



The Madison Area Transportation System

Performance Measures Report 2018



Madison Area Transportation Planning Board

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The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation or WisDOT.

Table of Contents

Introduction	1
Create Connected Livable Neighborhoods and Communities	3
Improve Public Health, Safety, and Security	5
Support Personal Prosperity and Enhance the Regional Economy	7
Improve Equity for Users of the Transportation System	7
Reduce the Environmental Impact of the Transportation System	9
Advance System-wide Efficiency, Reliability and Integration Across Modes	11
Establish Financial Viability of the Transportation System	13
Map Book for Selected Performance Measures.....	15

Regional Transportation Plan Goals and Measures

Goal I: Create Connected Livable Neighborhoods and Communities

- Miles of Pedestrian Facilities
- Low-Stress Bike Facilities
- BCycle Utilization

Goal II: Improve Public Health, Safety, and Security

- Motor Vehicle Crash Fatalities
 - **5-year average # of fatalities***
 - **5-year average rate of vehicle fatalities***
- Motor Vehicle Series Injuries
 - **5-year rolling average # of injuries***
 - **5-year average rate of vehicle injuries***
- Pedestrian and Bicycle Fatalities and Serious Injuries
 - **5-year rolling average # of non-motorized fatalities and serious injuries**

Goal III: Support Personal Prosperity and Enhance the Regional Economy

- Airline Passenger Traffic
- Transit Access to Employment

Goal IV: Improve Equity for Users of the Transportation System

- Transit Ridership
- Fixed Route Transit Service Area
- Transit Coverage for Minorities and Low Income Persons

Goal V: Reduce the Environmental Impact of the Transportation System

- Vehicle Miles Traveled
- Mode of Transportation to Work
- Air Quality

Goal VI: Advance System-wide Efficiency, Reliability, and Integration Across Modes

- Transit On-time Performance
- Percent of Key Destinations Served by Transit
- Roadway Congestion and Reliability
 - **Percentage of miles Traveled on the Interstate that are Reliable***
 - **Percentage of miles Traveled on the NHS that are Reliable***
 - **Truck Travel Time Reliability (TTTR) Index***

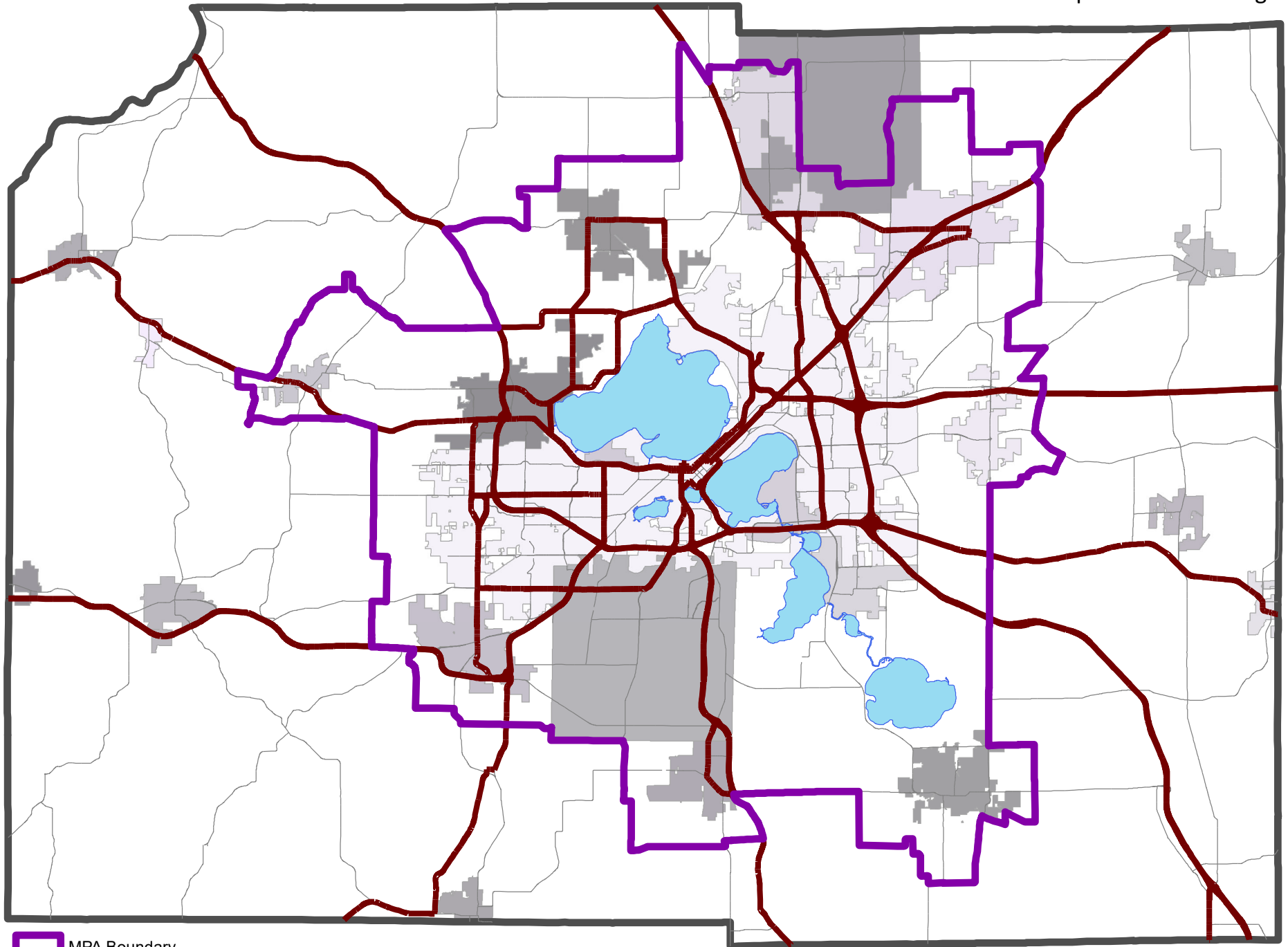
Goal VII: Establish Financial Viability of the Transportation System

- **Buses at or Past Replacement Age***
- Bridge Condition
 - **Percentage of NHS Bridges Classified as in Good Condition***
 - **Percentage of NHS Bridges Classified as in Poor Condition***
- Bridge Condition of Non-NHS Bridges
- Pavement Condition
 - **Percentage of Pavements on the Interstate System in Good Condition***
 - **Percentage of Pavements on the Interstate System in Poor Condition***
 - **Percentage of Pavements on the NHS in Good Condition***
 - **Percentage of Pavements on the NHS in Poor Condition***

***Bold italicized** measures are federally required.


Metropolitan Planning Area Boundary

for the Madison Area Transportation Planning Board



 MPA Boundary

 National Highway System (NHS) Roadways

 Arterial and Collector Roadways

0 1 2 4 Miles



Introduction

Purpose

The Madison Area Transportation Planning Board (MATPB), the Metropolitan Planning Organization (MPO) for the Madison area, creates and maintains the Regional Transportation Plan (RTP) for the Madison Metropolitan Area. The RTP articulates the long-range transportation vision for the region and provides numerous policies and recommends key investments to meet both [regional](#) and [national](#) goals. The seven goals identified in the RTP serve as the framework for the Performance Measures Report (PMR). The purpose of the report is to gauge progress in achieving the RTP goals, inform decisions about investments and strategies, and provide an annual snapshot of how well the regional transportation system is performing over time. Further, the PMR helps the MPO meet [federal requirements for performance management](#) outlined in the [Fixing America's Surface Transportation \(FAST\) Act](#).

Some measures are applicable to more than one goal, but have been organized under the goal that fits best. Some aspects of the plan goals are not addressed by the measures due to unavailable or incomplete data. The measures in this report are not intended to be exhaustive, but rather allow tracking of meaningful progress towards goals for which accurate, easily obtainable data is available. As a result, some measures and methodologies may change from year to year. For questions regarding data sources or methodology changes please contact [MATPB staff](#).

Federal Performance Measures

All federal performance measures have now been finalized. State department of transportations (DOTs) and transit agencies are required to establish performance targets for all federal measures. MPOs may either support the DOT's and transit agencies targets or establish their own. MATPB elected to support the Wisconsin Department of Transportation (WisDOT) and Metro Transit targets for all of the federally-required performance measures. The WisDOT and Metro developed targets for the federal measures are included in the measure narratives later on in this report. MATPB then must document how the roadway and transit projects that are programmed for the Madison metropolitan area in the annual [Transportation Improvement Program](#) (TIP) are helping to achieve these targets.



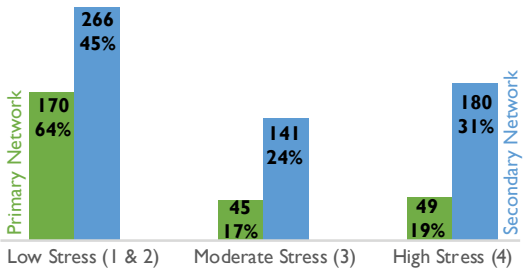



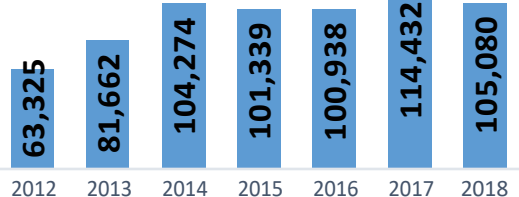


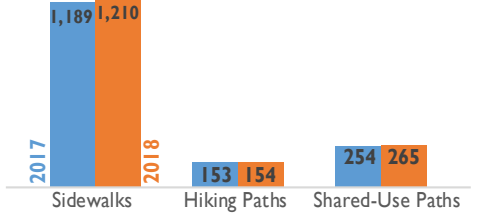


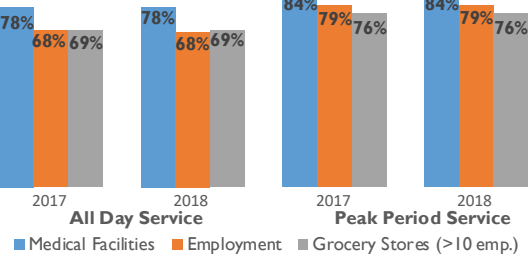



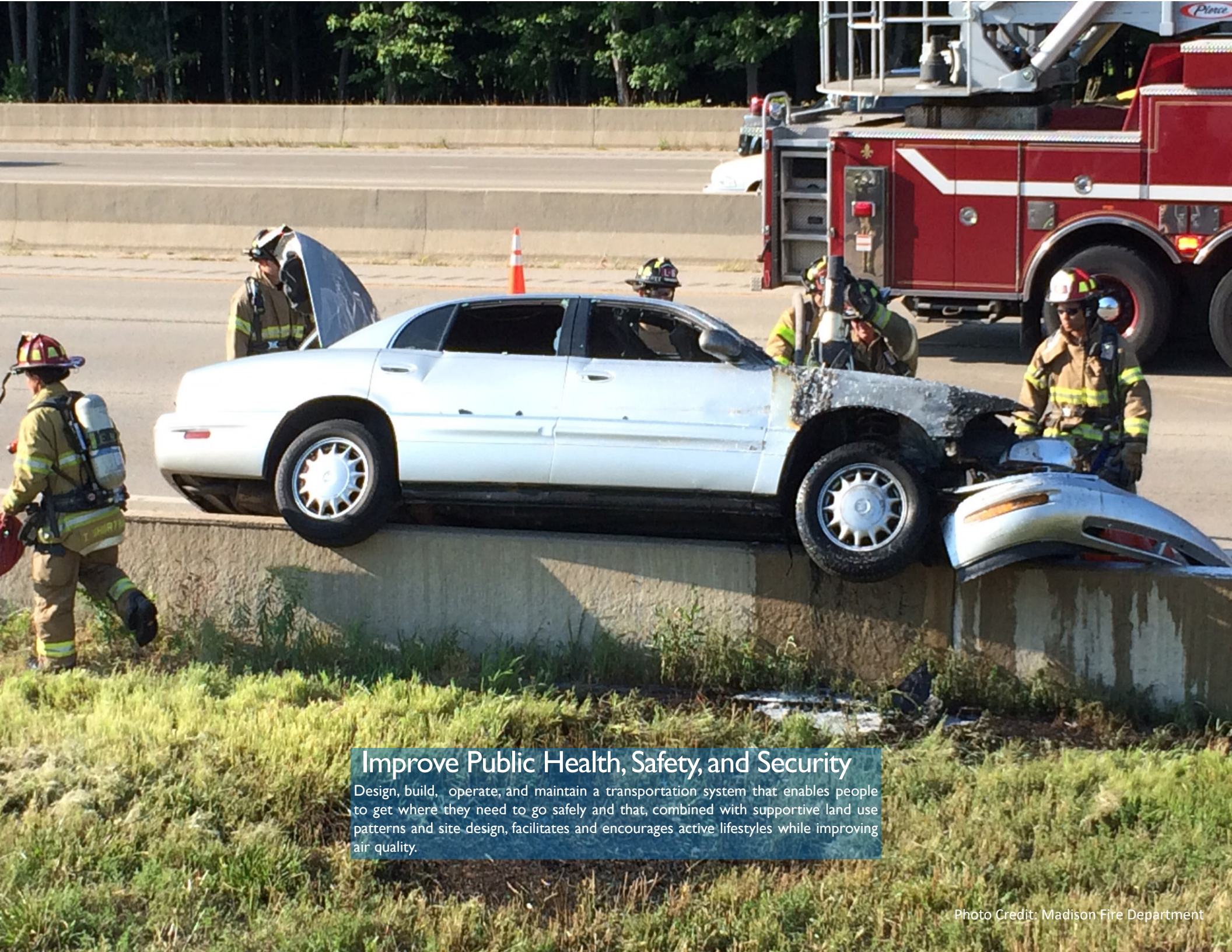
A wide-angle photograph of a suburban neighborhood. In the foreground, a paved road curves through a green lawn. A red fire hydrant stands on the left side of the road. A light blue car is parked on the right side of the road. In the background, a row of houses with grey roofs and white trim is visible. The houses have multiple gables and are set back from the road by a strip of grass. Behind the houses, there are trees with autumn-colored leaves in shades of orange, yellow, and brown. The sky is a clear blue with scattered white clouds.

Create Connected Livable Neighborhoods and Communities

Create interconnected livable places linked to jobs, services, schools, shops, and parks through a multi-modal transportation system that is integrated with the built environment and supports compact development patterns that increase the viability of walking, bicycling, and transit.

Create Connected Livable Neighborhoods and Communities


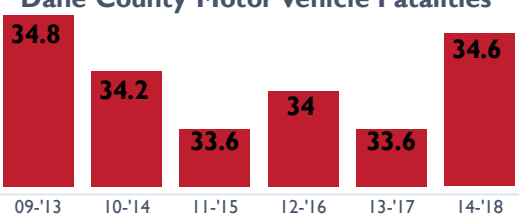


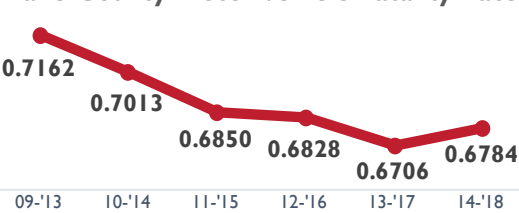


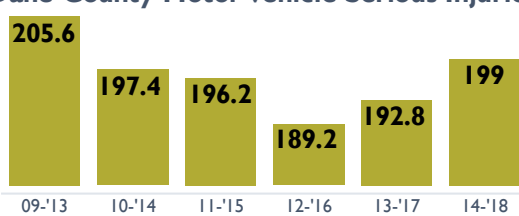


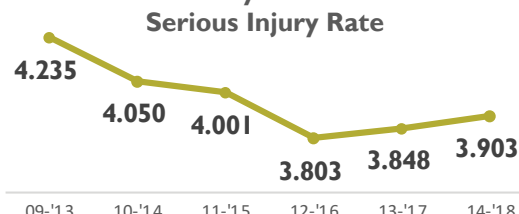


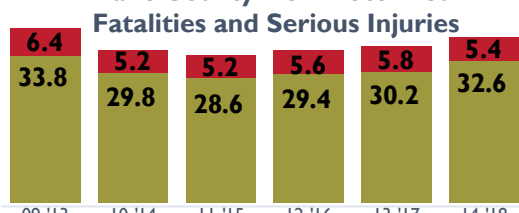

Performance Measure	Target	Data and Trends	Current Status	Analysis
Low-Stress Bike Network <i>The percentage of primary and secondary bicycle networks that are high stress (LTS 4) and low stress (LTS 1 or 2)</i>	 in % miles of low-stress facilities  in % miles of high-stress facilities	Miles of Low-Stress Bike Network (2018) 	 in % miles of low-stress facilities  in % miles of high-stress facilities	<p>Traffic-related safety concerns are one of the largest barriers to bicycling; comfortable biking conditions on key regional routes enable more people to ride.</p> <p>Between 2017 and 2018, the percentage of the primary and secondary bicycle networks that are high stress (LTS 4) and low stress (LTS 1 or 2) remained virtually unchanged. See Map 1 in Map Book.</p>
BCycle Utilization <i>Number of BCycle bikeshare trips made annually</i>	 in utilization	Number of BCycle Trips in Dane County 	 in utilization	<p>Bikeshare is a low-cost, environmentally friendly mode of travel that also helps to reduce congestion. The number of Bcycle trips declined by 8% between 2017 and 2018 but remain at their second highest level. In 2019 BCycle moved to electric bikes which is anticipated to boost ridership. See Map 2 in Map Book.</p>
Pedestrian Facilities <i>Miles of pedestrian facilities, including sidewalks and paths.</i>	 in miles of facilities	Miles of Pedestrian Facilities 	 in miles of facilities	<p>The Madison metropolitan area has 1,210 miles of streets with sidewalk, 154 miles of pedestrian paths and hiking trails, and 265 miles of shared-use path--a slight increase over 2017.</p>
Key Destinations Served by Transit <i>The percent of key destinations within 1/4 mile of transit service</i>	 in number of destinations covered	Transit Access to Key Destinations 	 destinations covered	<p>The number of jobs as well as medical and grocery-shopping destinations in the MPO area that are accessible by transit during peak and off-peak hours remain virtually unchanged since 2016. See Map 3 in Map Book.</p>



Improve Public Health, Safety, and Security

Design, build, operate, and maintain a transportation system that enables people to get where they need to go safely and that, combined with supportive land use patterns and site design, facilitates and encourages active lifestyles while improving air quality.

Improve Public Health, Safety, and Security

Performance Measure	Target	Data and Trends	Current Status	Analysis
Motor Vehicle Crash Fatalities* <i>The five-year rolling average of annual total fatalities in Dane County</i>	 DECLINE Reduce by 2%	Dane County Motor Vehicle Fatalities 	 INCREASE Does Not Meet Target	Dane County experienced an average of 34.6 fatalities per year due to a motor vehicle collision for the 5-year period from 2014-2018, an increase of 2.9% from the previous reporting period.
Motor Vehicle Crash Fatality Rate* <i>The five-year rolling average of annual fatalities in Dane County per 100 million vehicle miles traveled (VMT)</i>	 DECLINE Reduce by 2%	Dane County Motor Vehicle Fatality Rate 	 INCREASE Does Not Meet Target	Crash rates help explain the relative safety of the system, allowing for locations with differing amounts of traffic to be compared against other locations. The 2014-2018 5-year fatality rate for Dane County was 0.678, an increase of 1.2% from the previous period.
Motor Vehicle Crash Serious Injuries* <i>The five-year rolling average of annual total serious motor vehicle injuries in Dane County</i>	 DECLINE Reduce by 5%	Dane County Motor Vehicle Serious Injuries 	 INCREASE Does Not Meet Target	Dane County experienced an average of 199 serious injuries as a result of a motor vehicle collision for the 2014-2018 5-year period, an increase of 3.1% over the previous period.
Motor Vehicle Crash Serious Injury Rate* <i>The five-year rolling average of annual serious motor vehicle injuries in Dane County per 100 million vehicle miles traveled (VMT)</i>	 DECLINE Reduce by 5%	Dane County Motor Vehicle Serious Injury Rate 	 INCREASE Does Not Meet Target	The five-year serious injury rate for Dane County was 3.903, an increase of 1.4% from the previous period.
Non-Motorized Vehicle Crash Fatalities and Serious Injuries* <i>The five-year rolling average of annual total bike and pedestrian fatalities and serious injuries.</i>	 DECLINE Reduce by 5%	Dane County Non-Motorized Fatalities and Serious Injuries 	 INCREASE Does Not Meet Target	Non-motorized fatalities and serious injuries decreased in 2018, however the average combined number of non-motorized fatalities and serious injuries for the 2014-2018 period increased 5.3% over the previous period.

Rolling averages smooth out the year-to-year fluctuations in the number of crashes that can occur due to the randomness of crash events that can skew the data in a particular year, allowing for an examination of trends over time. To develop the averages, counts and rates are added for a series of years and averaged for the time period.

*Indicates federal performance measure and MPO adopted targets

Support Personal Prosperity and Enhance the Regional Economy


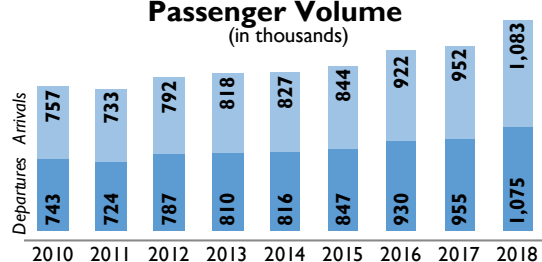


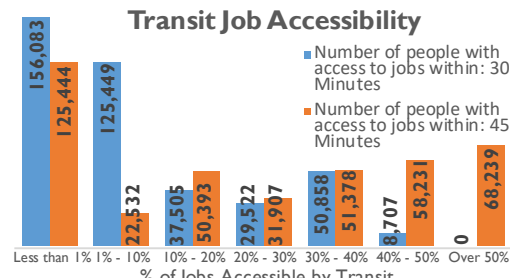

Build, operate, and maintain a transportation system that provides people with affordable access to jobs and enables the exchange of goods and services within the region and to/from other regions.




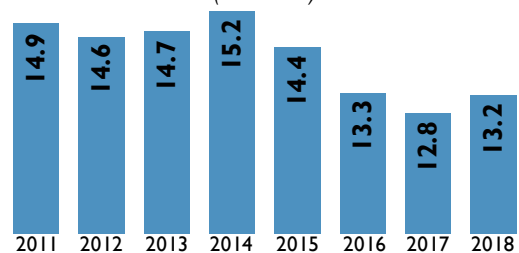



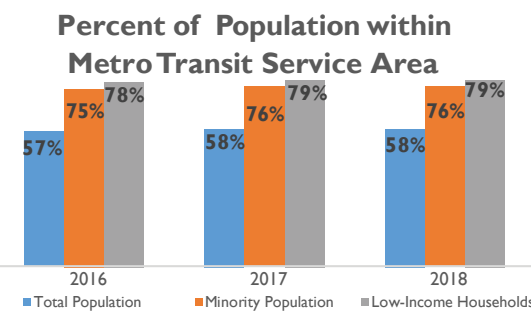


Improve Equity for Users of the Transportation System

Provide an equitable level of transportation facilities and services for all regardless of age, ability, race, ethnicity, or income.

Support Personal Prosperity and Enhance the Regional Economy

Performance Measure	Target	Data and Trends	Current Status	Analysis																														
Airline Passenger Traffic <i>The total number of passengers arriving and departing from the MSN airport</i>	 INCREASE in passengers	Dane County Regional Airport Passenger Volume (in thousands)  <table><tr><th>Year</th><th>Departures</th><th>Arrivals</th></tr><tr><td>2010</td><td>743</td><td>757</td></tr><tr><td>2011</td><td>724</td><td>733</td></tr><tr><td>2012</td><td>787</td><td>792</td></tr><tr><td>2013</td><td>810</td><td>818</td></tr><tr><td>2014</td><td>816</td><td>827</td></tr><tr><td>2015</td><td>847</td><td>844</td></tr><tr><td>2016</td><td>930</td><td>922</td></tr><tr><td>2017</td><td>955</td><td>952</td></tr><tr><td>2018</td><td>1,075</td><td>1,083</td></tr></table>	Year	Departures	Arrivals	2010	743	757	2011	724	733	2012	787	792	2013	810	818	2014	816	827	2015	847	844	2016	930	922	2017	955	952	2018	1,075	1,083	 INCREASE in passengers	The Dane County Airport (MSN) saw a record number of passengers in 2018, a 13% increase over 2017. Airline passenger traffic increases can be attributed to the strong local economy and the additional routes and larger aircraft offered by the airlines that serve MSN, which will in turn help to continue to expand the options available to passengers.
Year	Departures	Arrivals																																
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2018	1,075	1,083																																
Transit Access to Employment <i>The percent of jobs within 1/4 mile of transit service</i>	 INCREASE in job accessibility	Transit Job Accessibility  <table><tr><th>% of Jobs Accessible by Transit</th><th>Number of people with access to jobs within: 30 Minutes</th><th>Number of people with access to jobs within: 45 Minutes</th></tr><tr><td>Less than 1%</td><td>156,083</td><td>125,444</td></tr><tr><td>1% - 10%</td><td>125,449</td><td>22,532</td></tr><tr><td>10% - 20%</td><td>37,505</td><td>50,393</td></tr><tr><td>20% - 30%</td><td>29,522</td><td>31,907</td></tr><tr><td>30% - 40%</td><td>50,858</td><td>51,378</td></tr><tr><td>40% - 50%</td><td>8,707</td><td>58,231</td></tr><tr><td>Over 50%</td><td>0</td><td>68,239</td></tr></table>	% of Jobs Accessible by Transit	Number of people with access to jobs within: 30 Minutes	Number of people with access to jobs within: 45 Minutes	Less than 1%	156,083	125,444	1% - 10%	125,449	22,532	10% - 20%	37,505	50,393	20% - 30%	29,522	31,907	30% - 40%	50,858	51,378	40% - 50%	8,707	58,231	Over 50%	0	68,239	 STEADY in job accessibility	Efficiently connecting workers to jobs is one of the principle goals of transit. In 2018, nearly 70,000 people, about 17% of the urban area population, were able to access 50% of urban area jobs by transit within 45 minutes. This is virtually unchanged from 2016 and 2017. See Map 4 and 5 in Map Book.						
% of Jobs Accessible by Transit	Number of people with access to jobs within: 30 Minutes	Number of people with access to jobs within: 45 Minutes																																
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Improve Equity for Users of the Transportation System


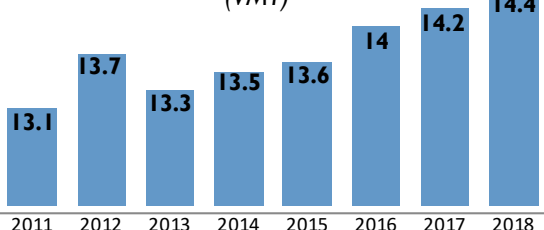


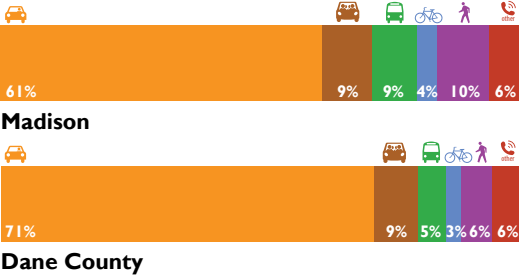


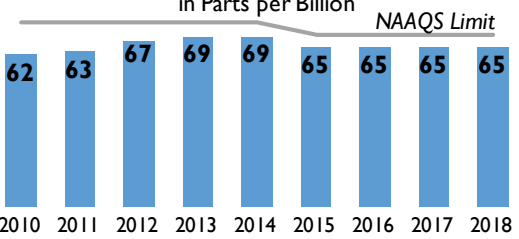


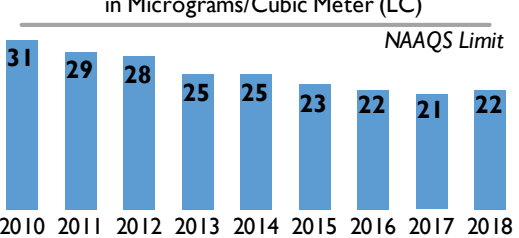

Performance Measure	Target	Data and Trends	Current Status	Analysis																		
Metro Transit Ridership <i>The total annual fixed-route ridership (in unlinked passenger trips)</i>	 INCREASE in ridership	Metro Fixed-Route Ridership <i>(in Millions)</i>  <table><tr><th>Year</th><th>Ridership (in Millions)</th></tr><tr><td>2011</td><td>14.9</td></tr><tr><td>2012</td><td>14.6</td></tr><tr><td>2013</td><td>14.7</td></tr><tr><td>2014</td><td>15.2</td></tr><tr><td>2015</td><td>14.4</td></tr><tr><td>2016</td><td>13.3</td></tr><tr><td>2017</td><td>12.8</td></tr><tr><td>2018</td><td>13.2</td></tr></table>	Year	Ridership (in Millions)	2011	14.9	2012	14.6	2013	14.7	2014	15.2	2015	14.4	2016	13.3	2017	12.8	2018	13.2	 INCREASE in ridership	Efficient, well-used public transit service is a key part of a well-balanced transportation system that serves all users. After three years of declines, ridership increased to 13.2 million trips in 2018 from its 2017 low of 12.8 million trips.
Year	Ridership (in Millions)																					
2011	14.9																					
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2014	15.2																					
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2016	13.3																					
2017	12.8																					
2018	13.2																					
Metro Transit Service Area <i>The percentage of the MPO area population living with 1/4 mile of transit service</i>	 STEADY in total population served  INCREASE in minority and low-income populations served	Percent of Population within Metro Transit Service Area  <table><tr><th>Year</th><th>Total Population</th><th>Minority Population</th><th>Low-Income Households</th></tr><tr><td>2016</td><td>57%</td><td>75%</td><td>78%</td></tr><tr><td>2017</td><td>58%</td><td>76%</td><td>79%</td></tr><tr><td>2018</td><td>58%</td><td>76%</td><td>79%</td></tr></table>	Year	Total Population	Minority Population	Low-Income Households	2016	57%	75%	78%	2017	58%	76%	79%	2018	58%	76%	79%	 STEADY in total population served  STEADY in minority and low-income populations served	People need to live within 1/4 mile of a transit stop in order for it to be a viable mode of transportation. The all-day transit service area remains unchanged since 2017, at 55.8 square mile, encompassing 58% of the MPO area total population, 76% of minority populations, and 79% of low-income households. See Maps 6-9 in Map Book.		
Year	Total Population	Minority Population	Low-Income Households																			
2016	57%	75%	78%																			
2017	58%	76%	79%																			
2018	58%	76%	79%																			



Reduce the Environmental Impact of the Transportation System

Ensure that the transportation system is designed, built, operated, and maintained in a way that protects and preserves the natural environment and historic and cultural resources, and is supportive of energy conservation.

Reduce the Environmental Impact of the Transportation System

Performance Measure	Target	Data and Trends	Current Status	Analysis
Vehicle Miles Traveled (VMT) <i>Total miles driven annually in Dane County</i>		Dane County Average Daily Vehicle Miles Traveled (VMT) 		<p>The average VMT for Dane County in 2018 was 14,406,214, a slight increase of 1.4% over 2017. While it is likely that VMT will continue to rise as the region adds more people, the desired trend is that the growth of VMT will not outpace the growth of the region's population, so that while there may be more people on the road, they are driving less frequently and/or shorter distances.</p>
Mode of Transportation to Work <i>The type of transportation people take to get to work in Dane County</i>		Mode of Transportation to Work (2017) 		<p>Commuting to work is one of the most predictable and common trips made by adults. In Dane County nearly three-quarters (71%) of all resident workers drove alone to work in 2017, whereas more Madison residents commute by alternate modes, just 61% driving alone. These numbers have remained consistent over several years.</p>
Air Quality- Ozone <i>Ozone annual mean 8-hour rolling average concentrations, averaged over three years.</i>		8 Hour Ozone Levels <i>in Parts per Billion</i> 		<p>The region's ozone levels have remained relatively consistent. In 2015 the NAAQS limit for ozone was reduced from 75 parts per billion (ppb) to 70 ppb. The design value for 2018 was 65 ppb, unchanged from the two prior reporting years.</p>
Air Quality- Particulate Matter <i>PM 2.5 annual mean 24-hour rolling average concentrations, averaged over three years.</i>		24-Hour PM_{2.5} Levels <i>in Micrograms/Cubic Meter (LC)</i> 		<p>In the preceding six years, PM 2.5 levels have steadily declined, staying safely below the NAAQS limit of 35 micrograms/cubic meter. While there was a slight rise in PM 2.5 levels in 2018, the region's current PM 2.5 levels pose no significant health risks.</p>


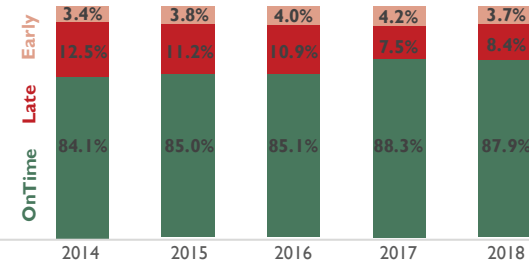



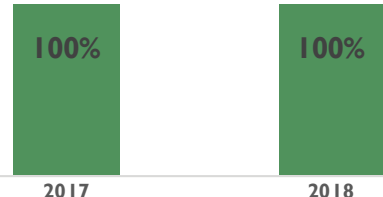


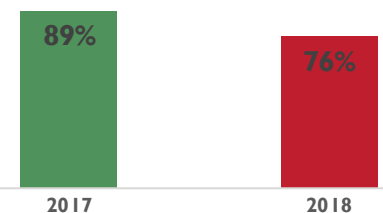



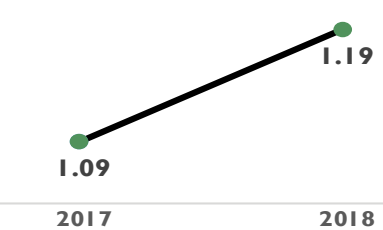

NAAQS stands for the National Ambient Air Quality Standards



Advance System-wide Efficiency, Reliability, and Integration Across Modes

Design, build, operate, and maintain an efficient transportation system with supportive land use patterns that maximizes mobility, minimizes unexpected delays, and provides seamless transfers between all modes.

Advance System-Wide Efficiency, Reliability, and Integration Across Modes

Performance Measure	Target		Data and Trends	Current Status	Analysis																								
Transit On-Time Performance <i>The percentage of Metro Transit on-time buses</i>			Transit On-Time Performance  <table><thead><tr><th>Year</th><th>OnTime</th><th>Late</th><th>Early</th></tr></thead><tbody><tr><td>2014</td><td>84.1%</td><td>12.5%</td><td>3.4%</td></tr><tr><td>2015</td><td>85.0%</td><td>11.2%</td><td>3.8%</td></tr><tr><td>2016</td><td>85.1%</td><td>10.9%</td><td>4.0%</td></tr><tr><td>2017</td><td>88.3%</td><td>7.5%</td><td>4.2%</td></tr><tr><td>2018</td><td>87.9%</td><td>8.4%</td><td>3.7%</td></tr></tbody></table>	Year	OnTime	Late	Early	2014	84.1%	12.5%	3.4%	2015	85.0%	11.2%	3.8%	2016	85.1%	10.9%	4.0%	2017	88.3%	7.5%	4.2%	2018	87.9%	8.4%	3.7%		Transit system on-time performance is critically important to serve riders effectively. In 2018, Metro Transit maintained the strong performance it achieved in 2017, with 87.9% of buses on time.
Year	OnTime	Late	Early																										
2014	84.1%	12.5%	3.4%																										
2015	85.0%	11.2%	3.8%																										
2016	85.1%	10.9%	4.0%																										
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2018	87.9%	8.4%	3.7%																										
Interstate Reliability* <i>Percent of person-miles traveled on the Interstate considered reliable</i>	2019 Target 	2021 Target 	Percent Of Interstate Rated Reliable  <table><thead><tr><th>Year</th><th>Percent</th></tr></thead><tbody><tr><td>2017</td><td>100%</td></tr><tr><td>2018</td><td>100%</td></tr></tbody></table>	Year	Percent	2017	100%	2018	100%		In 2018 100% of the person-miles traveled on the Interstate in the Madison Metro Area were considered reliable by the federal measure, consistent with the previous year. See Maps 10 and 11 in Map Book.																		
Year	Percent																												
2017	100%																												
2018	100%																												
National Highway System Reliability* <i>Percent of person-miles traveled on the non-Interstate National Highway System (NHS) considered reliable</i>	2021 Target 		Percent Of NHS Rated Reliable  <table><thead><tr><th>Year</th><th>Percent</th></tr></thead><tbody><tr><td>2017</td><td>89%</td></tr><tr><td>2018</td><td>76%</td></tr></tbody></table>	Year	Percent	2017	89%	2018	76%		Reliability of the non-Interstate NHS dropped considerably in 2018, failing to meet the target. This can be attributed to several lane closures and delay caused by the historic flooding in the Madison area. See Maps10 and 11 in Map Book.																		
Year	Percent																												
2017	89%																												
2018	76%																												
Reliability: Level of travel time reliability is the ratio between “normal” travel times and peak-period travel times. For instance, if the LOTTR is 1.5 for a segment, that means that a trip that would normally take 10 minutes would instead take 15 minutes (10 minutes x 1.5 = 15 minutes). The higher the LOTTR ratio is, the more delay that roadway segment experiences during the peak period. A segment is considered reliable if it has a ratio of 1.5 or less for all time periods. Rather than peak hour, the federal measure utilizes 4-hour AM and PM peak periods.																													
Freight Reliability* <i>The truck travel time reliability index (TTTR) on the Interstate</i>	2019 Target 	2021 Target 	Truck Travel Time Reliability  <table><thead><tr><th>Year</th><th>TTTR</th></tr></thead><tbody><tr><td>2017</td><td>1.09</td></tr><tr><td>2018</td><td>1.19</td></tr></tbody></table>	Year	TTTR	2017	1.09	2018	1.19		The freight reliability target measures the efficiency of freight movement on the Interstate. In 2018 the TTTR for the Interstate in the Madison Metro area was 1.19, a 9% decrease in reliability, however still well below the performance target. See Map 12 in Map Book.																		
Year	TTTR																												
2017	1.09																												
2018	1.19																												

The truck travel time reliability index is a ratio between “normal” truck travel times on the Interstate and the “worst” truck travel times. The truck travel time reliability index is reported as the average truck travel time reliability index for all Interstate roadway segments. The higher the truck travel time reliability index, the greater the delay.


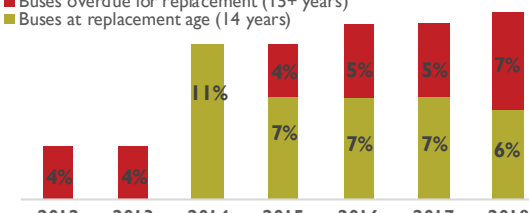



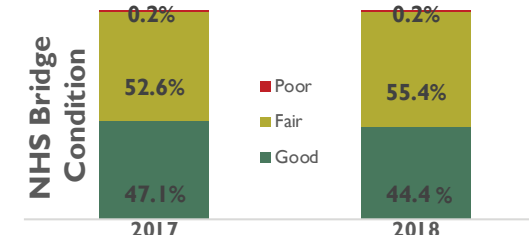




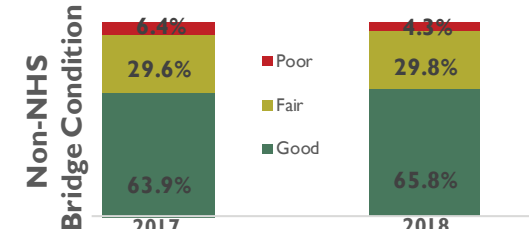




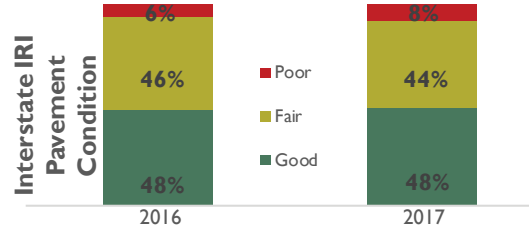




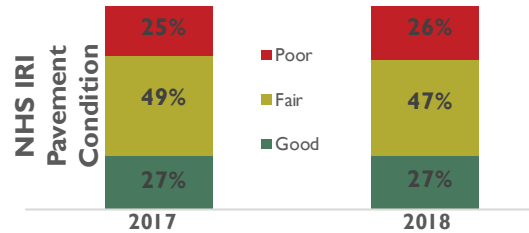


*Indicates federal performance measure and MPO adopted targets

A photograph of a street intersection during the day. In the foreground on the left, a traffic light pole has three lights, all of which are dark. A street sign is attached to the pole. In the background, there are orange and white striped construction barrels lining the road. A car is visible in the distance. The sky is clear and blue. A semi-transparent blue box with white text is overlaid on the bottom right of the image.

Establish Financial Viability of the Transportation System

Achieve and maintain a state of good repair for the existing transportation system, invest in cost-effective projects, and ensure adequate, reliable funding to meet current and future needs.

Establish the Financial Viability of the Transportation System

Performance Measure	Target	Data and Trends	Current Status	Analysis																								
Metro Transit Buses At or Past Replacement Age* <i>Bus Replacement Age: 14 years Past Replacement: 15+ years old</i>	 STEADY % of Old Buses	Metro Buses at or Past Replacement Age  <table><caption>Metro Buses at or Past Replacement Age</caption><thead><tr><th>Year</th><th>Buses overdue for replacement (15+ years)</th><th>Buses at replacement age (14 years)</th></tr></thead><tbody><tr><td>2012</td><td>4%</td><td>0%</td></tr><tr><td>2013</td><td>4%</td><td>0%</td></tr><tr><td>2014</td><td>0%</td><td>11%</td></tr><tr><td>2015</td><td>4%</td><td>7%</td></tr><tr><td>2016</td><td>5%</td><td>7%</td></tr><tr><td>2017</td><td>5%</td><td>7%</td></tr><tr><td>2018</td><td>7%</td><td>6%</td></tr></tbody></table>	Year	Buses overdue for replacement (15+ years)	Buses at replacement age (14 years)	2012	4%	0%	2013	4%	0%	2014	0%	11%	2015	4%	7%	2016	5%	7%	2017	5%	7%	2018	7%	6%	 STEADY Meets Target	In 2018 13% of the Madison Metro bus fleet was at or past the age of replacement, a slight increase over 2017. Metro's vehicle replacement schedule of replacing 15 buses annually will result in meeting the 11% performance target in 2020.
Year	Buses overdue for replacement (15+ years)	Buses at replacement age (14 years)																										
2012	4%	0%																										
2013	4%	0%																										
2014	0%	11%																										
2015	4%	7%																										
2016	5%	7%																										
2017	5%	7%																										
2018	7%	6%																										
National Highway System (NHS) Bridge Condition* <i>The percentage of bridge deck area in good and poor condition</i>	2019 and 2021 Targets  ≥ 50% Rated "Good"  ≤ 3% rated "Poor"	NHS Bridge Condition  <table><caption>NHS Bridge Condition</caption><thead><tr><th>Year</th><th>Poor</th><th>Fair</th><th>Good</th></tr></thead><tbody><tr><td>2017</td><td>0.2%</td><td>52.6%</td><td>47.1%</td></tr><tr><td>2018</td><td>0.2%</td><td>55.4%</td><td>44.4%</td></tr></tbody></table>	Year	Poor	Fair	Good	2017	0.2%	52.6%	47.1%	2018	0.2%	55.4%	44.4%	 Does Not Meet Target  Meets Target	In the Madison MPO area, 47% of NHS bridges were in good condition and 1% was in poor condition in 2018. See Map 13 in Map Book.												
Year	Poor	Fair	Good																									
2017	0.2%	52.6%	47.1%																									
2018	0.2%	55.4%	44.4%																									
Non-NHS Bridge Condition <i>The percentage of bridge deck area in good and poor condition</i>	 Rated "Good"  Rated "Poor"	Non-NHS Bridge Condition  <table><caption>Non-NHS Bridge Condition</caption><thead><tr><th>Year</th><th>Poor</th><th>Fair</th><th>Good</th></tr></thead><tbody><tr><td>2017</td><td>6.4%</td><td>29.6%</td><td>63.9%</td></tr><tr><td>2018</td><td>4.3%</td><td>29.8%</td><td>65.8%</td></tr></tbody></table>	Year	Poor	Fair	Good	2017	6.4%	29.6%	63.9%	2018	4.3%	29.8%	65.8%	 Rated "Good"  Rated "Poor"	In the Madison MPO area, 63% of non-NHS bridges were in good condition and 6% were in poor condition in 2018, a slight increase in favorable conditions over 2017. See Map 13 in Map Book.												
Year	Poor	Fair	Good																									
2017	6.4%	29.6%	63.9%																									
2018	4.3%	29.8%	65.8%																									
Interstate Pavement Condition* <i>The percentage of Interstate pavements in "Good" Condition and "Poor" Condition</i>	2021 Target  ≥ 45% Rated "Good"  ≤ 5% rated "Poor"	Interstate IRI Pavement Condition  <table><caption>Interstate IRI Pavement Condition</caption><thead><tr><th>Year</th><th>Poor</th><th>Fair</th><th>Good</th></tr></thead><tbody><tr><td>2016</td><td>6%</td><td>46%</td><td>48%</td></tr><tr><td>2017</td><td>8%</td><td>44%</td><td>48%</td></tr></tbody></table>	Year	Poor	Fair	Good	2016	6%	46%	48%	2017	8%	44%	48%	 Meets Target  Does Not Meet Target	Measurements taken in 2017 indicate that 48% of Interstate highway miles in the MPO area are in good condition and 8% are in poor condition, representing a slight increase in pavements in poor condition. See Map 14 in Map Book.												
Year	Poor	Fair	Good																									
2016	6%	46%	48%																									
2017	8%	44%	48%																									
NHS Pavement Condition * <i>The percentage of Interstate pavements in "Good" Condition and "Poor" Condition</i>	2019 and 2021 Targets  ≥ 20% Rated "Good"  ≤ 12% rated "Poor"	NHS IRI Pavement Condition  <table><caption>NHS IRI Pavement Condition</caption><thead><tr><th>Year</th><th>Poor</th><th>Fair</th><th>Good</th></tr></thead><tbody><tr><td>2017</td><td>25%</td><td>49%</td><td>27%</td></tr><tr><td>2018</td><td>26%</td><td>47%</td><td>27%</td></tr></tbody></table>	Year	Poor	Fair	Good	2017	25%	49%	27%	2018	26%	47%	27%	 Meets Target  Does Not Meet Target	In 2017, 27% of non-Interstate NHS routes were in good condition and 26% were in poor condition, representing a slight increase in pavements in poor condition. See Map 14 in Map Book.												
Year	Poor	Fair	Good																									
2017	25%	49%	27%																									
2018	26%	47%	27%																									
Pavement Condition: Federal guidelines specify that ratings should be based on international roughness index (IRI), cracking, and either rutting or faulting, depending on pavement type. These ratings are based exclusively on IRI because the other measures are not currently available. MATPB recommends that the PCI and PASER index for pavement condition (Map 15 in Map Book) is a more accurate measure in the Madison region.																												

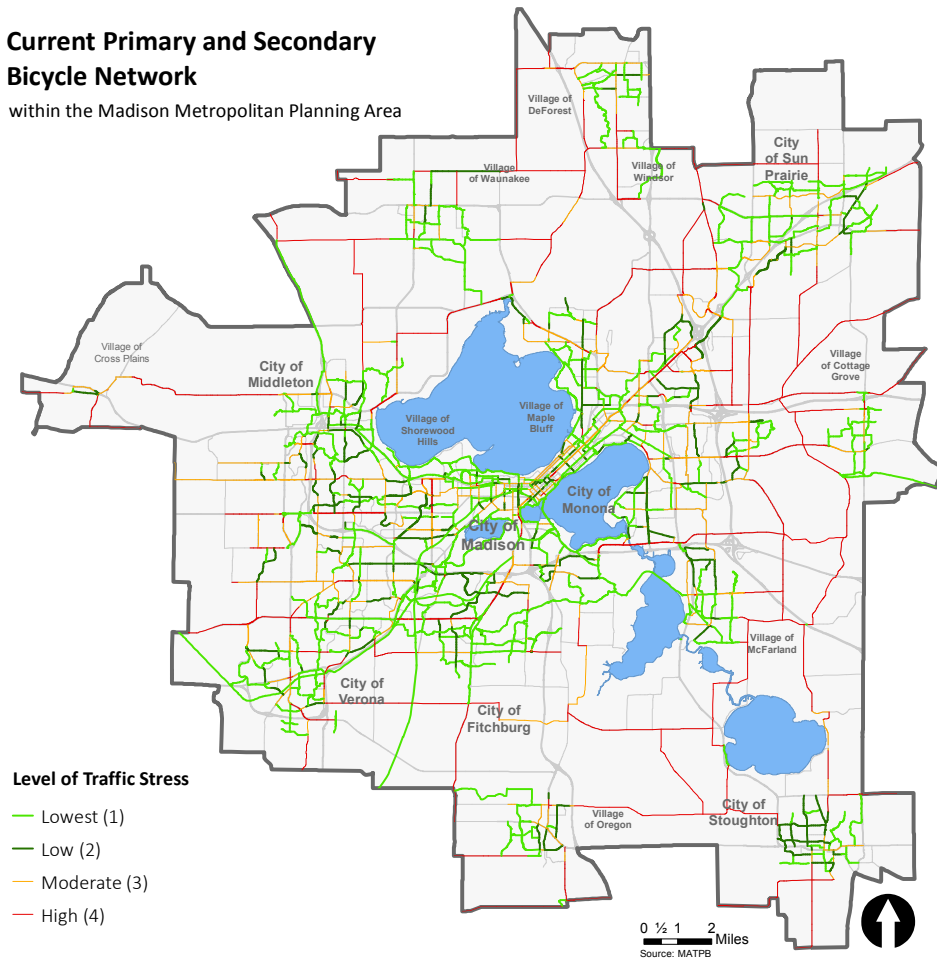
Pavement Condition: Federal guidelines specify that ratings should be based on international roughness index (IRI), cracking, and either rutting or faulting, depending on pavement type. These ratings are based exclusively on IRI because the other measures are not currently available. MATPB recommends that the PCI and PASER index for pavement condition (Map 15 in Map Book) is a more accurate measure in the Madison region.

*Indicates federal performance measure and MPO adopted targets

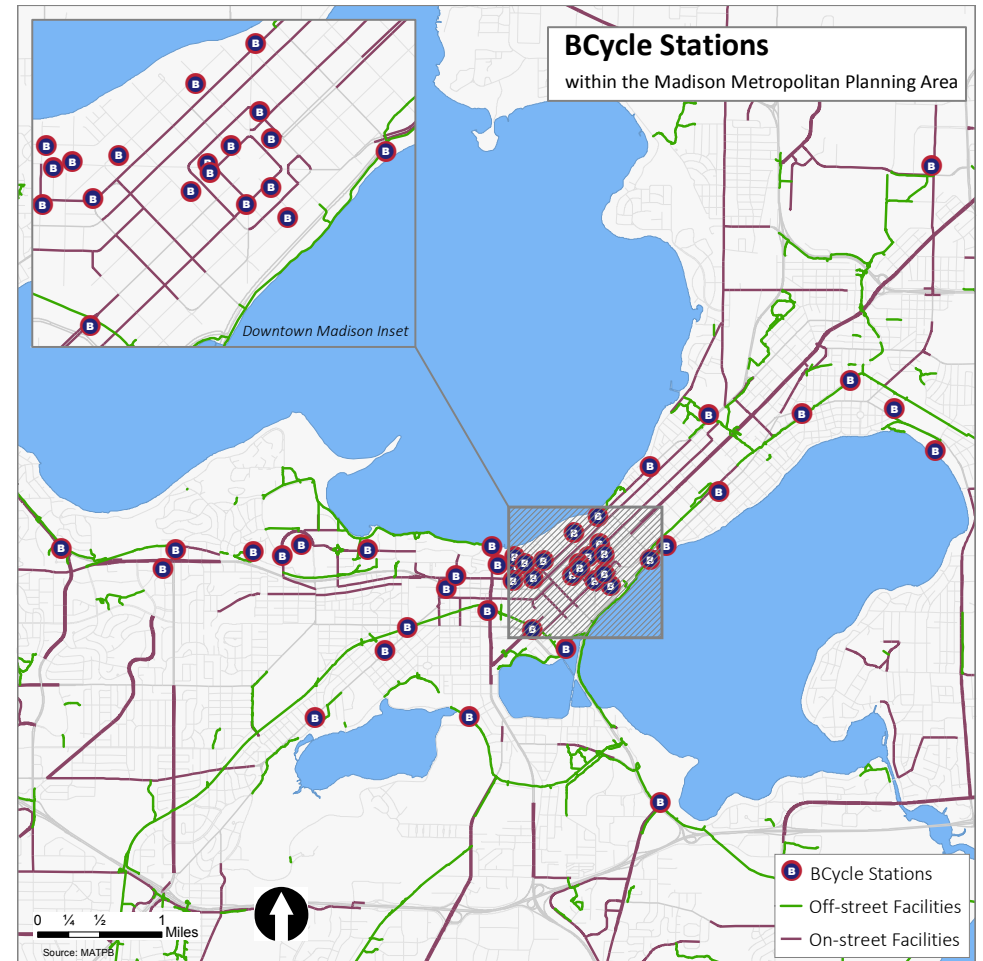


**Performance Measure
Map Book**

Current Primary and Secondary Bicycle Network within the Madison Metropolitan Planning Area



Map 1



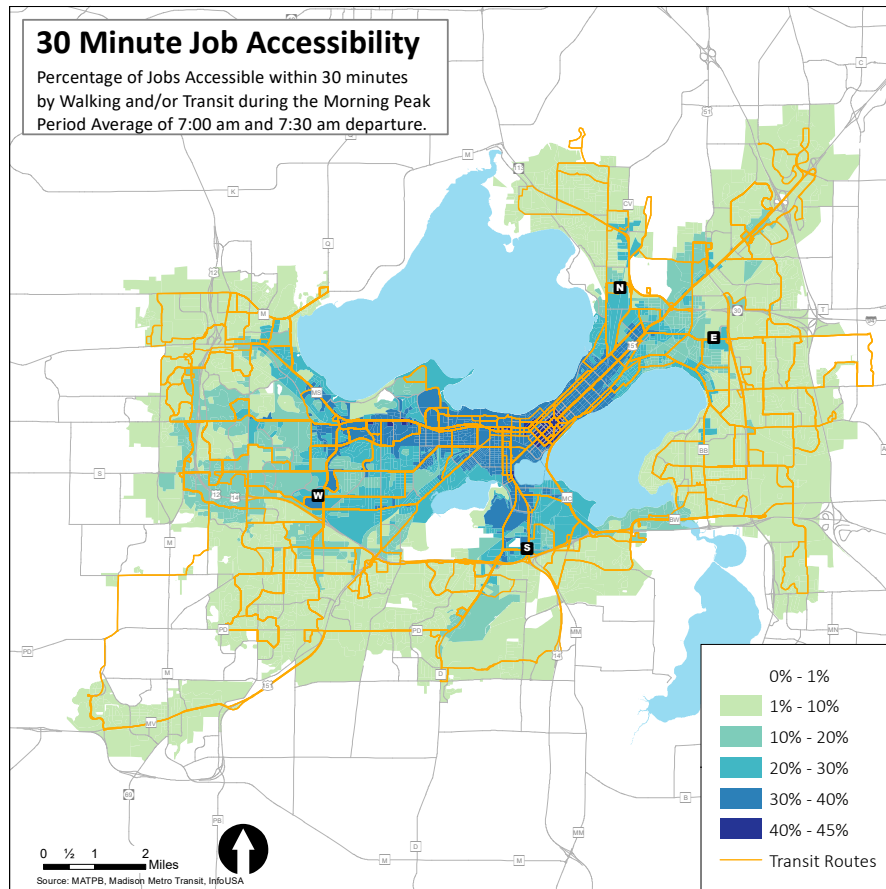
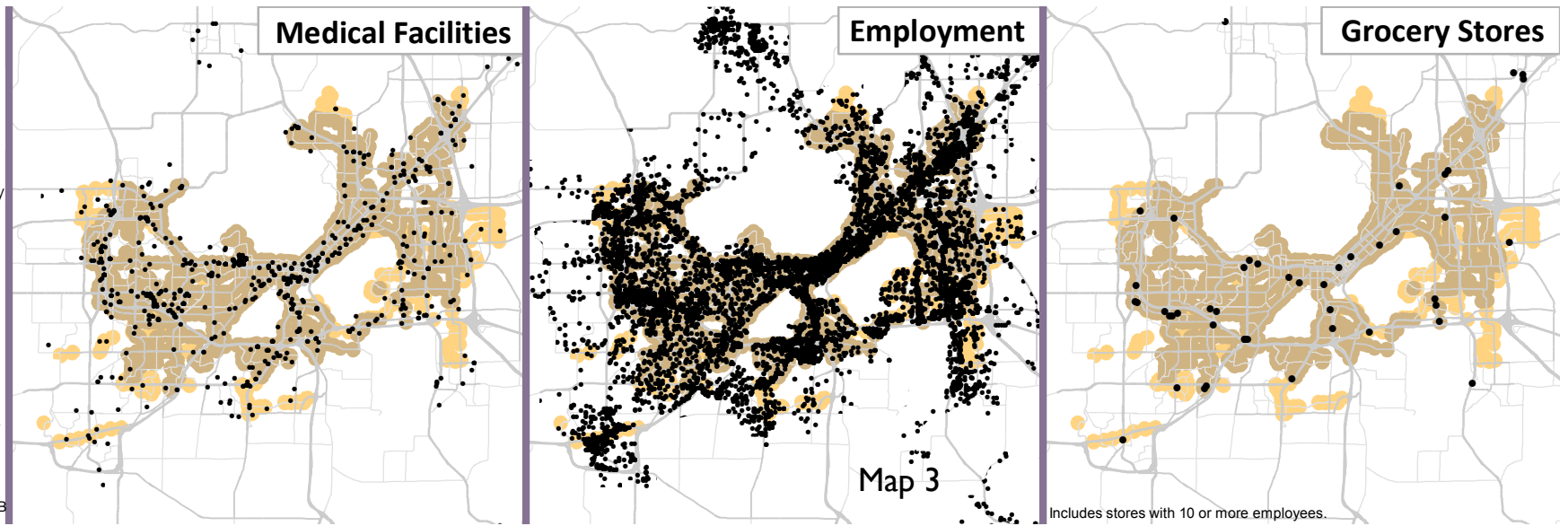
Map 2

Map 3

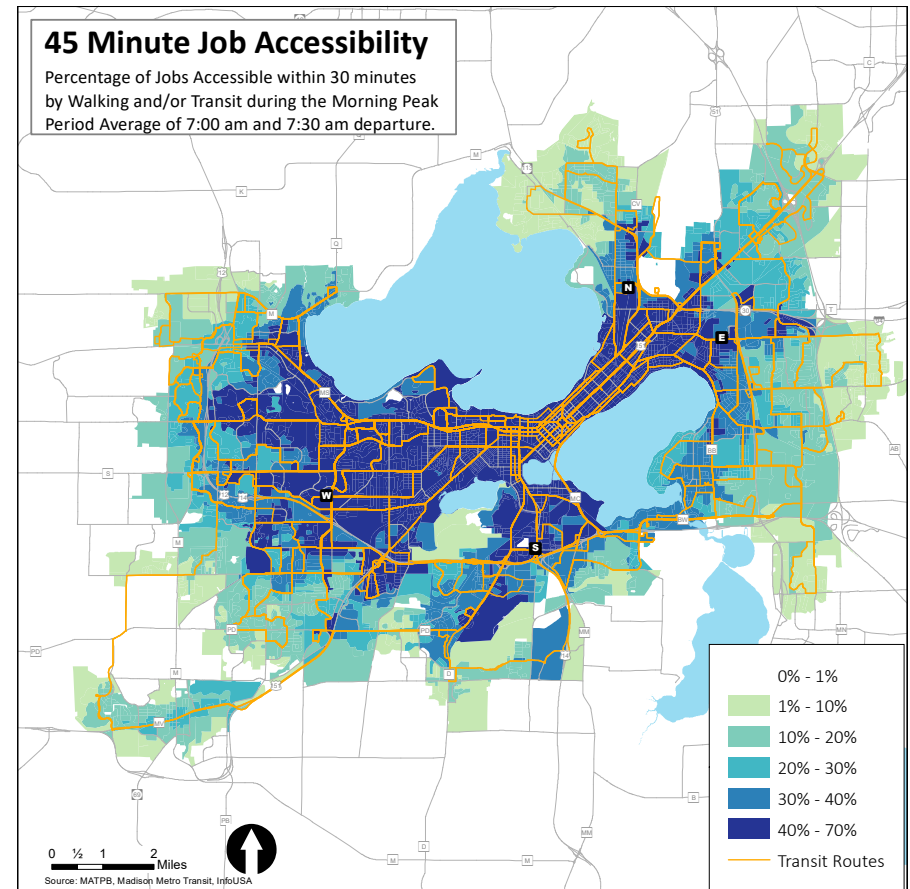
- Key Destination
- Weekday All Day
- Weekday Peak
- Service Area Only

**Key
Destinations
Accessible by
Transit**

Source: InfoUSA, MATPB

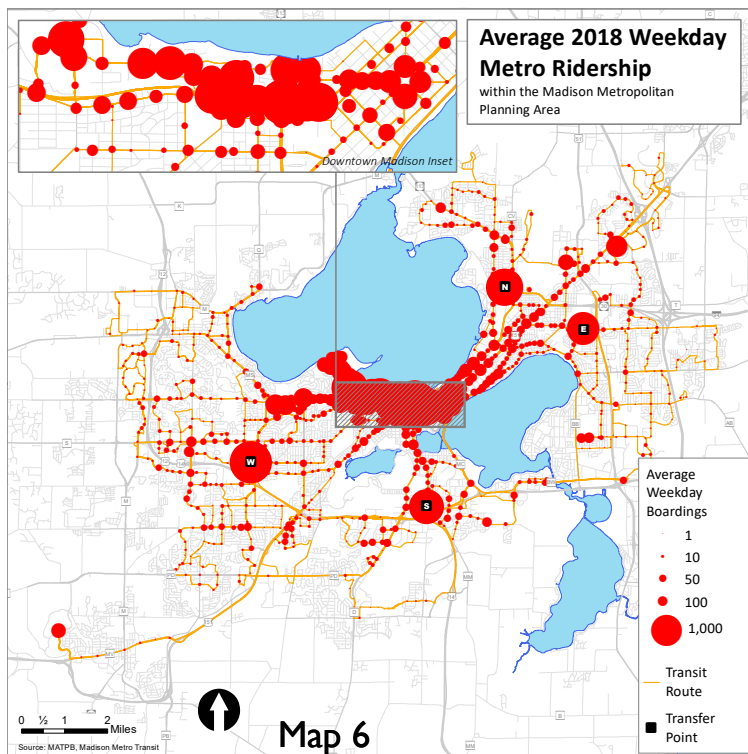


Map 4

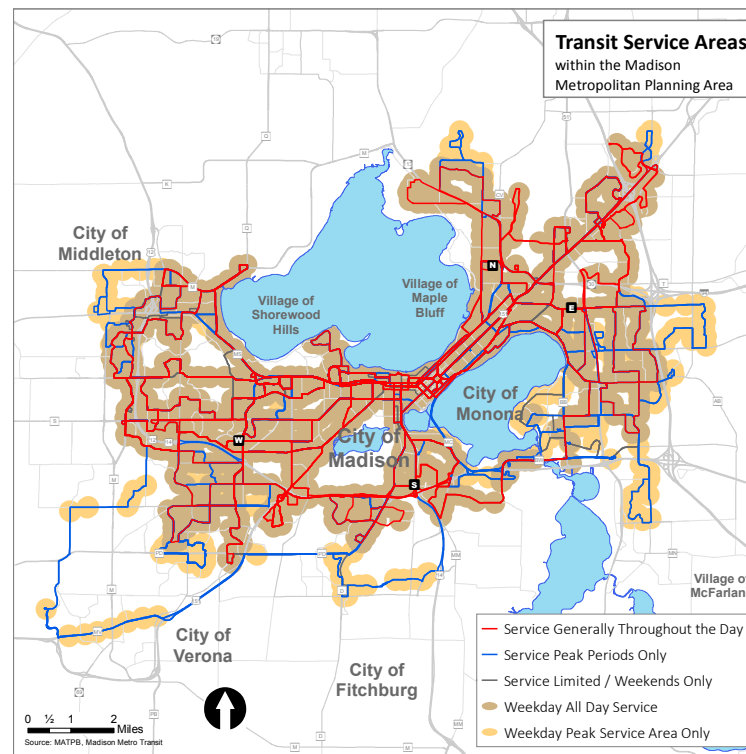


Map 5

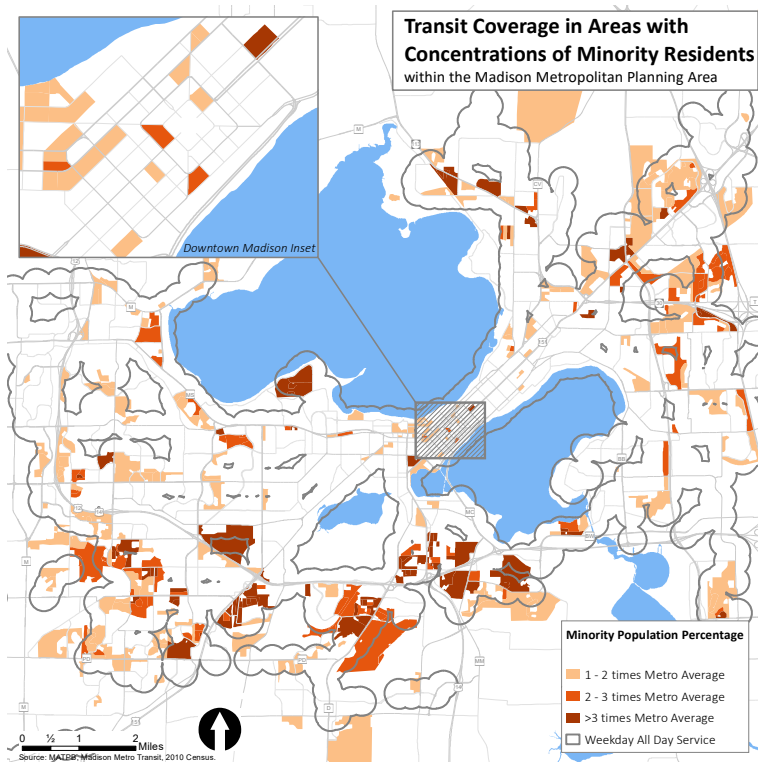
Map 6



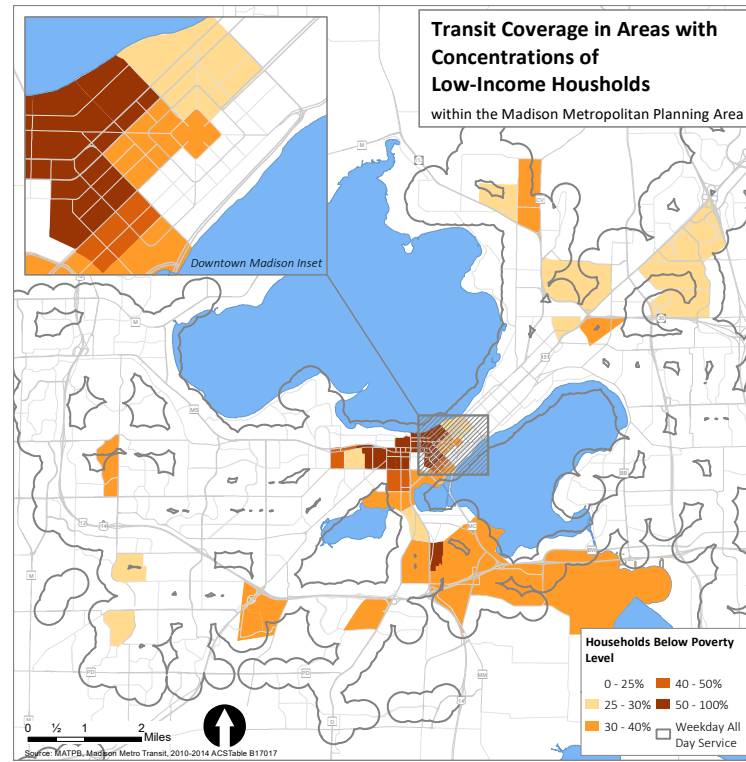
Map 7



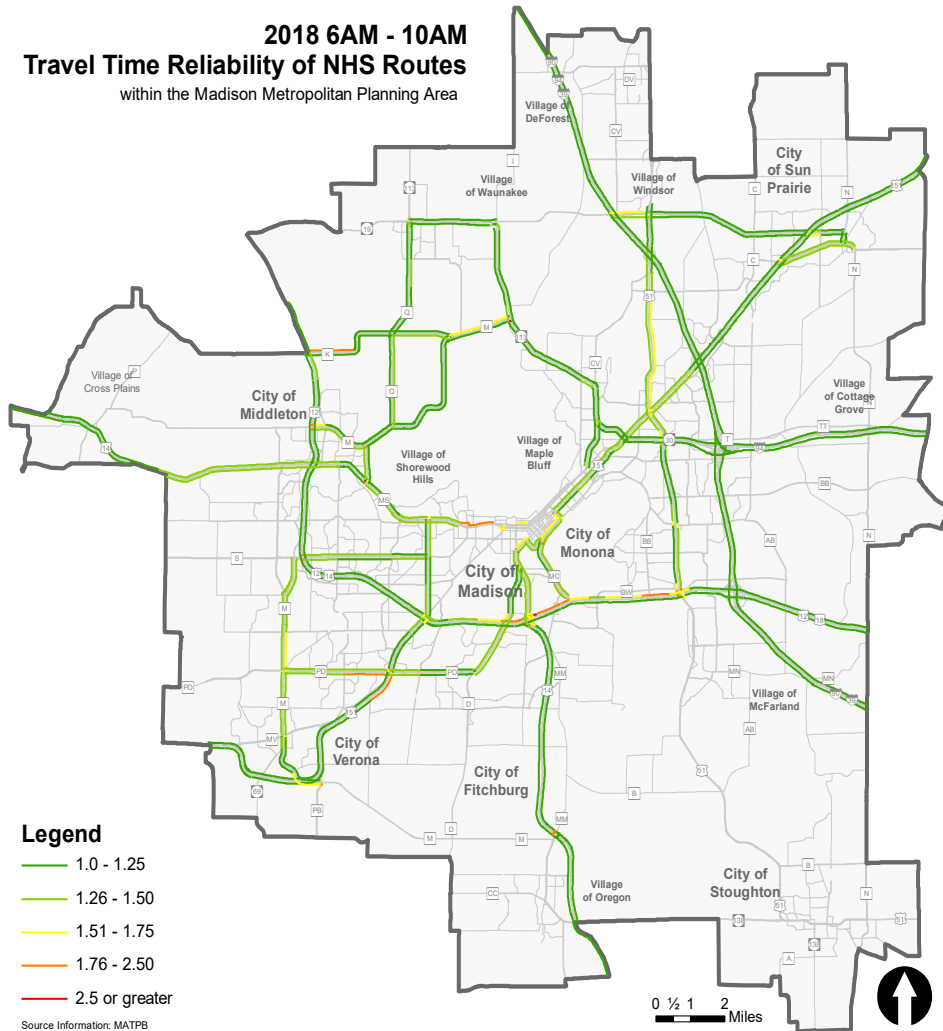
Map 8



Map 9

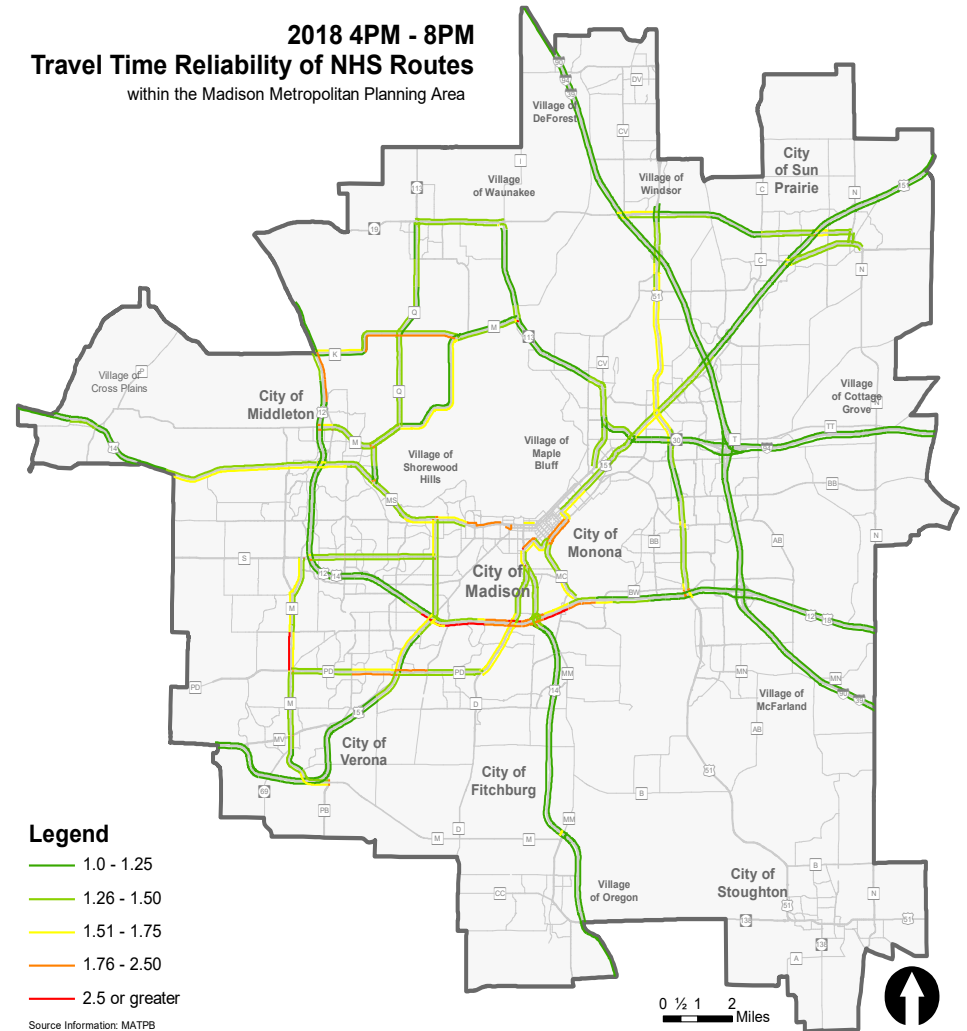


2018 6AM - 10AM
Travel Time Reliability of NHS Routes
 within the Madison Metropolitan Planning Area



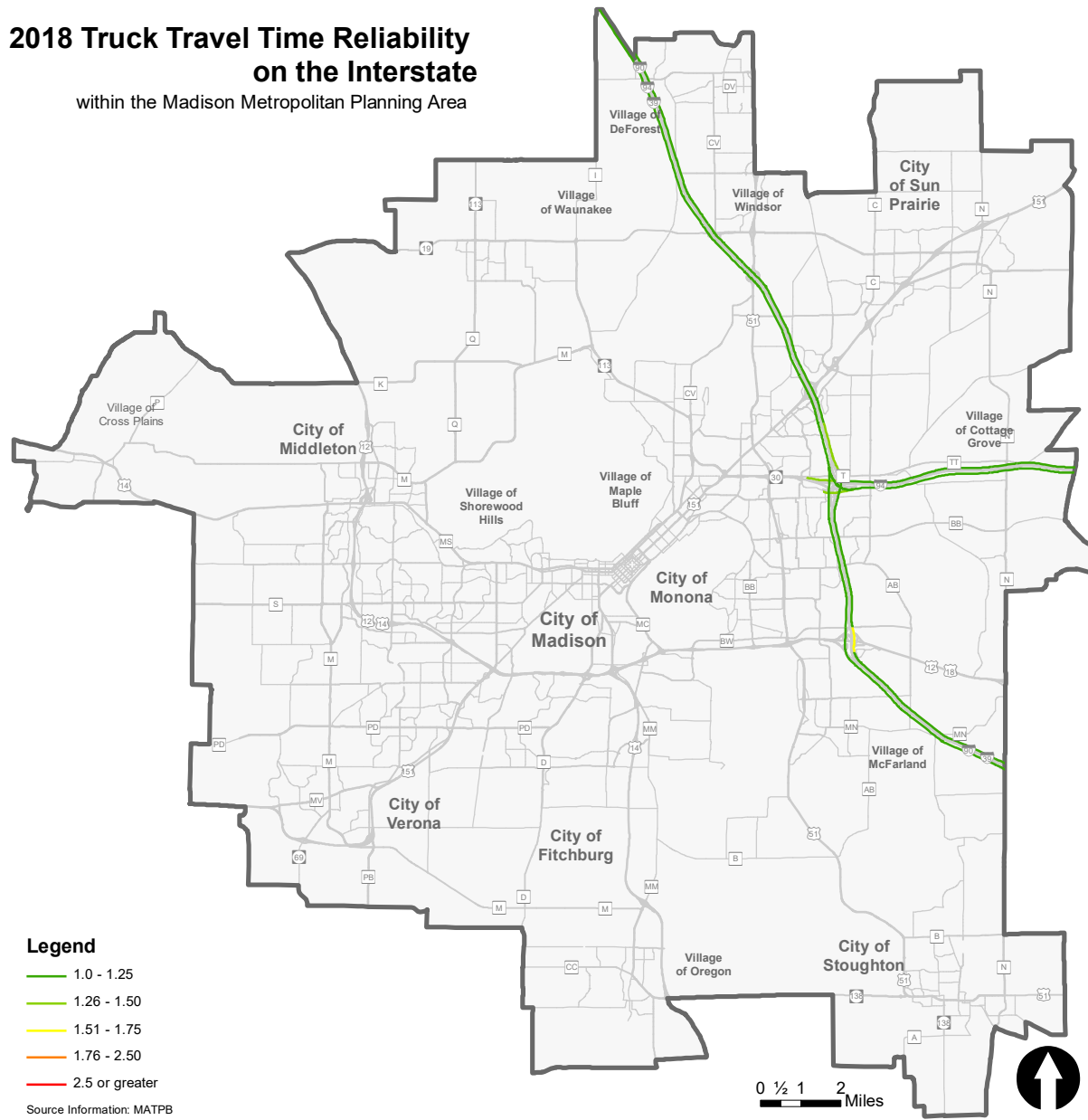
Map 10

2018 4PM - 8PM
Travel Time Reliability of NHS Routes
 within the Madison Metropolitan Planning Area



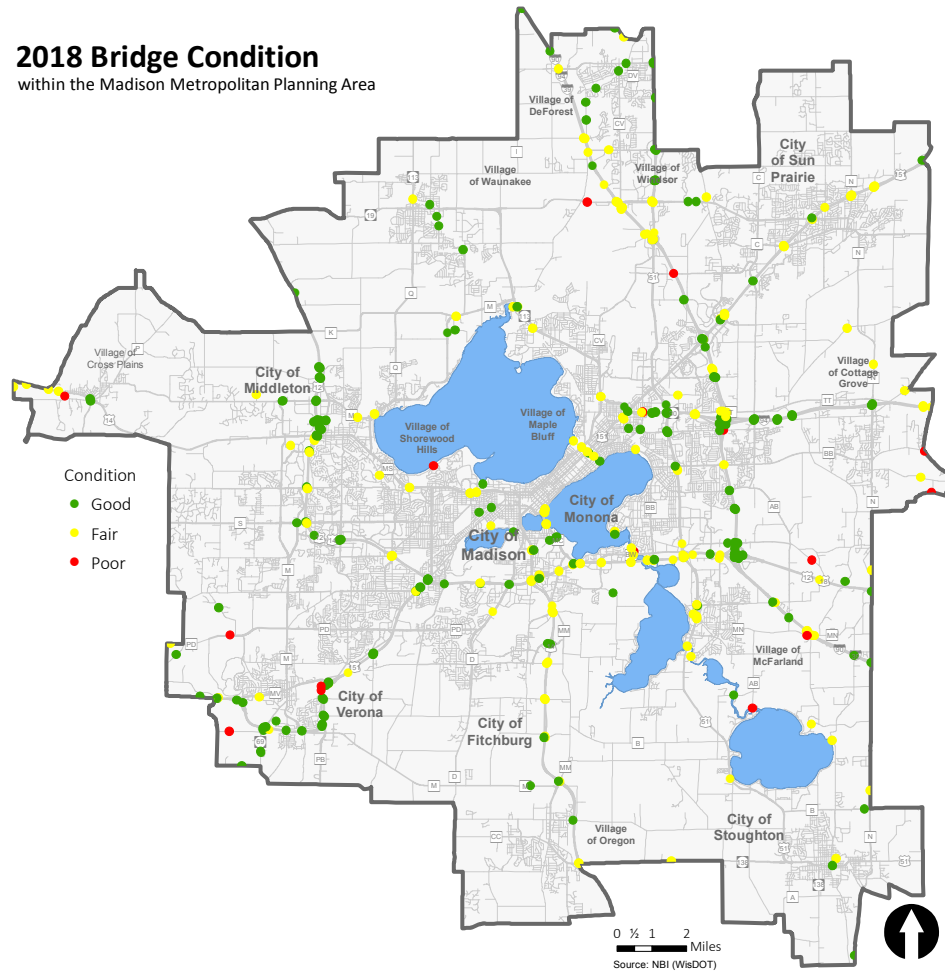
Map 11

2018 Truck Travel Time Reliability on the Interstate within the Madison Metropolitan Planning Area



2018 Bridge Condition

within the Madison Metropolitan Planning Area

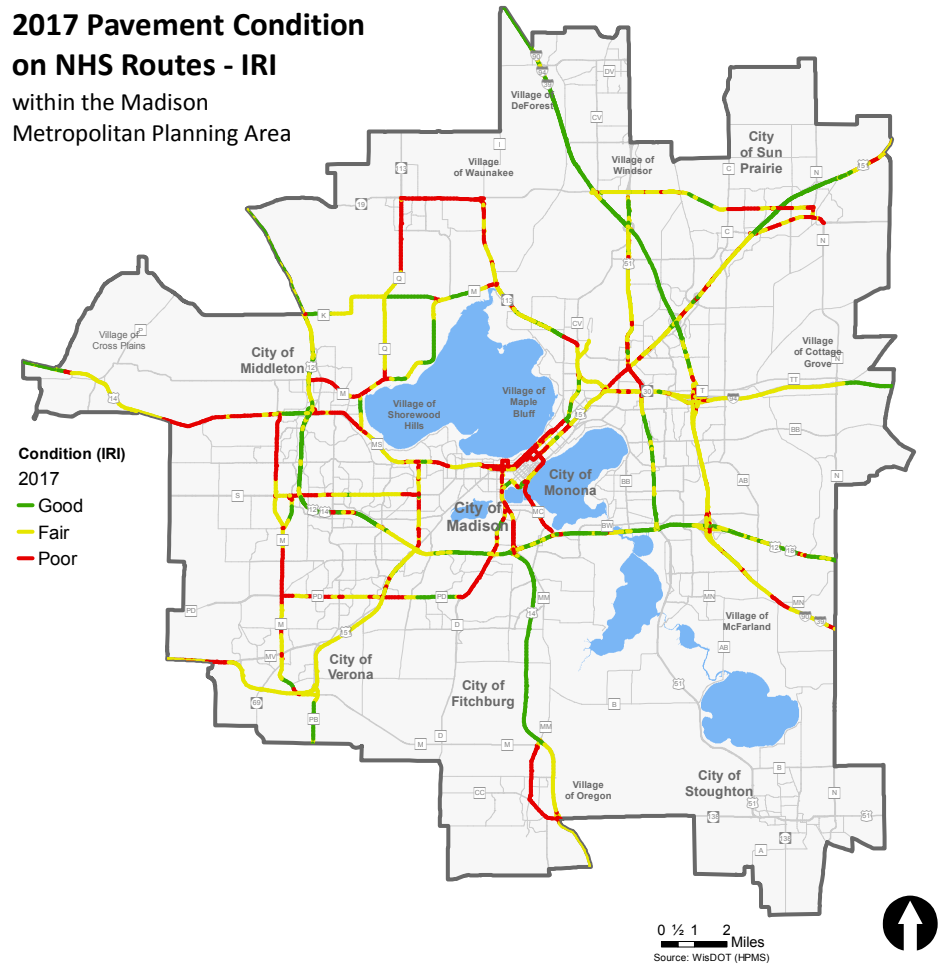


Map 13

2017 Pavement Condition

on NHS Routes - IRI

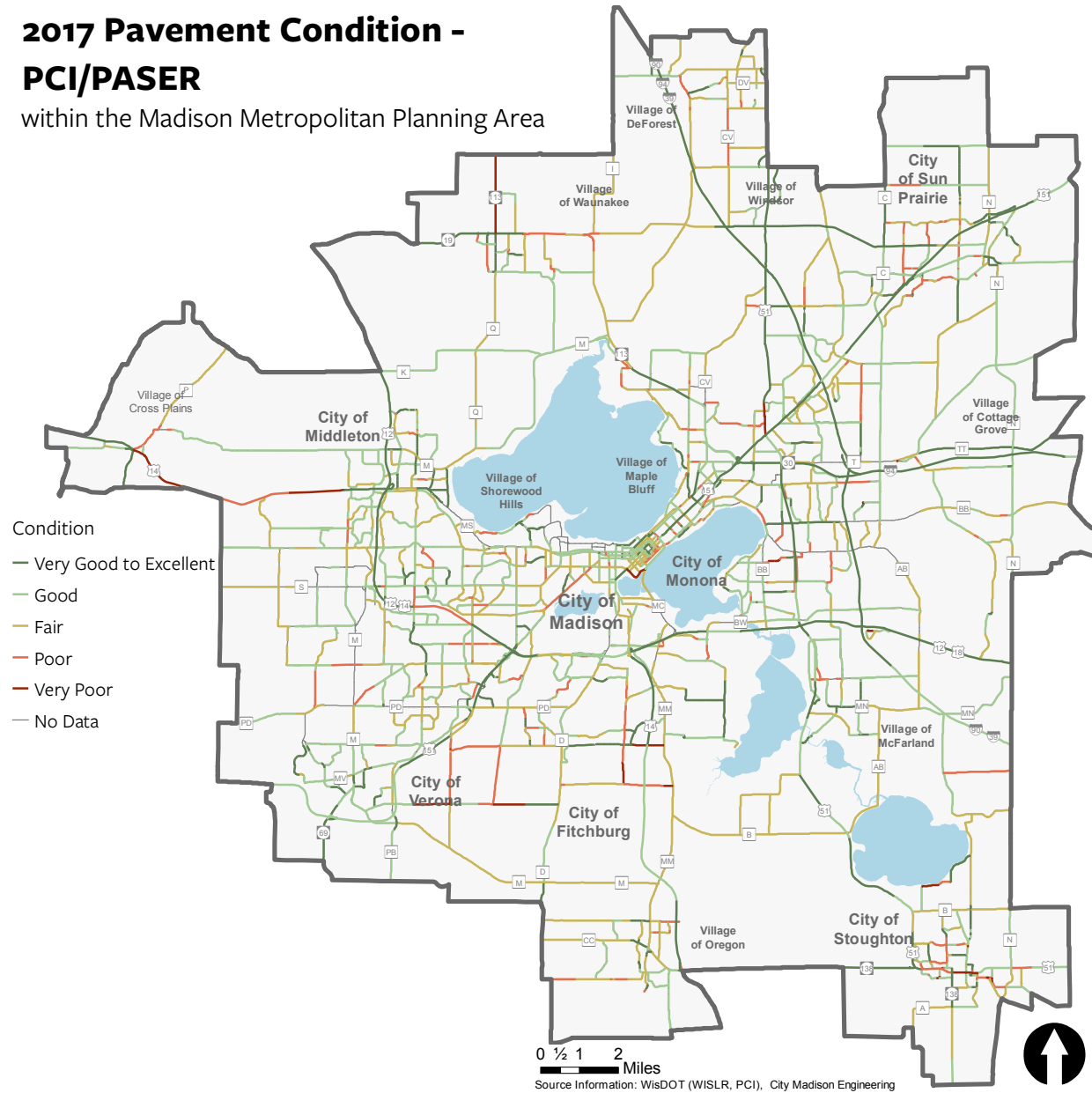
within the Madison Metropolitan Planning Area



Map 14

2017 Pavement Condition - PCI/PASER

within the Madison Metropolitan Planning Area



Map 15