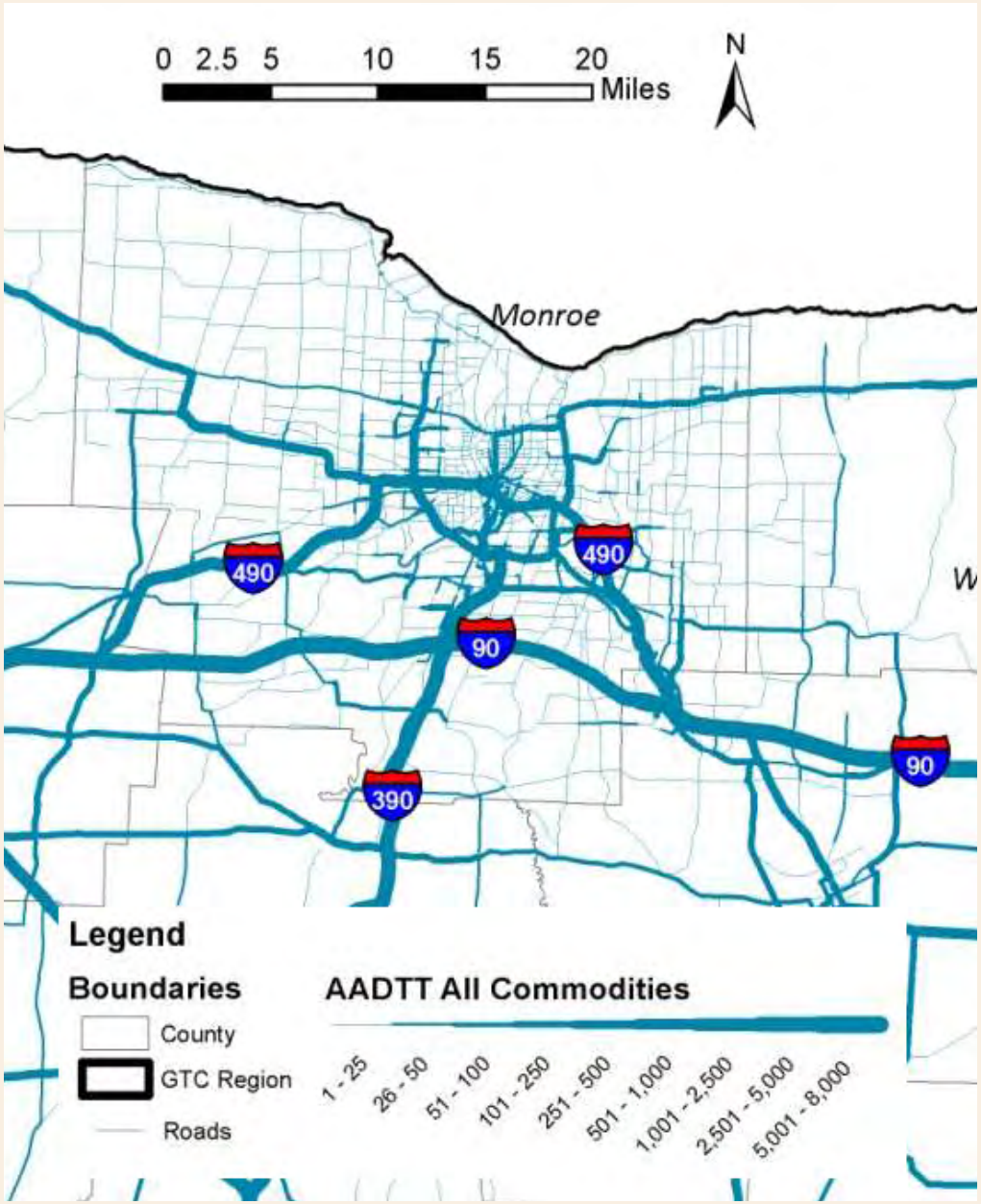
INTERCITY GROUND TRANSPORTATION AND FREIGHT RAILROADS

Rochester is linked to New York City, Toronto, Chicago, Boston, Cleveland, Buffalo, and Niagara Falls by 8 daily trains and 12 daily intercity buses.

The rail network is owned by freight rail companies and primarily transports bulk shipments of industrial materials. Many of these shipments are sorted in CSX's Rochester Yard.

Over 1.5 million tons of freight are handled on mainline tracks at the western edge of the city, linked to sites in the industrial northwest as well as Eastman Business Park's internal rail system.

Source: New York State



FREIGHT TRUCKING PATTERNS

The interstates and other expressways generally carry the largest truck volumes.

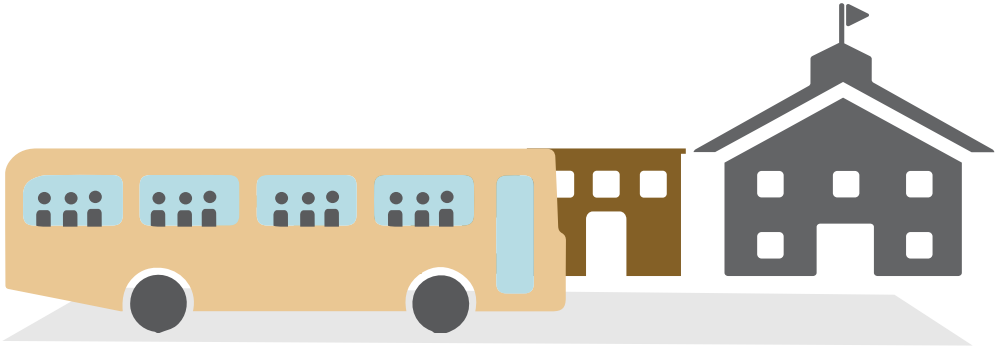
The highest truck volumes are seen on major roads such as I-490, Mt. Hope, and Mt. Read. Approximately $1 trillion worth of goods move into, out of, within, and through the Genesee-Finger Lakes Region annually.

Source: Transportation Strategies for Freight and Goods Movement in the Genesee-Finger Lakes Region. Genesee Transportation Council, 2012

STUDENT TRAVEL TO SCHOOL

Rochester City School District policies result in bus transportation for over 15,000 elementary school students, many of whom live within 1.5 miles of their school.

The scale of student transportation activity is even greater when public middle schools, high schools, private schools, and charter schools are considered.



560 Bus Routes

Transport 86% of RCSD Elementary Students

Source: Rochester City School District

4

SAFETY

While few exceptions exist to the citywide 30 miles per hour speed limit, roadway design can encourage excessive speeds, increasing the risk of collision with other vehicles, pedestrians, and cyclists.

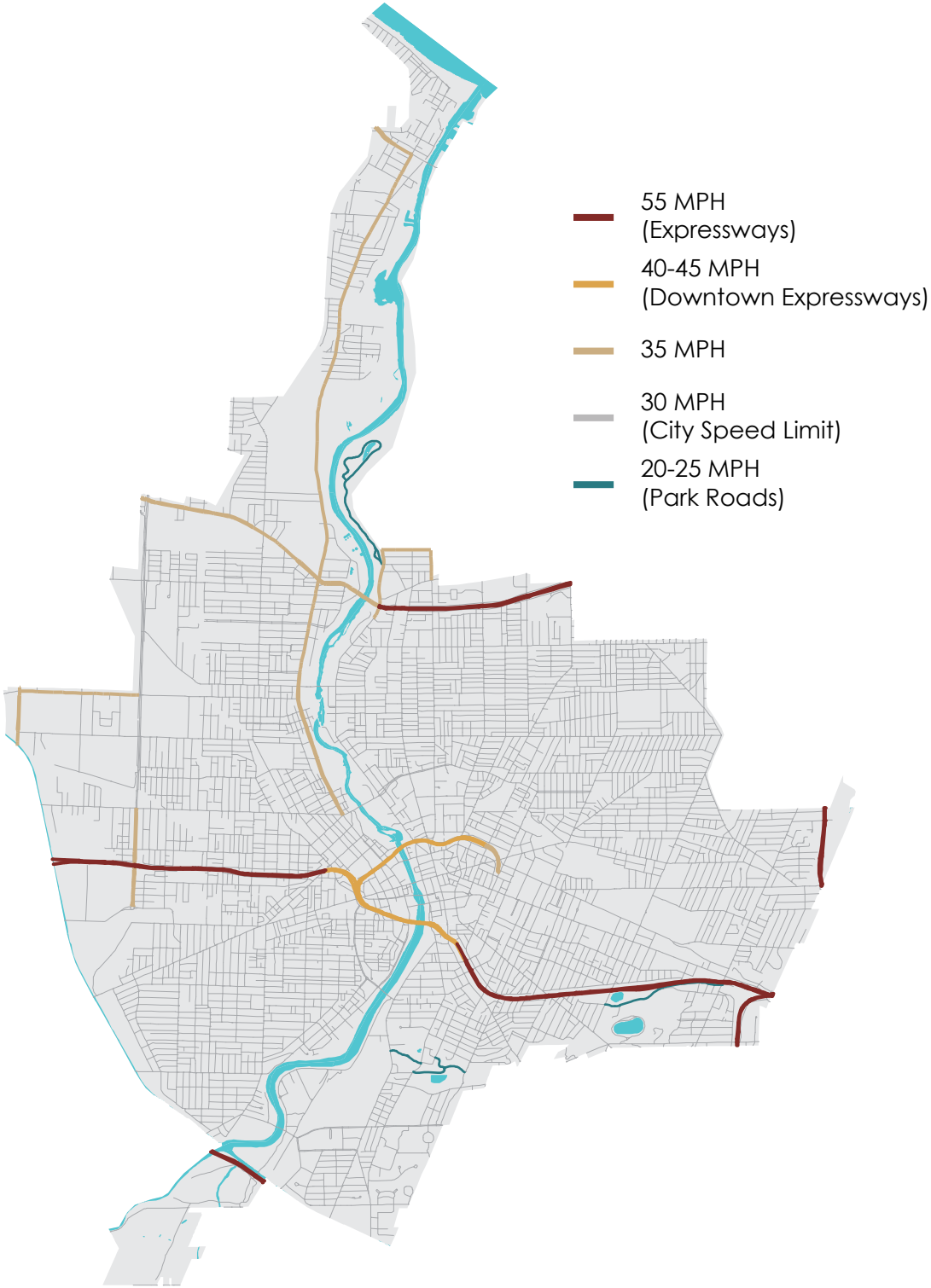
Those using non-motorized transportation as a primary mode choice face physical barriers and uncomfortable travel enviroments at conflict points with limited access freeways and multiple lane arterials.

SPEED LIMITS

There are few exceptions to the City's default 30 miles per hour speed limit.

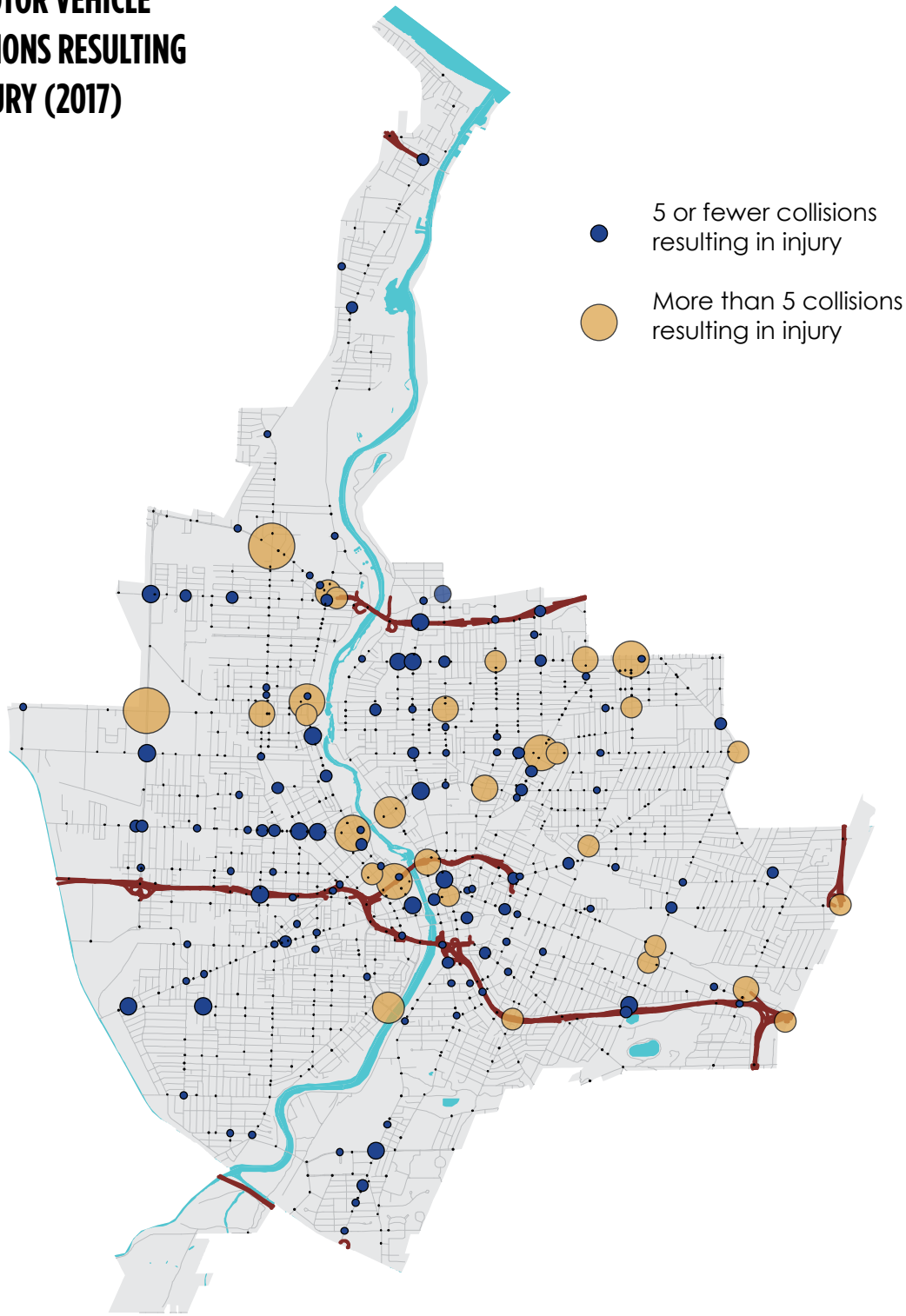
Permanent exceptions include park roads in Seneca and Highland Parks.

The speed limit is reduced to 20 mph near certain schools.



Source: City of Rochester

ALL MOTOR VEHICLE COLLISIONS RESULTING IN INJURY (2017)



Source: NYSDOT Accident Location Information System, 2017

TRAFFIC COLLISIONS

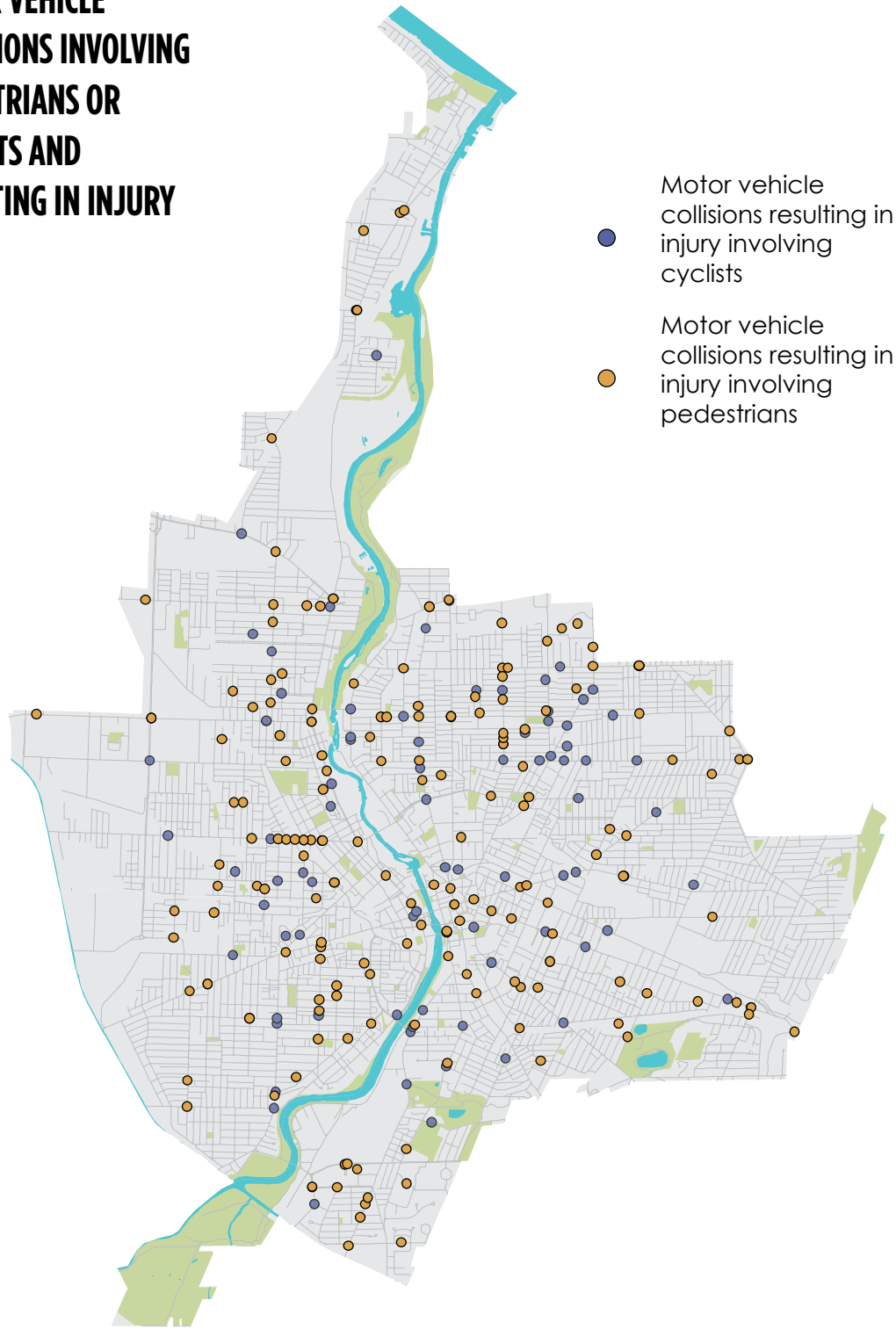
Collisions involving motor vehicles are far more likely to result in injuries on wider and higher speed roadways such as Ridge Road, Lake Avenue, Mt. Read Boulevard, Norton Street, Upper Falls Boulevard, and the Inner Loop.

COLLISIONS INVOLVING PEDESTRIANS AND CYCLISTS

Over 15 percent of motor vehicle collisions resulting in injury within the City involve a cyclist or a pedestrian, the most vulnerable users of the transportation system.

The speed of the vehicle is the single largest determinant of the severity of injury and likelihood of fatality. Approximately 95 percent of pedestrians struck by a vehicle moving at 20 miles per hour will survive the collision. Only 15 percent will do so at 40 miles per hour.

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



Source: NYSDOT Accident Location Information System, 2017

BARRIERS TO NON-MOTORIZED TRAVEL

Even if the non-motorized travel network is well-connected, certain environmental conditions can discourage walking and cycling as a primary mode of transportation.

Examples include:

- Large expressway interchanges that complicate and degrade the pedestrian experience while completely rerouting bicycle traffic.
- Frontage roads and one-way flows restricting pedestrian access to Amtrak and Greyhound/Trailways stations.
- Wide, high-speed urban arterials, such as Lake Avenue or Upper Falls Boulevard, that limit access to daily needs.

5
ACCESS

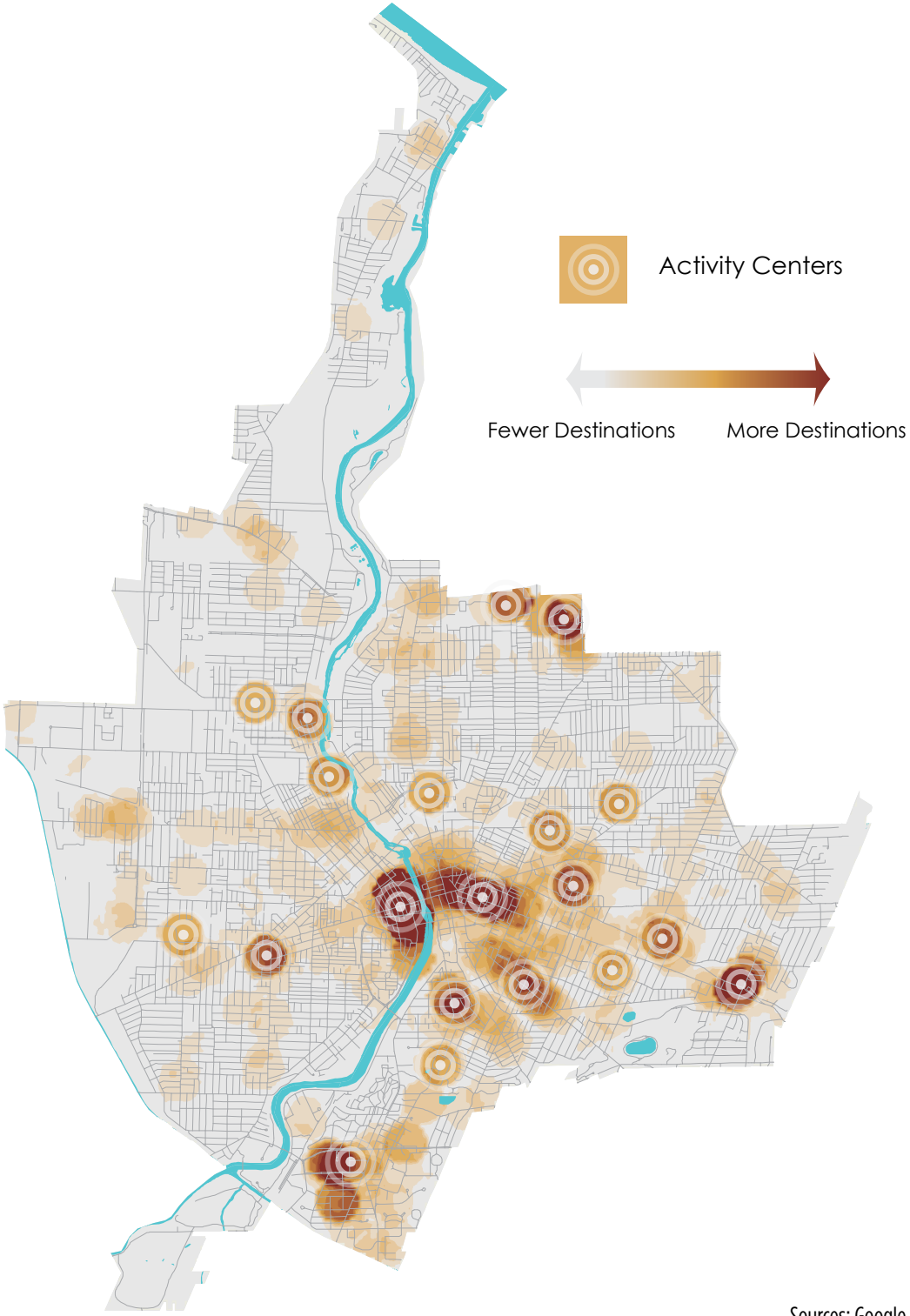
Rochester's transportation system faces great challenges due to the relationship between where residents live and where they can fulfill various basic needs. Relatively few are able to walk to obtain high quality groceries, though an improving bicycle network puts many within reach of most services. The location mismatch extends to the region, forcing the lowest income workers to spend more of their time commuting.

Transit coverage is extensive within city limits though residents wishing to connect to intercity transportation options face delays due to uncoordinated transfers.

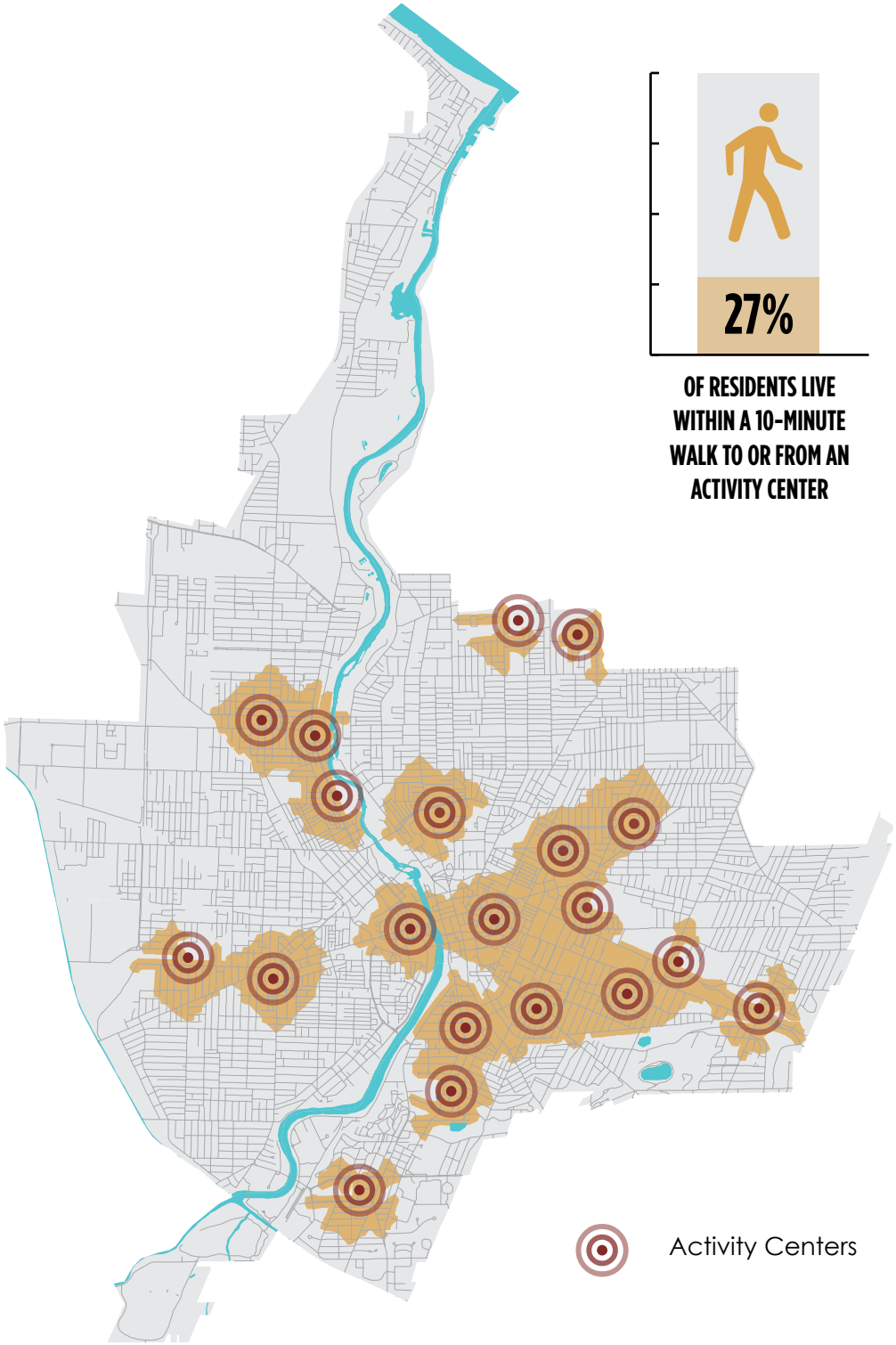
An expanding trail system paired with a large number of public parks ensure that a large majority of residents are able to walk to natural environments. Some gaps remain, however.

ACTIVITY CENTERS

20 activity centers were identified using the location of various daily and weekly needs such as grocery stores, pharmacies, medical offices, and social services.



Sources: Google API



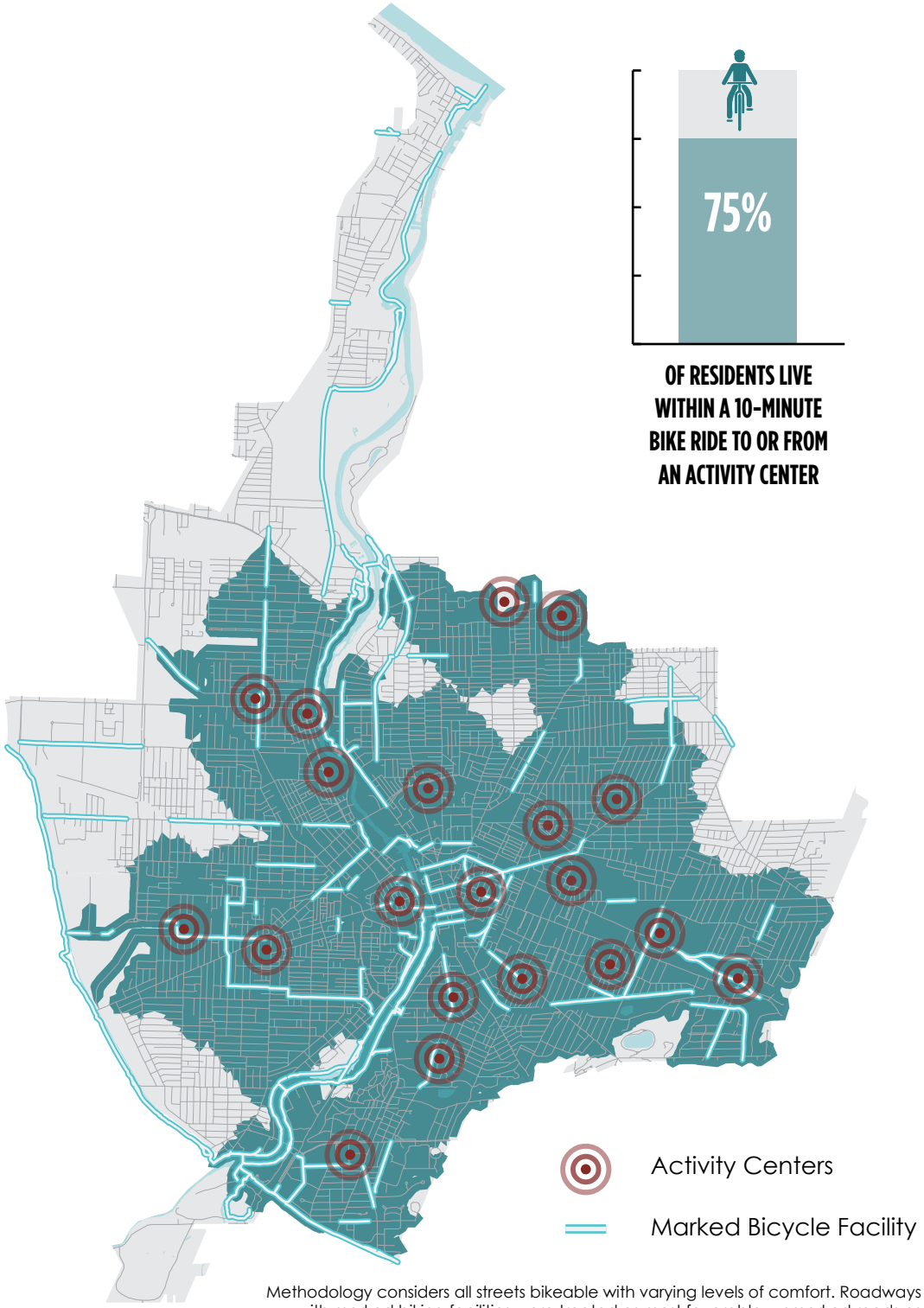
PEDESTRIAN ACCESS TO ACTIVITY CENTERS

Almost three-quarters of city residents are unable to walk a short distance to a supermarket or medical appointment.

BICYCLE ACCESS TO ACTIVITY CENTERS

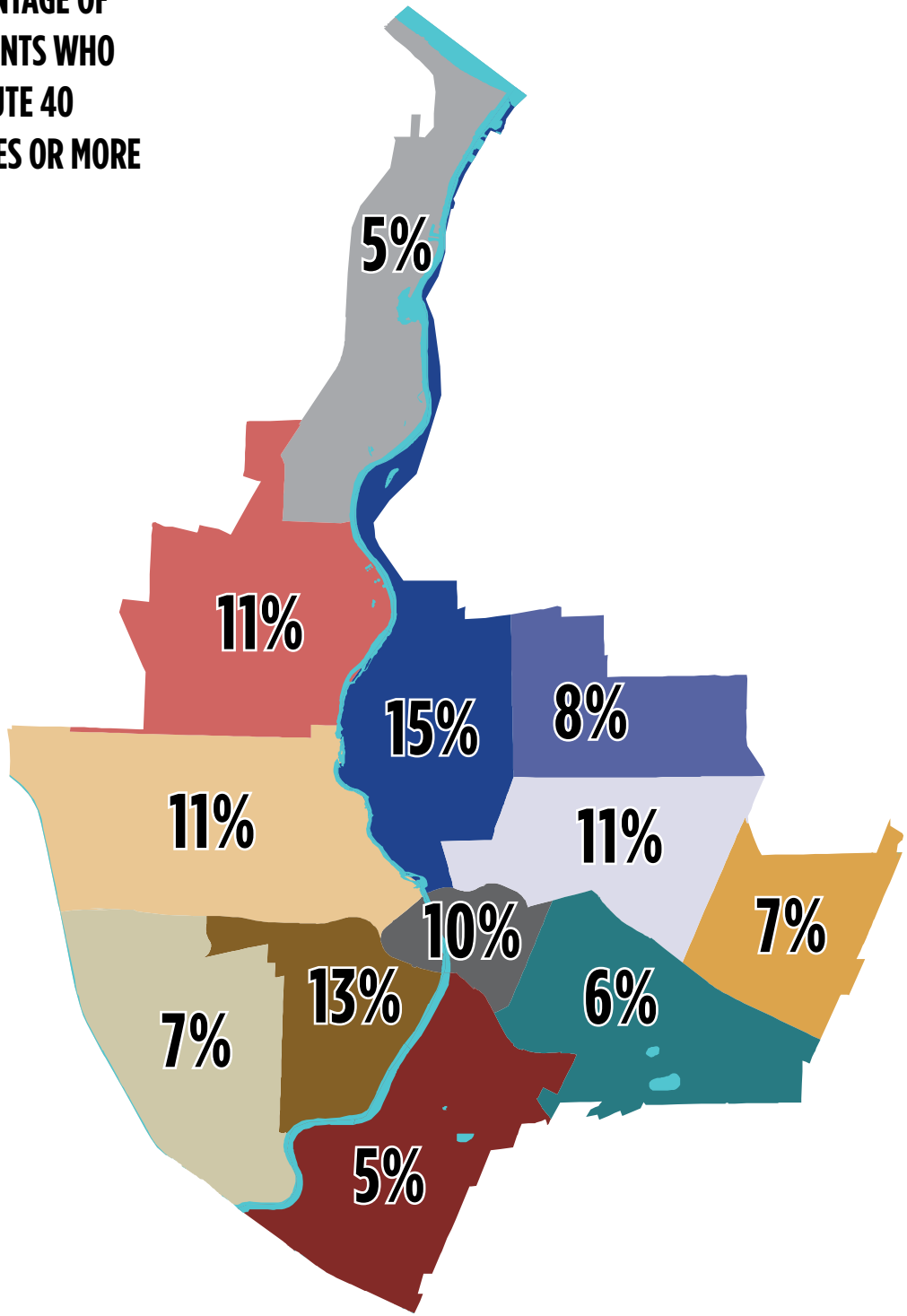
Almost all city residents, with the exception of those living north of Eastman Business Park, are able to access an activity center by bicycle within 10 minutes using a combination of roadways and the marked bicycle network.

Note that not all activity centers are directly connected to the non-motorized network. Dedicated bicycle infrastructure remains missing from many of the most direct travel routes.



Methodology considers all streets bikeable with varying levels of comfort. Roadways with marked biking facilities were treated as most favorable, unmarked roads as moderately favorable, and unmarked roads with high levels of traffic as least favorable.

PERCENTAGE OF RESIDENTS WHO COMMUTE 40 MINUTES OR MORE



ACCESS TO EMPLOYMENT

The lowest income city residents are more likely to experience the longest commute times due to low-wage employers locating in suburban areas.

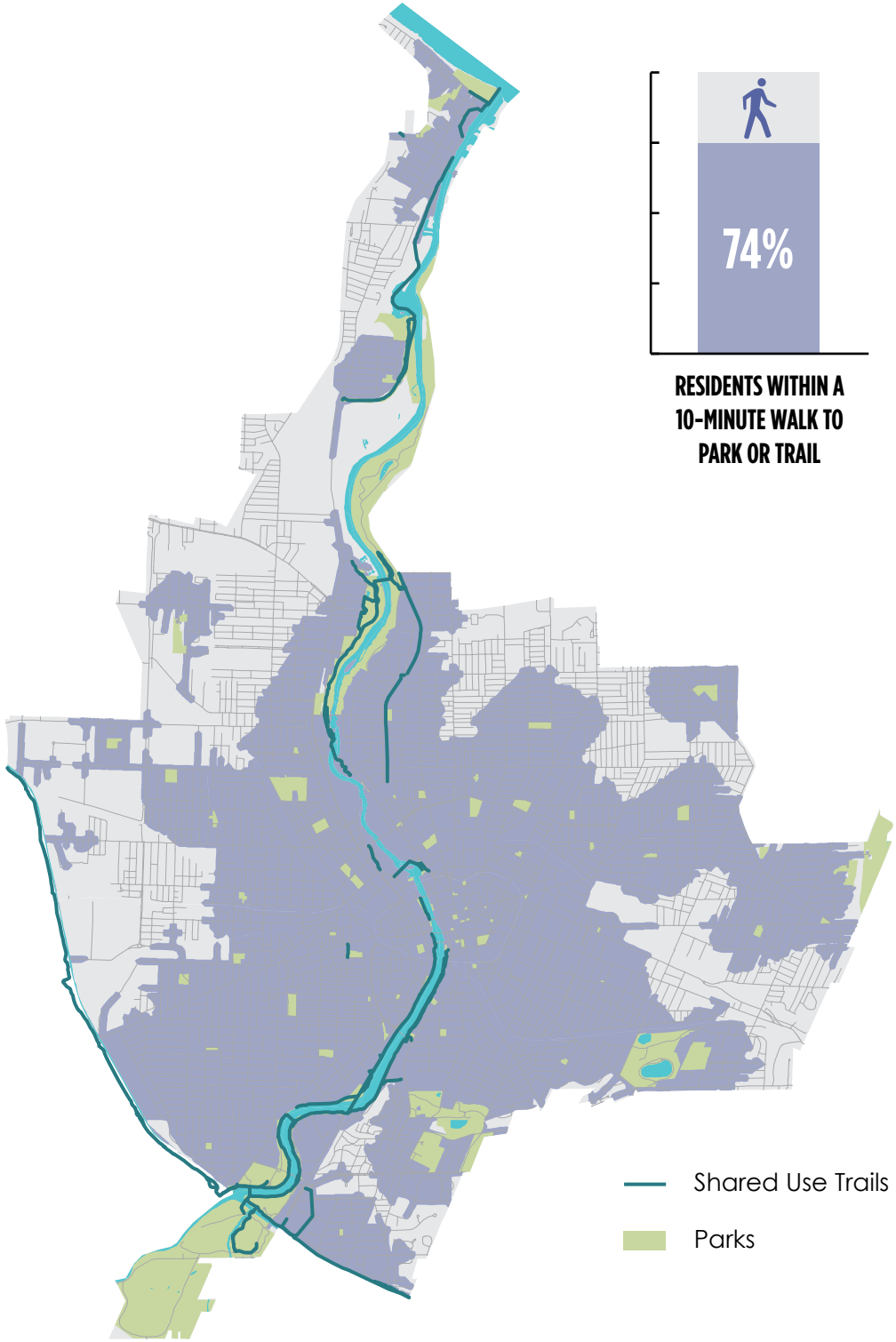
Low income jobseekers are forced to address a disproportionate travel burden in order to obtain and maintain employment.

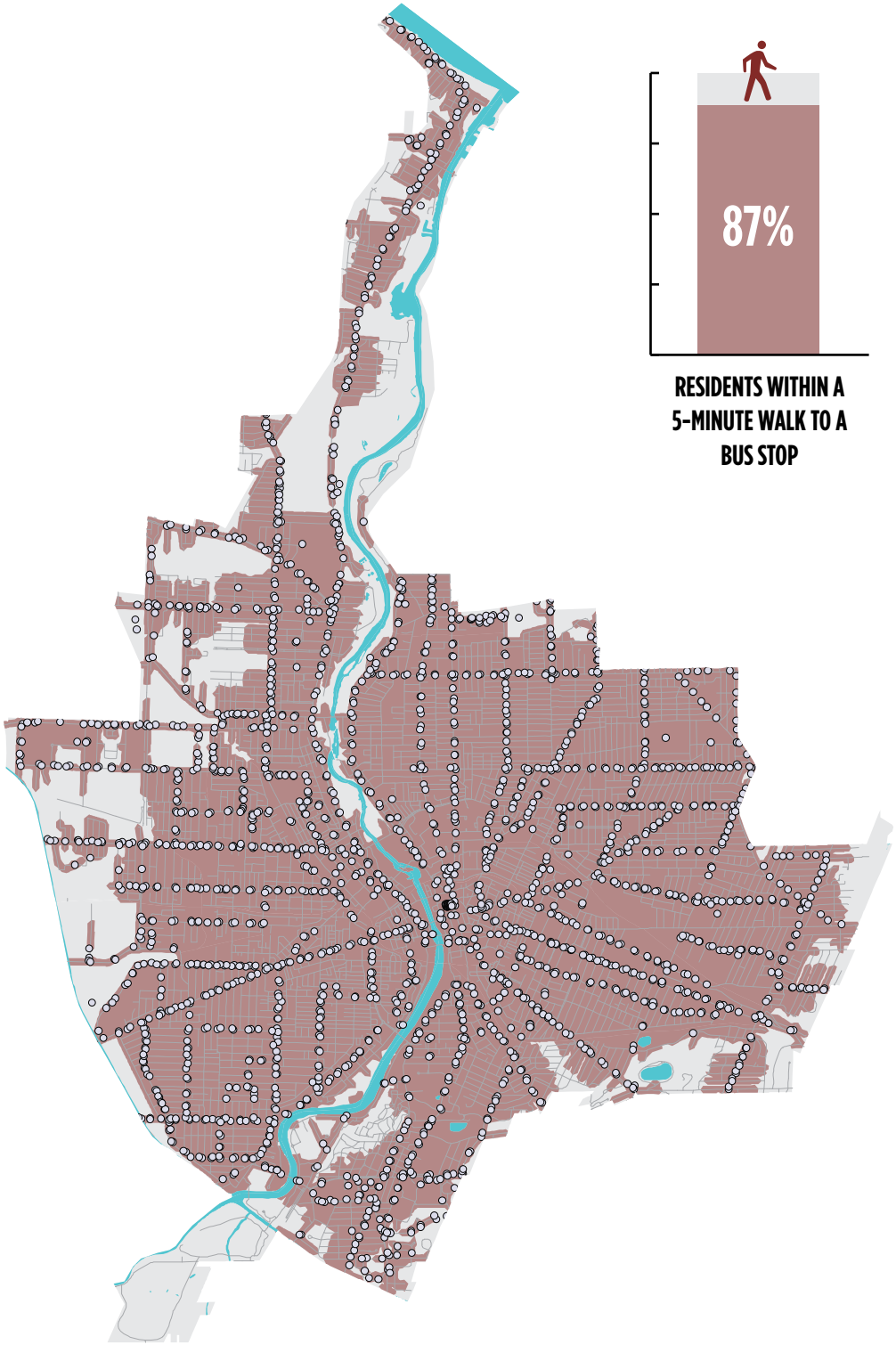
Source: American Community Survey Dataset B08303, 2016

PEDESTRIAN ACCESS TO PARKS AND TRAILS

Almost three-quarters of Rochester residents reside within a 10-minute walk of a park or trail.

Significant gaps in the park and trail system are found near heavily industrial areas on both the west and east sides of the City.





RESIDENTS WITHIN A 5-MINUTE WALK TO A BUS STOP

PEDESTRIAN ACCESS TO TRANSIT

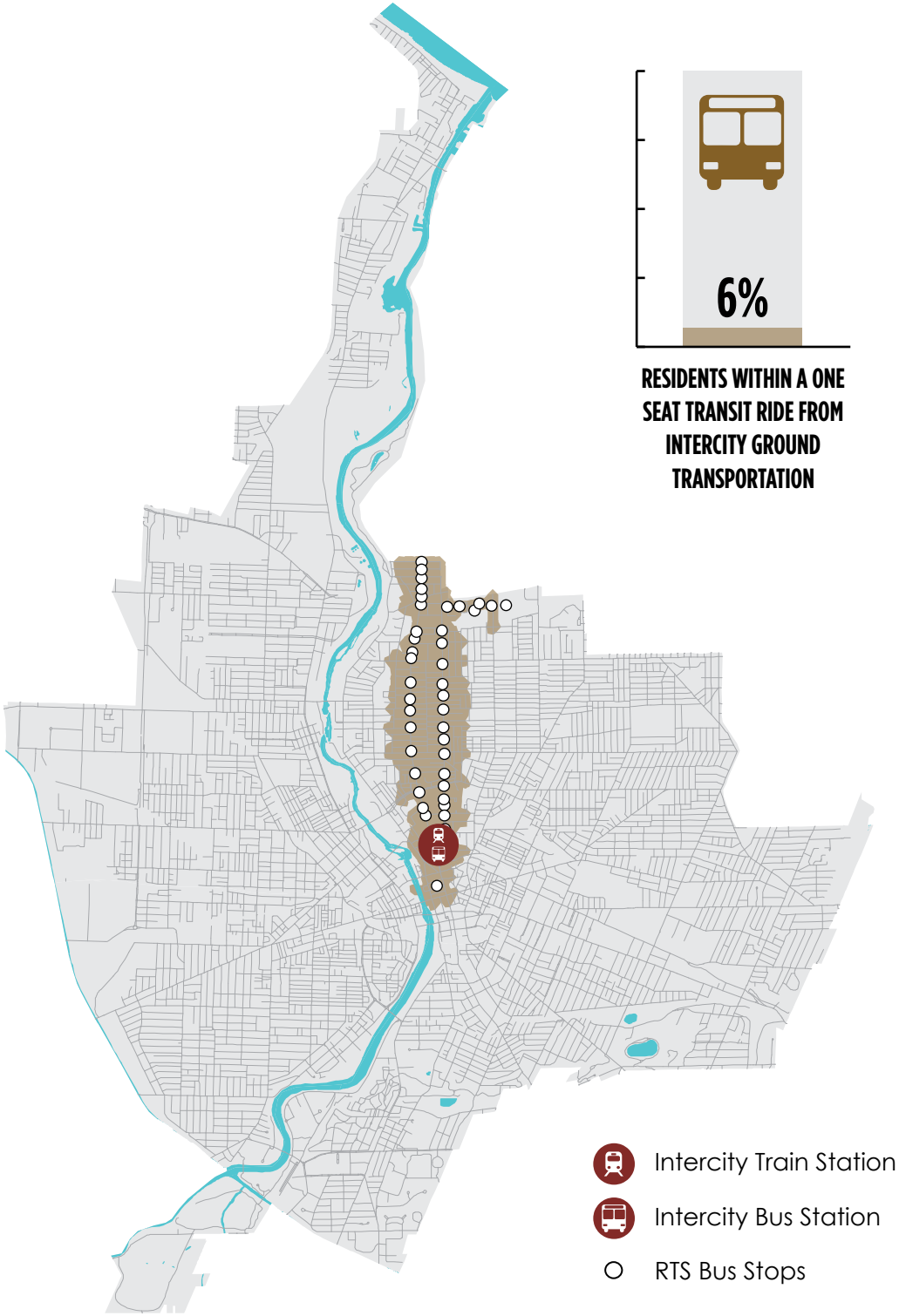
A large majority of Rochester residents live within a 5-minute walk of a bus stop.

Proximity is not the only factor that determines the viability of public transportation for many users. The frequency of service and overall travel times are also important considerations.

TRANSIT ACCESS TO INTERCITY GROUND TRANSPORTATION

Relatively few Rochester residents are able to access intercity transportation options via a single transit trip.

Most trips to intercity transportation facilities by transit require a transfer, which usually adds additional time for travelers. Walking and bicycling are limited as options when considering luggage and the potential of inclement weather.



6

PLANNED IMPROVEMENTS

Rochester is expanding people's mobility options through transformative transportation projects. Reimagine RTS has the potential to significantly boost riders' access to frequent, all-day transit service. ROC the Riverway street and trail upgrades position the Genesee River as the city's premier public space.

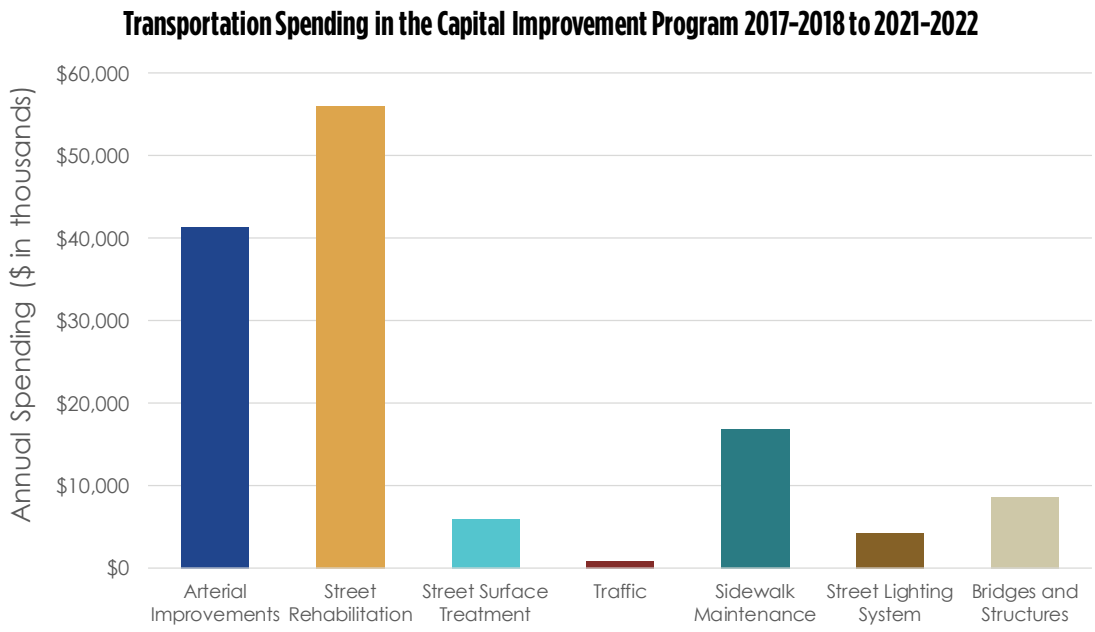
The Inner Loop North project will further reconnect Rochester's Downtown with nearby neighborhoods and leverage key land parcels for redevelopment. The City's Capital Improvement Program also knits together neighborhoods through street improvements that prioritize safety for people walking and biking.

CAPITAL IMPROVEMENT PROGRAM

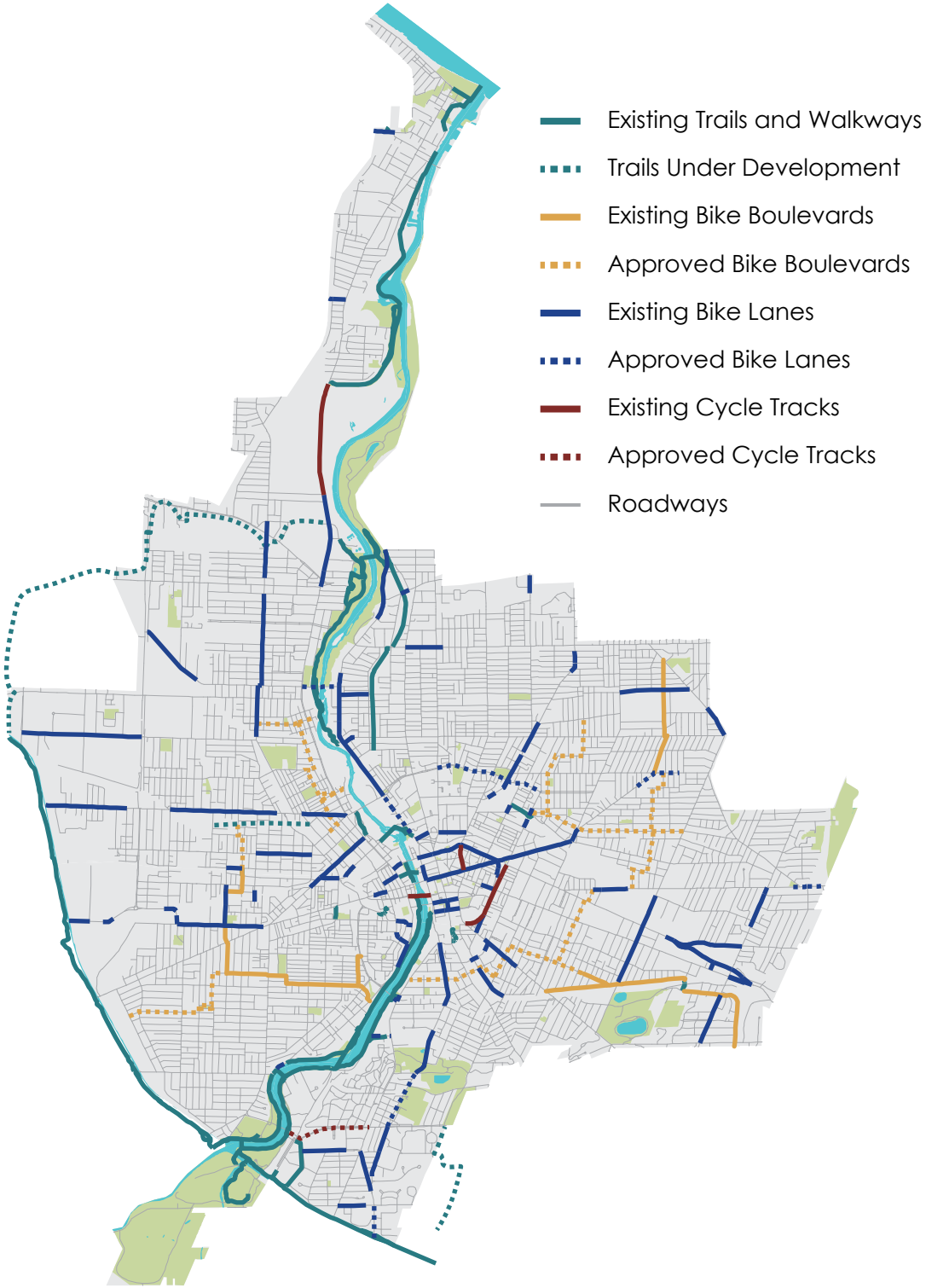
The City's 2017-18 to 2021-22 Capital Improvement Program (CIP) provides $134 million, 30% of expenditures listed in the program, for the reconstruction and rehabilitation of transportation facilities.

Street projects improve and 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.



East Main / Goodman Pedestrian Safety Improvements, financed by the Capital Improvement Program



Sources: Genesee Transportation Council, City of Rochester

NON-MOTORIZED NETWORK IMPROVEMENTS

Planned expansions to the non-motorized transportation network continue to be advanced. 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.

REIMAGINE RTS

Reimagine RTS refocuses the transit system around a comprehensive network of frequent, all-day core service routes and simplified local routes.

May 2018 draft recommendations, subject to revision, focus 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.

ROC THE RIVERWAY TRANSPORTATION IMPROVEMENTS

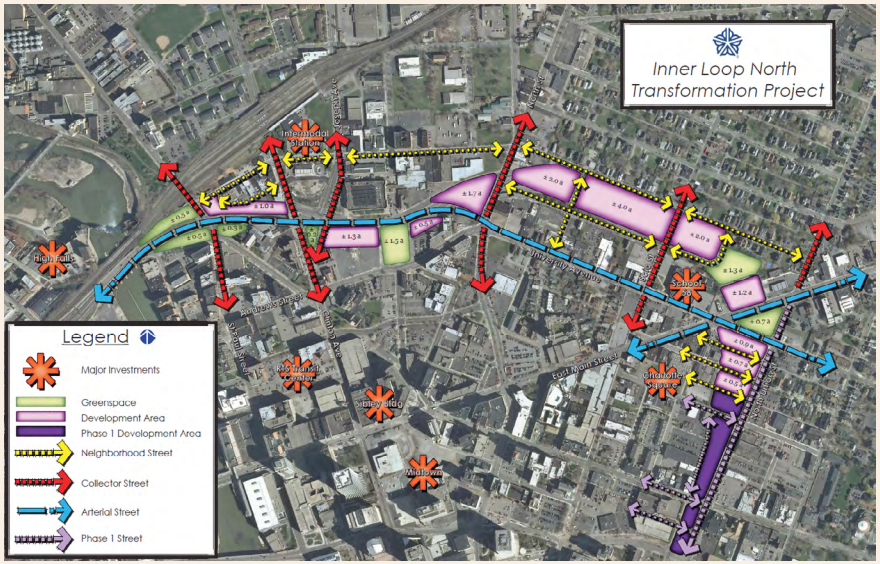
ROC the Riverway establishes the Genesee River as the centerpiece of Downtown Rochester by implementing multimodal access improvements on both sides of the riverfront.

Its key investments include a bike/pedestrian bridge over the Genesee at Byron Street and a road diet of Main Street between Broad Street and East Avenue.

INNER LOOP NORTH

Rochester recently converted the Inner Loop between Chestnut Street and East Main Street into a boulevard, reconnecting the street grid and city neighborhoods, and opening up land for development.

Stakeholders are now planning the removal of the Inner Loop's northern segment. The City will initiate the scoping phase in 2018-2019.



DATA SOURCES AND METHODOLOGY

The Factbook uses a variety of data sources to create representations of individual aspects of the transportation network. The following section describes those data sources, assumptions, and methods used to produce new data sets.

Genesee Transportation Council Regional Travel Demand Model: Pages 1-3, 1-4, 1-5

The Model estimates the movement of people and vehicles during an average weekday in September, 2010 within the Rochester Transportation Management Area, an area that includes all of Monroe County plus adjacent areas in Livingston, Ontario, and Wayne counties.

Model data is aggregated across 577 Transportation Analysis Zones (TAZ). 131 TAZs are located within the City of Rochester. TAZs comprise a subset of census tracts.

American Community Survey: Pages 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 5-5

The American Community Survey (ACS) is an ongoing survey by the U.S. Census Bureau. It regularly gathers information previously contained only in the long form of the decennial census, such as demographic, economic, employment, and htransportation characteristics. ACS data is aggregated in the factbook from data corresponding to each county census tract. There are 79 census tracts within the City of Rochester.

Employment and population density is displayed via color code on Page 2-2. The lowest population density grouping corresponds to lower densities than 7,071 persons per square mile while the highest corresponds to densities greater than 10,164 persons per square mile. The lowest employment

density grouping corresponds to lower densities than 789 jobs per square mile while the highest corresponds to densities greater than 3,038 jobs per square mile.

Longitudinal Employer-Household Dynamics (LEHD): Page 2-2

Part of the U.S. Census Bureau, the LEHD program combines federal, state, and Census Bureau data on employers and employees under the Local Employment Dynamics (LED) Partnership. From the data, the program creates statistics on employment, earnings, and job flows at detailed levels of geography and industry and for different demographic groups. LEHD data is spatially joined into census tracts for Factbook deliverables.

INRIX: Page 3-7

A subscription service, INRIX collects information about roadway speeds and vehicle counts from real-time anonymous mobile phones, connected cars, trucks, delivery vans, and other fleet vehicles equipped with GPS locator devices. The data collected is processed in real-time, creating traffic speed information and traffic predictions for roadways across North America.

INRIX data for streets in the City of Rochester is presented in 15 minute intervals for all days in September, 2017. Data displayed represents 15 minute averages across all Tuesdays, Wednesdays, and Thursdays.

Zagster: Page 3-9

Zagster, who operates the City's Pace bikeshare system, tracks activity of all bikes in operation. GPS points are logged at regular intervals to determine trip start and stop points as well as trip routes. Trip route information labeled 'Background' and 'Foreground' is analyzed using ArcGIS Spatial Anaylst to create the actitivty heat map found in the Factbook.

Regional Transit Service: Pages 3-10, 3-11, 3-12

Regional Transit Service (RTS) is the public-facing name of transit service provided in Monroe County by the Rochester-Genesee Regional Transportation Authority.

Average daily boarding by bus route was provided for calendar years 2015, 2016, and 2017. Corridor ridership was created by combining route ridership for route operating primarily along the same corridor. Eg. The Mt. Hope Avenue corridor includes routes 23, 24, 55, and 124.

Frequency figures were calculated from publicly available schedules, with night frequency representing the operating period after 7:30 p.m.

Federal Transit Administration: Page 3-13

The Federal Transit Administration's National Transit Database (NTD) records the financial, operating and asset condition of transit systems. The NTD includes agency profiles that

standardize efficiency and effectiveness metrics such as Unlinked Trips per Vehicle Revenue Hour representing the number of boardings per hour of bus service.

IHS/Global Insight TRANSEARCH Database: Page 3-15

The TRANSEARCH database combines information from public sources and data obtained from major freight carriers to develop a repository of county-level freight-movement data by commodity group and mode of transportation. The data informs Figure 3.32 of the Genesee Transportation Council's 2012 Transportation Strategies for Freight and Goods Movement in the Genesee-Finger Lakes Region.

Rochester City School District (RCSD): Page 3-16

The RCSD has made available a table listing all elementary schools, associated school bus routes, the number of students who make daily use of school transportation, and the total enrollment at each school.

New York State Department of Transportation (NYSDOT) Accident Location Information System: Pages 4-3, 4-4

Crash location information and crash statistics are retrieved by NYSDOT using the Accident Location Information System (ALIS). The ALIS application uses crash data stored in the Safety Information Management System database in conjunction with location information produced by location coders at the Department of Motor Vehicles.

Data is provided in point format including geographic information along with other collision details such as the involvement of pedestrians or cyclists.

Google Application Programming Interface (API): Page 5-2

The Google Places API allows for large scale commercial and service location queries. The following use types were included to locate activity centers providing daily and weekly needs:

- Goods Retail, including bicycle, book, clothing, furniture, hardware, and shoe stores
- Food Retail, including bakeries, restaurants, and supermarkets
- Services, including banks and laundromats
- Medical, including hospitals, pharmacies, and doctor/ dentist offices
- Government, including courts and local offices
- Institutional, including libraries and churches
- Intercity Transportation

Full-service supermarkets are weighted to be equivalent to ten times the other trip attractors to emphasize their importance in the community.

Access Metrics: Pages 5-3, 5-4, 5-6, 5-7, 5-8

Using ArcGIS Network Analyst, the non-motorized network is defined. Each segment of the network is assigned an associated travel time for walking and biking. The travel time assumes a walking speed of 3 miles per hour. Bicycle speed of 10 miles per hour is used for the marked bike lane and trail network while a 'penalty' is assessed on unmarked facilities dependent on the average daily traffic (effective 7mph on unmarked roads with less than 4,000 vehicles per day. effective 5 mph on unmarked roads with more than 4,000 vpd).

Activity centers, transit stops, trail access locations, and park entryways are defined by points. Network access is then simulated based on a ten-minute travel time to/from access points.

Population coverage figures are based on geographic coverage at the census tract level.