

MADISON STREET STATS

- **What do our streets do well, and not so well?**
- **How well do our current streets serve different users?**



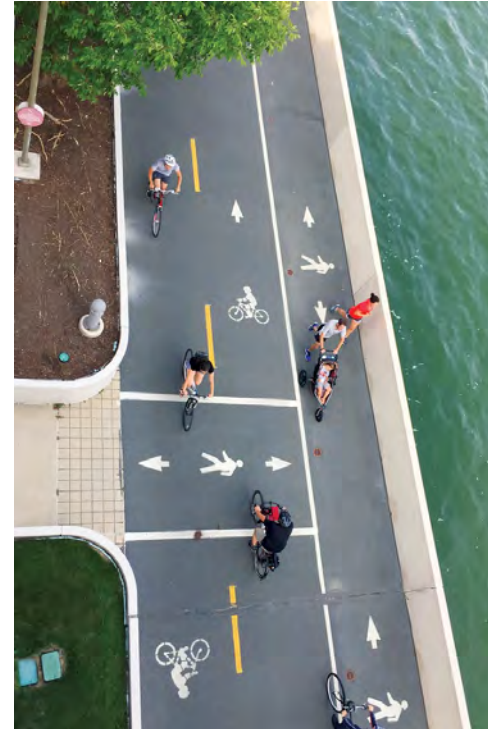
PEDESTRIAN SAFETY AND COMFORT

What is safe and comfortable for people walking?

Sidewalks are the default place for people to safely walk along the street. They reduce walking-along-the-street crashes by 88%.

Shared-use paths are also an important part of a pedestrian network.

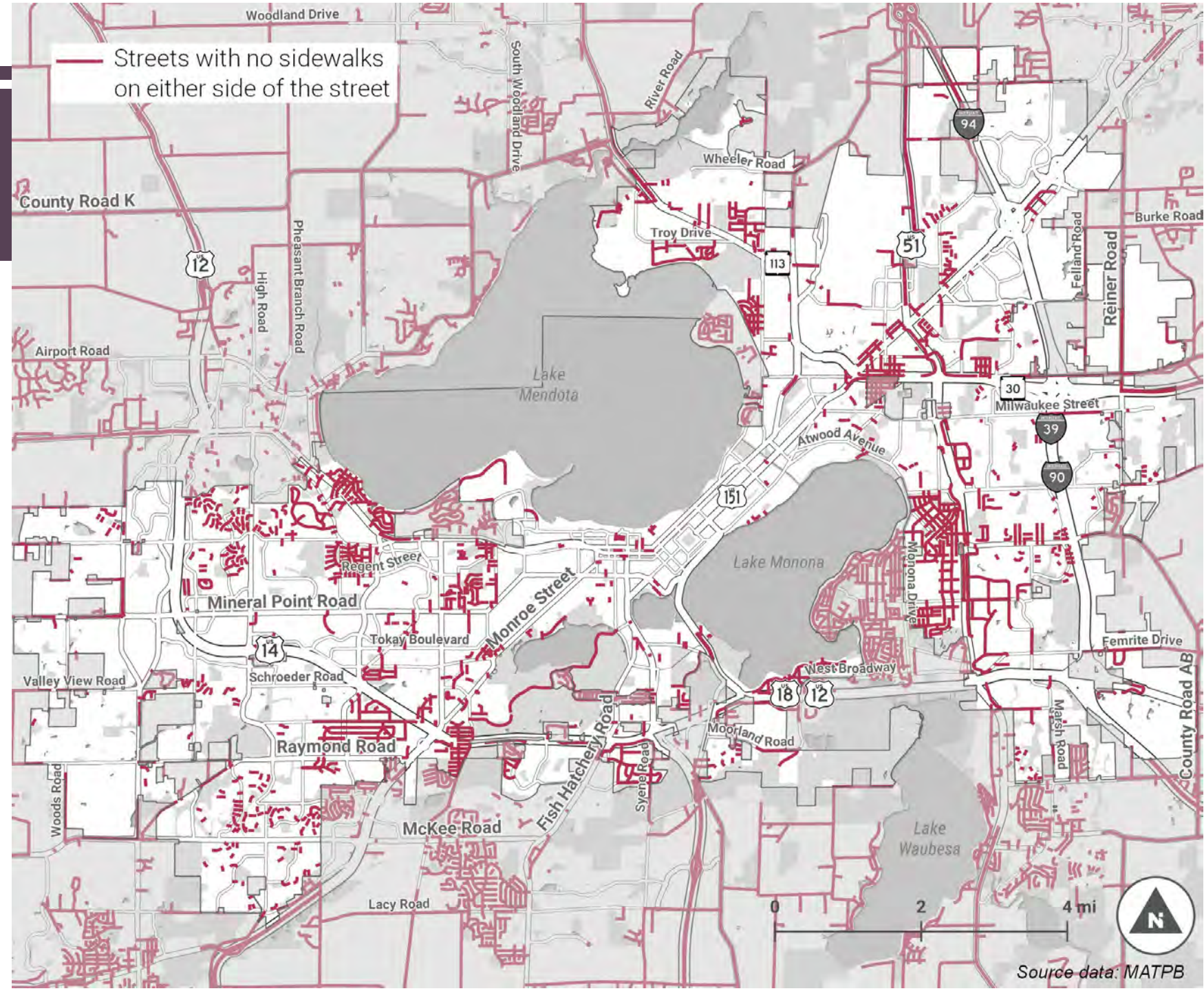
Streets with speed limits 15 mph or less *and* very low traffic (under 500 vehicles/day) are safe and comfortable without sidewalks.



STREETS WITH NO SIDEWALKS

Some of Madison's busiest streets saw (such as Aberg Avenue, Stoughton Road, and Packers Avenue) lack sidewalks in some places.

Some residential and industrial areas also stand out for their complete lack of sidewalks. Many such areas were developed and built out while they were unincorporated (part of a town), and later annexed by the city.



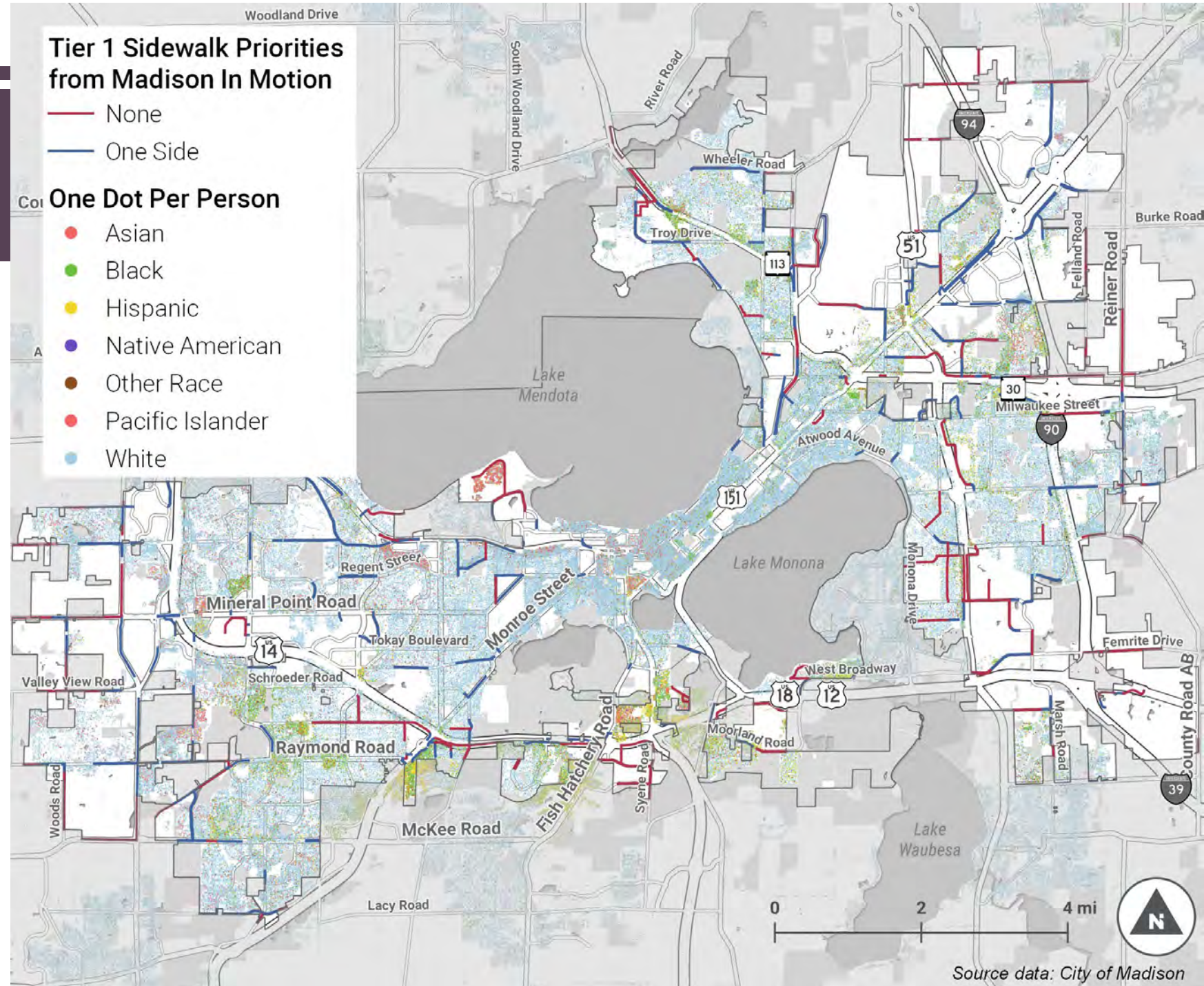
CRITICAL SIDEWALK GAPS

Priority sidewalk connections shown here are from the Madison in Motion Sustainable Transportation Plan.

They are on streets that are high-traffic, have local bus service, or provide connections to schools, commercial areas, or community services.

Madison is placing a high priority on installing these sidewalks.

Many of these missing sidewalk connections are in neighborhoods with higher percentages of people of color.

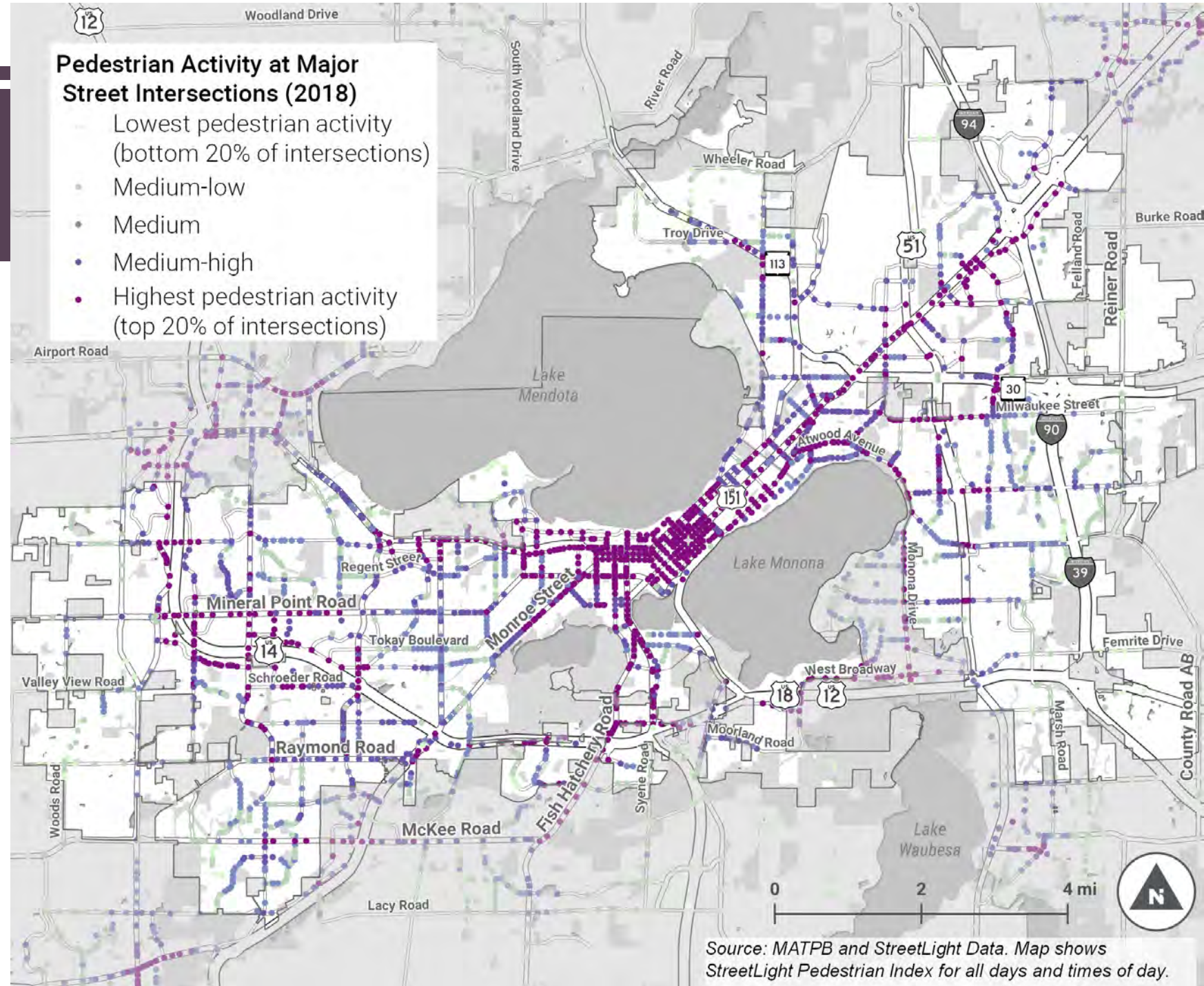


PEDESTRIAN VOLUMES

We can estimate pedestrian activity with "big data." StreetLight Data combines anonymous location records from smartphones and other GPS devices to track movement across major intersections.

The highest volumes of people walking are in downtown and around commercial areas.

There are high volumes of people walking near East Towne, West Towne malls, despite those areas being automobile-oriented street design.

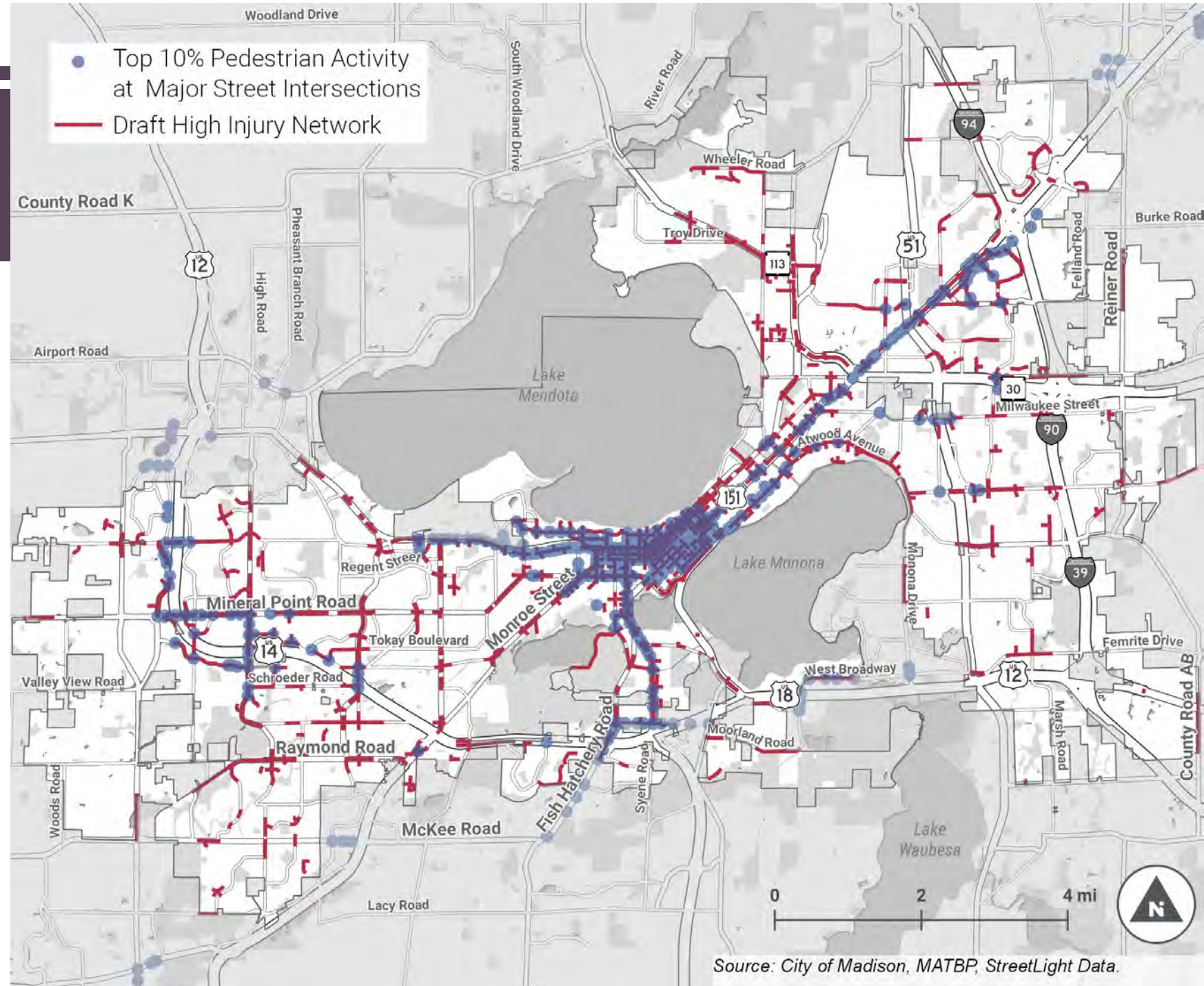


NEED FOR SAFE PED CROSSINGS

The map shows major intersections with the top 10% of pedestrian volumes in Madison. They are concentrated downtown, but East Washington Avenue, Park Street, and Mineral Point Road also stand out.

The points are overlaid on the Draft High-Injury Network, which is made up of streets that have high rates of crashes resulting in serious and fatal injuries.

These intersections should be prioritized to make them safer and easier to cross for pedestrians.

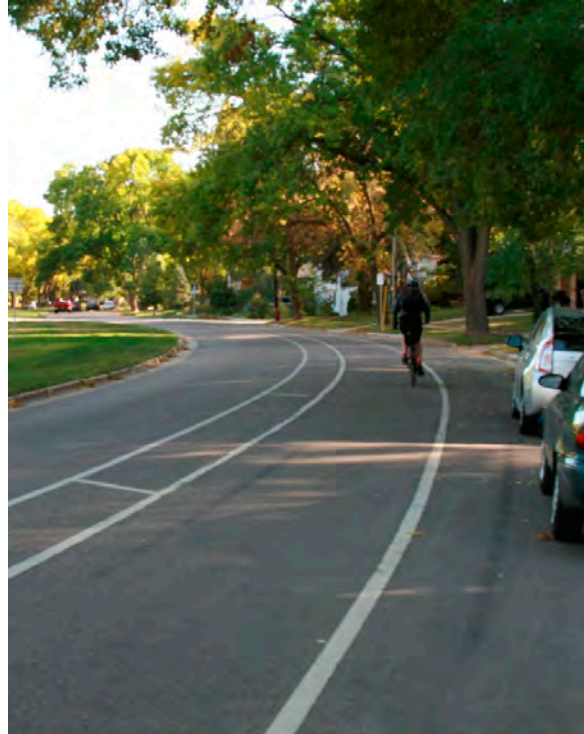


BICYCLIST SAFETY AND COMFORT: LEVEL OF TRAFFIC STRESS (LTS) SCALE

LOW-STRESS



LTS 1: Suitable for children



LTS 2: Tolerable for majority of adults (based on Dutch criteria)

HIGH-STRESS



LTS 3: Acceptable for more confident adults



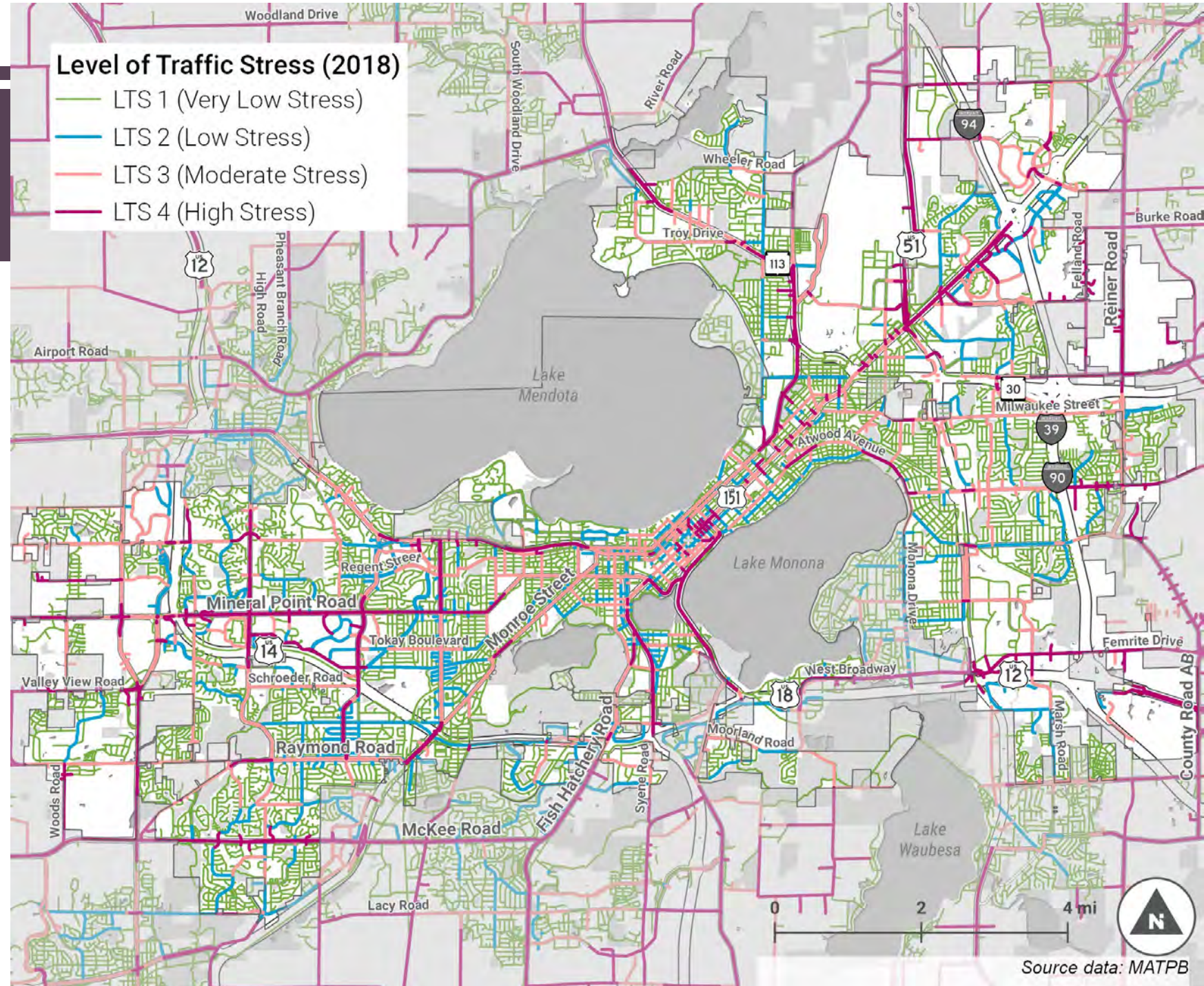
LTS 4: Acceptable to very few

BICYCLE LTS

The low-stress bicycle network is all the streets and paths on which an average person would be expected to feel comfortable riding a bicycle (LTS levels 1 and 2).

All paths and most residential streets in Madison qualify as LTS 1, providing a grid of low-stress streets. But traveling by bike beyond one's neighborhood is trickier.

The low-stress network has barriers created by high-stress crossings of major streets. Sometimes busy streets are the only connection across the city.

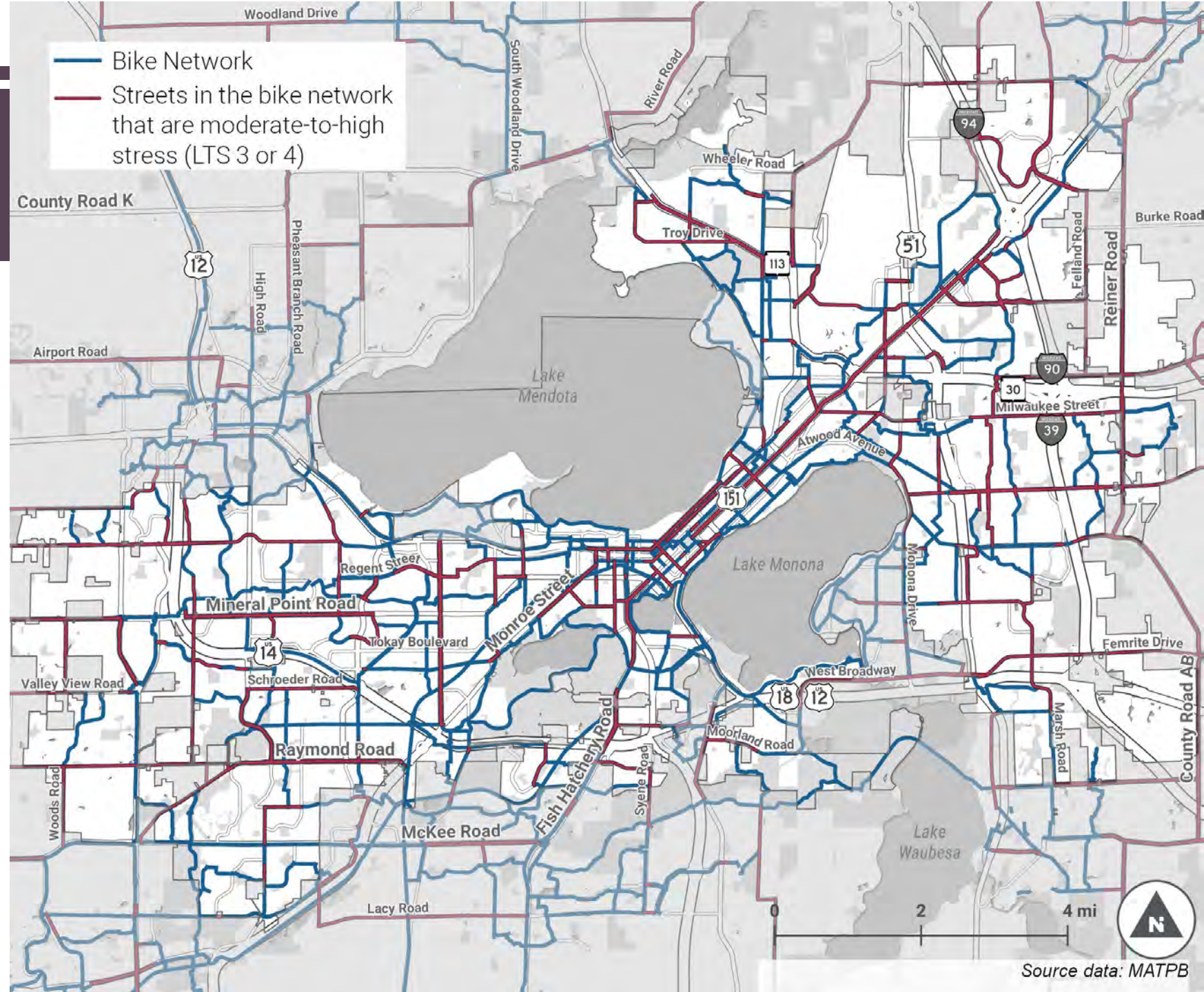


GAPS IN BIKE NETWORK

Some streets and paths are part of a designated regional bike network, made up of major paths, signed bike routes on residential streets, and bike lanes on busy streets.

The map at right shows the designated bike network. Blue-colored streets are part of the network that are low stress, while plum-colored streets are high-stress (LTS levels 3 or 4).

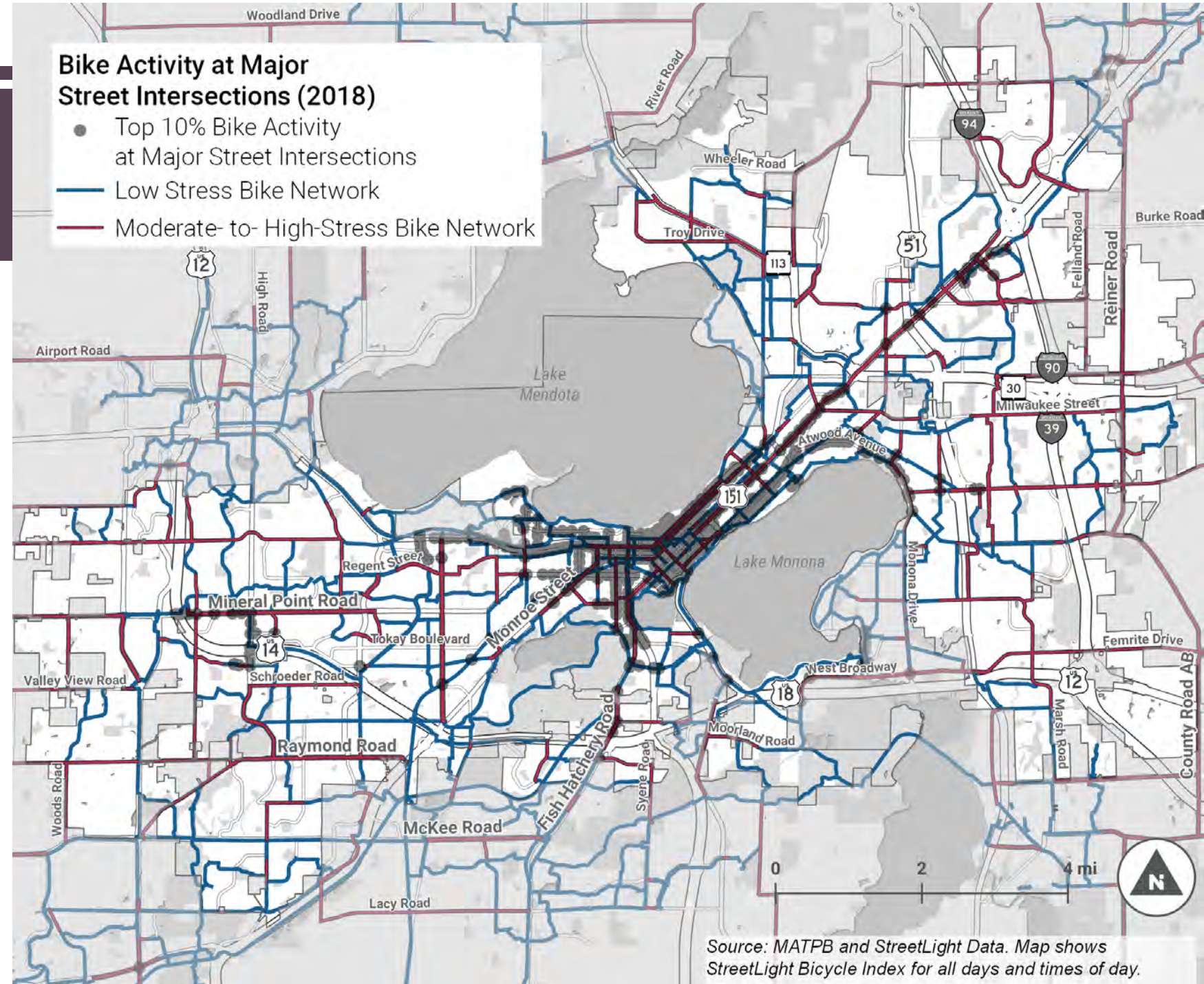
These street segments should be made safer and more comfortable for people bicycling.



BICYCLE VOLUMES

We can also estimate bicyclist activity with StreetLight data. Like the pedestrian estimates, the highest volumes of people biking are in downtown and around commercial areas, and there are high volumes of people biking near East Towne and West Towne malls, despite those areas being automobile-oriented.

Data from StreetLight does not include intersections of minor streets or paths, so many “top” intersections of paths or bike routes may be missing.



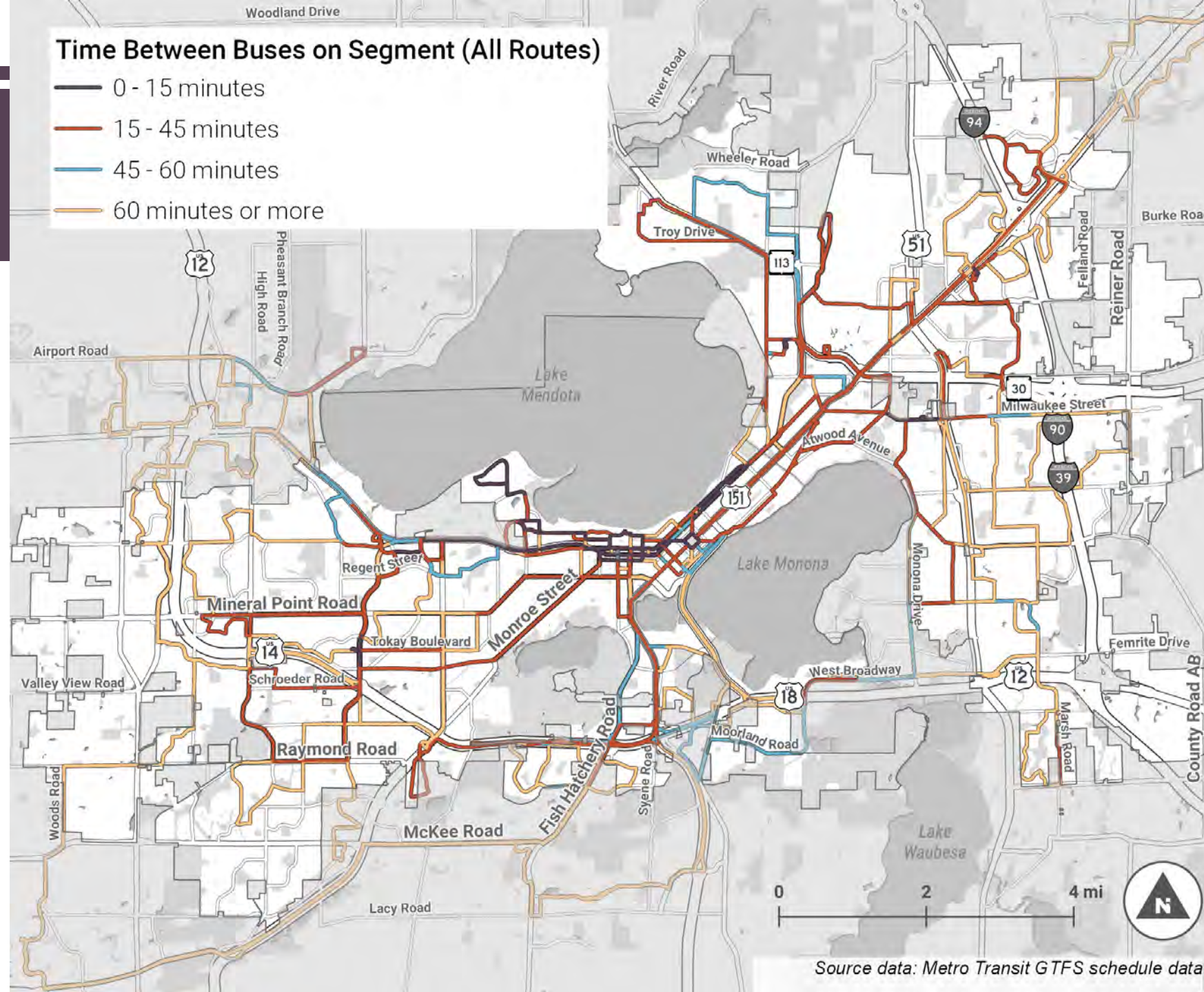
HIGH-VOLUME TRANSIT STREETS

The map shows the average time between buses on each street segment, including all routes that use that street.

Streets with frequent buses should be designed to prioritize transit.

Two projects currently underway—the East-West BRT and the Metro Transit Redesign—will change how frequently buses run along some streets.

Many of the routes in light orange are special routes that run infrequently, including commuter routes to Epic Systems.

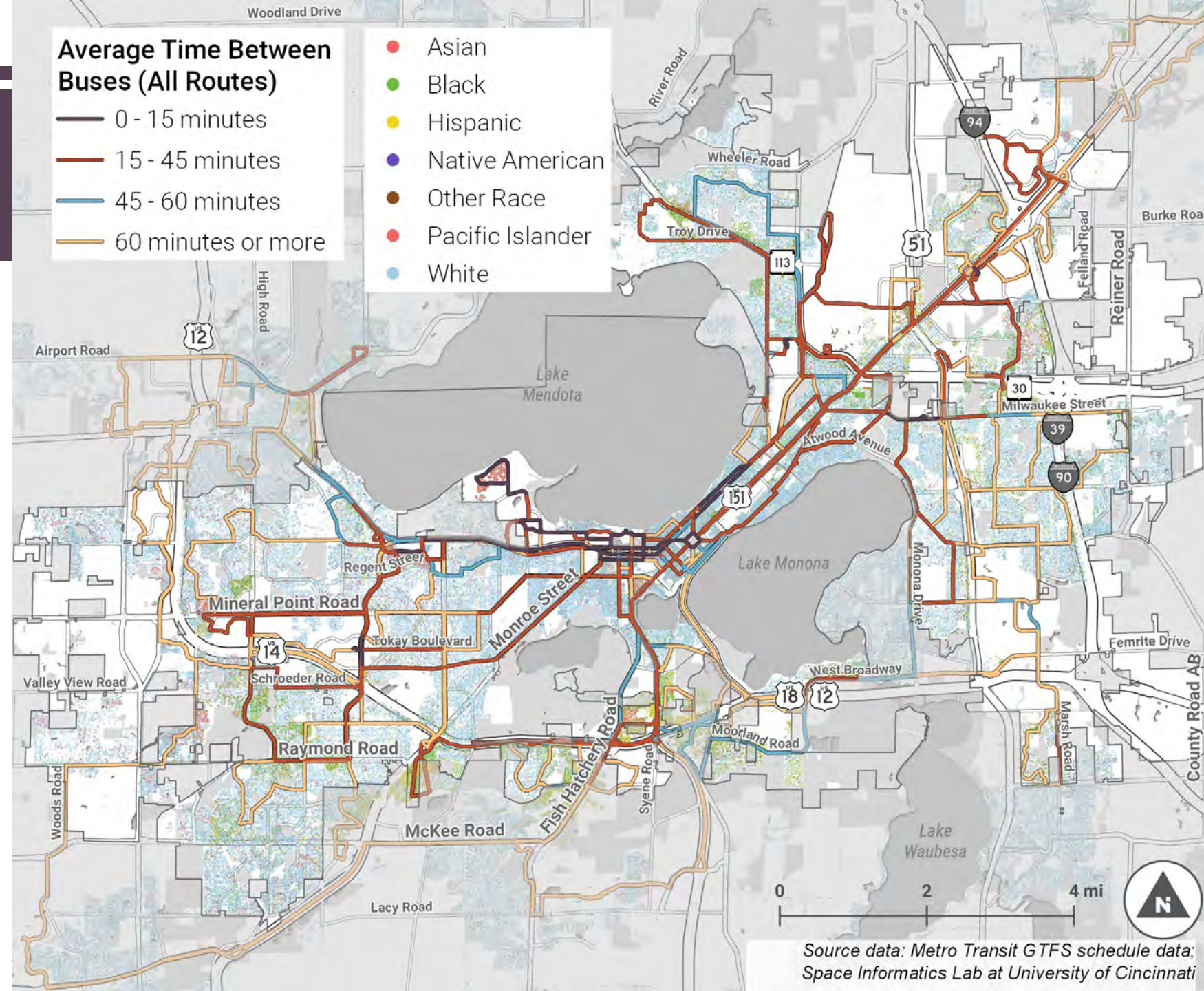


HIGH-VOLUME TRANSIT & EQUITY

As we consider which streets should be “transit streets,” we need to consider the disparity between high-transit streets and where people of color live.

Many people of color are in low-income households, and live in neighborhoods with affordable housing costs that are on the periphery of the city and are not served well by transit.

Streets in those areas with average transit service might still need to be designed to prioritize transit, because people in those areas are lower income and may rely more on transit.

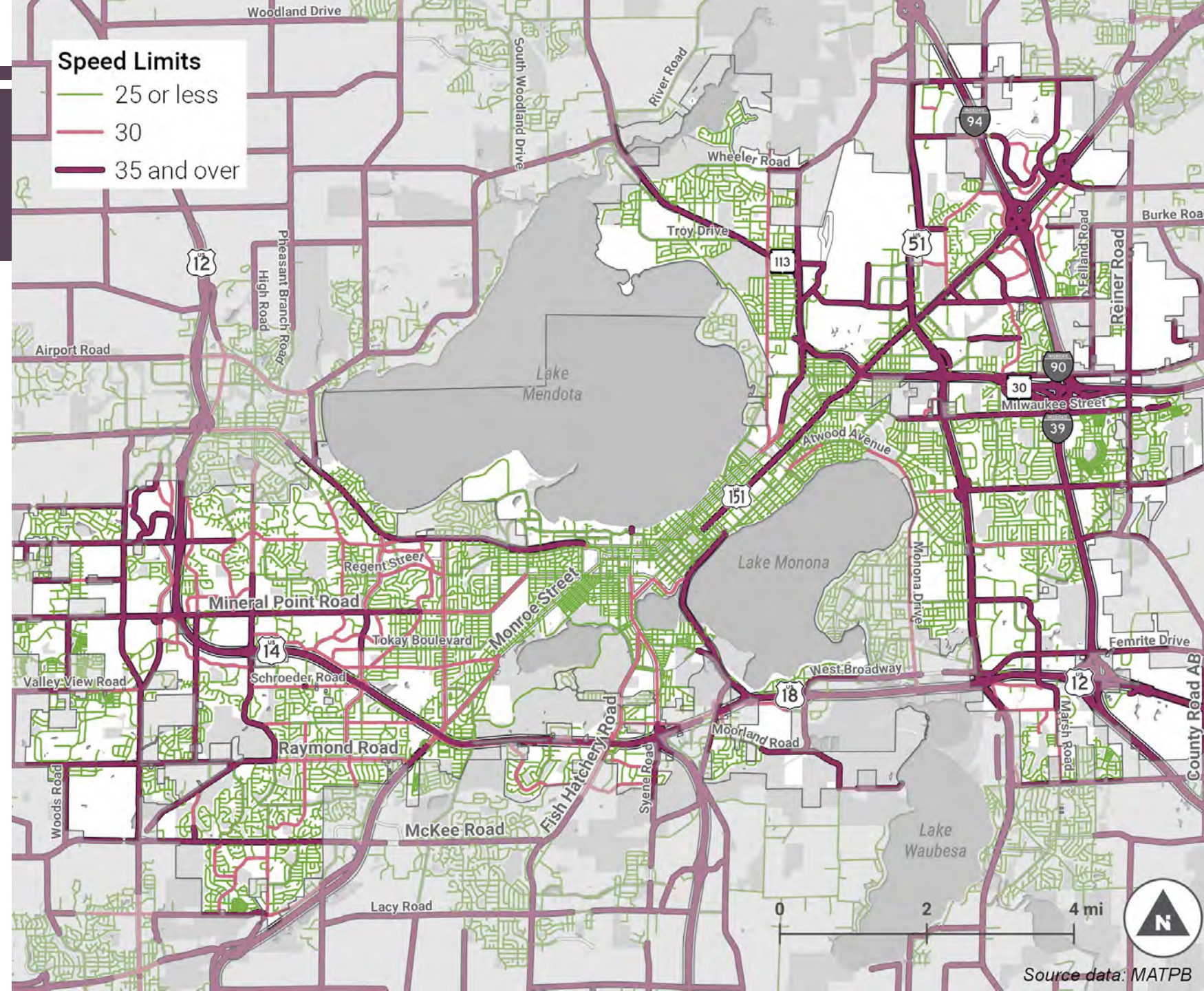


SPEED LIMITS

Vehicle speed plays a critical role in the outcome of a crash:

- If a vehicle moving at 20 mph strikes a pedestrian, there is a 13% likelihood of fatality or severe injury;
- At 30 mph, there is a 40% likelihood of fatality or severe injury;
- At 40 mph, the likelihood of fatality or severe injury is 73%.

This map does not reflect recent speed limit changes on a variety of streets in 2021.

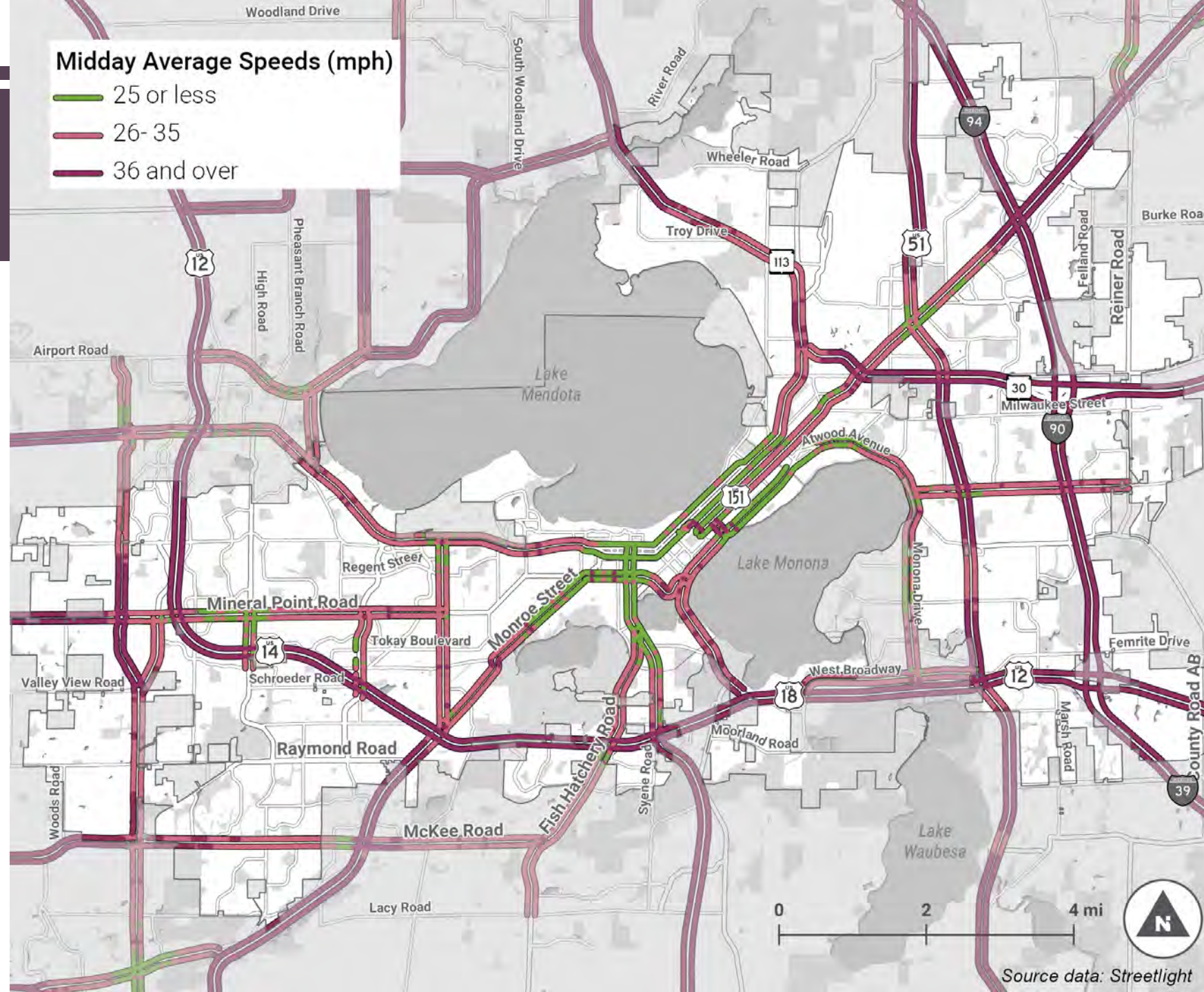


MIDDAY AVERAGE SPEEDS (ACTUAL)

Unfortunately, people often exceed the posted speed limit.

StreetLight Data provides estimates of average traffic speeds on a selected number of busy streets.

The map shows the average speeds across the segment, including while drivers are stopped at red lights, as well as the slowing and accelerating before and after the light. Someone could be reaching much faster speeds between stoplights, and only average 24 mph.

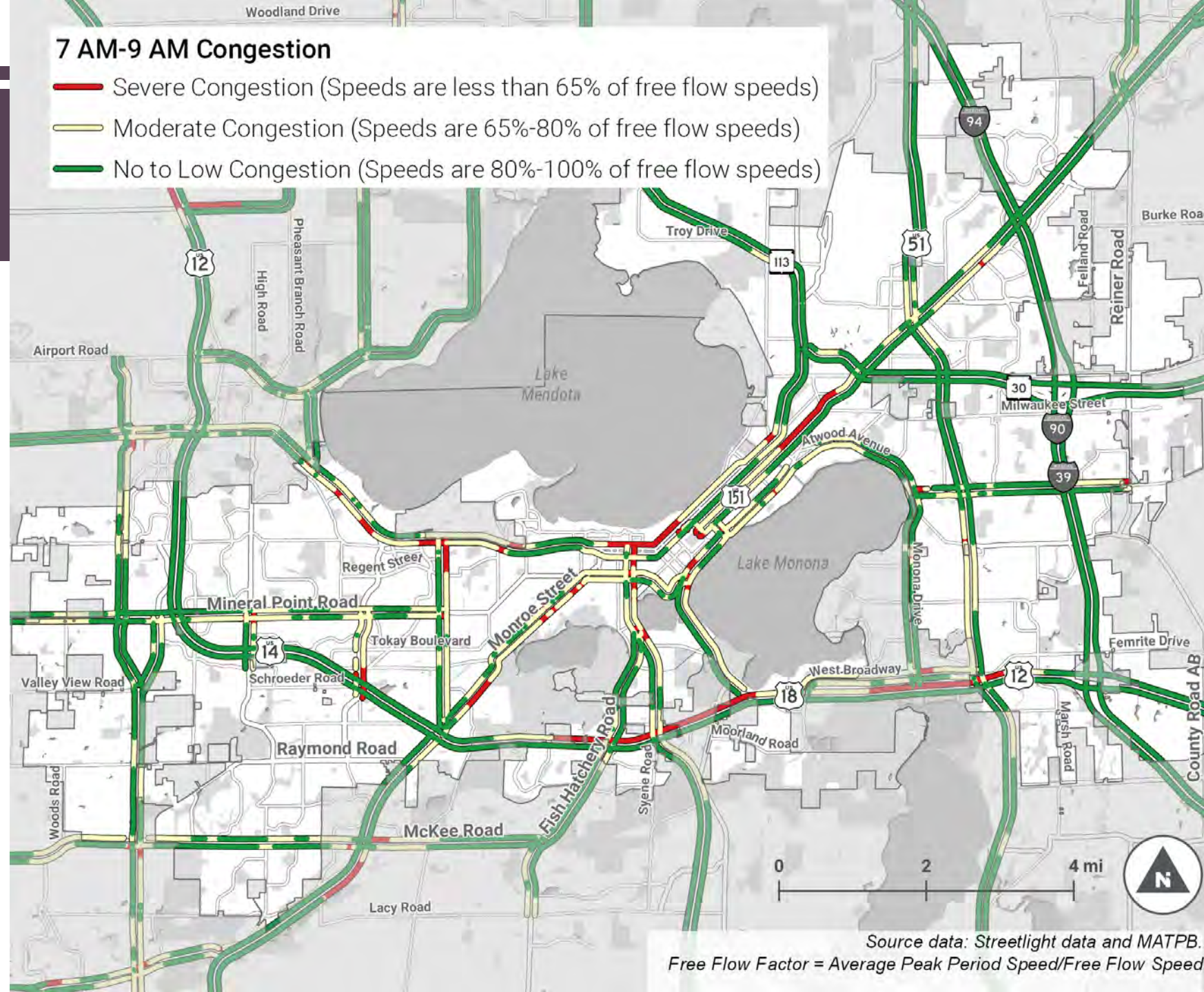


MORNING TRAFFIC CONGESTION

Madison has relatively few streets with severe traffic congestion in the morning.

The map shows StreetLight estimates of traffic congestion, which is calculated by comparing the traffic speed during the peak, to the free-flow traffic speed in off-peak periods.

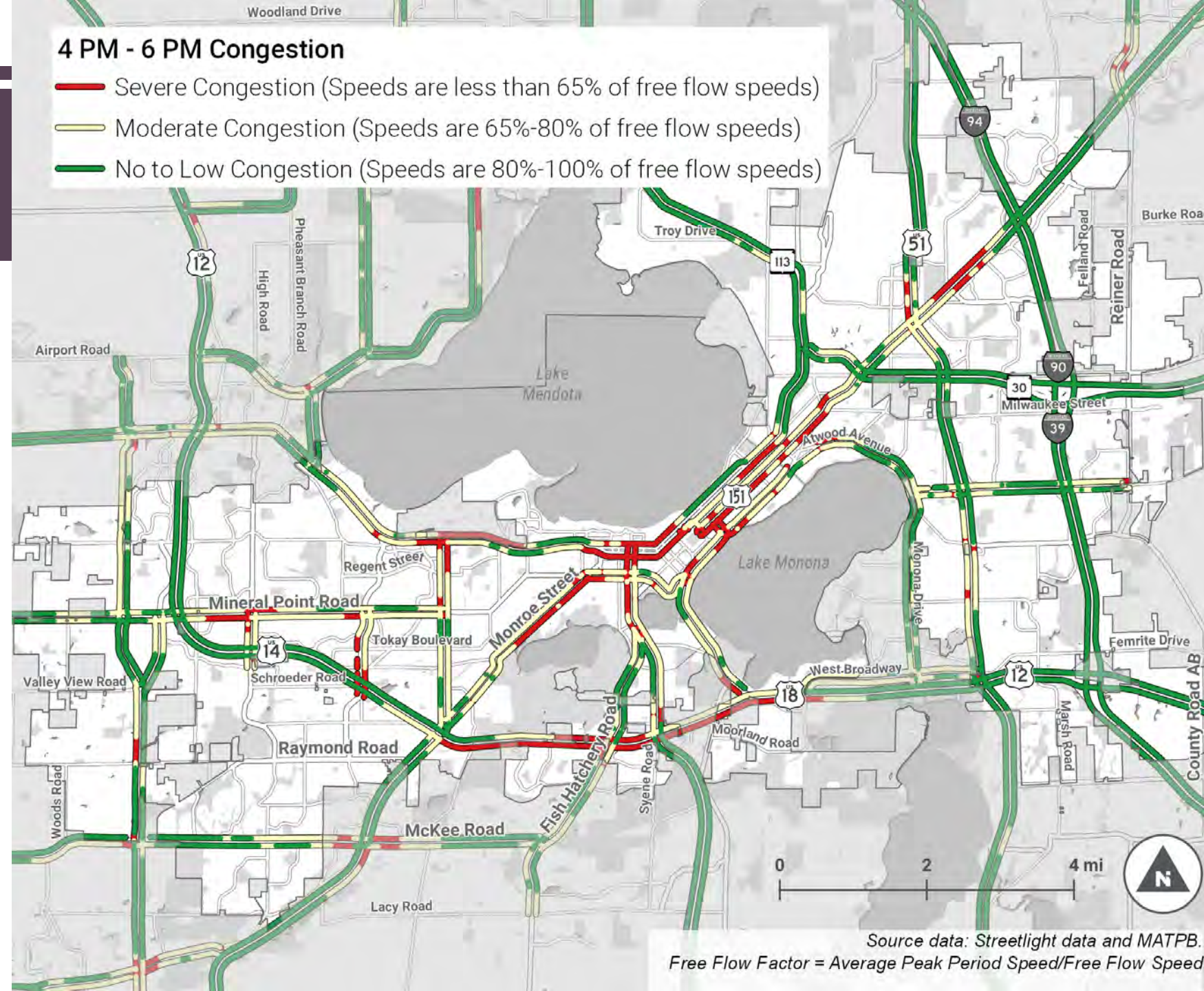
Significant speeding during the off-peak periods may make peak period congestion appear worse.



EVENING TRAFFIC CONGESTION

The worst part of the day for traffic congestion in Madison is the 2-hour window between 4 and 6 p.m.

Many streets with moderate or severe congestion are also high-volume transit streets. As part of Let's Talk Streets and the Madison Complete Green Streets projects, we will ask people about what kinds of tradeoffs the community should make as we decide which streets will be built to prioritize for people walking, using transit, riding bicycles, or driving.



RACIAL DISPARITIES IN MADISON'S STREET STATS

We need to keep racial disparities in mind so that they are reduced or eliminated. Black, Hispanic, and Native American people in Madison are more likely than white people to live near high-injury streets and priority sidewalk gaps.

	Asian	Black	Hispanic	Native American	Pacific Islander	Other Race	White	Total
Population	17,000	16,400	15,900	800	100	6,300	176,000	232,500
% of people living within 1/8 mile of High-Injury Network	57%	66%	62%	63%	*	62%	57%	58%
% of people living within 1/8 mile of priority sidewalk	25%	32%	33%	25%	*	29%	25%	26%
% of people living within 1/4 mile of high-frequency transit	35%	13%	16%	13%	*	19%	20%	21%
% of people living within 1/8 mile of regional bike path	17%	21%	19%	13%	*	19%	20%	20%

Demographic data: 2010 Census and Space Informatics Lab at University of Cincinnati