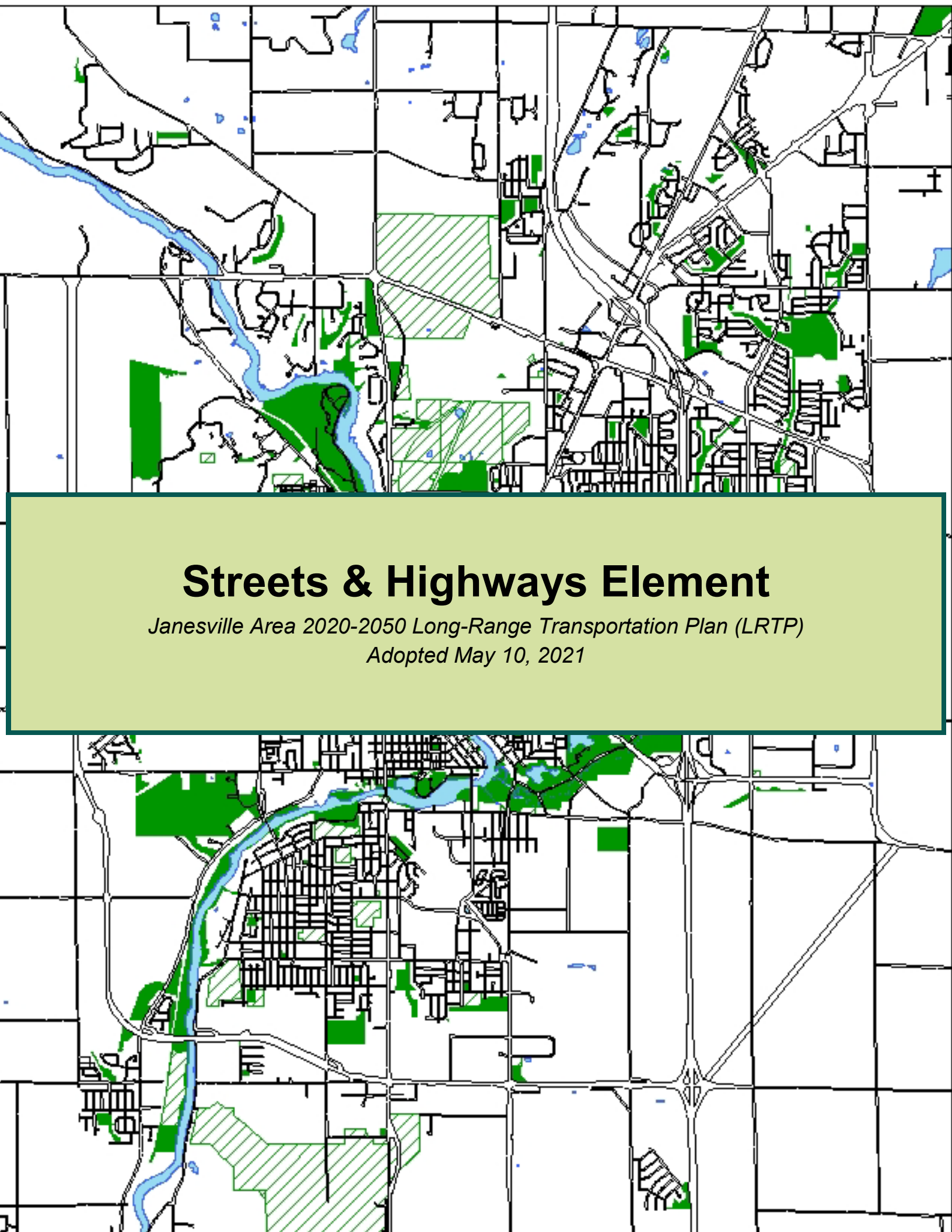

Streets & Highways Element

Janesville Area 2020-2050 Long-Range Transportation Plan (LRTP)

Adopted May 10, 2021

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MAPS

Chapter One: Goal & Objectives

The *Streets & Highways Element* of the LRTP serves as a minor update to that of the most recent plan. In an attempt to support and maintain the highest possible level of personal mobility, the *Streets and Highways Element* evaluates the existing traffic circulation system, analyzes the street systems' current and project deficiencies, and identifies short- and long-range improvement projects.

This element not only identifies projects anticipating state and federal funding, but also identifies local street connections as consistent with other area land use plans. While these local connections are likely to be funded by local sources (and therefore are not included in the fiscally constrained portions of the LRTP), they represent important connections for the overall transportation system.

Table 1: Streets & Highways Goal & Objectives

Goal: Develop and maintain an increasingly energy efficient transportation system which includes and integrates all modes of travel and provides for the safe and effective movement of people and goods, while optimizing the financial resources of the community.	
Objective 1	Utilize existing transportation facilities and services to their full potential
Objective 2	Providing expanded facilities and services in accordance with the present and future demand to accommodate travel by auto, truck, bus, air, rail, bicycle, and foot with the intent of creating a balanced, coordinated, and efficient transportation system.
Objective 3	Properly maintain and preserve the existing transportation system to increase safety and maximize the life of investments
Objective 4	Minimize the loss and damage to persons and property due to transportation related crashes
Objective 5	Develop and implement improvements to lessen peak hour traffic congestion
Objective 6	Reduce injuries and fatalities involving automobiles
Objective 7	Provide adequate intermodal connections within the transportation system
Objective 8	Support the agricultural economy through the protection of agricultural lands, while maintaining an adequate road network to transport product to market.
Objective 9	Design future street and highway improvements compatible with existing land uses and complementing existing land use plans

Chapter Two: Existing Conditions

System Mileage

All jurisdictions within the MPA hold responsibility for the upkeep of street and highway mileage within their respective boundaries. Some system mileage is maintained through coordination between multiple jurisdictions (e.g., the City of Janesville performs minor maintenance of state connecting highways; however, WisDOT is responsible for major rehabilitation and reconstruction).

There are approximately 735 miles of roadway within the MPA, but only the Town of Harmony, and the Cities of Janesville and Milton are completely contained within the MPA. The other four member townships and Rock County maintain mileage both within and outside the MPA boundaries. Most transportation issues described in the LRTP – like maintenance and funding – extend beyond the MPA. Several available data measures for tracking transportation performance are at the whole jurisdiction level for Rock County and the townships. **Table 2** shows the total responsible mileage for each MPO jurisdiction:

Table 2: Jurisdictional Miles, 2020

Jurisdiction	Jurisdictional mileage
City of Janesville	333.8
City of Milton	33.0
Town of Harmony	48.8
Town of Janesville	51.2
Town of La Prairie	43.4
Town of Milton	52.1
Town of Rock	50.9
Rock County	52.8*
Total Mileage	**666.0**

Source: Wisconsin Information System for Local Roads, 2020
**Includes only those roadways located in the associated municipalities*

Functional Classification

In the most general terms, functional classification is a hierarchical system of roadways by function and mobility. A roadway is classified according to its function, population served, the type of

surrounding land uses, average daily traffic volumes, and whether its primary purpose is to provide mobility or access.

Streets with a higher classification (i.e., interstates and principal arterials) primary serve through-trips or cross-town movement. These routes are often designated as limited access roadways, carrying the MPA's highest levels of traffic. Intermediate classifications (i.e., minor arterials and collectors) provide connections between principal arterials and local streets. Local streets serve adjoining land uses and function primarily as access routes to and from residential neighborhood to higher density commercial and industrial land uses. The role of mobility and land access in the classification system is illustrated in **Table 3**.

Table 3: Functional Classification Characteristics

Classification	Typical Land Access	Personal Mobility
Principal Arterials	No direct access	Highest
Minor Arterials	Limited access	High
Collectors	Common access	Moderate
Local Roads	Unrestricted access	Low

Rural principal and minor arterial roadways provide connections within the region and throughout the state, necessitating their development on a statewide level. Similarly, due to the nature of rural major and minor collectors (providing routes for inter- and intra-county travel), these types of roads must be developed on a countywide basis.

National Functional Classification System

The functional classification system is the process by which roadways are grouped into categories according to the type of trips served, traffic volumes, and the types of traffic generators to which they provide access. WisDOT's criteria – which directly reflect the standards established by the Federal Highway Administration (FHWA). Under the provisions of the *FAST Act*, all urban routes rated as collector, minor arterial, or principal arterial are eligible for federal funding. The official functional classification map used by FHWA and WisDOT is located in **Figure 1** on the following page.

Rural Street Classification

The rural functional classification system consists of routes that connect communities in Wisconsin. Criteria of rural road classification include population served, surrounding land uses, distance between road types, and ADT. Standards for classifying rural roads are included in the *Appendix*. Under the provisions of the *FAST Act*, all rural arterials are eligible for federal funding.

Urban Street Classification

In urban areas, an urban roadway classification is used. An urban area is a census-designated geography with a population of 5,000 or more. There are four classifications of streets within urban areas: principal arterials, minor arterials, collectors, and local street. Standards for classifying urban roads are included in the appendices of this plan. Under the provisions of the *FAST Act*, all urban streets classified as collector or higher are part of the "Federal-Aid Highway Systems." In other words, they are eligible for federal funding.

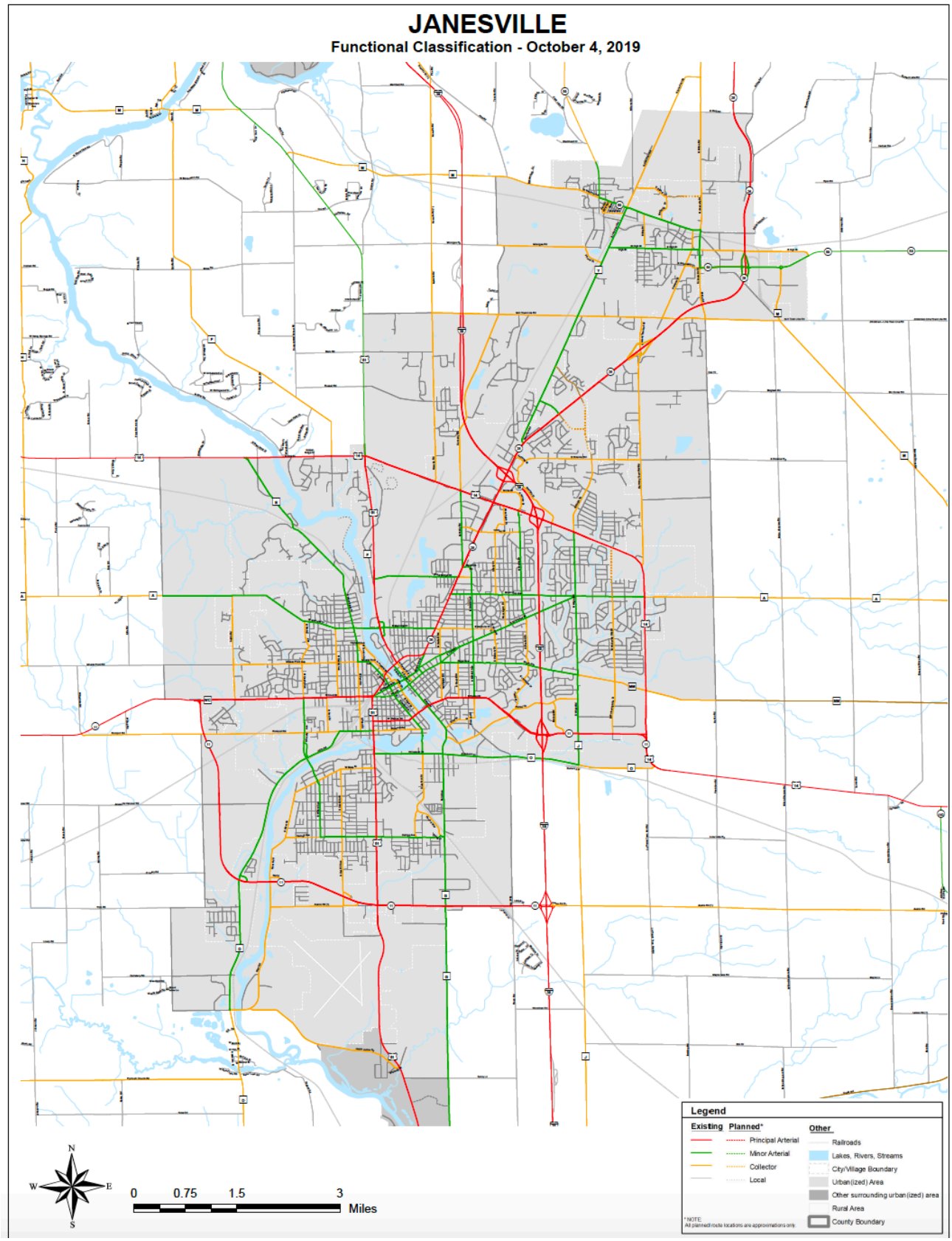


Figure 1: Functional Classification Map for the Janesville UZA, updated 2019. Source: WisDOT

City of Janesville Street Standards

The City of Janesville's street standards build upon the National Functional Classification Criteria, incorporating city specific standards for right-of-way width, sidewalk width, on-street parking, and pavement width. These standards were first adopted by the City as part of the *1971 JATS Plan*, and were reviewed when the City prepared the *2005 Traffic Circulation Plan*.

While the basis for the City's street standards is functional classification, the City of Janesville's classification differ slightly from the federal classification in terminology and design specifics. The following table illustrates the differences between the classification systems.

Table 4: Differences between Federal and Janesville Functional Classification, 2021

Federal Functional Classification	City of Janesville Equivalent
Principal Arterial	Primary Arterial
Minor Arterial	Standard Arterial
Collector	Collector
Local	Local

City Street Standards

The City of Janesville established standards for Right-of-Way width based on the City Engineer's recommended width for traffic lanes, parking lanes, curbs, sidewalks, and terrace areas.

Table 5. City of Janesville Pavement Width Standards

Travel Lane Width	Local roads with low traffic volumes	10-ft travel lane (minimum recommended width)
	Collector and higher, or local roads with high traffic volumes	11-ft travel lane (10 foot minimum)
	Parking, the number of intersections, speed limit, bike lanes, and type of traffic control devices are other considerations that affect pavement width.	
On-Street Parking	On-street parking is determined by traffic volumes, adjacent land uses, and side street access.	
	Collector & Local Streets	7-ft wide spaces
	Standard Arterial and higher	9-ft wide spaces

Table 5. City of Janesville Pavement Width Standards		
Curb Width	2-ft to curb face, typically used by vehicles parking on the street.	
Remaining Street Right-of-Way	Terrace	Area reserved for telephone, cable television and utility lines, sidewalks, planting strip, and snow storage in winter months
	Planting Strip	Local, collector, and standard arterial – 5-ft minimum
		Primary Arterial – 7-10 ft.
	Sidewalks	Construction of five-foot-wide sidewalks within the terrace is governed by the City's sidewalk policy and recommendations from neighborhood plans.

Table 6: City of Janesville General Street Standards			
Functional Classification	**ROW Width (Pavement Width)**	**Minimum Design Speed**	**Suggested Design Features**
D) Urban Expressway (Primary Arterial)	100' minimum, 120' desired (56'-80')	45 mph	Four to six lanes
			No parking (divided roadway)
			Limited Access
			Signals at major intersections.
			Left turn accommodations.
			Requires a minimum 5-foot sidewalk.
			On-street bicycle facilities discouraged
E) Primary or Standard Arterials	80' minimum, 100' desired (52'-56')	35-45 mph	Four lanes
			No parking
			Limited Direct Access

Table 6: City of Janesville General Street Standards			
Functional Classification	**ROW Width (Pavement Width)**	**Minimum Design Speed**	**Suggested Design Features**
			Signals at major intersections
			Left turn accommodations
			Requires a minimum of five-foot sidewalks.
			On-street bicycle facilities discouraged
F) Standard Arterial	80’ minimum, 100’ desired (28’-48’)	30-40 mph	Two to four lanes
			Parking on one or both sides
			Left turn accommodations
			Limited direct access
			Signals where needed
			Stop signs on side streets
			10’ wide minimum planting strip with 5’ wide detached sidewalks
			Bicycle facilities: wide curb lanes or bike lanes
G) Standard Arterial	66’ minimum, 80’ desired (28’-44’)	30-40 mph	Two lanes
			Parking
			Left Turn accommodations
			Signals where needed, stop signs on side streets.
			5’ wide minimum planting strip with 5’ wide detached sidewalks.

Table 6: City of Janesville General Street Standards

Functional Classification	ROW Width (Pavement Width)	Minimum Design Speed	Suggested Design Features
			Bicycle facilities: wide curb lanes or shared roadway.
			Limited direct access drives.
H) Standard Arterial or Collector	66' minimum, 80' desired (28'-40')	25-35 mph	Two lanes
			Parking
			Left Turn accommodations
			Stop signs on side streets
			7' wide minimum planting strip, with 5' wide detached sidewalk.
			Bicycle Facilities: Designated on-street Bike Lane, Wide Curb Lane or shared roadway.
			Limited direct access drives.
I) Local	60' minimum, 70' desired (28'-36')	25 mph	10'-15' terrace
			5' wide detached sidewalk.
			Bicycle facilities: shared roadway
			Parking.

Source: 1983 Transportation Analysis Base Study Series, 1987-2005 Traffic Circulation Plan

Narrow (Skinny) Street Standards

Narrow – or 'skinny' – street standards is an approach to residential development that provides roadway design flexibility and supports residential livability. Janesville residential streets are typically 36 feet (curb face to curb face) with a 70-foot right-of-way width the narrow street standard is 28 feet (curb face to curb face) with 60-feet or less of right-of-way. [1] Street width less than 28 feet may be

considered with restricted street parking, or if access is limited from physical or topographical challenges and limitations.

Land uses served by skinny streets are low-density residential areas consisting of single-family housing; with limited two-family housing (if it does not diminish the characteristics of the neighborhood) allowed only by a conditional use permit.[2]

Skinny streets support residential neighborhoods by providing the benefits of the following: 1) calming traffic; 2) discouraging non-local traffic; 3) promoting walking and bicycling; 4) creating neighborhood identity; and 5) preserving green space.

Narrow/Skinny streets tend to be less expensive to build and maintain overall than a standard width residential street due to the streets' reduced width. Cost savings are proportional to the reduced road width from a standard 36-foot (curb face to curb face) street to a narrow street, approximately 20% savings depending on exact width. In practice, City maintenance of a skinny street is of lower cost due to the reduced need for multiple passes on the streets to maintain roadways clear of snow and debris. Due to the reduced width of the streets, rehabilitation of these roadways also costs less than that of a typical residential street.

An environmental benefit of constructing narrow streets is the reduction of stormwater runoff. The effects of impervious surfaces are the increased pollutants into waterways from surface runoff. Runoff increases erosion and reduced bank stability, rapid rates of temperature changes, and alters the organic biology by introducing or restricting movement of pollutants, or sediments and nutrients. With skinny streets, the total streets footprint being much less than that of a traditional street reduces the overall negative environmental effects.

The Janesville 2006 narrow street ordinance provides a unique opportunity for real estate developers. Along with the R1 zoning district (i.e., new single-family housing) developers can reduce their financial burden from reduced roadway material costs and the need to clear large amounts of land.

Safety Conversions

The *Bicycle & Pedestrian Plan* identifies roadways in the MPA that could benefit from a road reconfiguration (i.e., safety conversion). A safety conversion refers to the reconfiguration of a roadway form a four-lane undivided roadway to two driving lanes, a two-way left turn lane (TWLTL, pronounced 'Twiddle'), and either bike lanes or a parking lane. Some of the potential benefits of a three lane TWLTL over the current four-lane undivided roadway include:

- Improving safety for bicyclists.
- Improving speed limit compliance and decreasing crash severity when crashes do occur.
- The TWLTL can be used by vehicles travelling in either direction for deceleration and refuge while making a midblock left turn maneuver.

[1] City Ordinance 17.40.065 – Street Width Applications

[2] City Ordinance 18.36.020 Residence Districts, Section B: R1 – Single-Family and Two-Family Resident District

- The TWLTL reduces the number of mid-block and intersection conflict points, thereby reducing rear-end and side swipe crashes.
- The TWLTL can be used as an acceleration lane for vehicles turning left to enter the street from mid-block driveways.
- The TWLTL can allow for easier and safer emergency vehicle movement, particularly during peak hour periods.
- Conventional exclusive left and right turn lanes remain at major intersections.

A potential disadvantage of the TWLTL is the possibility of slightly increased delays and backups at signalized intersections during peak hour traffic periods as the TWLTL maintains only one lane of thru traffic. Nevertheless, the benefits of converting from a four-lane undivided roadway to a three-lane TWLTL have been found to outweigh the potential peak hour delays.

The conversion from a four-lane undivided roadway to a three-lane TWLTL has been successfully executed in numerous communities across Wisconsin and the United States over the last several decades. Conversion of streets with ADT less than 17,500 vehicles have been found to adequately handle traffic, reduce accidents, and improve bicycle and pedestrian safety on streets with multiple residential driveways and commercial accesses.

Current Streets & Highways Issues

Congestion

The I-39/90 corridor has the most serious congestion issues in the Janesville MPA. Traffic is especially heavy on weekends during the tourist season. Relatively few other areas in the MPA experience significant congestion. Commercial areas along STH 26 and USH 14 do experience some delay because of a large amount of traffic signals along those corridors, although they are not considered especially congested from a strict capacity definition.

Rail Transportation

Although the focus of this Element is on streets and highways, rail lines affect traffic flow along major corridors such as W. Court Street, Delavan Drive, USH 51, and USH 14 in Janesville, and along John Paul Road and Janesville Street in Milton where at-grade crossings are located. Trains sometimes block these intersections for long periods, creating delay and congestion. Of particular concern, trains can delay emergency response vehicles, an especially significant issue in Milton where the City is bifurcated by rail line. There are no grade-separated crossings in Milton to allow vehicles north-to-south access.

The Union Pacific and Wisconsin & Southern Railways serve the City of Janesville, and the Wisconsin & Southern serves the City of Milton. The Wisconsin & Southern Railway uses Janesville as the hub from which they serve south central Wisconsin and northern Illinois. A map of Janesville's existing rail lines and specific rail related issues are addressed in the *Freight Element* of the LRTP.

Parking

The majority of the street network within the MPA is designed to provide at least one lane of parking. The availability of on-street parking relates to the design standards, functional classification, and speed limit of each street.

On-Street Parking

On-street parking can act as a traffic calming mechanism by reducing vehicle speeds by narrowing the perceived roadway and necessitating that drivers be aware of other vehicles and pedestrians centering or leaving the roadway. In the City of Janesville, on-street parking is restricted on several of the City's major arterials. The commercial development along major arterials where parking is restricted provides ample off-street private parking for consumer needs.

On-street parking is more common along streets with lower ADT and in business areas that developed during the City of Janesville's inception. In Janesville's Downtown, short-term, on-street parking is necessary for the offices and businesses located there. In residential neighborhoods with limited through traffic on-street parking is also commonplace.

Public Parking

The largest capacity public parking in the MPA is the Wall Street Ramp in Downtown Janesville (completed in 2010), located at the southwest corner of N. Parker Drive and E. Wall Street. The ramp provides 234 parking spaces with an occupancy rate of 70%, per the most recent *2019 Downtown Parking Study*. [3] Since the removal of the downtown Parking Plaza and recent downtown revitalization (and related construction efforts), parking has been redistributed relatively evenly throughout the Downtown and within the Parking Ramp. In 2019, the entire downtown experienced a 60% occupancy rate. The current state of parking availability in Janesville's downtown is currently sufficient.

Parking Overlay District

A Parking Overlay District encompasses most of the Central Business District (CBD) in downtown Janesville. The overlay exempts parking requirements for commercial developments in the zoning code. Instead, the City manages parking based on a shared-use model. The intentions of the Parking Overlay District are to lessen. Congestion on streets, and encourage off-street parking. [4] It also supports healthy property values and encourages private development opportunities.

Connected & Autonomous Vehicles (CAV)

CAVs are vehicles that utilize independent, in-vehicle technology (sensors, GPS, etc.) of both a passive and active variety for the purposes of avoiding collisions, lane deviation, parking assist, and adaptive cruise control. Simply put, CAVs are vehicles that can operate with varying degrees of autonomy. As a form of technology, CAVs need to be connected to a network, which can come in two forms: 1) vehicle-to-vehicle connection (VTV); and 2) vehicle-to-infrastructure connection (V2I). Three types of vehicles comprise CAVs:

1) **Autonomous Vehicles:** Vehicles that operate in isolation from other vehicles using internal sensors;
2) **Connected Vehicles:** Vehicles that communicate with nearby vehicles and infrastructure; and

[3] Janesville Area Metropolitan Planning Organization, Downtown Parking Study, Janesville WI, 2019.

[4] City Ordinance 18.36.070 Overlay Supplemental District, Section B: District Requirements, Subsection1: P-Parking Overlay District.

3) **Connected & Autonomous Vehicles:** Vehicles that leverage both autonomous and connected capabilities.

In Wisconsin, Governor Scott Walker created the "Governor's Steering Committee on Autonomous and Connected Vehicle Testing and Deployment" via executive order in 2017. As CAVs become a mainstay of the transportation network, Wisconsin will play a vital role in: 1) drive education and training; 2) traffic laws and regulations pertaining to CAVs; 3) CAV registration and drivers licensing. This committee was disbanded in 2018 after the submission of its final report to the Governor's office.

Additionally, in Janesville in 2019, the MPO worked with the UW-Madison TOPS Lab to survey Janesville residents' opinions on CAVs as part of broader research. A similar survey was conducted in Eau Claire. The focus of the survey was on autonomous technologies as part of transit systems, but the survey also surveyed current attitudes regarding autonomous technologies in personal vehicles generally.

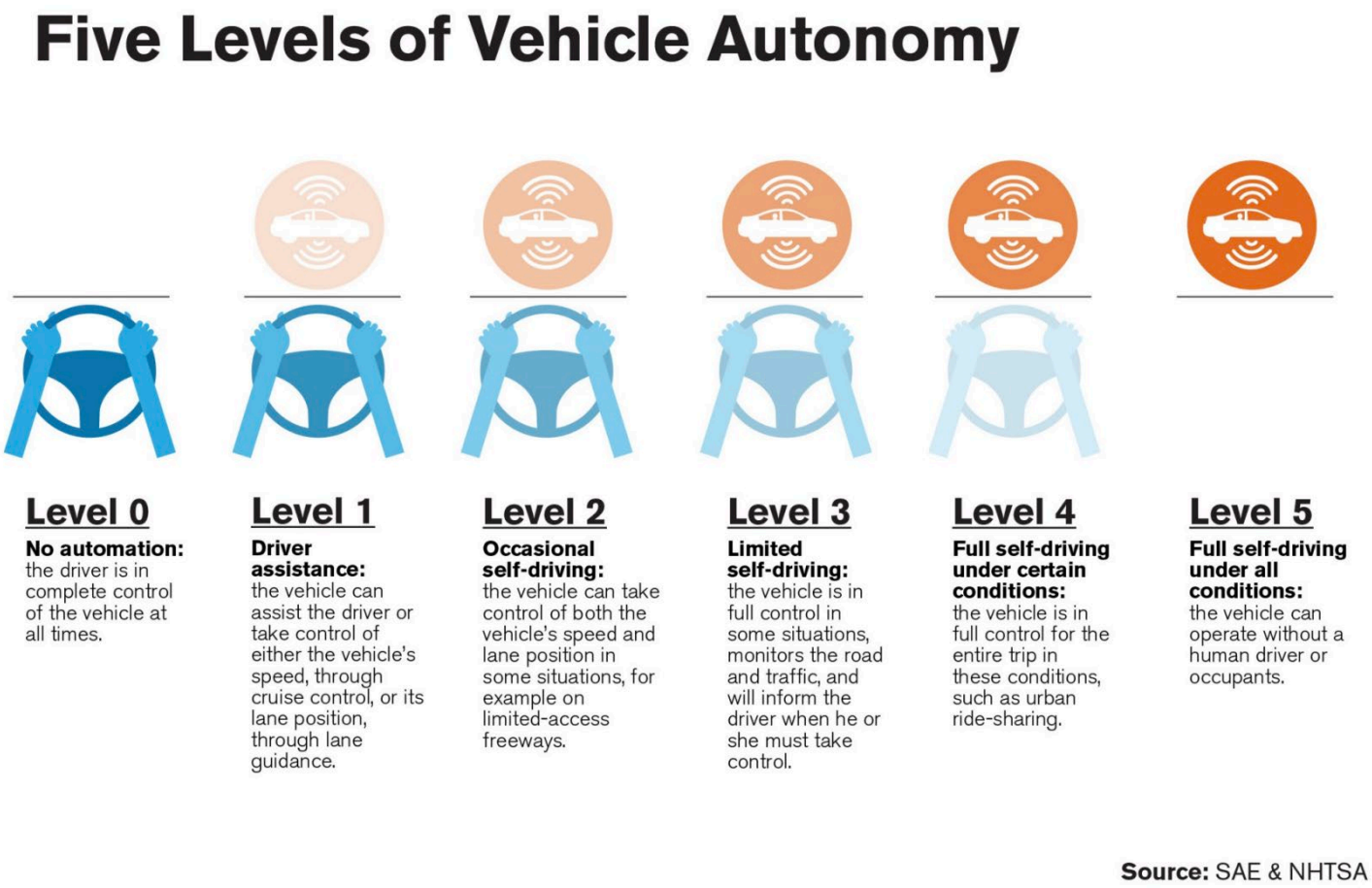


Figure 2: Five Levels of CVA Autonomy. Source: WisDOT

Chapter Three: Travel Demand 2050

The Wisconsin Department of Transportation (WisDOT) completes, maintains, and updates a travel demand process used to predict future travel on the existing and planned street network. Travel demand forecasting utilizes information such as current socioeconomic, land use, and highway data to create a model of the road network and its use in 2050.

Current traffic is modeled by establishing a relationship between trip-making behavior and current socioeconomic and land use data. Traffic growth is then estimated through projecting this data to a future year, and using these same relationships to generate predicted future trips. These current and future trips are loaded onto the current street network in order to determine deficiencies in the ability of the street system to carry traffic efficiently. When "operational capacity" deficiencies in the current network appear, alternative networks can then be tested to see which combination of improvements might alleviate these deficiencies most effectively.

The main inputs into WisDOT's modeling process are current socioeconomic, land use data that had been projected into the future, and the highway improvements expected by 2050. After trip-making relationships were established with the current data, the projected data and alternative vision of the future highway network enabled the forecasting of future traffic volumes on various alternative networks. Expected changes to the system, such as the addition of new roadways or the expansion of existing facilities were incorporated into the model's future road network, increasing the model's ability to accurately predict how each road segment will function in 2050. The travel demand modeling process provides an overall picture of how the MPO's street system works. The model is useful at several levels: first, at the planning level of analysis, to determine capacity deficiencies and for alternatives testing, and second; in a micro level of analysis, as a tool in facilities forecasting, including turning movement analysis. The model can give an indication of intersection capacity, but operational evaluations, such as signal timing, require additional software.

The primary purpose of the travel forecast process is to identify roadways that will experience future congestion. The solutions used to alleviate congestion problems in the Janesville MPA typically fall into one of three categories: 1) Operations; 2) Transit Improvements; and 3) Roadway Improvements.

Operations

Operational improvements include Intelligent Transportation Systems (ITS), Transportation Demand Management (TDM), enhancement to the existing physical system, and system preservation.

- *Intelligent Transportation Systems (ITS)* – ITS incorporates technology into the transportation system. It can control the speed at which vehicles enter a given roadway or provide drivers with real-time information about roadway conditions, alternate route suggestions, and trip times. By controlling the flow of vehicles and allowing users to make informed decisions about their trip. ITS aids in increasing the capacity of the transportation system.

- *Transportation Demand Management (TDM)* – TDM alleviates congestion by decreasing overall travel demand, reducing the number of single occupant vehicles and the need to make

trips, or by altering the time periods users travel. To achieve the desired changes in demand, TDM relies on incentives and disincentives, such as reducing the number of public parking spaces, increasing the cost of public parking, providing easy to access Park'n'Ride lots, more efficient bus service, and employer-supported transportation incentives such as flex-time work schedules, and transit passes.

- *Roadway Improvements* – Improvements to the existing system improve the functioning of the physical capital already in place. Re-striping can make existing lanes more visible, increasing user confidence, which can aid the flow of traffic, and in some cases the number of people willing to use a route. Adding one-way and two-way lanes redirects traffic and creates new routes. Removing on-street parking could make an existing route more desirable, diverting traffic onto it from surrounding congested segments. Making the timing of traffic signals more efficient and changing the types of traffic controls at select intersections, such as adding a dedicated turn arrow, are minimal operational changes that can greatly increase the flow of vehicles.

System preservation allows the system to be maintained at the level necessary for it to be used to its fullest capacity and for its intended lifecycle.

Transit Improvements
Transit Improvements are intended to increase the viability of transit. Transit gives greater mobility to those without vehicles and provides an alternative mode of transport to those who normally make their trips in single occupant vehicles. Examples of ways to increase the viability of transit include: 1) More frequent service; 2) Expanded service areas; and 3) Express routes between key users and destinations. The *Transit Element* of the LRTP discusses the Janesville Transit System in greater depth, and discusses how specific improvements may be implemented in the future.

System Enhancement
System enhancements add capacity through new travel lanes on existing roadways or the creation of new road segments, which is one of the most obvious forms of congestion management and most expensive. The realignment of roadways, through the use of a bypass or other measure, is also within this category. Capacity expansion has the ability to alleviate congestion.

Background & Model Inputs

Traffic Volumes
Traffic volumes on urban streets and rural roads are indicators of the functional classification of a route, the type of land use adjacent to the corridor, and the size of traffic generators located on that route. Current traffic is modeled by establishing a relationship between trip-making behavior and current socioeconomic and land use data. Traffic growth can be estimated by projecting this data to a future year and using these same relationships to generate future trips. These current and future trips are loaded onto the current street network in order to determine if the street system will be able to carry the predicted traffic efficiently, or if deficiencies will exist.

When "operational capacity" deficiencies in the current network appear, alternative networks can then be tested to see which combination of improvements might alleviate these deficiencies most effectively. The level of congestion, or capacity deficiency, on any given street may be determined by

comparing traffic volumes to its "operational capacity" or "level of service" (i.e., a numeric value representing a driver's level of comfort). The Level of Service (LOS) number illustrates whether the street is operationally deficient. LOS concepts are described in greater detail later in this Element.

Trip Purpose

Traffic volumes help identify heavily-used arterial and collector streets and provide an indication of how traffic circulates near major traffic generators. Data on traffic volume is limiting in that the data only provide a geographic snapchat as to where traffic is, and provides no indicator where that traffic is going. Origin and destination studies provide a more macro-level indication of the types of trips being made, along with their beginning and ending points. In the modeling process information on trip purpose indicates different trip lengths and behaviors (e.g., a home-based work trip will most likely be a longer trip in miles and have fewer trips than a home-based shopping trip, which may travel a shorter distance, stop multiple times and take a longer amount of time).

Socioeconomic Data

Forecasted population, households, and employment levels of the Janesville MPA are used in the transportation planning process to determine the amount of possible future traffic generated by households, businesses, shopping, schools, industry. The ratio of population to available dwelling units directly affects trip production, as does auto ownership an employment. Shifts in employment, such as growth or decline in manufacturing, trade, or service employment influence the number of work-related trips generated or attracted to a particular employment sector.

The population of the Janesville MPA is projected to grow from about 82,000 persons in 2010 to over 98,000 persons in 2050, an increase of approximately 20%. The number of households in MPA is expected to increase from about 33,000 in 2010 to about 43,000 in 2050. The tables below illustrate in detail the population and household projections used for the forecast modeling effort.

Table 7: MPO Population 2000-2050

	2000	2010	2020	2030	2040	2050
C Janesville	60,200	63,575	67,500	72,100	74,000	75,900
C Milton	5,132	5,546	5,935	6,400	6,615	6,830
T Harmony	2,351	2,569	2,785	3,045	3,195	3,345
T Janesville	3,048	3,434	3,750	4,145	4,385	4,625
T La Prairie	929	834	815	790	730	730
T Milton	2,844	2,923	3,150	3,390	3,505	3,620
T Rock	3,338	3,196	3,290	3,370	3,325	3,280
Total	**77,842**	**82,077**	**87,225**	**93,240**	**95,755**	**98,330**

Source: Wisconsin Department of Administration & WisDOT

Table 8: MPO Households 2000-2050						
	2000	**2010**	**2020**	**2030**	**2040**	**2050**
C Janesville	23,894	25,828	28,655	31,279	32,579	33,879
C Milton	2,034	2,231	2,495	2,752	2,892	3,032
T Harmony	787	906	1,026	1,148	1,225	1,302
T Janesville	1,137	1,325	1,512	1,710	1,839	1,968
T La Prairie	342	331	338	335	315	315
T Milton	1,061	1,129	1,272	1,400	1,471	1,542
T Rock	1,304	1,240	1,334	1,395	1,395	1,395
Total	**30,559**	**32,990**	**36,632**	**40,019**	**41,716**	**43,433**
Source: Wisconsin Department of Administration & WisDOT						

Level of Service (LOS)

The WisDOT travel demand forecasting model process determines the LOS for streets within the MPA by incorporating land use, population, and traffic volume data.

LOS is one of the key indicators used to identify deficiencies in the system. LOS is determined through measuring the results of either the Base 2010, for existing conditions, or Future Year 2050, for either committed or planned conditions, model volumes with the average daily traffic (ADT) thresholds of each ADT class. The ADT thresholds are LOS and capacity calculations based on: 1) the Transportation Research Board's (TRB) *2010 Highway Capacity Manual*; and 2) best practices conducted by other states and MPOs around the country. Each ADT threshold represents the maximum allowable limit for an LOS grade. LOS is labeled A through F and is described in the table below:

Table 9: Level-of-Service		
LOS	**LOS Numeric Value**	**Description**
A	1.01 to 2.00	Not congested. Free flow – users unaffected by one another. Free to maneuver and select desired speed. High level of comfort.
B	2.01 to 3.00	Not congested. Stable flow – users notice the presence of other drivers. Free to select desired speed, but slight decrease in maneuverability. Comfort slightly less, due to increased presence of other drivers.
C	3.01 to 4.00	Minimal congestion. Stable to beginning of high-density flow – other drivers affect your speed and force you to maneuver carefully. Comfort begins to decline noticeably.
D	4.01 to 5.00	Moderate congestion. High density, stable flow – speed and maneuvering are severely restricted. Comfort level is poor. Point

Table 9: Level-of-Service		
LOS	**LOS Numeric Value**	**Description**
		where a minimal increase in traffic will cause problems.
E	5.01 to 6.00	Severe congestion. Operating at or near capacity level. All speeds are reduced to a uniform low value. Maneuvering is very difficult. Comfort level are extremely poor, driver frustration levels are generally high. Point where small increases in traffic or minor problems in the traffic stream will cause backups.
F	6.00 or greater	Extreme congestion. Forced or break-down flow. Characterized by stop and go traffic. Creased when the amount of traffic approaching a point is greater than the capacity that can pass that point.
Source: Wisconsin Department of Transportation (WisDOT)		

LOS thresholds indicate the maximum desirable LOS, or congestion level, by roadway type in both rural and urban areas. The threshold system recognizes that the level of desirable congestion changes with a population's size and a roadway's functional classification.

Table 10: Desirable Levels of Service		
	Rural & Small Urban Areas	**Urbanized Areas**
C2030 Backbone Routes (I-39/90)	4.0	5.0
National highway System Routes (STH 26 and 11)	5.0	5.0
Other principal arterials	5.0	5.5
Minor Arterials	5.0	5.5
Collectors & Local Function Roads	5.0	5.5
Source: WisDOT, Facilities Development Manual, 2020		

More information on one-way and two-way LOS thresholds as illustrated in the *WisDOT Facilities Development Manual* is included in the *Appendix* of the LRTP.

The Model

In developing the LRTP and evaluating the potential needs of the MPO throughout the next three decades, key future projects were analyzed to help understand future roadway needs. For the purposes of the model, the "No-Build" scenario's project LOS is portrayed in the current year, while all other scenarios' LOS are portrayed in year 2050.

To evaluate how the recommended projects would affect projected 2050 congestion levels in the MPO the travel demand model was developed in three steps that build upon one another. The steps are as follows: 1) the existing network; 2) the committed network (the existing plus completed and committed network); and 3) the full-build network (the existing, plus committed and committed, plus planned projects). The committed scenario is a prediction of how the road network could operate in 2050 should no further improvements occur beyond what is illustrated in the *2021-2026 TIP*. The full-build network begins with the street network developed in the previous scenario and then adds to the network the major capacity expansion projects recommended for construction within the MPA. The current deficiency levels help illustrate where congestion relieving measures **are** needed, while the expected deficiency levels indicate where they **likely will be** needed, aiding in the development of recommended projects.

The study area boundary for the 2020-2050 LRTP is consistent with the MPA discussed throughout this plan, consisting of the entirety of the Cities of Milton and Janesville, and parts of the Townships of Harmony, Janesville, La Prairie, Milton, and Rock. For highway planning purposes, Rock County is subdivided into 399 traffic analysis zones (TAZs). The TAZs are generally defined by census and physical boundaries; TAZ boundaries typical fall along arterials or natural physical boundaries. [5]

No Build Scenario 2050, with Committed Projects

The No Build 2050 network refined the 2050 congestion level prediction by incorporating into the model new and expansion projects that have been completed since the existing base year network (2010) and those projects that have funding secured for construction in the coming years. The transportation model was run with the existing plus committed projects, and the traffic volumes expected in 2050 to develop the deficiency levels that can be expected in 2050, which is shown in **Map 2**. Additional project scenarios were generated to enable sufficient evaluation and analysis of recommended projects of the effects on traffic deficiency levels. **Tables 11, 13, 14, and 15** list the recommended projects for each of the modeled traffic forecasts, and **Maps 3-4** provide an illustration of the deficiencies in each scenario.

Table 11: No Build 2050 Traffic Model with Committed Projects

#	Committed Project	Length	Project Type
1	W. Court Street	Waveland to Pearl	Reconfiguration from four to three lanes
2	E. Racine Street	Forest Park to Randall	Reconfiguration from four to two lanes (plus TWLTL
3*	S. Wright Road	Racine to Enterprise	Reconfiguration from four to three lanes
4*	S. Wright Road	Enterprise to Palmer	Reconfiguration from four to two lanes
5	I-39/90	IL Stateline to Madison	Expansion

[5] It is important to note that after the 2020 Census results are compiled, TAZ geographies will be retired and ultimately replaced with Census Block Group Boundaries. As such, the default census geography utilized in this LRTP is the Census Block.

Table 11: No Build 2050 Traffic Model with Committed Projects			
#	**Committed Project**	**Length**	**Project Type**
6*	Ryan Road Underpass	Under I-39/90	Road Extension
**These projects have been completed as of the writing of this plan; however, they have been completed recently enough where they are treated as programmed projects, as the WisDOT model has not yet formally incorporated those projects.*			

Table 12: No Build (with committed projects) 2050 Level of Service Deficiencies		
	Committed Project	**Length**
1	E. Centerway	Milton Avenue to Harding Street
2	Milton Avenue (STH 26)	E. Memorial Drive to Randolph Road
3	John Paul Road (CTH Y)	STH 26 to W. Walnut Grove Road
4	Newville Road	USH 14 to Russell Road
5	N. USH 51	Russell Road to J-J Townline Road
6	USH 14/STH 11	CTH O to Rock-Walworth County Line
7	USH 14	Rock River to N. Burdick Road

The projects illustrated in **Table 13** address most, but not all of deficiencies illustrated in **Table 12**. Roadways with an LOS Grade of "D" improved by the proposed projects include STH 26, John Paul Road (CTH Y), E. Centerway, STH 11, and N. USH 51. However, by 2050, the WisDOT Travel Model illustrates a Grade "E" level of congestion along USH 14 near its intersection with USH 51.

Table 13: Traffic Model with Committed & Recommended Projects *No West Side Bypass*			
#	**Project**	**Length**	**Project Type**
7	Waveland Road	To CTH A	Road Extension
8	N. Bypass – USH 51	Black Bridge Road to USH 14	Widen to four-lane urban cross section
9	USH 51/STH 11	Intersection of USH 51 & STH 11	Grade Separation
10	Innovation Drive	To USH 51	Road Extension
11	Todd Drive	Delavan Drive to Conde Street	Road Extension
12	Conde Street/Read	Conde to Read Road	Road extension from Conde to Read;

Table 13: Traffic Model with Committed & Recommended Projects
No West Side Bypass

#	Project	Length	Project Type
	Road	Read Road to Delavan Drive	upgrade from Read to Delavan
13	USH 14	USH 51 to Wright Road	Reconstruct to six-lane urban cross section
14	USH 14 RR Crossing	Intersection of USH 14 and Kennedy Drive	Grade Separation
15	Kettering Street	To Kennedy Road/Brentwood Drive	Road Extension
16	Sandhill Road	From Wright Road/Deerfield Drive	Road Extension
17	McCormick Drive	Intersection of McCormick/Huntinghorne Drive to Wright Road	Road Extension
18	N. Wright Road	From Rotamer Road to STH 26	Road Extension
19	Wuthering Hills Drive	From Mackinac to USH 14	Road Extension
20	Randolph Road	Connection to Wuthering Hills Drive	Road Extensions (constructed in conjunction with Project 19
21	USH 11/14	From Wright Road to CTH O	Reconstruction to four lanes
22	Harmony Town Hall Road	From USH 14 to STH 26	Widening to a four-lane urban cross section
23	USH 11/14	CTH O to I-43	Expansion to a new four-lane expressway
24	Milton-Schopiere Road	E. USH 11/14 to Townline Road	Expansion from two-lane rural to two-lane limited access divided highway
25	E. Klug Road	Old HWY 26 to I-39/90 at future CTH M interchange	Road extension
26	Sunset Drive	Intersection of Sunset/Lucas to N. John Paul Road	Road extension
27	Sunset Drive	Terminus to Janesville Street	Road extension
28	CTHY/Madison Ave Installation	Intersection of CTH Y/Madison Avenue	Traffic Signal Installation
29	RR Crossing at John Paul Road	WSOR RR Crossing at John Paul Road	Grade Separation

Table 13: Traffic Model with Committed & Recommended Projects *No West Side Bypass*			
#	**Project**	**Length**	**Project Type**
30	Hilltop Drive	To Townline Road	Road Extension
31	W. State Street	To E. of WSOR Rail Lines	Road Extension
32	Elliott Street	To Project 31	Road Extension
33	Reuther Way	To Joliet Street	Road Extension
34	Lafayette Street	To Lafayette Street	Road Extension

The inclusion of a west side bypass from USH 11 to USH 14, as proposed in the LRTP as well as the City of Janesville's Comprehensive and Strategic Plans, greatly improved LOS on USH 14 from the proposed bypass to USH 51.

It is important to note that an objective of the LRTP is to preserve agricultural resources whenever feasible. Therefore, it should be emphasized that these roadway projects – which extend across agricultural landscapes – are not a near-term priority of the MPO. These projects should only be studied further when LOS achieves a level where major highway projects such as highway bypasses become a necessity.

Table 14: Traffic Model with Committed, Recommended Projects, West Side Bypass, and new connections			
#	**Project**	**Length**	**Project Type**
35	West Side Bypass	From USH 11 to USH 14	New Road/Bypass
36	USH 14	From USH 51 to Project 35	Expansion to Four Lanes
37	USH 11 bypass connection	From I-39-90/Avalon Road Interchange to USH 11/14 at CTH O	Road Extension

The final package reconfigured two select roads in the City of Janesville from four-lane, undivided roadways, to two driving lanes with a center TWLTL and either bike or parking lanes. The traffic model founds that there were no major impacts to the reconfigured roadways, or to the overall transportation network.

Table 15: Projects 1-34, and Potential Road Diets			
#	**Project**	**Length**	**Project Type**
38	E. Milwaukee Street	Garfield Avenue to Wright	Conversion from four-lane undivided

Table 15: Projects 1-34, and Potential Road Diets			
#	**Project**	**Length**	**Project Type**
		Road	road to two driving lanes (plus TWLTL)
39	E. Memorial Drive	Milton Avenue to Harding Street	Conversion from four-lane undivided road to two driving lanes (plus TWLTL)
40	N. Pontiac Drive	USH 14 to Holiday Drive	Conversion from four-lane undivided road to two driving lanes (plus TWLTL)

Chapter Four: Proposed Street & Highway Facilities

WisDOT's travel forecast modeling process predicts where congestion problems are likely to occur on the existing street network, given projected socioeconomic trends. As demonstrated in the previous chapter, there are fairly few areas predicted to experience congestion in the No Build 2050 Scenario (however, there is a slight increase from projections made in the previous LRTP in 2015). The proposed street and highway facilities are primarily preservation projects, and new local road connections to accommodate future growth.

Environmental Consultation

The MPO conducted environmental consultation with state and federal resource agencies for the *Streets & Highways Element* in early 2021, and incorporated all received comments into the LRTP where appropriate.

Significant Committed Projects

The purpose of the following listing of committed projects is to demonstrate the major infrastructure improvements that will address many of the transportation concerns in the Plan over the next six years. Significant committed projects are projects within the MPA that are identified in the MPO's 2021-2026 TIP or the projected is otherwise programmed by an MPO member jurisdiction. Project costs are listed as they are reflected in the TIP, and therefore these projects are fiscally constrained. **Table 17** reflects projects that do not expand roadway capacity, but are still programmed to use federal funding. These costs are reflected in the fiscally constrained portion of the TIP.

Table 16: Significant Committed Projects ($1,000s)

Project Number	Project	Extent	Sponsor	Federal	State	Local	Total
1	W. Court Street	Waveland Rd. to Pearl Street	City of Janesville	$3,266		$649	$3,915
Description: *W. Court Street will undergo a reconfiguration from its current 4-lane structure to a 3-lane road with bike lanes on both sides. 2024 Construction dollars are programmed through the Highway Safety Improvement Program.*							
2	E. Racine Street	Forest Park Blvd. to Randall Ave.	City of Janesville				

Table 16: Significant Committed Projects ($1,000s)

Project Number	Project	Extent	Sponsor	Federal	State	Local	Total
Description: *E. Racine Street will undergo a reconfiguration from its current 4-lane structure to a 2-lane road with a Two-Way-Left-Turn-Lane (TWLTL) in the center.*							
3	**S. Wright Road**	**Racine St. to Enterprise Rd.**	**City of Janesville**				
Description: *S. Wright Road will undergo a reconfiguration from its current 4-lane structure to a 3-lane road (with two northbound lanes and one southbound). This project was completed during the LRTP planning process, and thus was included among other future projects; therefore, costs are not included in this LRTP.*							
4	**S. Wright Road**	**Enterprise Rd. to Palmer Ave.**	**City of Janesville**				
Description: *S. Wright Road will undergo a reconfiguration from its current 4-lane structure to a 2-lane roadway with bike lanes on both sides. This project was completed during the LRTP planning process, and thus was included among other future projects; therefore, costs are not included in this LRTP.*							
5	**I-39/90**	**Stateline to Madison**	**WisDOT**				
Description: *WisDOT is nearing completion of the expansion of Interstate Highway 39/90 from a 4-lane to a six-lane highway, running from the Illinois state line to the City of Madison.*							
6	**Ryan Road**	**I-39/90 Underpass**	**WisDOT**				
Description: *As part of the I-39/90 Expansion Project, WisDOT completed the Ryan Road underpass on Janesville's north side. This project was completed during the LRTP planning process, and thus was included among other future projects; therefore, costs are not included in this LRTP.*							

Table 17: Committed System Preservation Projects ($1,000s)

Project	Extent	Sponsor	Federal	State	Local	Total
W. Milwaukee Street Reconstruction	**Centerway to River Street**	**City of Janesville**	**$1,361**		**$3,787**	**$5,148**
Description: *This project entails the reconstruction of W. Milwaukee Street in Downtown Janesville in 2021 as part of greater Downtown revitalization efforts. Federal funds are provided through the Surface Transportation Program.*						
E. Milwaukee Street Reconstruction	**Main Street to Atwood**	**City of Janesville**	**$2,224**		**$3,316**	**$5,540**
Description: *This project entails the reconstruction of E. Milwaukee Street in Downtown Janesville in 2024 as part of greater Downtown revitalization efforts. Federal funds are provided through the Surface Transportation Program.*						
USH 51 Improvements	**Nicolet Street to Court Street**	**WisDOT**	**$8,964**	**$2,241**	**$1,239**	**$12,443**
Description: *This project entails pavement replacement along USH 51/Center Avenue in South Janesville, as well as a bridge superstructure replacement. Federal funding is programmed through the National Highway Performance Program. This project is expected to take place in 2023.*						

Table 17: Committed System Preservation Projects ($1,000s)						
Project	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
STH 59 Mill & Overlay	**Vickerman Road to Rock County Line**	**WisDOT**	**$2,576**	**$644**		**$3,220**
Description: *This project entails over seven miles of mill and overlay along STH 59 in 2021. Federal funding is provided through flexible Surface Transportation Program funding.*						
Highway Epoxy Pavement Markings	**STH 26 and I-39/90**	**WisDOT**	**$840**	**$210**		**$1,050**
Description: *Routine pavement markings along key highways in the WisDOT Southwest Region in 2021.*						
Delavan Drive Railroad Signal & Gates		**WisDOT**	**$181**	**$97**		**$278**
Description: *2021 Railroad Signal and Gates in the City of Janesville. Highway Safety Improvement Program funded.*						
Beloit Avenue Railroad Signal and Gates		**WisDOT**	**$149**	**$79**		**$228**
Description: *2022 Railroad Signal and Gates in the City of Janesville. Highway Safety Improvement Program funded.*						
Read Road Railroad Signal and Gates		**WisDOT**	**$147**	**$80**		**$227**
Description: *2022 Railroad Signal and Gates in the Town of La Prairie. Highway Safety Improvement Program funded.*						
Signal Improvements	**E. Racine Avenue and S. Randall Avenue**	**City of Janesville**	**$277**		**$137**	**$414**
Description: *2021 Signal Improvements in the City of Janesville, funded through the Highway Safety Improvement Program*						
Signal Improvements	**W. Memorial Drive/N. Washington Street**	**City of Janesville**	**$359**		**$40**	**$399**
Description: *2021 Signal Improvements in the City of Janesville, funded through the Highway Safety Improvement Program*						
Signal Improvements	**E. Milwaukee Street/Randall Avenue**	**City of Janesville**	**$275**		**$31**	**$306**
Description: *2021 Signal Improvements in the City of Janesville, funded through the Highway Safety Improvement Program*						
Five Points Intersection Improvements	**Center Avenue/Court Street/Milwaukee Street/Centerway**	**WisDOT**	**$883**	**$98**		**$981**
Description: *2022 Intersection Improvements in the City of Janesville, funded through the Highway Safety*						

Table 17: Committed System Preservation Projects ($1,000s)						
Project	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
Improvement Program						
Five Points Intersection Improvements	**Center Avenue/McKinley Street**	**WisDOT**	**$120**	**$13**		**$133**
Description: *2022 Intersection Improvements in the City of Janesville, funded through the Highway Safety Improvement Program*						

Planned & Recommended Projects

The MPO acknowledges that needs and priorities can and will change over the course of the thirty-year planning horizon. Therefore, construction dates shown in the LRTP are tentative and should be treated as general estimations. The MPO's actual needs and funding availability will govern when recommended projects are constructed. Other recommended projects in this Element originate from several sources including the *Rock River Renaissance Area Implementation Strategy (ARISE*), the *2021-2026 Transportation Improvement Program (TIP)*, the *Centennial Industrial Park Redevelopment Plan*, state, county, and local jurisdictions, and the results of WisDOT's transportation model.

Planned preservation projects include the reconstruction, rehabilitation, resurfacing, and reconditioning of roadways and bridges, as well as signal installation. Capacity expansion projects include adding travel lanes, or the construction of new alignments to provide additional capacity or access. Expansion projects also include upgrading roadways from a rural design to an urban design. Some of the preservation projects are also intended to address safety concerns through rebuilding existing roadways. The capacity expansion projects have the potential to address safety by addressing congestion issues on existing corridors. The alignments shown are for illustrative purposes only. Early in the design phase, the responsible jurisdiction will provide the final alignment.

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
7	Waveland Road	Extension to CTH A	City of Janesville			$1,043	$1,043
This proposed project extends the current Waveland Road from its northern terminus to CTH A. As a local road, extension would most likely occur through local funding as development occurs. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							
8	N. Bypass USH 51	Black bridge Road to USH 14	WisDOT	$11,123	$3,178	$1,589	$15,890

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
This proposed project involves widening the current U.S. Highway 51 from Black Bridge Road to U.S. Highway 14 from a two-lane road to a four-lane urban cross-section. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP.							
9	USH 51/STH 11	Intersection of USH 51 & STH 11	WisDOT	$6,552	$1,638		$8,190
This proposed project involves a grade separation at the intersection of USH 51 and STH 11. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and National Highway Performance Program funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP.							
10	Innovation Drive	To USH 51	City of Janesville		$243	$243	$487
This proposed project extends Innovation Drive from its current western terminus to intersect with USH 51. Innovation Drive is currently classified as a local road; however, given the roadway's connection with major southwest Janesville employers, the roadway extension could potentially be eligible for TEA dollars.							
11	Todd Drive	Delavan Drive to Conde Street	City of Janesville	$288	$32	$1,477	$1,797
This proposed project extends Todd Drive from Delavan Drive to Conde Street. In order to complete this project, approval for a new railroad crossing would be needed. Todd Drive is currently classified as a local road, and so would most likely be extended using local funding. The railroad crossing could be funded through federal HSIP dollars.							
12	Conde Street/Read Road	Conde to Read Road/Read Road to Delavan Drive	City of Janesville			$621	$621
This proposed project Conde Street from its current terminus to Read Road. Read Road would then be upgraded from its intersection with the new Conde Street Segment, north to Delavan Drive to accommodate increased truck traffic. It should be emphasized that Read Road is currently considered to be a utilized bicycle corridor, and this should be considered during design. As local roadways, these road expansions would most likely be use local funding. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							
13	USH 14	USH 51 to Wright Road	WisDOT	$23,737	$6,782	$3,391	$33,910
This proposed project widens U.S. Highway 11/14 from U.S. Highway 51 to Wright Road from its current configuration to a four-lane urban cross section. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP. During Environmental Consultation, the National Parks Service advised that impacts to the Ice Age National Scenic Trail be considered.							
14	USH 14 RR Crossing	Intersection of USH 14 & Kennedy Drive	WisDOT	$5,759	$640		$6,398
This proposed project involves the installation of an at-grade railroad crossing at the intersection of U.S. Highway 14 and							

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
Kennedy Road. Such an improvement would most likely be made through a future HSIP project. As part of construction along a U.S. Highway, this project is not included in fiscal constraint, and costs are illustrative.							
15	Kettering Street	To Kennedy Road/Brentwood Drive	City of Janesville	$288	$32	$1,099	$1,419
This proposed project involves the extension of Kettering Street from the intersection of Kennedy Road & Brentwood Drive, to a dead end west of Whitney Street. This project would require the approval of a new railroad crossing, which would most likely be funded through federal HSIP Dollars. Kettering Street is a local road, meaning that the extension itself would most likely be funded through local means. During Environmental Consultation, the National Parks Service advised that impacts to the Ice Age National Scenic Trail be considered.							
16	Sandhill Road	Wright Road to Deerfield Drive	City of Janesville			$909	$909
This proposed project extends Sandhill Road from its western terminus to Deerfield Drive. Consideration to bicycle and pedestrian accommodation are essential, due to the project's close proximity to the existing Ice Age National Trail. As a local road, extension would most likely occur through local funding. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							
17	McCormick Drive	Huntinghorne to Wright Road	CoJ	$569		$142	$712
This proposed project involves the extension of McCormick Drive from its current eastern terminus at STH 26 to a future extension of Wright Road. The official Functional Classification Map for the Janesville UZA portrays the future McCormick Drive as a future collector route, thereby making the route eligible for federal STP-Urban allocation Dollars. However, local funding sources should also be assumed.							
18	N. Wright Road	Rotamer Road to STH 26	CoJ	$1,403		$351	$1,753
This proposed project involves extending Wright Road from its terminus north of Rotamer Road to the existing N. Wright Road at the STH 26 overpass. Consideration to bicycle and pedestrian accommodation are essential, as this segment is recommended in the LRTP for on-street facilities, and will be in close proximity to a future extension of the Spring Brook Trail. The official Functional Classification Map for the Janesville UZA portrays the future Wright Road as a future collector route, thereby making the route eligible for federal STP-Urban Allocation Dollars. However, local funding sources should also be assumed.							
19	Wuthering Hills Drive	Mackinac to USH 14	CoJ	$787		$197	$984
This proposed project extends N. Wuthering Hills Drive from its current terminus to USH 14. The official Functional Classification Map for the Janesville UZA portrays the future Wuthering Hills Drive as a future collector route, thereby making the route eligible for federal STP-Urban allocation dollars. However, local funding sources should also be assumed.							
20	Randolph Road	To Wuthering Hills Drive	CoJ			$65	$65
This proposed project extends Randolph Road from its current terminus at Holly Drive to the future Wuthering Hills Drive. As a local road, extension would most likely occur through local funding. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
21	USH 11/14	Wright Road to CTH O	WisDOT	$30,077	$8,593	$4,297	$42,967
This project involves the widening of U.S. Highway 11/14 from wright Road to CTH O from its current configuration to a four-lane urban cross section. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state, city, and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP. During Environmental Consultation, the National Parks Service advised that impacts to the Ice Age National Scenic Trail be considered.							
22	Harmony Town Hall Road	USH 14 to STH 26	Town of Harmony	$26,454		$6,613	$33,067
This project involves the reconstruction of Harmony Town Hall Road from a rural roadway to an urban four-lane cross section from USH 14 to STH 26. The official functional classification map for the Janesville UZA classifies Harmony Town Hall Road as a collector route, thereby making the route eligible for federal STP-Urban allocation dollars. However, local funding sources should also be assumed. Due to the cost of this reconstruct, it is anticipated this reconstruction would take place over the course of multiple projects; as such, it is not included as part of the fiscally constrained portion of the Plan. It is additionally critical to note that this roadway is currently heavily utilized by bicyclists when considering reconstruction.							
23	USH 11/14	CTH O to I-43	WisDOT	$68,405	$17,101		$85,506
This project involves the expansion of U.S. Highway 11/14 from CTH O to I-43 in Walworth County from its current configuration to a new four-lane expressway. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP.							
24	Milton-Shopiere Road	USH 11/14 to Townline Road	Town of Milton				
This project involves preserving Milton-Shopiere Road from USH 14 to STH 59 for potential future expansion as a two-lane limited access highway. During the LRTP planning horizon, new access points should be limited and adequate right-of-way preserved for future expansion. Additionally, the MPO recognizes that this project may not prove necessary until after 2050. As such, costs remain unidentified and are not included within the fiscally constrained portion of the LRTP.							
25	E. Klug Road	Old 26 to I-39/90	Town of Milton			$130	$130
This project extends E. Klug Road from its current terminus to the intersection of CTH M and I-39/90. As a local road, extension would most likely occur through local funding. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							
26	Sunset Drive	Lucas to N. John Paul Road	City of Milton	$455		$114	$568
This project extends Sunset Drive from its terminus at Lucas Lane to John Paul Road. The official functional classification map for the Janesville UZA portrays E. Sunset Drive as a future collector route, thereby making the roadway eligible for future STP-Urban allocation dollars. However, local funding sources should be assumed.							
27	Sunset Drive	Terminus to Janesville Street	City of Milton	$452		$113	$566
This project extends Sunset Drive from its eastern terminus to Old Highway 26. The official functional classification map							

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
for the Janesville UZA portrays E. Sunset Drive as a future collector route, thereby making the roadway eligible for future STP-Urban allocation dollars. However, local funding sources should be assumed.							
28	John Paul Road/Madison Avenue Installation	CTH Y/Madison Avenue	Rock County/CoM	$943		$105	$1,048
This project involves the installation of traffic signals at John Paul Road and Madison avenue in downtown Milton. This project is a potential candidate for future HSIP funding.							
29	RR Crossing at John Paul Road	WSOR Crossing on John Paul Road	WisDOT	$6,870	$382	$382	$7,633
This project involves the installation of an at-grade railroad crossing where John Paul Road meets the Wisconsin & Southern Railroad. This project is a potential candidate for future HSIP funding; however, it is not included within the fiscally constrained portion of the LRTP.							
30	Hilltop Drive	To Townline Road	City of Milton			$1,021	$1,021
This project involves the extension of Hilltop Drive from its current terminus to Townline Road. As a local road, extension would most likely occur through local funding. As no federal funding sources are identified, it is not included in the fiscally constrained portion of the LRTP.							
31	W. State Street	To WSOR Rail Lines	City of Janesville		$380	$380	$760
This project involves the extension of W. State Street at its western terminus to the WSOR Rail Lines. W. State Street is currently classified as a local road; however, given the roadway's connection to the proposed Centennial Industrial Park, the roadway extension could potentially be eligible for TEA dollars.							
32	Elliott Street	To W. State Street	City of Janesville		$353	$353	$707
This project involves the extension of Elliott Street from its terminus to Project 31. Elliott Street is currently classified as a local road; however, given the roadway's connection to the proposed Centennial Industrial Park, the roadway extension could potentially be eligible for TEA dollars.							
33	Reuther Way	To Joliet Street	City of Janesville	$966		$242	$1,208
This project involves the extension of Reuther Way from its terminus to Joliet Street. As of 2021, extension would most likely occur through local funding. However, as part of the greater Centennial Industrial Park Redevelopment effort, assistance through the TEA program may be appropriate. Additionally, connecting Reuther Way and Joliet Street may upgrade the functional classification of the future segment in future ways, which would make the roadway eligible for federally-funded improvements through the STP-Urban Allocation.							
34	Lafayette Street	To Lafayette Street	City of Janesville		$209	$209	$418
This project involves the connection of the northern and southern segments of Lafayette Street, intersecting with the Rock County Complex. Elliott Street is currently classified as a local road; however, given the roadway's connection to the proposed Centennial Industrial Park, the roadway extension could potentially be eligible for TEA dollars.							

Table 18: Planned & Recommended Projects ($1,000s)							
Project Number	**Project**	**Extent**	**Sponsor**	**Federal**	**State**	**Local**	**Total**
35	West Side Bypass	USH 11 to USH 14	WisDOT	$288,940	$72,235		$361,175
The West Side Bypass would branch off from USH 11 on the west side of the MPA, and connect with USH 14 to the north. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP. Considerable planning for environmental effects should take place in anticipation of a highway project of this magnitude, as noted by the Wisconsin Department of Transportation during Environmental Consultation.							
36	USH 14	USH 51 to West Side Bypass	WisDOT	$30,151	$7,538		$37,689
To account for future congestion, this project proposes an expansion of USH 14 from its current configuration to four lanes from USH 51 to the future West Side Bypass. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP.							
37	USH 11 Bypass Connection	I-39/Avalon Road to USH 11/14	WisDOT	$199,915	$49,979		$249,894
This proposed Highway bypass would branch off from I-39/90 from its interchange with Avalon Road, and carry traffic northeast to USH 11/14 East at CTH O. This project would most likely be considered a WisDOT Majors project, to be funded through a combination of state and NHPP funding. As a likely long-term Majors project, the project is not included in the fiscally constrained portion of the LRTP. The MPO recognizes that it is very possible that this project will not be necessary until after the LRTP Plan Horizon (2050). As such, it is not included within the fiscally constrained portion of the LRTP. When and If planning for this project occurs, considerable attention must be paid to the effects of future construction on the Town of La Prairie's Agricultural Enterprise Areas (AEAs), as noted by the Wisconsin Department of Trade, Agriculture, and Consumer Protection during Environmental Consultation							

Projects Under Study

No projects are currently under study. A formal study determines need, feasibility, - and once warranted – the project's description, cost, scope, and alignment. Projects in this section do not have costs identified yet as they are conceptual in nature.

Candidates for Safety Conversion

Projects 38 & 39 – identified candidates for "road diets" – are identified in the LRTP as roadways that could benefit from a reconfiguration without creating adverse congestion. These corridors are identified as potential safety conversion projects due to their daily peak hour traffic, crash rates, number of driveways and intersections, and speeding issues. While both of these corridors are recommended for further study, other four-lane roadways may benefit from a safety conversion.

Realignment of Centerway/Parker Drive & Main Street

The realignment of Centerway/Parker Drive and Main Street is a recommendation contained in *The Rock Renaissance Area Redevelopment & Implementation Strategy (ARISE)*. The intention

is to create a gateway to Janesville's downtown and to improve traffic flow. With the realignment, drivers wishing to enter the downtown continue straight while those continuing on USH 51 turn right. It should be emphasized that the WisDOT travel model does not account for this proposed improvement. A more detailed project-level analysis is needed to study whether the proposed realignment would directly relieve projected traffic congestion along the Centerway corridor.

Grade Separated Crossing at Kennedy Road/USH 14 & Railroad Crossing
Roughly 20,000 vehicles per day travel along this segment of US 14, and trains blocking the intersection cause major delays and concern for emergency response. USH 14 will serve as a detour route during the I-39/90. A study would analyze the costs and benefits of a grade separated crossing at this intersection.

Grade Separated Railroad Crossing in Milton
A major issue for the City of Milton is its lack of a grade-separated railroad crossing. Railroad tracks run east-to-west through the City and trains create a barrier to north-south travel. This presents a major concern for emergency vehicle access and response. John Paul Road was identified as a potential location for a grade-separated crossing; however, a study would be the most appropriate method to identify the most appropriate candidates for such a crossing.

North Side Bypass
The potential for a North Side Bypass was first identified in the MPO's 2005 LRTP as a project recommended for study. A North Side Bypass would improve regional connectivity north of Janesville as well as west of Milton. The alignment would roughly include the corridor of USH 51, Kidder Road, CTH M, a diamond interchange at CTH M, and an extension of E. Klug Road. Further study would determine whether the bypass would be an upgrade of existing roadways, a new alignment, or a combination of both.

Milton Avenue Corridor
The Bicycle & Pedestrian planning process identified Milton Avenue as a potential corridor for improvements that would improve multimodal circulation in the urbanized area. However, Milton Avenue is also projected to incur "D" LOS in its current alignment. The MPO and City of Janesville tentatively plan to conduct a corridor study to determine how and if bicycle and pedestrian accommodations along Milton Road or its frontage roads would be an appropriate treatment.

Future Consideration

The following projects have been studies in the past, but are not currently in a study phase. WisDOT suspended these studies in the past due to low statewide priority and lack of funding for construction. WisDOT determined the projects would likely not rank high enough for construction in the next twenty years. If WisDOT resumed these studies, the MPO will participate as a stakeholder. The MPO does not therefore have a formal recommendation for or against the following projects.

West Side Bypass & Avalon interchange to USH 14/STH 11 – New Connection
The West Side Bypass was studied as a new north-south corridor extension of STH 11 to USH 14. The project purpose is to reduce congestion on USH 14, provide an alternative to USH 14 for freight and through traffic, and provide regional connectivity on the west side of Janesville. The connection could also serve as a detour route in the event of a shutdown of I-39/90. A separate

new segment, but tied to the West Side Bypass, is a new connection from the Avalon Road interchange at STH 11 and I-39/90 extending to 11/14 East. Currently, STH 11 uses the interstate as the connection between the Avalon interchange and USH 14/STH 11 East. If the State picks up the West Side Bypass Study, the Avalon Connection would likely be included in such a study.

In past LRTPs and City of Janesville planning processes, stakeholders have frequently indicated a desire for a West Side Bypass to serve manufacturing land uses in the southeast region of Janesville. The topic is explored in greater detail in the *Freight Element*.

STH 11/USH 14 Expansion

WisDOT studied the East Side Expansion from STH 11/USH 14 on Janesville's east side to I-43 in Walworth County. WisDOT ultimately suspended the study due to its low statewide project rank and limited funding. At the time of the suspension, the study had identified alternative alignments. No analysis has been conducted on the identified alternatives since the suspension of the study.

Chapter Five: Financial Plan

The type of highway funding resources that can be used to implement the recommendations in this plan come from a variety of programs at the federal, state, and local levels. The programs that the MPO has identified as funding sources for the committed and recommended highway projects are briefly described in this chapter. All estimated revenues and expenditures are given in 2020 dollars. WisDOT provides funding levels estimated to be available over the next thirty years. At the time a project moves into the programmed years of the TIP, the cost of the project will be reevaluated and the funding method to be used will be revisited. Actual funding sources are dependent on the current allocation levels. The MPO will pursue alternate funding mechanisms, if appropriate, as the design and construction phases of projects in the 2020-2050 plan horizon proceed.

Available Funding Sources

Surface Transportation Block Grant Program – Urban (STBG-Urban): The Surface Transportation Program is a federally funded program administered by WisDOT with an 80% federal share, and 20% local match. STBG-Urban funding provides for a wide range of transportation-related activities and local safety improvements. To qualify, projects must be on roadways functionally classified as a collector or higher, and the projects cannot be on roadways that are part of the State Trunk Highway system.

Existing Majors Enumerated for Construction – (MAJ) – Major Project is a state designation that can use federal and/or state funding for implementation. Major Projects must meet a specific definition and follow a specific process for approval. The Transportation Project Commission and the Legislature must enumerate these projects. Projects designated as a Major Project do not require a local match. The Majors Highway Development Program is for expansion projects greater than five miles, or new state highway segments greater than 2.5 miles.

State Trunk Highway (STH) Preservation (STH) – State and federally funded program administered by WisDOT, with a variable local match. The majority of projects require no local match. However, some activities may require a local match resulting in a funding split that is project specific. These funds include "Backbone" and "Non-Backbone 3R" funds. Backbone funds can be used on the backbone routes identified in *Corridors 2030*. Non-Backbone 3R funds can be used on the rest of the state highway system (Connectors). Backbone and 3R funds can be used for preservation, reconstruction, resurfacing, and reconditioning projects. STH funds may be used for reconstruction, resurfacing, and reconditioning projects along State Trunks Highways, including bridge projects. The projected allocation is based on a combination of mileage and average spending from years 2015-2020.

State Trunk Highway (STH) Operations & Maintenance (STH O&M) – Funds from this state program can be used for O&M activities associated with STHs, including bridge projects.

Local Roads Improvement Program (LRIP) – This state program requires a 50% local match. The program assists local governments with improvements on seriously deteriorating county highways, town roads, city, and village streets. LRIP dollars can be split between multiple projects; however, only half of each project's total cost will be funded through LRIP, assuming that their combined federal portions do not exceed the federal allocation. One project substitution is allowed per allocation cycle. LRIP funds must be used within three biennia.

In most cases, the jurisdictions within the MPA use LRIP dollars for preservation projects. LRIP projects are identified in the annual Transportation Improvement Program

Transportation Economic Assistance (TEA) – This WisDOT-administered grant program provides a relatively rapid response to transportation needs supporting economic development at a fifty-fifty local match cost. The program is administered on a year-round, first-come-first-served basis with a short turn-around-time of approximately 60 to 90 days. The grant program was created to help fund transportation enhancements specifically on public right-of-way to support economic development in generating new employment opportunities, retain current employees, and encouraging private investment.

Connecting Highway Aids (CHA) – This WisDOT program is paid for entirely with state dollars. The CHA program is designed to assist municipalities with the costs associated with the increased traffic and maintenance of roads that connect segments of the State Trunk Highway System. The funds are given as yearly, lump allocations. In Janesville, Connecting Highways are as follows:

- USH 14, from Kennedy Road to Wright Road.
- USH 51: from Kellogg Avenue to Black Bridge Road
- STH 26: from Park Drive to Kettering Road

Surface Transportation Block Grant Program (Rural) – WisDOT administers this federal program that grants a max 80% federal share and requires a minimum 20% local match. Funds may be used to complete a variety of improvements to rural highways (generally county trunk highways). The objective of STBG-Rural is to improve federal aid eligible highways outside of urban areas. Projects must meet federal and state requirements. Communities are eligible for funding on roads classified higher than rural minor collectors. WisDOT does not provide financial projects for STBG-Rural funding as there is no method of predicting the geography of the MPA in thirty-years to any degree of certainty.

General Transportation Aids (GTA) – This WisDOT program is paid for entirely with state dollars. GTAs return a portion of state-collected transportation revenues (i.e., fuel taxes, vehicle registration fees) to local governments. WisDOT allocates GTAs to municipalities four times a year, which may be used on any roadway project. GTAs help to offset traffic related costs such as road construction, maintenance, and traffic.

Local Funding Mechanisms – For projects funded either locally or with a local match, responsibility for projects funded locally lies with the funding jurisdiction. Municipalities may generate local funding in a variety of ways. A few options are illustrated below:

- **General Fund:** Local funding for street construction and maintenance are obtained primarily through the general property tax levy of a given municipality.

- **General Obligation Bonds:** These funds are issued on a per project basis, and are supported through the general tax levy.

- **Special Assessments**: Special assessments are charged to property owners for sidewalk installation and street improvements when residential and commercial lands develop. Property owners may also pay a share of the cost for a traffic signal or street improvements on streets adjoining their properties.

- **Tax Increment Finance (TIF) Districts:** A TIF district allows a municipality to retain property tax increment on an industrial development to pay for land acquisition, transportation improvements, and utility expense within that district. The City diverts increased revenues from rising property values to pay for the improvements that helped to increase the property's value. The City retains the incremental increase in tax revenues from the district, until all the infrastructure costs are paid, at which time the tax revenues from the district may be collected by all applicable taxing jurisdictions.

Transportation Utility

To address the increasing costs of street rehabilitation as addressed in this Plan, the City of Janesville is in the process of establishing a transportation utility to keep up with costs. A transportation utility is a mechanism by which funds are raised through charging property owners' road usage fees in order to raise funding for road repairs (this is very similar to typical water and sewer utilities). Transportation utilities are potentially effective as they are a comparatively equitable mechanism by which to levy funds, and provides municipalities an additional mechanism of reliable revenue, decreasing local dependency on state and federal sources, and reducing the need for the City to rely on borrowing. If implemented, Janesville would join the City of Neenah and Town of Buchanan as the only communities operating such a utility in the State of Wisconsin.

Available Federal & State Funding

Funding for projects for the LRTP are provided by WisDOT. For most programs, estimates were derived from *FAST Act* specifications, which are apportionments based on a mileage and/or population formula. Program estimates based on apportionments include transit, STBG-Urban, and STH Maintenance and Operations. These cost projections are considered steady and reliable. Other funding program estimates were based on an average of historic amounts received, combined with a mileage adjustment. This produces a reliable estimate for programs that are fairly predictable and consistent, such as GTAs, CHAs, and LRIP.

The revenue estimates for two programs – Majors Program and STH Rehab – are based on past expenditures from 2016-2020. These produced unrealistically high revenue projection for the Janesville Area MPO due to the programmed expenditures related to the I-39/90 expansion project.

WisDOT and MPO staff decided to leave the future projection of Majors Program funding unknown because projects are determined by the state Transportation Projects Commission. The STH Rehab Program revenue projection remains unrealistically high. The MPO chose to take a conservative approach to programming projects for the STH Program.

For the revenue projections, it was assumed the funding levels would raise with the rate of inflation (2.0%).

Table 19: Janesville Area MPO Revenue Estimates for 2016-2020 ($1,000s)

	2021-2025		2026-2030		2031-2040		2041-2050	
	Average	Total	Average	Total	Average	Total	Average	Total
STH Rehab	$8,814	$44,071	$9,732	$48,658	$11,304	$113,037	$13,779	$137,792
SHR Bridges	$686	$3,429	$757	$3,786	$880	$8,795	$1,072	$10,721
STH Maintenance & Operations	$4,484	$22,422	$4,951	$24,756	$5,751	$57,509	$7,010	$70,103
STP-Urban	$623	$3,115	$688	$3,439	$799	$7,989	$974	$9,738
General Transportation Aids (GTAs)	$632	$3,159	$697	$3,487	$810	$8,101	$988	$9,875
Connecting Highway Aids	$97	$487	$108	$538	$125	$1,250	$152	$1,524
LRIP	$245	$1,223	$270	$1,351	$314	$3,138	$383	$3,825
Federal Safety Programs	$174	$870	$192	$961	$223	$2,232	$272	$2,721
Local Bridges	$1,650	$8,249	$1,821	$9,107	$2,116	$21,157	$2,579	$25,790

Source: WisDOT estimates, 2020

Summary of Long-Range Needs & Funding

Estimating costs and revenues over a thirty-year plan horizon is an imprecise process heavily influenced by funding availability, guiding legislation, and need. Therefore, the financial analysis should be revisited in each five-year plan update. The total projected federal & state allocation for each funding program is greater than or equal to the total amount the MPO expects to need. Based on historical activity, it appears that the minimum local match needed for each of the approved federal and state projects is likely to be available (most programs require a ten-to-twenty percent local match).

The funding expected to be available, along with the needs of the MPO, are summarized below. Should a funding shortfall arise, the MPO shall seek to either secure additional federal and state funding assistance, or consider delaying projects.

Costs

Per mile costs are based on 2020 WisDOT cost guidance that uses historic statewide item costs. MPO staff utilized ArcGIS to measure approximate length of projects. For project, the miles of roadway are multiplied by the per-mile cost to find a Total Miles Cost figure. A total of 28% of the total miles cost figure is added to account for contingency (15%), research and engineering (8%), and utilities (5%).

Each planned and potential project shows a range of years for year of construction. For the purpose of the cost estimate, the upper limit of the construction range is used when adding annual inflation of 2.0%. A detailed description of how cost estimated are derived is contained in the *Appendix* of the LRTP.

Real Estate Acquisition

The cost of real estate is not included in project cost estimates. Determination of real estate acquisition needs is determined during project design. Real estate is acquired within the context of land division and development review by requiring the dedication of right-of-way for existing and proposed streets and highways within the Extraterritorial Jurisdiction (ETJ). In the event of expansion of a roadway, any purchase of additional right-of-way would follow standards and regulations for acquisition of fair compensation.

Fiscal Constraint

The adopted LRTP must demonstrate expected revenues are sufficient to fund recommended projects. Most committed and planned projects make up the fiscally constrained Street & Highway Element. Costs are listed for the proposed or potential projects in order to identify the resources needed to move a project into the planned list or to include the project in the TIP or STIP. The LRTP needs to be amended to include any projects identified through studies listed in the plan before projects can move into the most current TIP or STIP.

Table 20: Anticipated Funding & Need, 2021-2050

Programs	Planned or Programmed			Estimated Available Funding		
	2021-2030	2031-2040	2041-2050	2021-2030	2031-2040	2041-2050
Majors	$15,475	Unknown	Unknown	$15,475	Unknown	Unknown
STH Rehab	$92,729	$113,037	$137,792	$92,729	$113,037	$137,792
SHR Bridges	$7,215	$8,795	$10,721	$7,215	$8,795	$10,721
STH Maintenance & Operations	$47,178	$57,509	$70,103	$47,178	$57,509	$70,103
STP-Urban	$3,585	$4,632	$9,738	$6,554	$7,989	$9,738

Table 20: Anticipated Funding & Need, 2021-2050						
Programs	**Planned or Programmed**			**Estimated Available Funding**		
	2021-2030	**2031-2040**	**2041-2050**	**2021-2030**	**2031-2040**	**2041-2050**
General Transportation Aids (GTAs)	$6,646	$8,101	$9,875	$6,646	$8,101	$9,875
Connecting Highway Aids	$1,025	$1,250	$1,524	$1,025	$1,250	$1,524
LRIP	$1,501	$3,138	$3,825	$2,574	$3,138	$3,825
Federal Safety Programs	$5,657	$576	$943	$5,657	$2,232	$2,721
Local Bridges	$17,356	$21,157	$25,790	$17,356	$21,157	$25,790

Notes:

Majors – Programmed major projects include the I-39/90 Expansion and Reconstruction,

STH – All potential STH projects currently programmed in the region are in the Majors program.

GTA – The MPO does not program projects for General Transportation Aids. Local communities utilize all of the funding available.

CHA – The MPO does not program for Connecting Highway Aids. Local communities utilize all of the funding available.

LRIP – The MPO TIP lists all LRIP projects planned in the MPO over the next two-year period. Although no LRIP projects are identified in the LRTP, it is assumed any funding available will be programmed in future Transportation Improvement Programs

FSP – Federal Safety Programs manifest as Highway Safety Improvement Program (HSIP) funded projects in the TIP.

Local Bridges – 2021-2025

Cost vs. Revenue Analysis

The fiscal constraint table above reflects all street and highway funding programs and estimates developed for the MPA. The MPO only identifies projects for select funding programs in its plans, such as STP. As detailed in the notes associated with the above table, fiscal constraint assumes all available funding will be utilized for those programs. Collectively, all programs contribute to the overall road network. Additionally, the Transportation Alternatives Program and Transit Capital and Operating Assistance Grants contribute to funding the local multimodal transportation system.

The funding for these programs statewide has fluctuated over time, as documented in the 2018-2019 Budget Trends report from WisDOT's Office of Management and Budget.

Table 21: Statewide Local Road Assistance, 2006-2019 (nominal dollars, millions				
State Fiscal Year	**Local Transportation Facility Improvement Assistance**	**Local Bridge Assistance**	**Local Roads Improvement Program (LRIP)**	**Total**
2006	84.75	41.73	46.25	172.73
2007	85.42	74.23	47.17	206.82
2008	84.75	41.76	48.11	174.63
2009	128.23	70.31	49.08	247.62
2010	93.36	117.88	46.07	257.31
2011	88.14	41.67	46.07	175.87
2012	83.10	41.65	56.07	180.82
2013	83.10	41.65	56.07	180.82
2014	79.50	41.65	63.27	184.42
2015	83.10	41.65	56.07	180.82
2016	83.10	41.66	56.07	180.82
2017	83.10	41.66	56.07	180.82
2018	83.08	55.02	66.07	204.16
2019	83.08	53.99	66.07	203.13
2006-2019 % Change	**-2.0%**	**29.4%**	**42.9%**	**17.6%**
2006-2019 Compound Annual Growth	**-0.2%**	**2.0%**	**2.8%**	**1.3%**
Source: Transportation Budget Trends, 2018-2019; Wisconsin Department of Transportation				

The WisDOT Chained Fisher Construction Cost Index (CFCCI) provides a universal indicator for how much construction costs have grown since WisDOT began tracking the measure in 2010. The CFCCI is used by WisDOT to update old bid cost information to current year pricing, and provides an accurate overall indicator of the relative costs of construction. **Figure 3** below compares the CFCCI since 2010 with the relative purchasing power of $100 since 2010, using the Consumer Price Index (CPI) as reference, as a general indicator of the relative expected revenues.

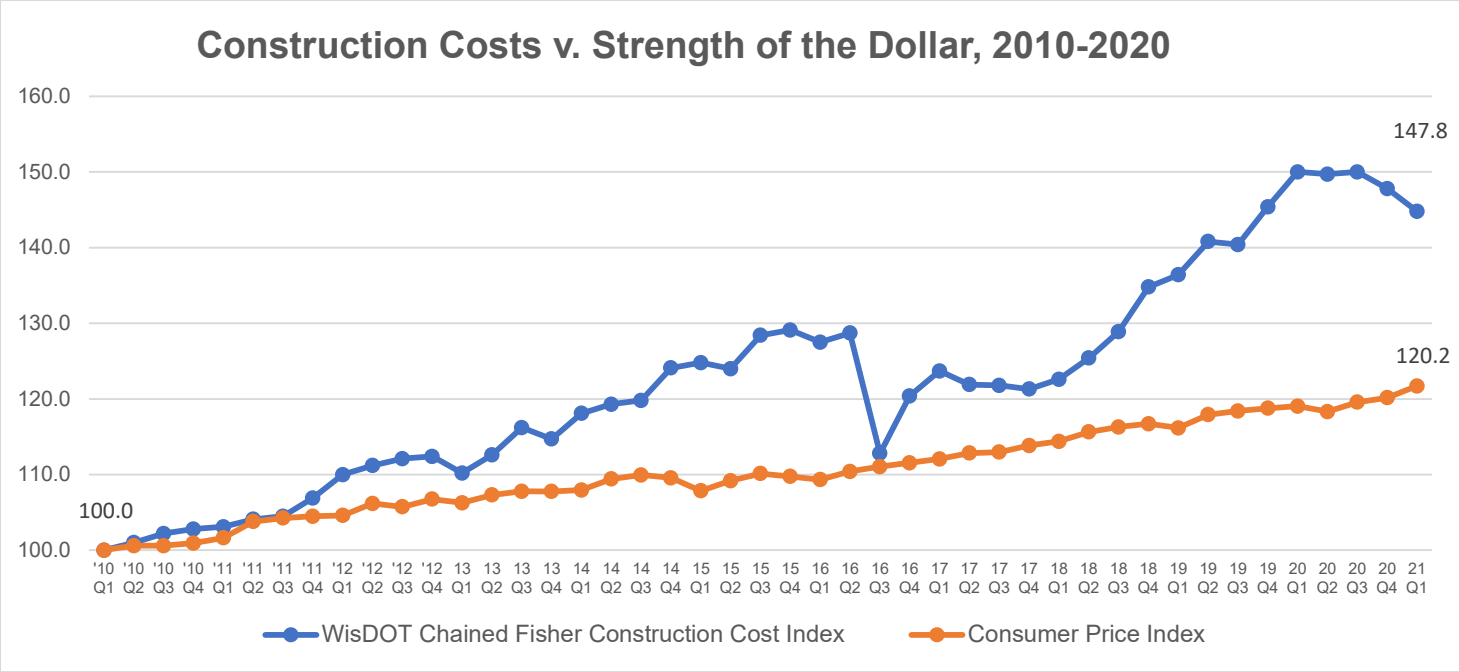


Figure 3: Comparison between the WisDOT CFCCI and Federal CPI. Source: WisDOT and Federal Bureau of Labor Statistics.

The growing divergence between the CFCCI and the CPI since 2010 is striking. Construction costs reflected in bids were nearly fifty percent higher at the end of 2020, compared with the beginning of 2010. By contrast, purchasing power only increased by about twenty percent during that same period. While **Table 21** demonstrates that local road assistance from WisDOT is also expected to grow in the long term, this gap between CFCCI and CPI illustrates that local governments within the MPA should expect to be increasingly self-reliant when it comes to maintaining road infrastructure.

Chapter Six: System Performance

Economic Vitality

Although a number of data sets exist to measure economic vitality (unemployment, income, home value, etc.), defining a concrete and comprehensive measure of economic vitality of the street and roadway network is difficult. On the one hand, vehicle traffic may indicate increased economic activity; on the other hand, it may also indicate inefficient operations or non-optimal land use planning.

Vehicle crashes also have a substantial impact on the economic vitality of a region. Any given crash can cause economic impact crash victims, medical facilities, employers, local businesses, and insurance companies in the form of Hospital and Emergency Room costs, costs for ongoing medical care, lost days at work, lost opportunities to participate in the local economy, and ultimately fewer years of life lived by individuals.

Table 22: Costs Accrued due to Crashes in the City of Janesville, 2017

	Hospital Charges	Emergency Room Charges	Estimated Medical Costs	Estimated Other Costs	Estimated Quality of Life Costs	Years of Person Life Lost
Federal Interstate	$11,522	$91,119	$442,790	$3,238,802	$2,146,037	51
State Highway	$1,111,747	$428,716	$2,335,598	$13,912,633	$8,307,522	138
County Roads	$0	$19,008	$11,811	$96,829	$13,853	0
Local Roads	$2,151,080	$678,229	$4,010,486	$22,506,679	$10,199,578	56
Total	**$3,274,349**	**$1,217,072**	**$6,800,685**	**$39,754,943**	**$20,666,990**	**245**

Source: University of Wisconsin-Madison, Center for Health Systems Research & Analysis, Wisconsin CODES Project.

System Preservation

MPO jurisdictions utilize the Pavement Surface Evaluation and Rating (PASER) system of evaluating roadway conditions under their jurisdiction every two years (on the odd year) as required under State

Statute. The change aligns with other Wisconsin municipalities utilizing the PASER system due to the simplicity of the evaluation of roadway conditions.

The PASER system rates roadway conditions between the ranges of "1" (needing total reconstruction) to "10" (reflective of newly completed construction). PASER data is recorded in the Wisconsin Information System for Local Roads (WISLR), a state-hosted database assisting local governments and WisDOT to manage local data to improve decision-making and meet legal requirements. See **Table 23** for the full illustration of the PASER rankings.

Table 23: PASER Rating System & Condition

PASER Rating	Road Condition
9-10	Excellent
7-8	Good
5-6	Fair
3-4	Poor
1-2	Failed

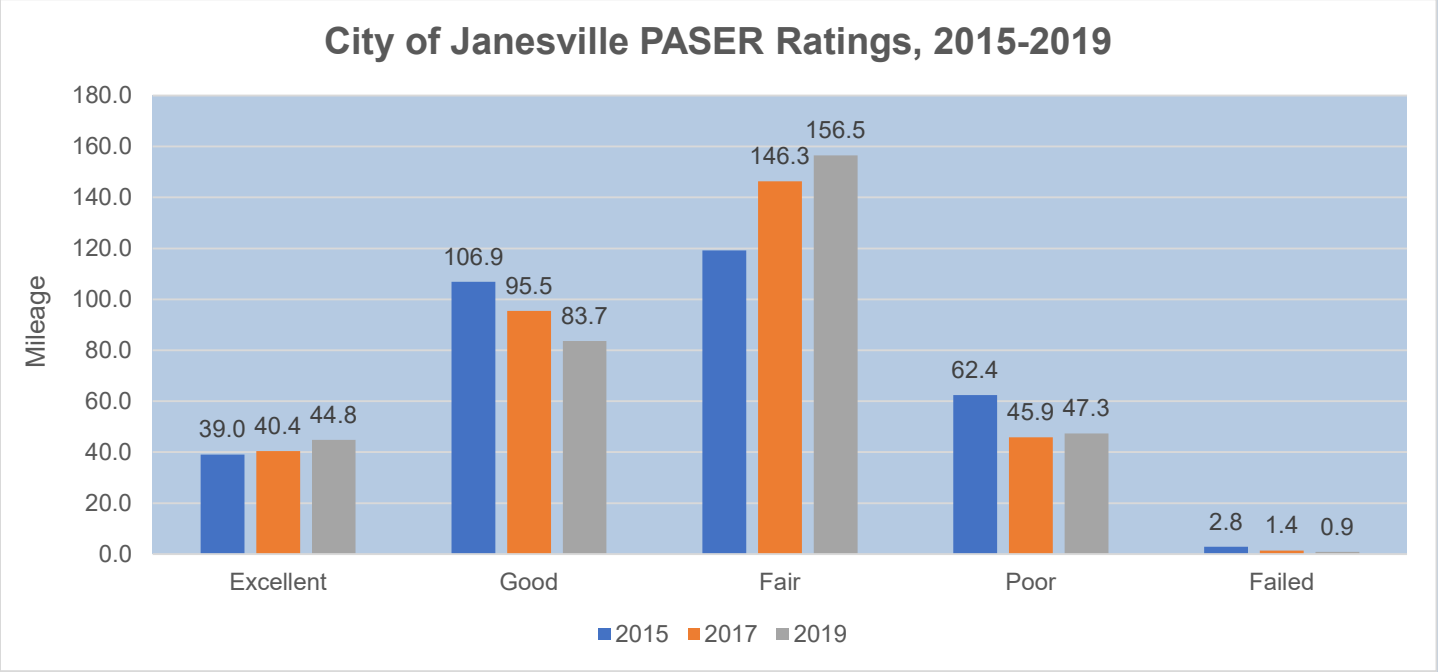


Figure 4: City of Janesville PASER Ratings, 2015-2019. Source: WisDOT, 2020.

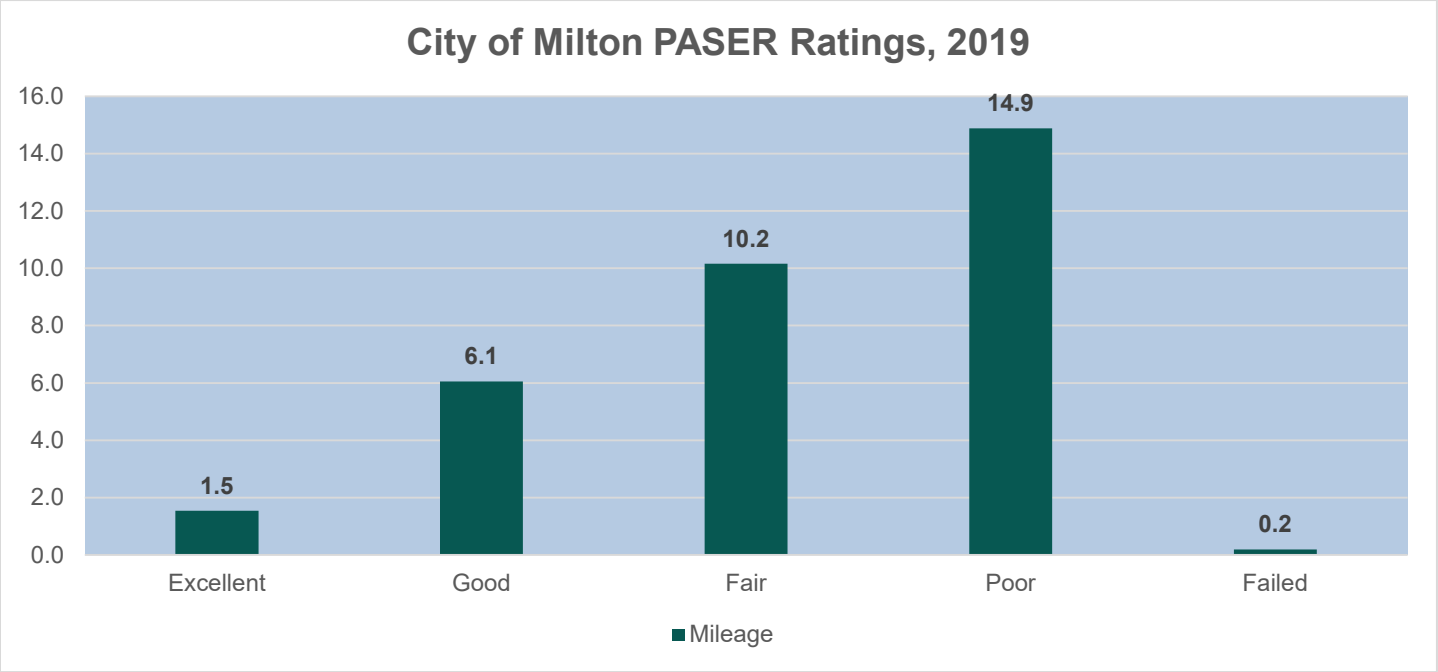


Figure 5: City of Milton PASER Ratings, 2019. Source: WisDOT, 2020.

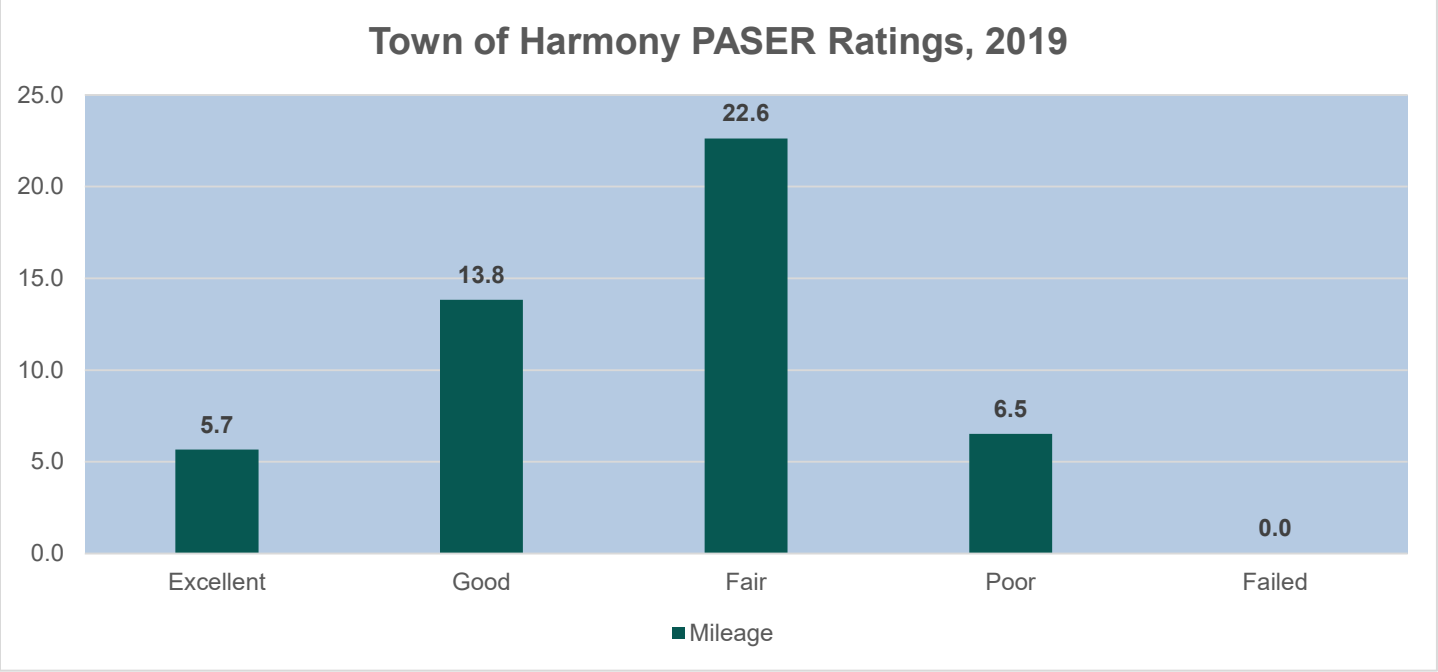


Figure 6: Town of Harmony PASER Ratings, 2019. Source: WisDOT, 2020.

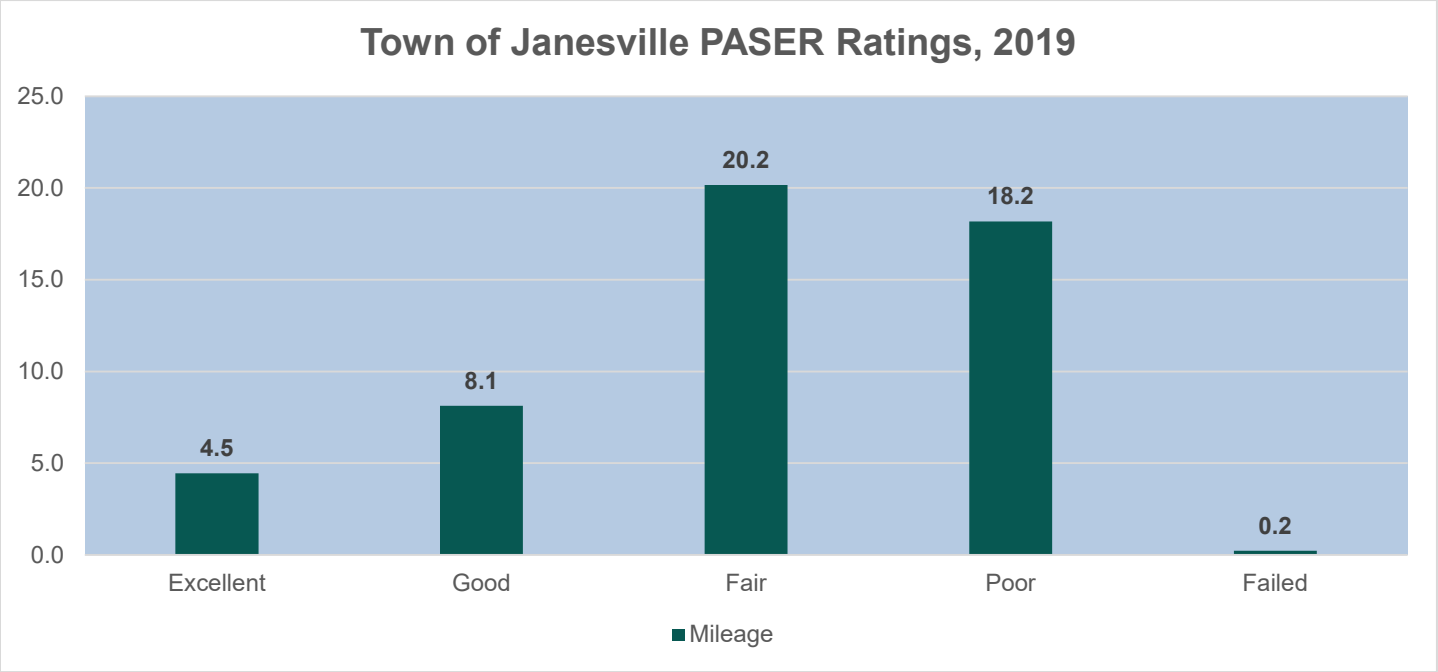


Figure 7: Town of Janesville PASER Ratings, 2019. Source: WisDOT, 2020.

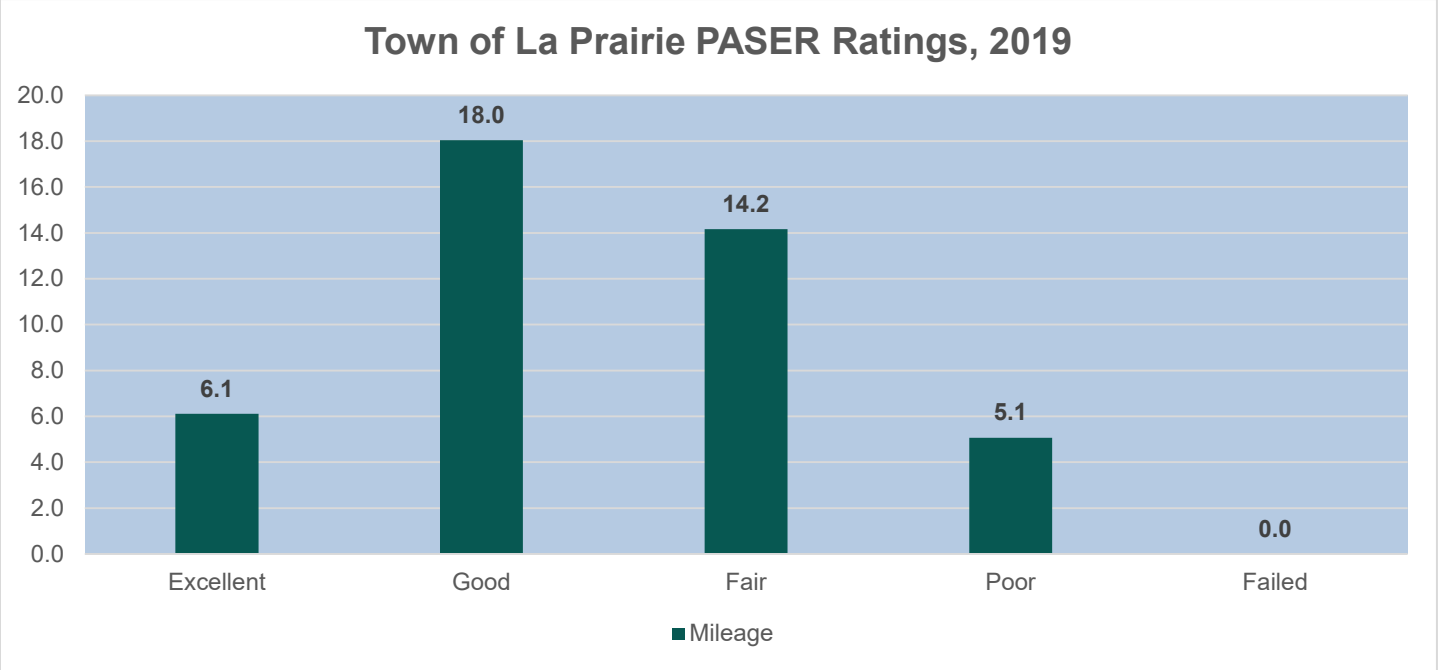


Figure 8: Town of La Prairie PASER Ratings, 2019. Source: WisDOT, 2020.

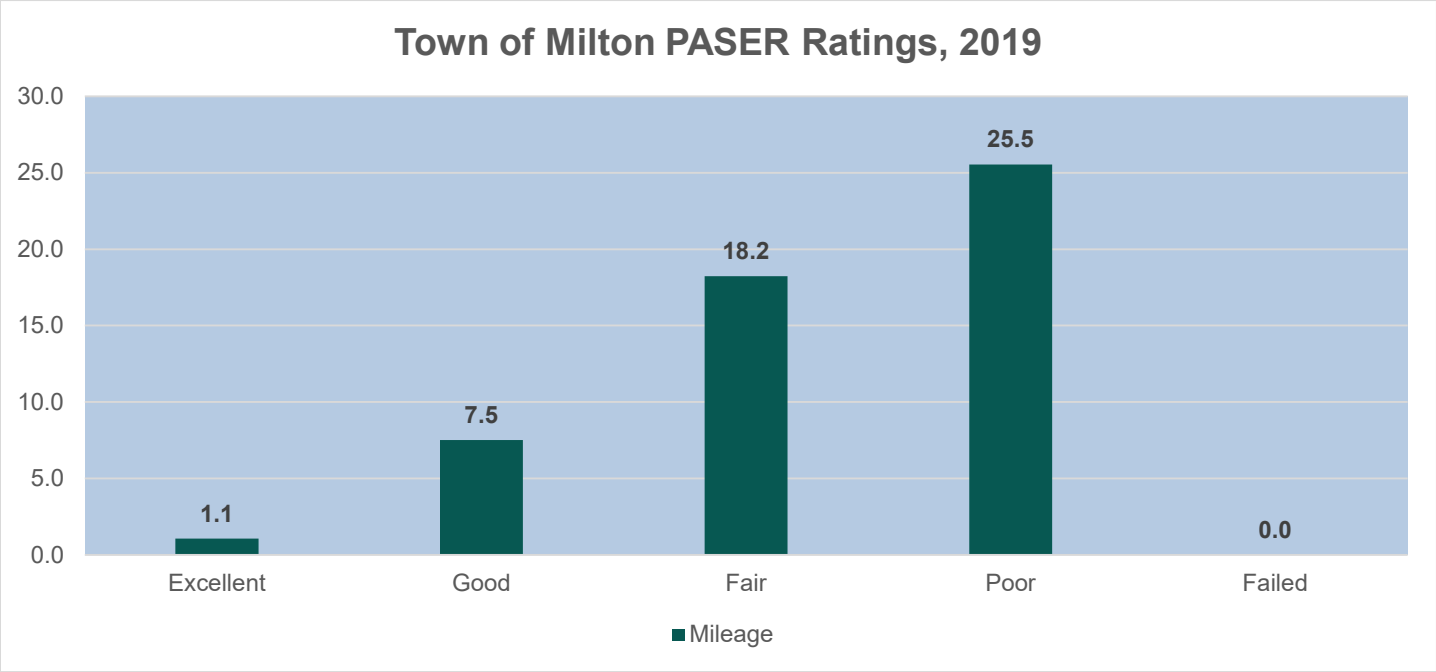


Figure 9: Town of Milton PASER Ratings, 2019. WisDOT, 2020.

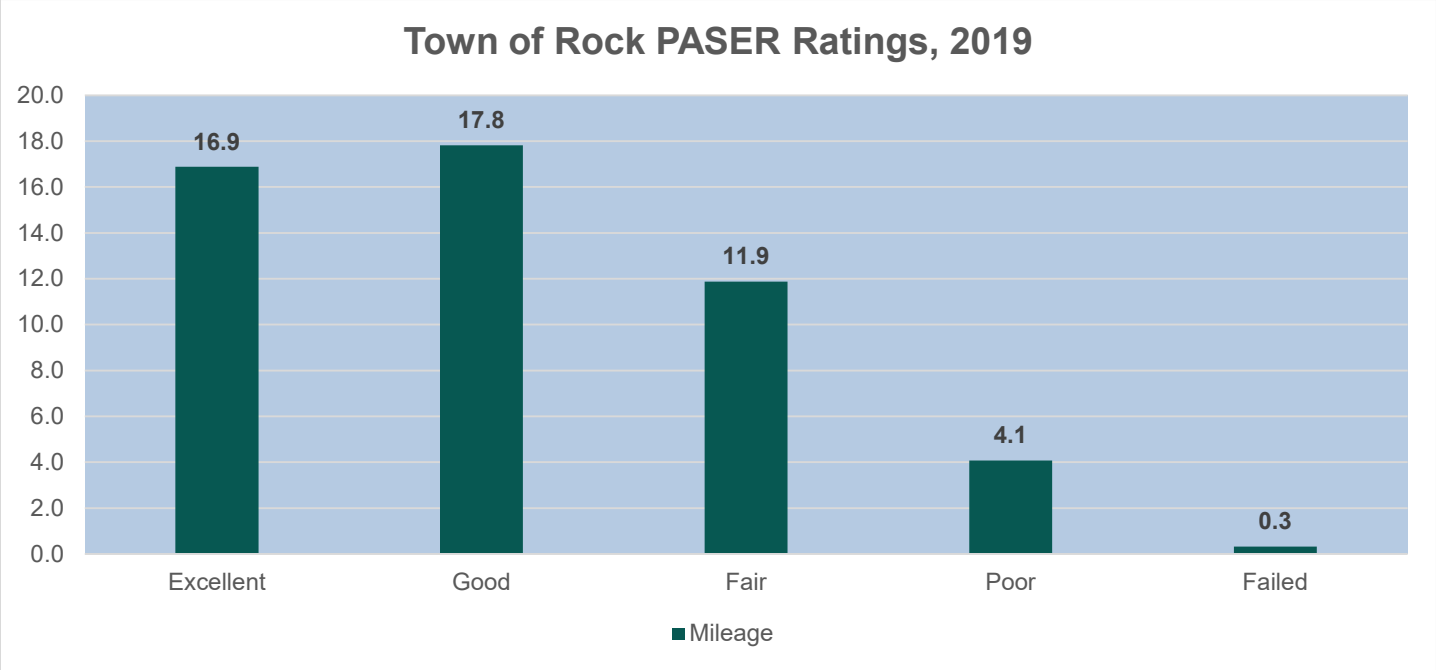


Figure 10: Town of Rock PASER Ratings, 2019. WisDOT, 2020.

Overall road conditions in the Cities of Janesville and Milton have a satisfactory rating, with most roads rated as “Fair” or above. Of the 334 miles of roadway in Janesville, about six percent are rated as “poor” or “failing.” This represents an overall decrease of roadways in need of an immediate reconstruct since the 2015 LRTP.

As shown in above figures, while the City of Janesville has modestly decreased its mileage of roads in need of a reconstruct, the number of street miles rated "fair" is increasing, with streets rated "excellent" or "good" similarly decreasing. PASER ratings for all seven municipalities within the MPA are illustrated in the figures above.

PASER represents the most optimal data for performance-based planning because it is consistently collected and reported every two years. For this reason, it is possible to set specific targets to maintain the street network in Fair/Good condition.

Similar to streets, all bridge structures are inspected, and reported to the State of Wisconsin, per State Statute. Three numeric values are assigned to different parts of a given bridge: the deck, the superstructure, and the substructure. Each section of the bridge is rated numerically on a 1-9 scale:

- 7-9: Good
- 5-6: Fair
- 4 and below: Poor

If any one of the three sections of the bridge achieves a "Poor" rating, the entire bridge is considered to be in "poor" condition.

MPA bridge condition ratings are listed in the table below. Several bridge projects programmed within the MPO Transportation Improvement Program will address structures with poor and fair ratings. In upkeeping the National Bridge Inventory (NBI), the FHWA is currently developing models to project when the sections of a given bridge will reach certain points of deficiency, taking into account factors such as climate, average daily traffic, bridge, materials, and age. This is an ongoing project of the Federal Highway Administration as of 2021, so not all bridges in the table below have future projected ratings. However, it is important to note that most bridges currently rated "fair" are likely to be rated "poor" at some point in the LRTP plan horizon, and thus become eligible for a replacement or reconstruction. The vast majority of bridges rated "good" will most likely become eligible for replacement or reconstruct at some point after 2050.

Table 24: Bridge Sufficiency Ratings in the MPA, 2021

Name	Jurisdiction	ON	Crossing	Bridge Condition Rating	Anticipated Year of "Poor" Rating
B-53-021	Rock County	CTH D (Afton Road)	Markham Creek	Fair	2030
B-53-018	City of Janesville	USH 51 (E. Centerway)	Rock River	Fair	2031
B-53-017	Town of Milton	Business 26	Otter Creek	Fair	2038
B-53-013	City of Janesville	Racine Street	Spring Brook	Fair	Undetermined
B-53-007	WisDOT	USH 14	Blackhawk Creek	Fair	2043
B-53-133	City of Janesville	Crosby Avenue	Rock River	Fair	2030
B-53-124	Town of Harmony	Henke Road	Blackhawk Creek	Fair	2036
P-53-096	Town of Harmony	Milton-Schopiere Road	Blackhawk Creek	Fair	Undetermined

Table 24: Bridge Sufficiency Ratings in the MPA, 2021

Name	Jurisdiction	ON	Crossing	Bridge Condition Rating	Anticipated Year of "Poor" Rating
B-53-103	WisDOT	STH 11	Markham Creek	Fair	2039
B-53-008	City of Janesville	E. Memorial Drive	USH 51 (N. Parker Drive)	Fair	2030
P-53-097	WisDOT	W. Memorial Drive	Rock River	Fair	2025
B-53-092	Rock County	CTH D	Fisher Creek	Fair	2029
B-53-085*	WisDOT	I-39/90 Southbound	STH 26 (Milton Ave)	Good	Outside Plan Horizon
B-53-228	City of Janesville	Wuthering Hills Drive	Spring Brook Creek	Fair	Undetermined
B-53-157	WisDOT	USH 51	Rock River	Fair	2028
B-53-154	City of Janesville	USH 51	WSOR Railroad	Fair	Undetermined
B-53-153	WisDOT	USH 51 (Center Avenue)	Rock River	Fair	2044
P-53-915	Town of Rock	S. River Road	Rock River	Fair	Undetermined
B-53-083*	WisDOT	I-39/90 Southbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-081*	WisDOT	I-39/90 Southbound	Kennedy Road & Bike Path	Good	Outside Plan Horizon
B-53-008*	WisDOT	I-39/90 Northbound	EMH Townline Road	Good	Outside Plan Horizon
B-53-077*	WisDOT	I-39/90 Northbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-075*	WisDOT	I-39/90 Northbound	CTH M	Good	Outside Plan Horizon
B-53-073*	WisDOT	I-39/90 Northbound	Newville Road	Good	Outside Plan Horizon
B-53-058	Rock County	CTH D	Fisher Creek	Fair	Undetermined
B-53-736	City of Janesville	Palmer Drive	Spring Brook Creek	Fair	Undetermined
B-53-724	City of Janesville	Wright Road	Spring Brook Creek	Fair	Undetermined
B-53-147	City of Janesville	Beloit Avenue	Spring Brook Creek	Fair	2025
B-53-143	WisDOT	STH 11 Eastbound	Road Road	Fair	Outside Plan Horizon
B-53-142	WisDOT	STH 11 Eastbound	Union Pacific Railroad	Fair	2042
B-53-137	City of Janesville	Black Bridge Road	WSOR Railroad	Fair	Undetermined
B-53-291	Rock County	CTH G	Waterway	Good	Outside Plan Horizon
B-53-287	City of Janesville	Jackson Street	Rock River	Good	Outside Plan Horizon
B-53-284	Town of Rock	Hayner Road	Markham Creek	Good	Outside Plan Horizon
B-53-282	Town of La Prairie	Read Road	Waterway	Good	Undetermined
B-53-028	City of Janesville	Ruger Avenue	Spring Brook Trail	Good	Outside Plan Horizon
B-53-006	WisDOT	USH 14	Spring Brook Creek	Good	Undetermined
B-53-192	Town of Milton	Klug Road	Otter Creek	Good	Outside Plan Horizon
B-53-191	City of Janesville	E. Court Street	Rock River	Good	Outside Plan Horizon
B-53-088	Town of Janesville	Burdick Road	Marsh Creek	Good	Undetermined
B-53-329	WisDOT	STH 11 (E. Racine Street)	I-39/90 Southbound	Good	Outside Plan Horizon
B-53-324	WisDOT	STH 11 Westbound (Avalon Road)	I-39/90	Good	Outside Plan Horizon
B-53-323	WisDOT	STH 11 Eastbound	I-39/90	Good	Outside Plan Horizon

Table 24: Bridge Sufficiency Ratings in the MPA, 2021

Name	Jurisdiction	ON	Crossing	Bridge Condition Rating	Anticipated Year of "Poor" Rating
		(Avalon Road)			
B-53-319	WisDOT	Woodman Road Eastbound	I-39/90	Good	Outside Plan Horizon
B-53-257	WisDOT	STH 26 Southbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-256	WisDOT	STH 26 Northbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-255	WisDOT	STH 26 Southbound	E. High Street	Good	Outside Plan Horizon
B-53-254	WisDOT	STH 26 Northbound	E. High Street	Good	Outside Plan Horizon
B-53-253	WisDOT	STH 26 Southbound	STH 59	Good	Outside Plan Horizon
B-53-252	WisDOT	STH 26 Northbound	STH 59	Good	Outside Plan Horizon
B-53-251	WisDOT	Henke Road	STH 26 Northbound	Good	Outside Plan Horizon
B-53-250	WisDOT	EMH Townline Road	STH 26	Good	Outside Plan Horizon
B-53-249	WisDOT	Harmony Town Hall Road	STH 26	Good	Outside Plan Horizon
B-53-183	WisDOT	USH 51	CTH F	Good	2045
B-53-276	Rock County	CTH A	Blackhawk Creek	Good	Undetermined
B-53-273	WisDOT	STH 59 Westbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-272	WisDOT	STH 59 Eastbound	WSOR Railroad	Good	Outside Plan Horizon
B-53-266	WisDOT	STH 26	Wright Road	Good	Outside Plan Horizon
B-53-263	WisDOT	STH 26 Southbound	Otter Creek	Good	Outside Plan Horizon
B-53-262	WisDOT	STH 26 Northbound	Otter Creek	Good	Outside Plan Horizon
B-53-261	WisDOT	STH 26 Southbound	Bowers Lake Road	Good	Outside Plan Horizon
B-53-260	WisDOT	STH 26 Northbound	Bowers Lake Road	Good	Outside Plan Horizon
B-53-259	WisDOT	STH 26 Southbound	Storrs Lake Road	Good	Outside Plan Horizon
B-53-258	WisDOT	STH 26 Northbound	Storrs Lake Road	Good	Outside Plan Horizon
B-53-165	City of Janesville	S. Main Street	Spring Brook Creek	Good	2039
B-53-230*	WisDOT	I-39/90 Northbound	CTH O (E. Delavan Road)	Good	Outside Plan Horizon
B-53-229*	WisDOT	I-39/90 Southbound	CTH O (E. Delavan Road)	Good	Outside Plan Horizon
B-53-224	WisDOT	STH 11	Drainage	Good	Undetermined
B-53-374	City of Janesville	Sharon Road	Spring Brook Trail	Good	Outside Plan Horizon
B-53-490	City of Janesville	W. Racine Street	Rock River	Good	2043
B-53-219	WisDOT	STH 11 Westbound	S. Read Road	Good	Outside Plan Horizon
B-53-218	WisDOT	STH 11 Eastbound	S. Read Road	Good	Outside Plan Horizon
B-53-215*	WisDOT	I-39/90 Northbound	Milwaukee Street	Good	Outside Plan Horizon
B-53-214*	WisDOT	I-39/90 Southbound	Milwaukee Street	Good	Outside Plan Horizon
B-53-213	WisDOT	STH 11 Westbound	S. Oakhill Avenue	Good	Outside Plan Horizon
B-53-212	WisDOT	STH 11 Eastbound	S. Oakhill Avenue	Good	Outside Plan Horizon
B-53-211	WisDOT	STH 11 Westbound	S. River Road	Good	2050

Table 24: Bridge Sufficiency Ratings in the MPA, 2021

Name	Jurisdiction	ON	Crossing	Bridge Condition Rating	Anticipated Year of "Poor" Rating
B-53-210	WisDOT	STH 11 Eastbound	S. River Road	Good	2050
B-53-209	WisDOT	CTH D	STH 11	Good	Outside Plan Horizon
B-53-208	WisDOT	CTH D	STH 11	Good	Outside Plan Horizon
B-53-207	WisDOT	STH 11 Eastbound	Markham Creek	Good	Outside Plan Horizon
B-53-206	WisDOT	STH 11 Westbound	Markham Creek	Good	Outside Plan Horizon
B-53-141	Town of Rock	Rockport Road	Fisher Creek	Good	2039
B-53-100*	Rock County	CTH E	Marsh Creek	Good	Outside Plan Horizon
B-53-135*	City of Janesville	USH 51 (Center Avenue)	CNW Railroad	Good	Outside Plan Horizon
P-53-097	Town of La Prairie	Milton-Schopiere Road	Blackhawk Creek	Poor	Current Year
P-53-087*	Town of Janesville	Mineral Point Avenue	Fisher Creek	Good	Outside Plan Horizon
B-53-065*	WisDOT	I-39/90 Southbound	USH 14	Good	Outside Plan Horizon

Source: National Bridge Inventory, 2020

**Reflects a recently reconstructed bridge, a bridge currently undergoing reconstruction, or a bridge programmed for reconstruction in the 2021-2026 TIP but not currently reflected in the federal inventory.*

Efficient Management & Operations

The Rock County Travel Demand Model generated by WisDOT measures the efficiency of the road network by analyzing level of congestion through Level-of-service (LOS) analysis. As discussed earlier in the *Streets & Highways Element*, the Janesville area has very little for current or forecasted congestion. The MPO shall continue to examine the travel model results every five years in conjunction with updates to the Long-Range Transportation plan.

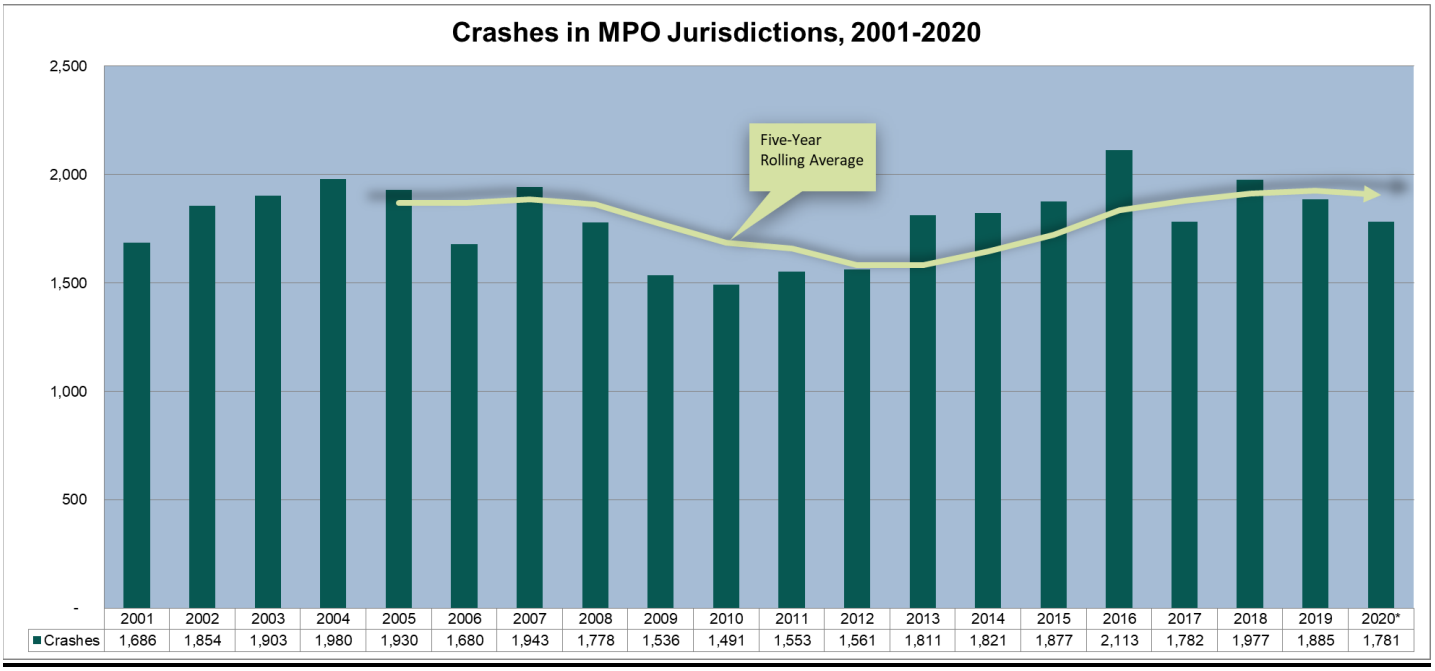
Another indicator of efficient operations of the system is traffic speed. Actual average travel speeds should align closely with posted speed limits. Average speeds significantly below the posted limit indicate congestion levels while speeds well above posted limits indicates that motorists are not maintain proper speed. MPO jurisdictions, including WisDOT, conduct speed studies as part of corridor studies or to address particular issues on a roadway. The MPO does not conduct comprehensive area-side speed studies; however, the MPO will analyze the effects of road diets and road reconfigurations recommended in the *Streets & Highways Element*.

Safety

The University of Wisconsin Traffic Operations and Safety Laboratory (TOPS Lab) maintains the MV4000 crash database, a query tool that provides reliable and consistent data on all types of crashes. *The Bicycle & Pedestrian Plan* includes bicycle and pedestrian related crashes from 2001-

2019. Data regarding automobile crashes is provided below. There is a slight decreasing trend in total number of crashes in the MPA, both in raw numbers and in the five-year rolling average of crashes. It remains to be seen as of 2021 how much correlation exists between the decline of traffic crashes, and the decline in traffic generally due to the COVID-19 pandemic.

On the County Level, the Rock County Traffic Safety Commission conducts a quarterly review of all fatal crashes in the County. Membership on the Commission include representatives for the City of Janesville Police and Engineering Staff, WisDOT, township staff, and the County Sheriff's Office. The City of Janesville and MPO have taken recent actions to target safety improvements. In 2018, the City completed a Safety Screening of intersections to identify the most dangerous intersections in the City by their economic impact.[6] This screening represents the foundation for the City's recent successful HSIP applications. The MPO and Janesville City Engineering will complete and Intersection and Road Safety Review and Analysis in 2021 to further these efforts.



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Crashes	1,686	1,854	1,903	1,980	1,930	1,680	1,943	1,778	1,536	1,491	1,553	1,561	1,811	1,821	1,877	2,113	1,782	1,977	1,885	1,781

Figure 11: Trend of Total Crashes in the Janesville MPA. Source: UW-Madison TOPS Lab.

[6] The Screening only accounts for those roadways over which the City of Janesville has jurisdiction.

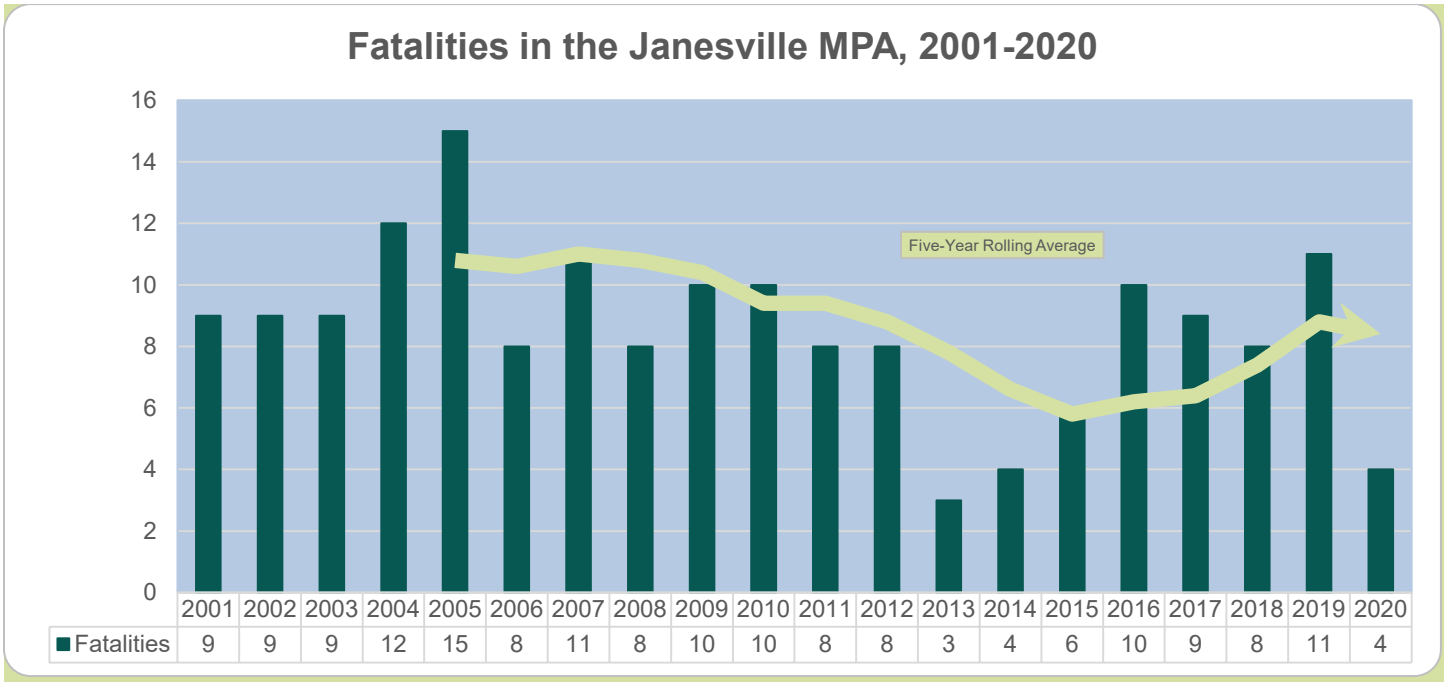


Figure 12: Trend of Fatalities in the Janesville MPA. Source: UW-Madison TOPS Lab.

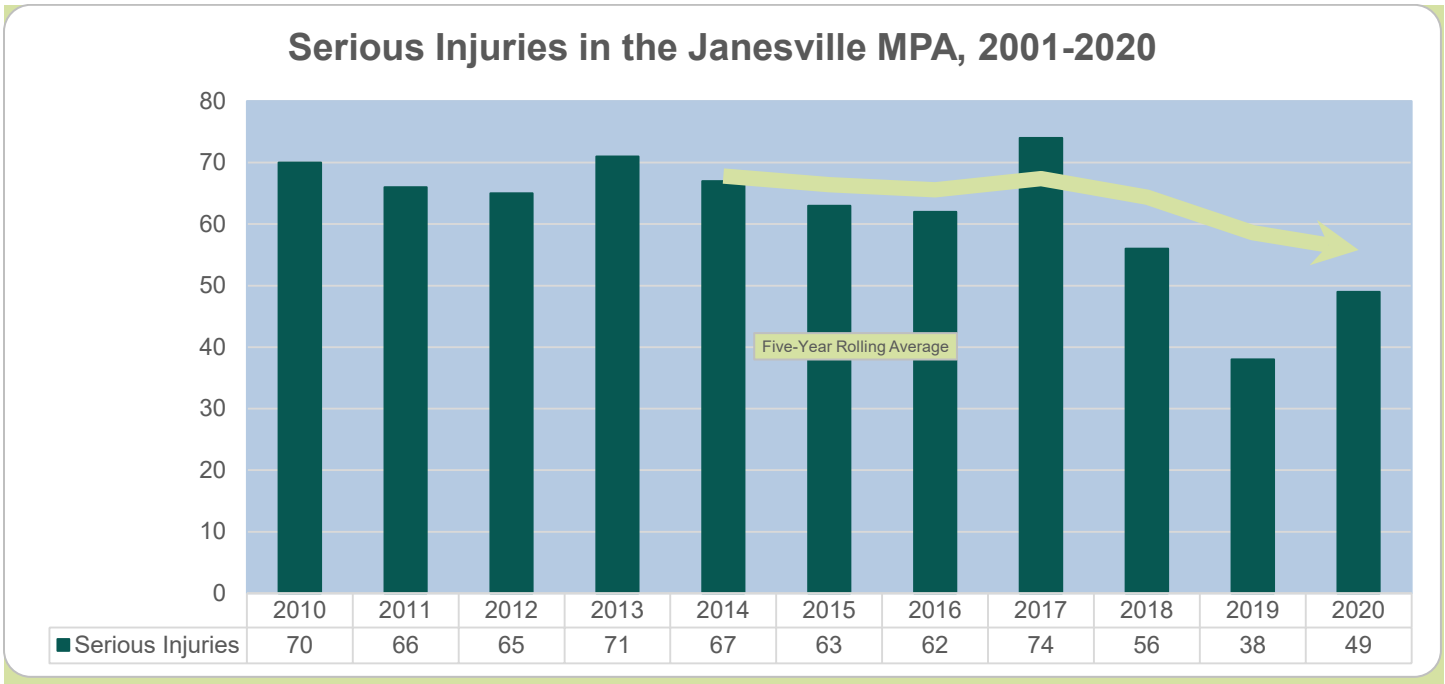


Figure 13: Trend of Serious Injuries in the Janesville MPA. Source: UW-Madison TOPS Lab.

Security

The City of Janesville holds responsibility for the Park-and-Ride lot located near the intersection of I-39/90 and Racine Street. While crimes or convictions associated with the location is a difficult

measure to track, the number of calls for service to the lot is a data measure that is readily tracked. One caveat to this data measure is that not all calls for service result in a criminal charge being issued or recorded.

Accessibility & Mobility

This planning factor deals mainly with accessibility and mobility of persons without the use of a personal vehicle. The *Bicycle & Pedestrian Plan* analyzes miles of trail, bike lanes, and sidewalk as measures of accessibility. Mileage of bike lanes and sidewalk would be an appropriate performance indicator for the *Streets & Highways Element* as well.

Integration & Connectivity of the System

A Park-and ride lot exists near the E. Racine interchange to I-39/90. An additional Park-and-Ride is located just north of the MPA at the Highway 73 Interchange with I-39/90 in Newville. The streets and highway network also interacts with public transit, pedestrian, bicycle, and freight networks, as illustrated in the other elements of the overall LRTP.

Protect & Enhance the Environment

Transportation related emissions are a major source of greenhouse gasses (GHG) emissions which contribute to global climate change. A discussed in the Health, Land Use, Public Health, and Climate Resiliency Element of the Plan, the MPO plays a role in developing and implementing strategies to improve the transportation system and operations and reduce motorized travel activity. Level-of-service (LOS) is an appropriate measure of how well the system is operating. The U.S. Census Bureau's Longitudinal Employment Household Survey and the National Household Travel Survey (NHTS) provide reliable data about travel mode to work, and so a goal to reduce drive-alone is easy to monitor. The *Bicycle & Pedestrian Plan* of the LRTP provides an ample analysis of modal shift in the MPA.

It is important to note that this iteration of the LRTP was created during the Covid-19 Pandemic. While the pandemic adversely upended all aspects of life, one potential positive long-term impact is the potential increased prominence of telecommuting. In practice, this may have a long-term impact on easing traffic volumes, reducing VTM, and greenhouse gas emissions. While VMT and GHGs measures are covered only briefly in this LRTP, it is expected that future federal transportation legislation will addresses these topics in greater depth in the near future, and therefore, the MPO should anticipate this focus.

Impact on Transportation Infrastructure
Transportation infrastructure in Rock County and the Midwest is widely expected to become increasingly vulnerable to flooding due to increasingly frequent and intense precipitation events due to climate change. Flooding causes both direct and indirect impacts on transportation systems. Direct impacts that flooding has on transportation systems includes the physical degradation of roadways.

Damages can occur to both the roadway pavement surface (i.e., cracking), as well as the subgrade (i.e., saturation and weakening) under the pavement. These damages can be extensive and costly to repair and disrupt the estimate life cycle of the affected roadways.

Brides are also quite vulnerable to physical damages caused by flooding. Bridge scour (the removal of sand and/or gravel from around bridge foundations due to flooding/swift-moving water) is the most common cause of highway bridge failure in the United States. [7]

Indirect impacts that flooding has on the transportation system include closures of local and arterial routes that become flooded. These closures can result in disruptions to resource supply chains that provide goods (i.e., water, food, medical supplies) vital to the safety and health of communities. Closure and re-routing of roadways can also impair response times by emergency services, which see increased activity during disaster events.

Roadways that are particularly susceptible to the physical damages associated with flooding include road segments that are already in a deteriorated state. The MPO monitors the condition of all road segments in the Metropolitan Planning Area (MPA) through the PASER system. Segments that are rated as "Fair" or worse are considered to be vulnerable to severe flooding events.

Of the 735 miles of roadway within the MPA, 69 miles are located within a Flood Hazard Area, which is defined as the Rock River Flood Plain, the municipal greenbelt system, and the 100-year and 500-year flood zones of the Rock River. A total of about 31 of the 69 miles that are within a Flood Hazard Area have conditions that are rated at or below "Fair". The breakdown of exact mileage of PASER ratings is included in **Table 25.**

Table 25: Mileage of At-Risk Local Roadways in Flood Hazard Areas

PASER Status	Mileage
Fair	19.1
Poor	10.5
Failed	1.1

Source: Wisconsin Information System for Local Roads, Wisconsin Department of Transportation; Federal Emergency Management Agency

Bridges that are considered specifically vulnerable to physical damage from extreme flooding events are those considered to be in already a deteriorated condition. As stated earlier in this chapter, the entire structure of a bridge is considered "poor" if any critical component is rated at a "4" or lower." As of the writing of this plan, multiple bridges currently rated as "poor" are located within Flood Hazard Areas. However, all are programmed within the TIP for reconstruction. The figure below illustrates where poor and fair conditioned structure are located in relation to flood hazard areas.

[7] Federal highway Administration (2012), Evaluating Scour at Bridges, 5th Edition

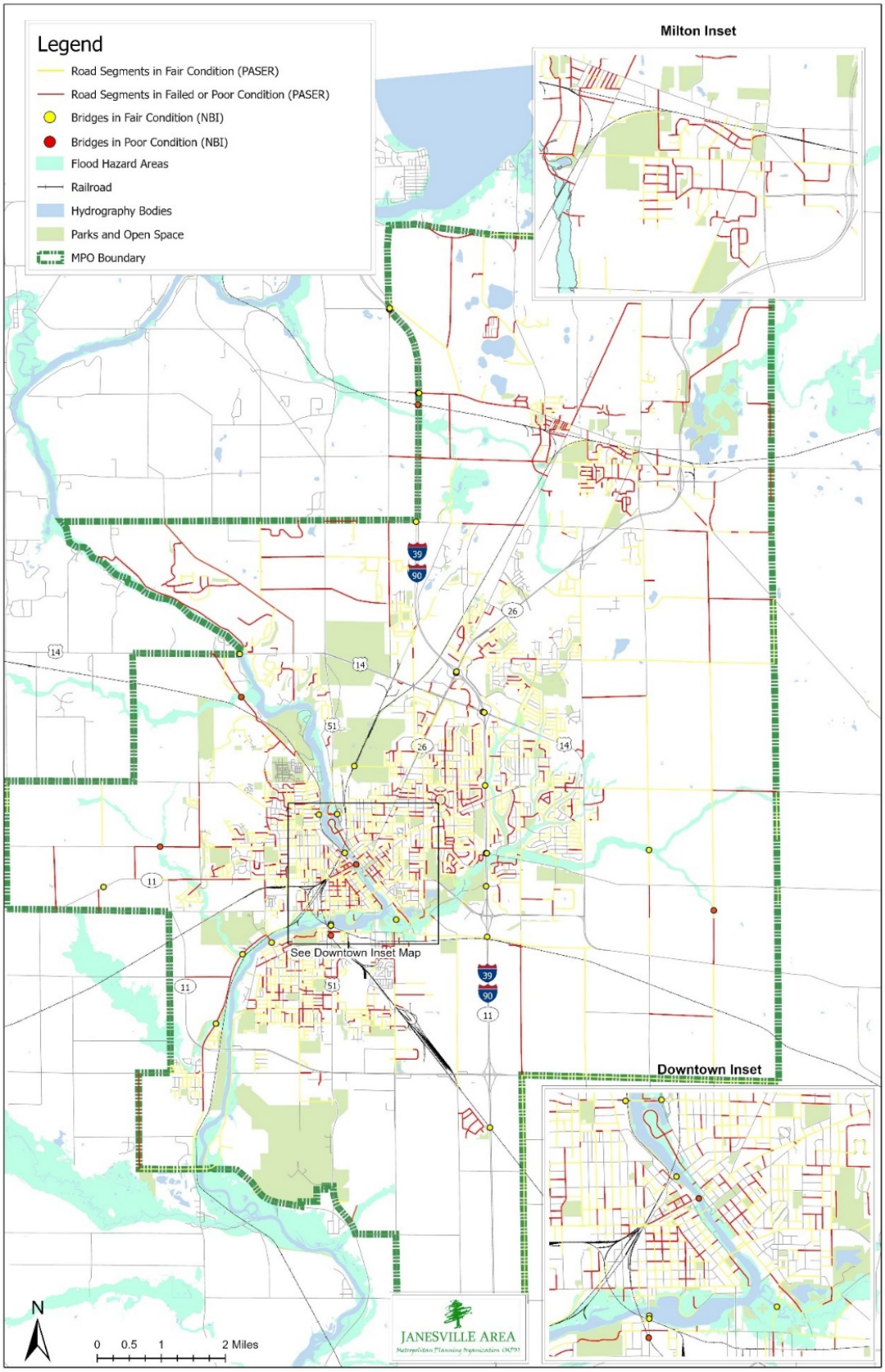


Figure 14: Vulnerable street and road segments in relation to flood hazard areas. Source: PASER and FEMA, 2020.

Table 26: Road Segments Potentially Vulnerable to Natural Hazards, 2019

Road	Limits	Special Flood Area	Functional Classification	PASER Rating	Jurisdiction
Afton Road (CTH D)	Bridge over Markham Creek	Floodway	Minor Arterial	Poor	Rock County
Afton Road (CTH D)	Brookview Court to Rockport Park South Entrance	500-Year Floodplain	Minor Arterial	Poor	Rock County
Afton Road (CTH D)	S. Crosby Avenue to Rockport Road	100-Year Floodplain	Minor Arterial	Fair	City of Janesville
Beloit Avenue	W. State Street to W. Delavan Drive	100-Year Floodplain	Minor Arterial	Poor	City of Janesville
Beloit Avenue	E. Delavan Drive to Palmer Drive	Floodway	Minor Arterial	Fair	City of Janesville
Beloit Avenue	Palmer Drive to Tyler Street	100-Year Floodplain	Minor Arterial	Fair	City of Janesville
Bingham Avenue	E. Delavan Drive to Terminus	100-Year Floodplain	Local Road	Failed	City of Janesville
Blue Wing Court	N. Wright Road to Terminus	Floodway	Local Road	Fair	City of Janesville
Blue Wing Place	N. Wright Road to Terminus	Floodway	Local Road	Fair	City of Janesville
Brakefield Drive	Hampshire Road to Royal Road	100-Year Floodplain	Local Road	Poor	City of Janesville
Brakefield Drive	Royal Road to Ruger Avenue	Floodway	Local Road	Poor	City of Janesville
Briar Crest Drive	Widgeon Drive to N. Wright Road	Floodway	Local Road	Poor	City of Janesville
Briar Crest Drive	N. Wright Road to Spaulding Avenue	Floodway	Local Road	Fair	City of Janesville
Case Drive	USH 14 to N. Touson Drive	100-Year Floodplain	Local Road	Poor	
Colby Court	Colby Lane to Terminus	100-Year Floodplain	Local Road	Fair	City of Janesville
Colby Lane	Ruger Avenue to Colby Court	Floodway	Local Road	Fair	City of Janesville
Colby Lane	Colby Court to Ruger Avenue	Floodway	Local Road	Poor	City of Janesville
Cree Court	Mohawk Road to Sioux Court	100-Year Floodplain	Local Road	Poor	City of Janesville
CTH A	Howorth Drive to N. Touson Drive	Floodway	Collector	Fair	Rock County
CTH A	Milton Schopiere Road to N. Tarrant Road	Floodway	Collector	Poor	Rock County
CTH D	Rockport Park Drive to Rockport Park South Entrance	Floodway	Minor Arterial	Poor	Rock County
CTH WC	N. Austin Road to USH 11	Floodway	Principal Arterial	Poor	Rock County
E. Carly Court	N. Kennedy Road to Terminus	100-Year Floodplain	Local Road	Fair	Town of Milton
E. Delavan Drive	Bouchard Avenue to Todd Drive	100-Year Floodplain	Minor Arterial	Fair	City of Janesville
E. Manogue Road	N. Kennedy Road to W. High Street	100-Year Floodplain	Collector	Poor	Town of Milton
E. Stone Ridge Drive	CTH Y to Terminus	100-Year Floodplain	Local Road	Poor	Town of Milton
E. Van Buren Street	S. Water Street to Terminus	100-Year Floodplain	Local Road	Poor	City of Janesville
Eau Claire Road	W. Happy Hollow Road to Rock River Bridge	100-Year Floodplain	Collector	Fair	Town of Rock
Eau Claire Road	Rock River Bridge to CTH D	100-Year Floodplain	Collector	Fair	Town of Rock
Greenwood Drive	Curry Lane to Midvale Drive	Floodway	Local Road	Fair	City of Janesville

Table 26: Road Segments Potentially Vulnerable to Natural Hazards, 2019

Road	Limits	Special Flood Area	Functional Classification	PASER Rating	Jurisdiction
Harmony Drive	Palmer Pass to Arbor Drive	100-year Floodplain	Local Road	Fair	City of Janesville
Holmes Street	S. Franklin Street to S. River Street	500-Year Floodplain	Local Road	Fair	City of Janesville
Hyatt Street	N. Parker Drive to Medal of Honor Circle	500-Year Floodplain	Local Road	Poor	City of Janesville
Iroquois Court	S. Pontiac to Mohawk Road	100-Year Floodplain	Local Road	Fair	City of Janesville
Lucey Street	N. Wright Road to Red Hawk Drive	500-Year Floodplain	Local Road	Fair	City of Janesville
McKinley Street	S. Franklin Street to S. River Street	500-Year Floodplain	Local Road	Fair	City of Janesville
Medal of Honor Circle	Hyatt Street	Floodway	Local Road	Poor	City of Janesville
Mohawk Road	Palmer Pass to S. Lexington Street	Floodway	Collector	Fair	City of Janesville
Mohawk Road	Iroquois Court to Mohican Road	100-Year Floodplain	Local Road	Poor	City of Janesville
Monterey Park Drive	Riverside Street to Terminus	500-Year Floodplain	Local Road	Poor	City of Janesville
Mt. Zion Avenue	Friendship Drive to I-39-90 underpass	Floodway	Minor Arterial	Fair	City of Janesville
N. Henke Road	E. County Road MM to CTH A	Floodway	Local Road	Fair	Town of Harmony
N. Kennedy Road	E. Manogue Road to E. County Road M	100-Year Floodplain	Local Road	Poor	Town of Milton
N. Kennedy Road	M H Townlin Road to E. Manogue Road	100-Year Floodplain	Local Road	Fair	Town of Milton
N. Klug Road	Otter Creek Crossing	Floodway	Local Road	Poor	Town of Milton
N. Ladue Drive	F M H Townline Road to N. Kennedy Road	100-Year Floodplain	Local Road	Fair	Town of Milton
N. Little Road	W. Mineral Point Road to Magnolia Road	Floodway	Local Road	Fair	Town of Janesville
N. Main Street	E. Centerway to Avon Street	100-Year Floodplain	Minor Arterial	Failed	City of Janesville
N. Main Street	Avon Street to Hyatt Street	100-Year Floodplain	Local Road	Poor	City of Janesville
N. Milton Road	Otter Creek Crossing	Floodway	Collector	Fair	Town of Milton
N. River Road	USH 14 to River Hills Court	500-Year Floodplain	Local road	Fair	Town of Janesville
N. River Road	River Hills Court to N. Sunny Shore Road	100-Year Floodplain	Local road	Poor	Town of Janesville
N. River Street	Ravine Street to W. Centerway	500-Year Floodplain	Local Road	Failed	City of Janesville
N. Tarrant Road	CTH A to County Road MM	100-Year Floodplain	Local Road	Fair	Town of Harmony
N. Water Street	St. Marys Court to Sherman Avenue	Floodway	Local Road	Failed	City of Janesville
N. Wright Road	Ruger Avenue to Blackhawk Creek	Floodway	Minor Arterial	Fair	City of Janesville
N. Wright Road	USH 14 to Lucey Street	500-Year Floodplain	Collector	Fair	City of Janesville
N. Wright Road	Lucey Street to Huntington Avenue	Floodway	Collector	Fair	City of Janesville
Paler Drive	S. Main Street to S. Randall	Floodway	Local Road	Poor	City of Janesville

Table 26: Road Segments Potentially Vulnerable to Natural Hazards, 2019

Road	Limits	Special Flood Area	Functional Classification	PASER Rating	Jurisdiction
	Avenue				
Palmer Drive	Beloit Avenue to S. Main Street	Floodway	Collector	Fair	City of Janesville
Palmer Drive	Under Racine Street	500-Year Floodplain	Collector	Fair	City of Janesville
Palmer Pass	Mohawk Road to Harmony Drive	100-Year Floodplain	Local Road	Fair	City of Janesville
Park Avenue	W. Delavan Drive to Terminus	500-Year Floodplain	Local Road	Failed	City of Janesville
Parkside Drive	Burns Avenue to Edge Hill Drive	100-Year Floodplain	Local Road	Fair	City of Janesville
Pintail Drive	Spaulding Avenue to Autumn Lane	500-Year Floodplain	Local Road	Fair	City of Janesville
Prospect Avenue	N. Main Street to Terminus	500-Year Floodplain	Local Road	Poor	City of Janesville
Putnam Avenue	W. State Street to W. Delavan Drive	100-Year Floodplain	Local Road	Fair	City of Janesville
Randolph Road	Green Valley Drive to Morningside Drive	500-Year Floodplain	Local Road	Poor	City of Janesville
Ridge Drive	Ridge Creek Drive to S. Austin Road	Floodway	Local Road	Poor	City of Janesville
River Hills Court	N. River Road to Terminus	500-Year Floodplain	Local Road	Poor	Town of Janesville
Riverside Street	S. Pearl Street to S. Washington Street	500-Year Floodplain	Local Road	Fair	City of Janesville
Riverside Street	S. Washington Street to Linn Street	500-Year Floodplain	Local Road	Fair	City of Janesville
Riverside Street	Linn Street to Monterey Park Drive	100-Year Floodplain	Local Road	Fair	City of Janesville
Rock Street	S. Franklin Street to S. River Street	500-Year Floodplain	Local Road	Poor	City of Janesville
Rockport Road	S. Pine Street to S. Chatham Street	500-Year Floodplain	Minor Arterial	Poor	City of Janesville
Rockport Road	S. Chatham Street to S. Pearl Street	100-Year Floodplain	Minor Arterial	Fair	City of Janesville
Rockport Road	S. Pearl Street to S. Washington Street	500-Year Floodplain	Minor Arterial	Poor	City of Janesville
Rockport Road	S. Jackson Street to S. River Street	500-Year Floodplain	Local Road	Fair	City of Janesville
Royal Court	Royal Road to Terminus	100-Year Floodplain	Local Road	Poor	City of Janesville
Royal Road	Valley Drive to Surrey Lane	100-Year Floodplain	Local Road	Poor	City of Janesville
Royal Road	Surrey Lane to Ruger Avenue	Floodway	Local Road	Poor	City of Janesville
S. Crosby Avenue	CTH D to Rock River Bridge)	500-Year Floodplain	Minor Arterial	Poor	City of Janesville
S. Franklin Street	Wilson Avenue to Rockport Road	500-Year Floodplain	Local Road	Fair	City of Janesville
S. Milton Schopiere Road	E. County Road MM to USH 14	Floodway	Local Road	Fair	Town of La Prairie
S. Oakley Road	S. River Road to Eau Claire Road	100-Year Floodplain	Local Road	Fair	Town of Rock
S. Palm Street	Rockport Road to Mill Street	100-Year Floodplain	Local Road	Fair	City of Janesville

Table 26: Road Segments Potentially Vulnerable to Natural Hazards, 2019

Road	Limits	Special Flood Area	Functional Classification	PASER Rating	Jurisdiction
S. Pearl Street	Rockport Road to Trail	100-Year Floodplain	Local Road	Poor	City of Janesville
S. Pontiac Drive	S. Lexington Drive to Mohican Road	100-Year Floodplain	Collector	Poor	City of Janesville
S. Randall Avenue	Palmer Drive to Sharon Street	Floodway	Local Road	Poor	City of Janesville
S. River Road	City limits to Kellogg Avenue	500-Year Floodplain	Collector	Fair	City of Janesville
S. River Road	Janesville city Limits to S. Oakley Road	Floodway	Collector	Fair	Town of Rock
S. River Road	W. Ehrlinger Road to W. Happy Hollow Road	100-Year Floodplain	Collector	Fair	Town of Rock
S. River Street	W. Racine Street to Rockport Road	500-Year Floodplain	Local Road	Poor	City of Janesville
S. Shady Lane	Sunny Lane to Second Avenue	500-Year Floodplain	Local Road	Fair	Town of Rock
S. Sherman Road	USH 51 to Terminus	500-Year Floodplain	Local Road	Failed	Town of Rock
S. Washington Street	Rockport Road to Ice Age Trail	500-Year Floodplain	Local Road	Fair	City of Janesville
S. Water Street	St. Lawrence Avenue to E. Van Buren Street	100-Year Floodplain	Local Road	Fair	City of Janesville
S. Wright Road	Ruger Avenue to Canterbury Lane	Floodway	Minor Arterial	Fair	City of Janesville
Sandhill Drive	N. Wright Road to Spaulding Avenue	Floodway	Local Road	Fair	City of Janesville
Sharon Street	Pond Road to Palmer Drive	Floodway	Local Road	Fair	City of Janesville
Sharon Street	Palmer Drive to Todd Drive	Floodway	Local Road	Poor	City of Janesville
Sherman Avenue	N. Water Street to USH 51	100-Year Floodplain	Local Road	Fair	City of Janesville
Sioux Court	Mohican Road to Cree Court	100-Year Floodplain	Local Road	Poor	City of Janesville
Spaulding Avenue	Teal Lane to Terminus	500-Year Floodplain	Local Road	Fair	City of Janesville
St. Marys Court	N. Water Street to Terminus	100-Year Floodplain	Local Road	Failed	City of Janesville
Sussex Drive	Greendale Drive to Woodall Drive	500-Year Floodplain	Local Road	Poor	City of Janesville
Todd Drive	Sharon Road to Terminus	100-Year Floodplain	Local Road	Failed	City of Janesville
Valley Drive	Hampshire Road to Royal Road	100-Year Floodplain	Local Road	Fair	City of Janesville
Vincent Street	CTH Y to E. Manogue Street	100-Year Floodplain	Collector	Poor	Town of Milton
Vincent Street	W. High Street to Capman Street	100-Year Floodplain	Local Road	Poor	City of Milton
W. Court Street	S. Franklin Street to S. River Street	500-Year Floodplain	Principal Arterial	Poor	City of Janesville
W. Court Street	S. River Street to Bridge	100-Year Floodplain	Principal Arterial	Fair	City of Janesville
W. Delavan Drive	Cherry Street to Industrial Court	500-Year Floodplain	Minor Arterial	Fair	City of Janesville
W. High Street	E. Manogue Road to Elm Street	100-Year Floodplain	Local Road	Poor	City of Milton
W. Mineral Point Road	N. Pahl Road to N. Austin Road	Floodway	Local Road	Poor	
W. Van Buren Street	S. Franklin Street to S. River	500-Year Floodplain	Local Road	Fair	City of Janesville

Table 26: Road Segments Potentially Vulnerable to Natural Hazards, 2019					
Road	**Limits**	**Special Flood Area**	**Functional Classification**	**PASER Rating**	**Jurisdiction**
	Street				
Wilson Avenue	S. Franklin Street to S. River Street	500-Year Floodplain	Local Road	Poor	City of Janesville
Wuthering Hills Drive	Ruger Avenue to Blackhawk Creek	Floodway	Collector	Fair	City of Janesville

Performance Targets & Indicators

This section proposes performance targets for the Janesville Area MPO that meet the spirit of both *MAP-21* and the FAST Act. Please note that the MPO expects to revise performance targets and indicators as necessary in order to meet the requirements of the *FAST Act* or any subsequent federal transportation legislation.

The target setting process involved the analysis of trends and past performance in the MPA, the examination of recommendations contained made in this element, and consideration of available data sets for measuring progress.

Table 27: Streets & Highway Performance Targets & Indicators				
Target	**Indicator**	**Data Source**	**Data Frequency**	**Status**
Emphasize the preservation of the existing transportation system				
All streets rated Fair or better	PASER	WisDOT & Municipalities	2 years (upcoming 2021; 2023; 2025)	**All streets are not rated fair or better**
Replace structures rated below 50 within five years	Structure sufficiency ratings	WisDOT/FHWA/ municipalities	Every LRTP (5 Years)	**Some, but not all, bridges rated below a 50 programmed for replacement in five years**
Promote efficient system management and operation				
Ensure acceptable levels of traffic congestion	LOS D or higher	WisDOT Travel Demand Model	Every LRTP (5 years)	**Programmed and Planned Projects to reduce or eliminate "E" and "F" LOS**
Increase the safety aspects of the transportation system for its users				
Reduce total motorized crashes	Number of total crashes	TOPS Lab WisTransPortal	Annual	**Recent trends show slight decrease in total crashes in the MPA). This metric is tracked in**

Table 27: Streets & Highway Performance Targets & Indicators				
Target	**Indicator**	**Data Source**	**Data Frequency**	**Status**
				the annual TIP.
Reduce fatal motorized crashes (2021 Target: 576.0 statewide) (2021 Target: (0.890 per 100 million VMT)	Number of fatal crashes	TOPS Lab WisTransPortal	Annual	**Recent trends show slight decrease in average yearly fatalities from crashes. This metric is tracked in the annual TIP.**
Reduce motorized crashes resulting in injury	Number of crashes resulting in injury	TOPS Lab WisTransPortal	Annual	**Recent trends show slight decrease in average yearly injuries from crashes. This metric is tracked in the annual TIP.**
Increase the security of the transportation system for motorized and non-motorized users				
Secure Park and Ride Lots	Number of calls for police service	JPD	Variable	**No activity of note**
Increase the accessibility and mobility options available to people and for freight				
0.4 miles/year of new bike lanes	Number of miles in a bike land	MPO	As constructed	**This target has been met or exceeded consistently throughout the past five years.**
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight				
Encourage Park-and-Ride locations	Number of Park-and-Ride locations	WisDOT & MPO	Variable	**No additional movement on this metric since the 2015 LRTP**
Protect and enhance the environment, promote energy conservation, and improve quality of life.				
Decrease drive alone to work trips	U.S. Census American Community Survey Five-Year Estimates and National Household Travel	U.S. Census Bureau/FHWA	Annually	**Mode Share suggests increase in alternative commutes since 2015 LRTP**

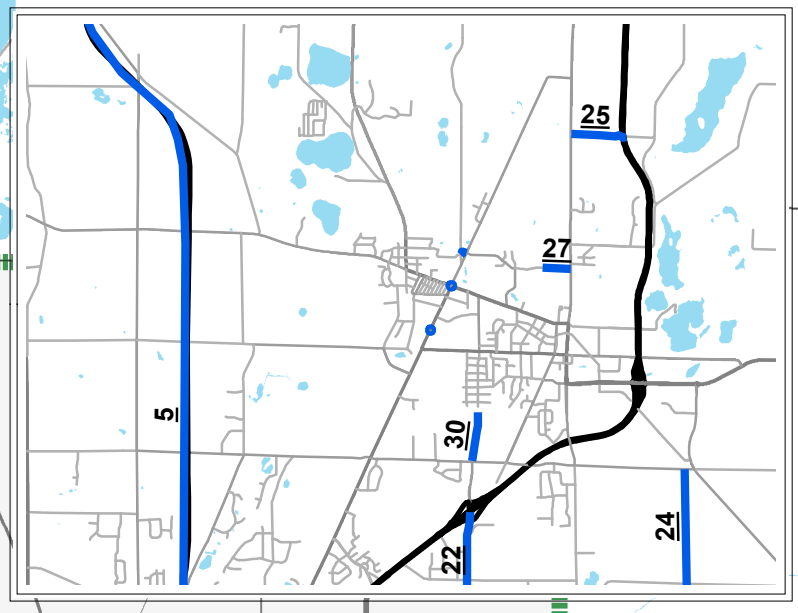
Table 27: Streets & Highway Performance Targets & Indicators				
Target	**Indicator**	**Data Source**	**Data Frequency**	**Status**
	Survey			
Improve Air Quality	Air Quality Index	U.S. Environmental Protection Agency	Annual	**Air quality remains at a healthy level**
Ensure acceptable levels of traffic congestion	LOS "D" or higher	WisDOT Travel Demand Model	Five years	**Programmed and Planned Projects to reduce or eliminate "E" and "F" LOS**

Summary

The *Streets & Highways Element* of the LRTP identifies corridors where traffic conditions will need further monitoring and evaluation over the plan horizon. Streets and roads in the MPA generally operate at high levels of service and few roadways are projected to be congested in 2050. Expansion of congested roadways should be the option of last resort only after all other mitigation strategies have been exhausted.

The highway improvements recommended in the LRTP include a combination of maintenance, intersection reconstruction, road and bridge rehabilitation, and new construction projects, designed to meet the needs of the MPO. The MPO shall continue to use established implementation and monitoring activities to target future problem areas, and identify potential land use or transportation policies and projects that could deter future congestion. The recommendations for improving existing facilities, constructing new facilities, and improving conditions to minimize personal injury and property damage included in the LRTP reflect the transportation objectives that the MPO has strove to meet in the past, and will continue to work on through the year 2050. In short, the recommendations of the *Streets & Highways Element* maintain the dedication the Janesville Area MPO has toward planning and developing an efficient and effective roadway network.

Milton Inset



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See South Side Inset Map
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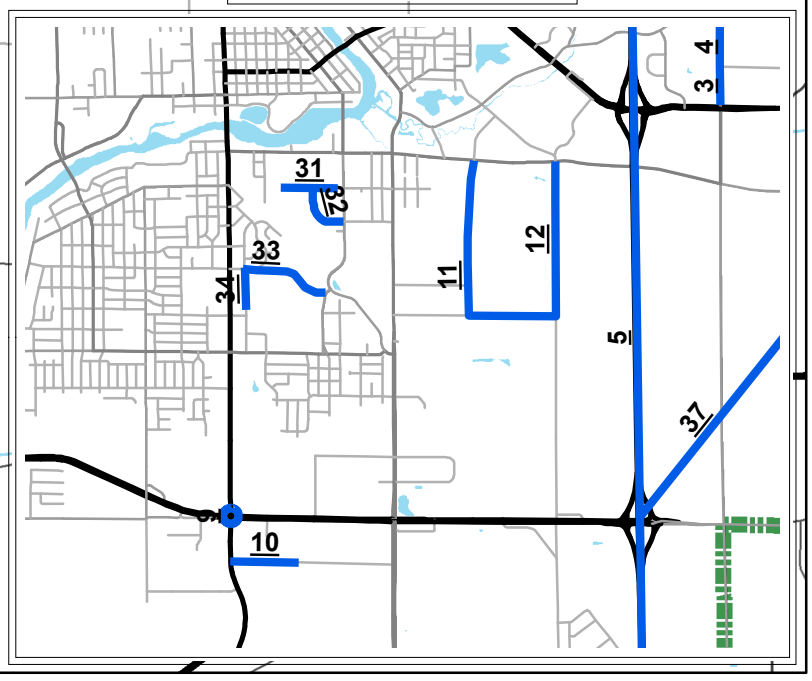
South Side Inset Map



N

0 0.5 1 2 Miles

Map 1

Modeled Projects
Streets & Highway Element
Long-Range Transportation Plan

JANESVILLE AREA
Metropolitan Planning Organization (MPO)

Downtown Inset

See Downtown Inset Map

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Map 2

No Build 2050
Streets & Highway Element
Long-Range Transportation Plan

JANESVILLE AREA
Metropolitan Planning Organization (MPO)

Legend

LOS Grade

- ABC
- D
- F

Legend

LOS Grade

- ABC
- D
- E
- F

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See USH 14 Inset

N

0 0.5 1 2 Miles

Map 3

No-Bypass Scenario 2050
Streets & Highway Element
Long-Range Transportation Plan

JANESVILLE AREA
Metropolitan Planning Organization (MPO)

USH 14 Inset

Legend

LOS Grade

- ABC
- D
- E
- F

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See Bypass Inset

N

0 0.5 1 2 Miles

Map 4

Bypass Scenario 2050
Streets & Highway Element
Long-Range Transportation Plan

JANESVILLE AREA
Metropolitan Planning Organization (MPO)

Bypass Inset