

Overview of the PASER Rating System

Each year the Southwest Michigan Planning Commission collaborates with MDOT and county road agencies to assess the pavement conditions on federal aid eligible roads in Berrien, Cass and Van Buren Counties. Staff members from each of the agencies are trained and certified annually to use the Pavement Surface Evaluation and Rating system (PASER) by the Transportation Asset Management Council. PASER is a system to visually assess pavement condition while driving (windshield survey), and assign a value of 1 thru 10 based on the observed defects.

Each year half of the federal aid eligible road network in Berrien County is rated using the PASER system. In 2018 the northern portion of the county was completed which included the majority of the TwinCATS planning area with the exception of Lake Township & the City of Bridgman, which was completed in 2017.



Good Condition

PASER RATING 8-10
Requires Routine Maintenance



Fair Condition

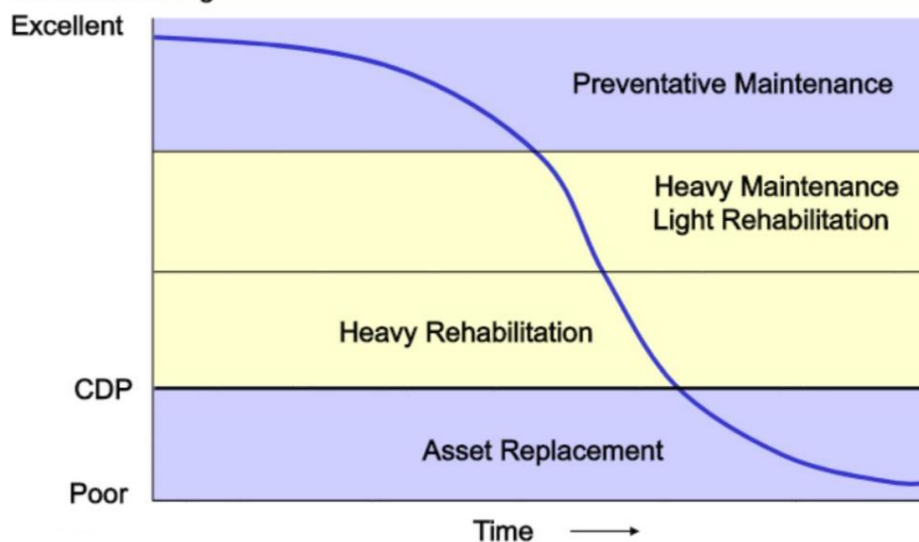
PASER RATING 5-7
Requires Capital Preventative Maintenance



Poor Condition

PASER RATING 1-4
Requires Structural Improvements or Reconstruction

Condition Rating



The costs for rehabilitation are exponentially higher than the cost to perform preventative maintenance, and a full reconstruction is the most expensive treatment option. Asset management best practices encourage preventative maintenance to slow decay and save money.

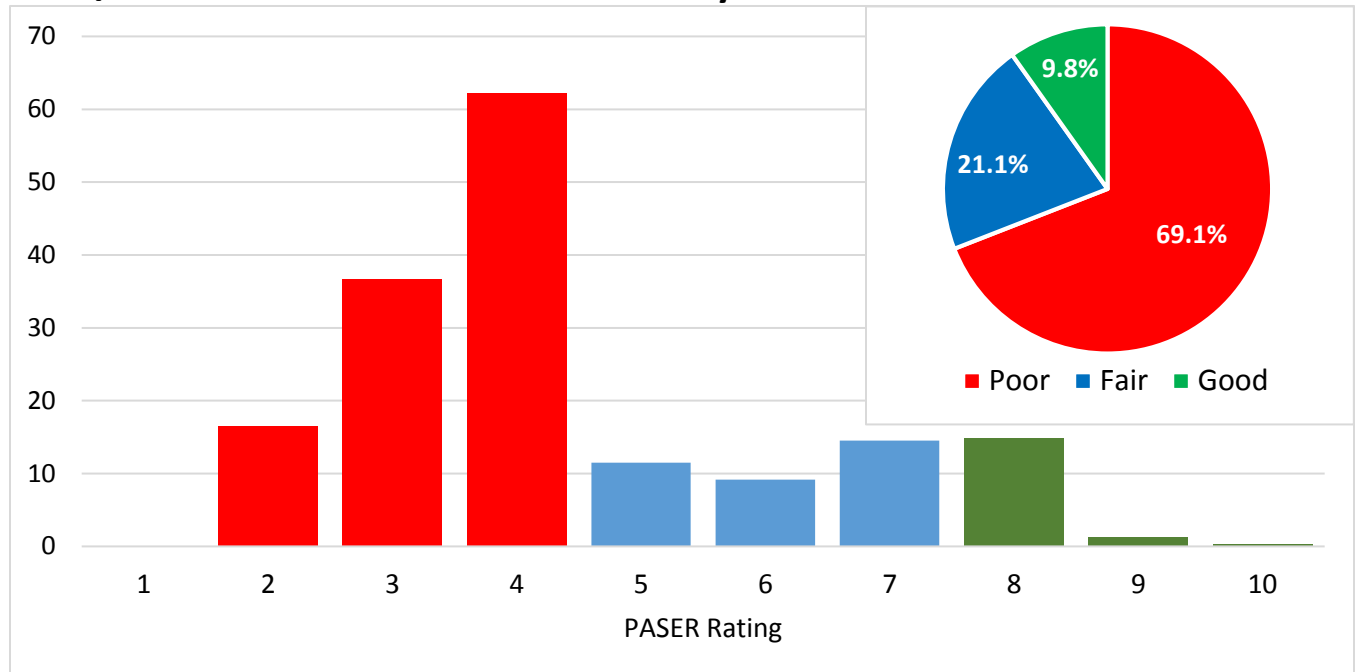
It is vital to know pavement condition to monitor when a road is close to reaching a point where treatments that are more expensive become necessary and to ensure fewer roads cross the critical distress point (CDP) at which maintenance is no longer effective.

2018 Pavement Condition Report for the TwinCATS Area

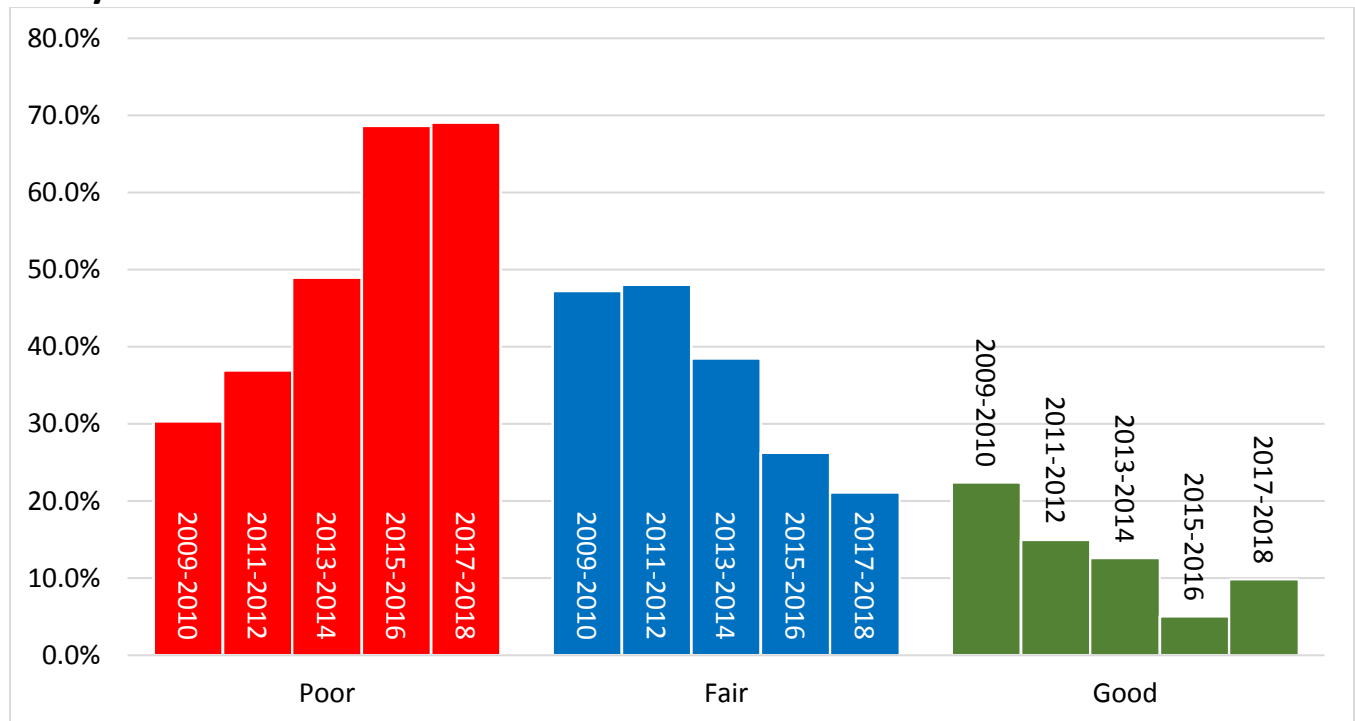
TwinCATS Pavement Condition Summary

For Federal Aid Roads Maintained by Cities, Villages or the Berrien County Road Department

2017/2018 Miles of Federal Aid Roads by Pavement Condition



Ten-year Trends in Pavement Condition



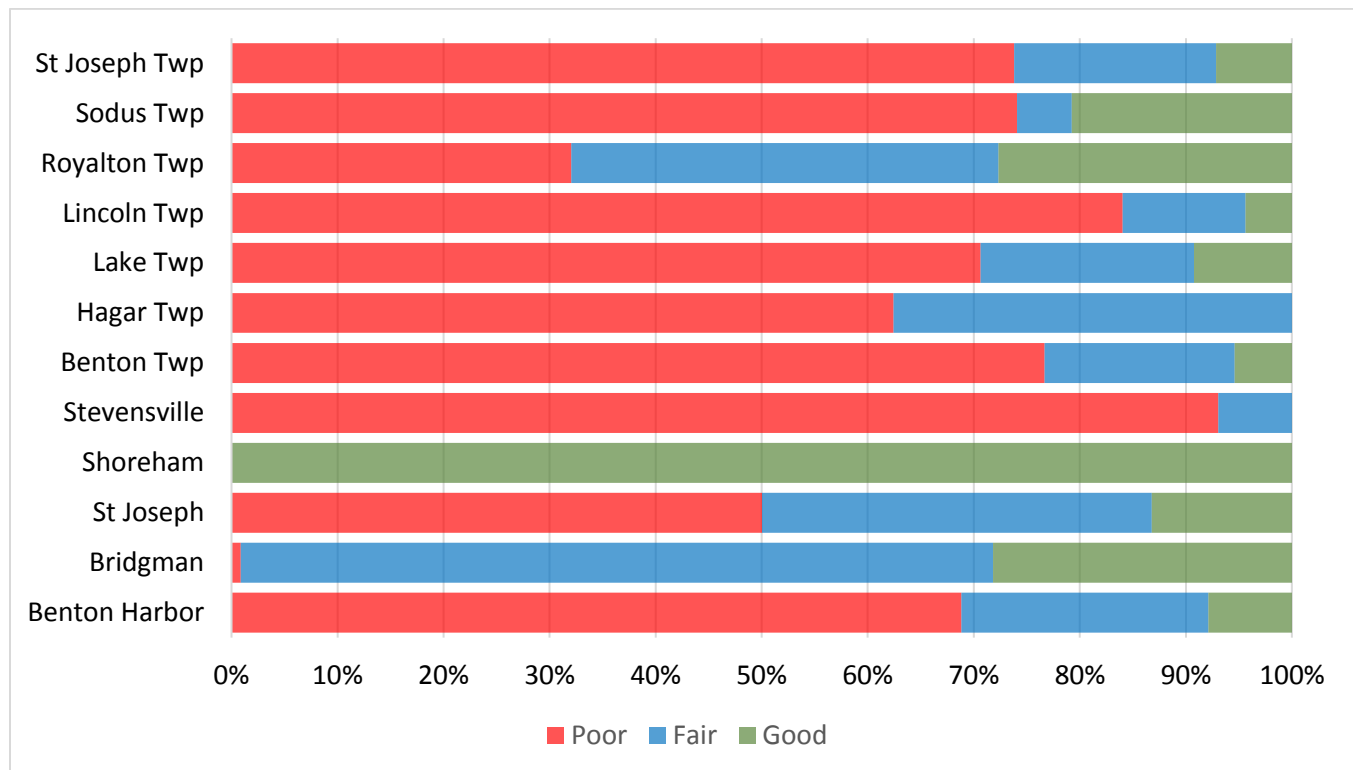
2018 Pavement Condition Report for the TwinCATS Area

TwinCATS 2017-2018 Pavement Condition by Jurisdiction

Miles of Road within Each Jurisdiction

Jurisdiction	Total Miles	Non Federal Aid	Federal Aid		
			Total	Locally Maintained	MDOT Maintained
City of Benton Harbor	59.7	41.8	17.9	15.5	2.4
City of Bridgman	18.4	10.2	8.1	3.8	4.4
City of St Joseph	49.8	30.5	19.3	12.1	7.2
Village of Shoreham	4.2	2.3	1.8	0.5	1.4
Village of Stevensville	12	4.8	7.2	4.6	2.6
Benton Charter Township	193.6	99.7	93.9	46.2	47.7
Hagar Township	84	52.5	31.5	9.7	21.8
Lake Charter Township	57.1	33.1	24	14	10
Lincoln Charter Township	105.1	68.4	36.7	23.8	13
Royalton Township	53.9	35.5	18.4	10.3	8.1
Sodus Township	67.4	31.1	36.4	18.3	18.1
St. Joseph Charter Township	62.2	46.8	15.4	8.3	7
City and Village total	144.1	89.6	54.3	36.5	18
Township Total	623.3	367.1	256.3	130.6	125.7
Grand total	767.4	456.7	310.6	167.1	143.7

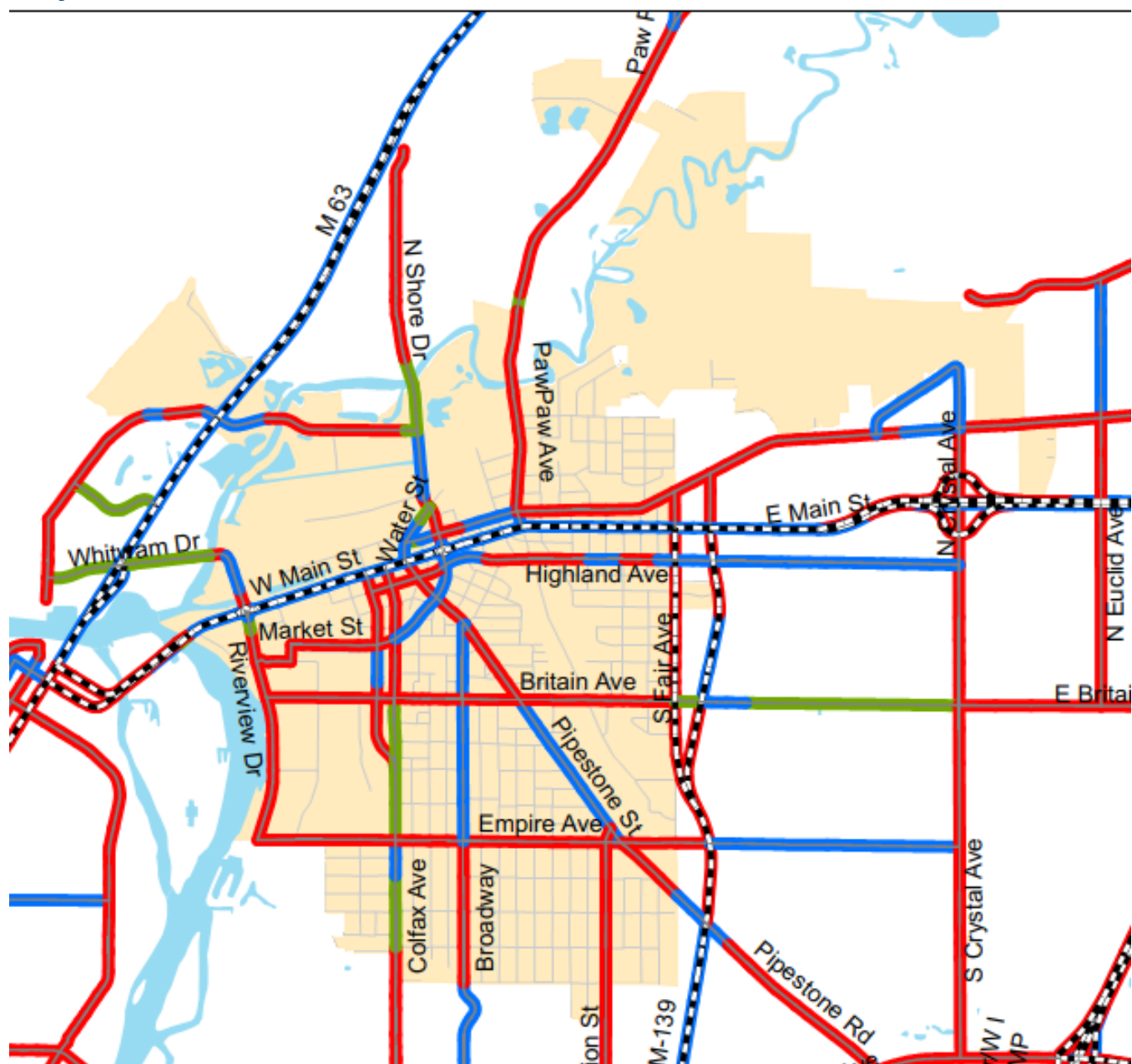
Percent of Roads Rated Good, Fair, or Poor by Jurisdiction



Notes: PASER rating for the majority of TwinCATS communities was conducted in 2018, except for Lake Township & the City of Bridgman, which were taken in 2017.

2018 Pavement Condition Report for the TwinCATS Area

City of Benton Harbor



PASER Ratings
(On Federal Aid Eligible Road Only)

--- MDOT Maintained

— Locally Maintained

Good (8-10)

Fair (5-7)

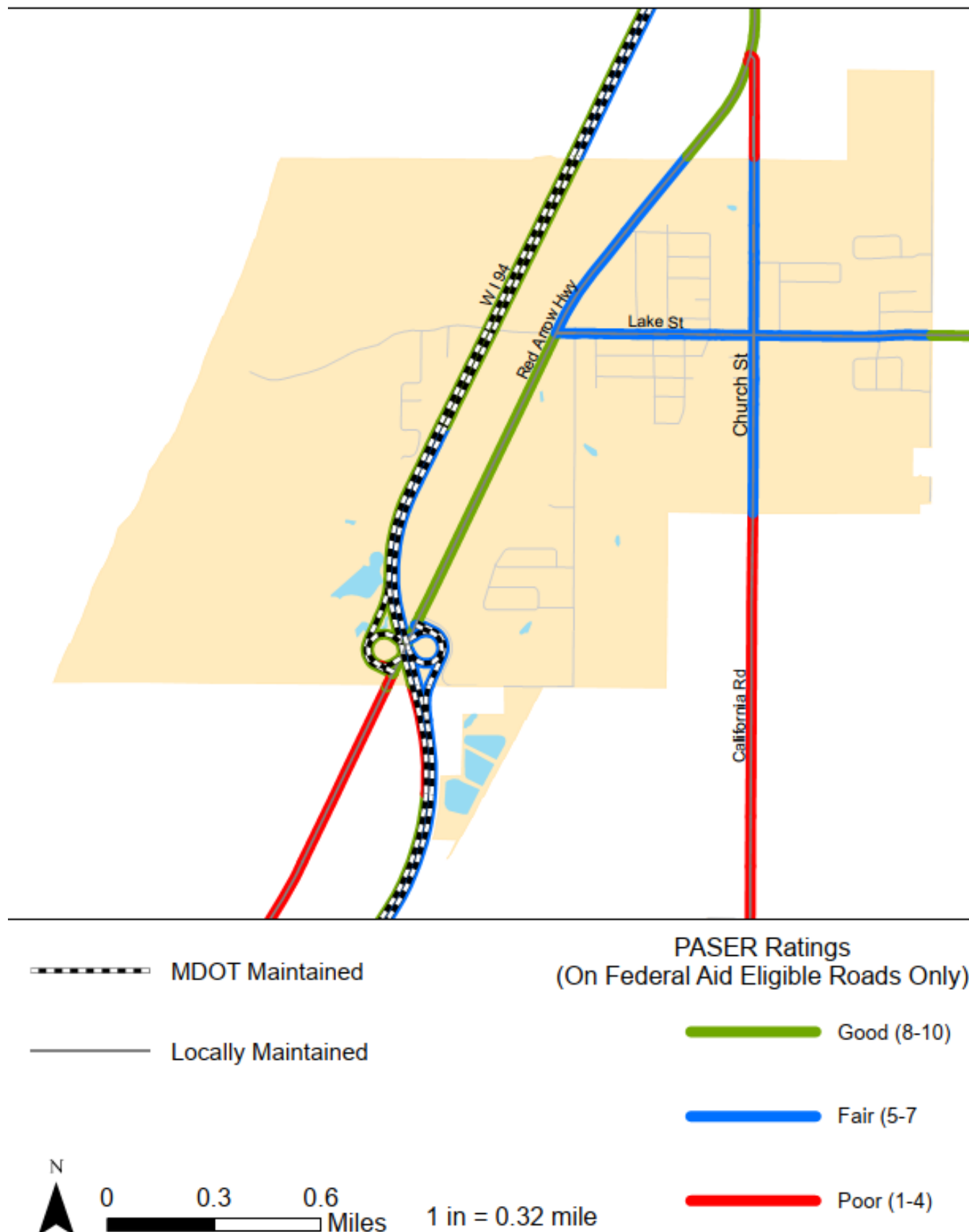
Poor (1-4)



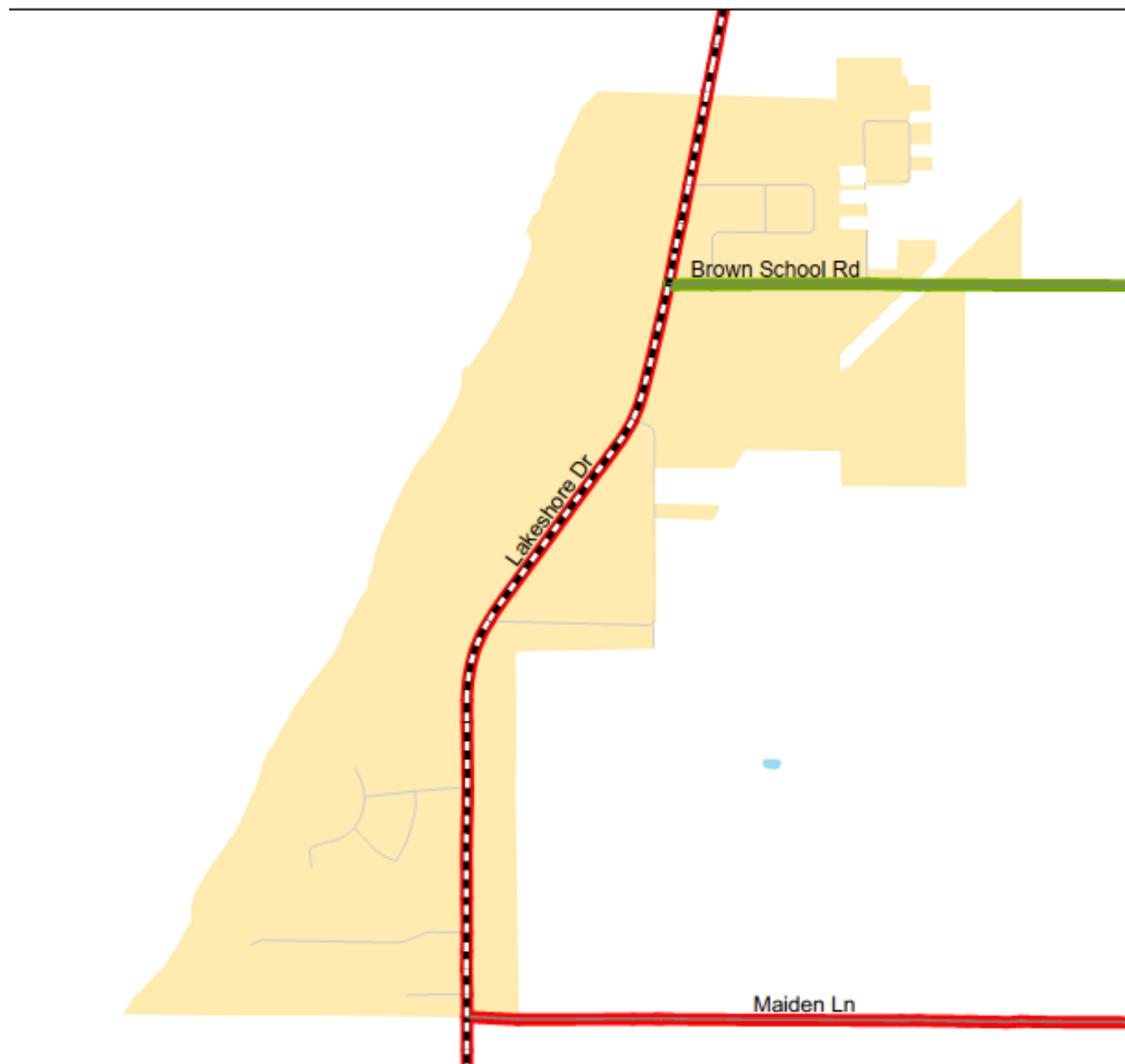
0 0.45 0.9 Miles 1 in = 0.47 mile


2018 Pavement Condition Report for the TwinCATS Area


City of Bridgman



Village of Shoreham



 MDOT Maintained

 Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

 Good (8-10)

 Fair (5-7)

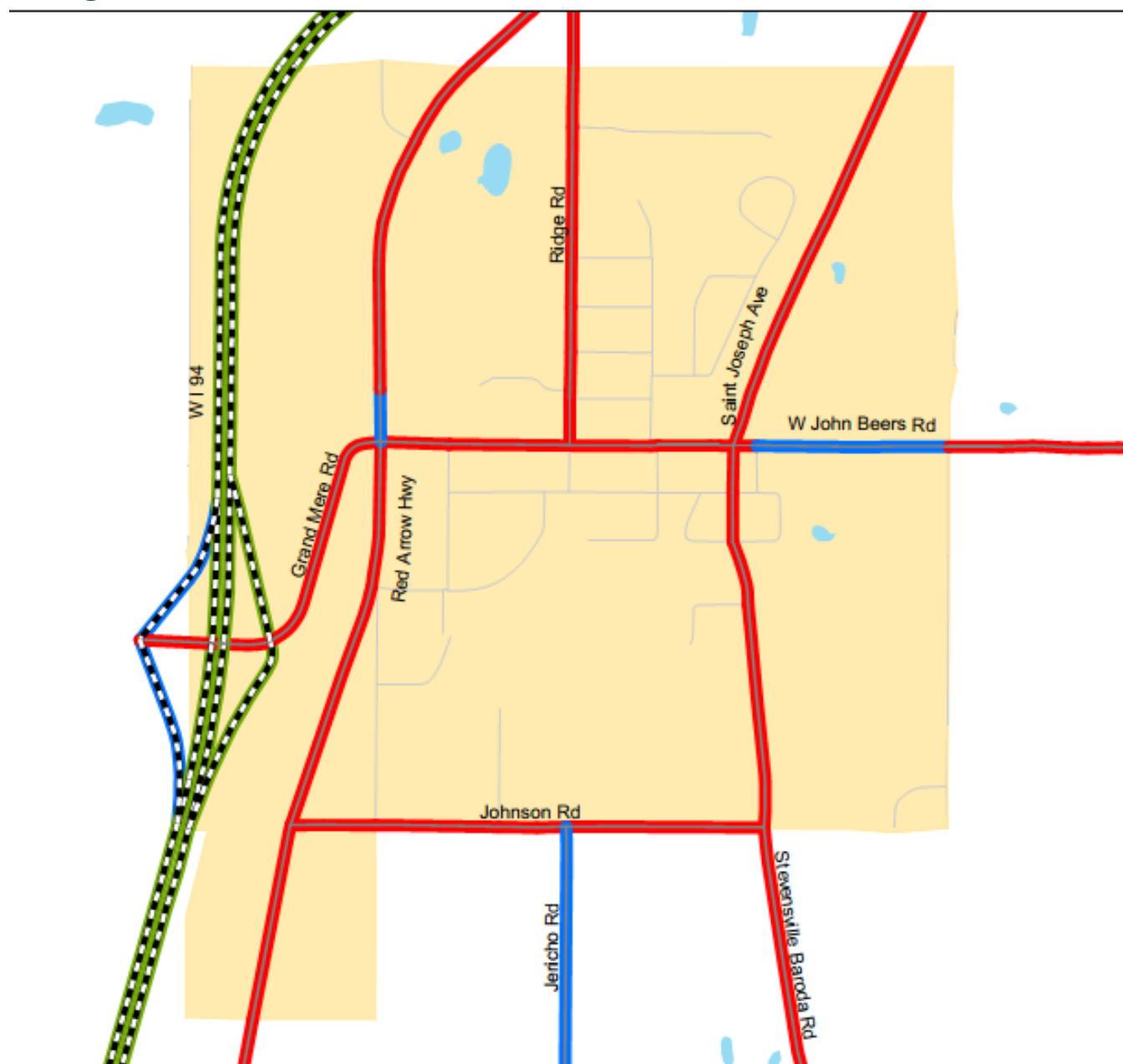
 Poor (1-4)



0 0.15 0.3
Miles

1 in = 0.18 mile

Village of Stevensville



MDOT Maintained

Locally Maintained



0 0.15 0.3
Miles

1 in = 0.17 mile

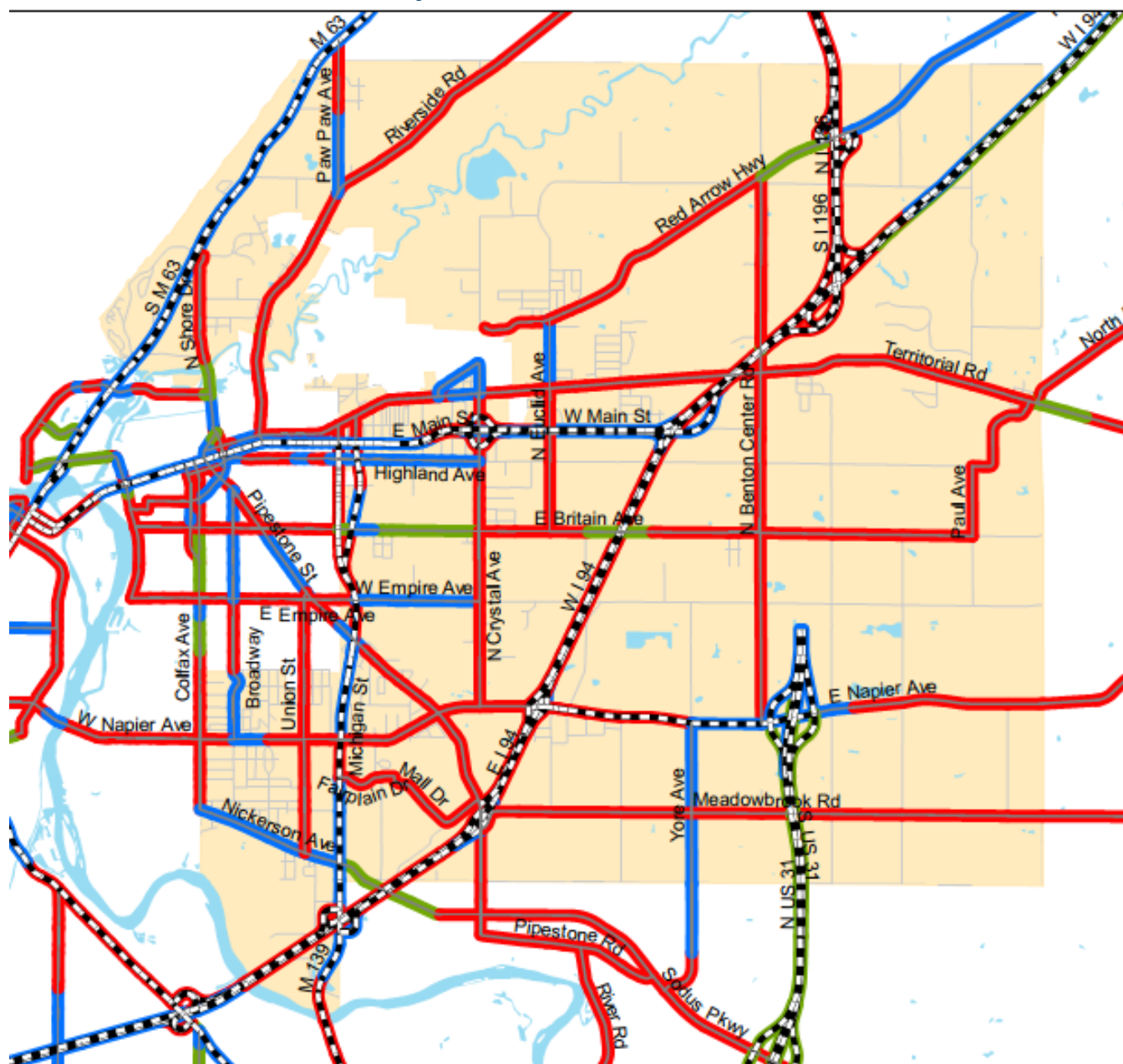
PASER Ratings
(On Federal Aid Eligible Roads Only)

Good (8-10)

Fair (5-7)

Poor (1-4)

Benton Charter Township



--- MDOT Maintained

— Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

— Good (8-10)

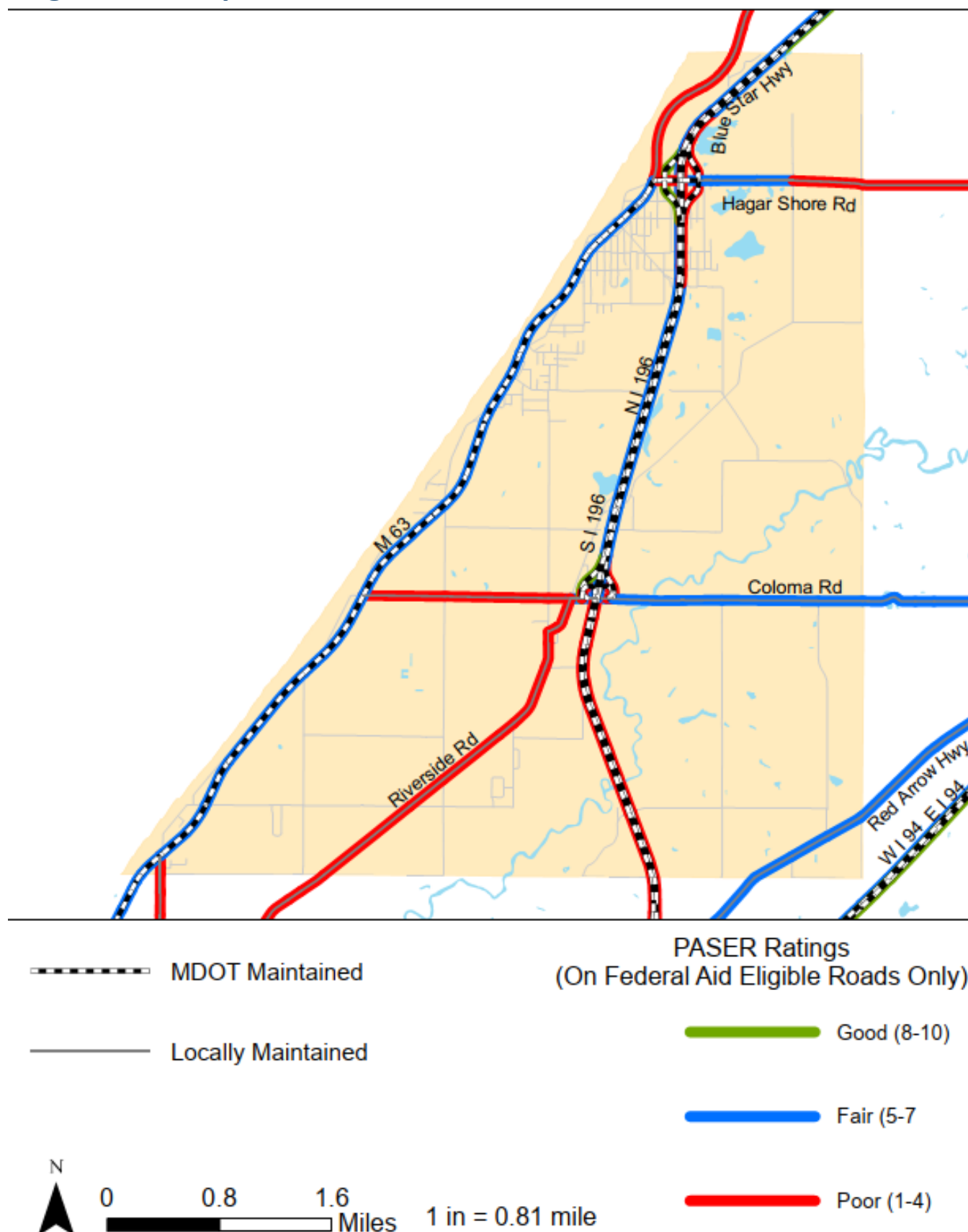
— Fair (5-7)

— Poor (1-4)

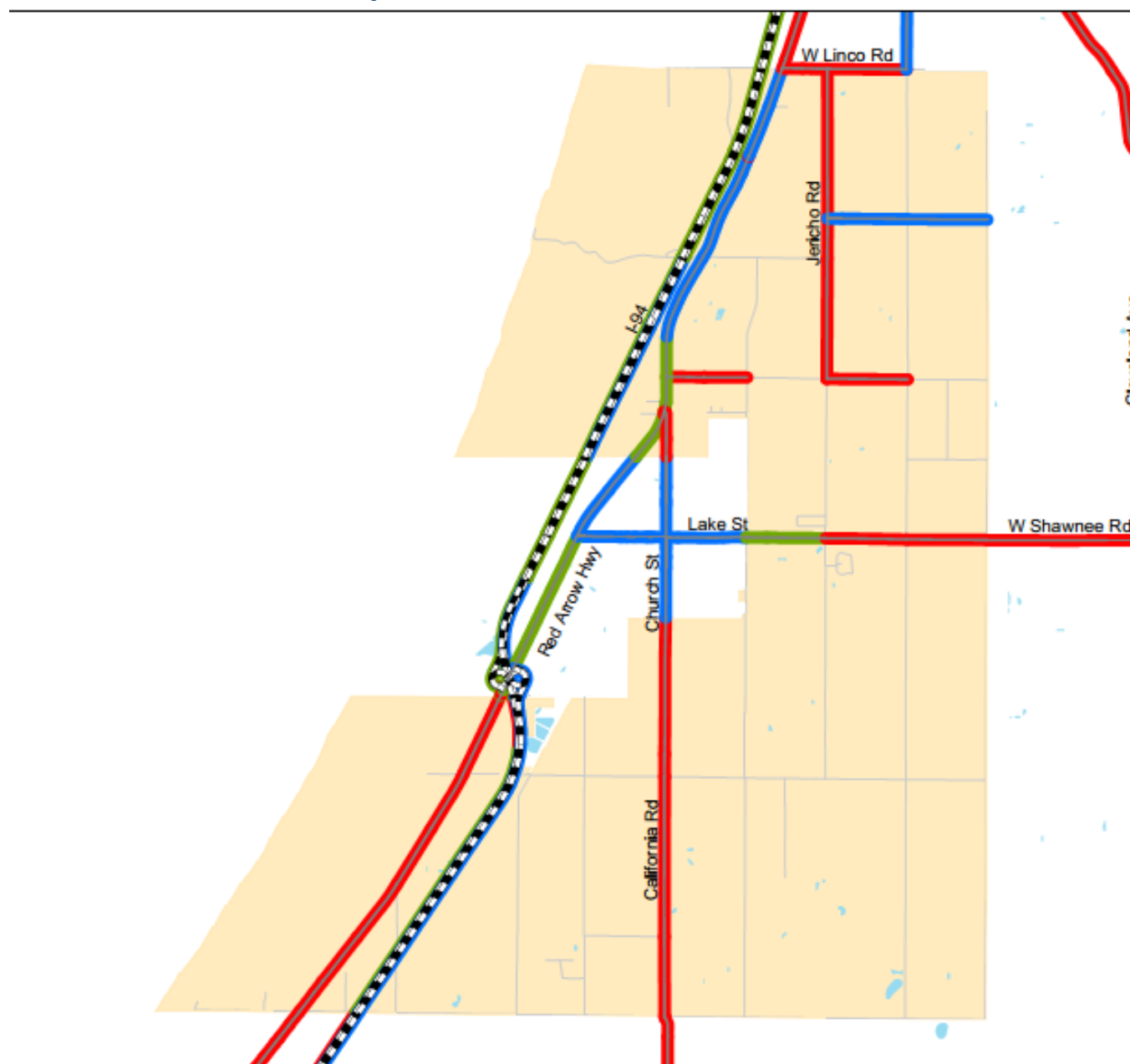


0 0.95 1.9 Miles 1 in = 0.94 mile

Hagar Township



Lake Charter Township



MDOT Maintained

Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

Good (8-10)

Fair (5-7)

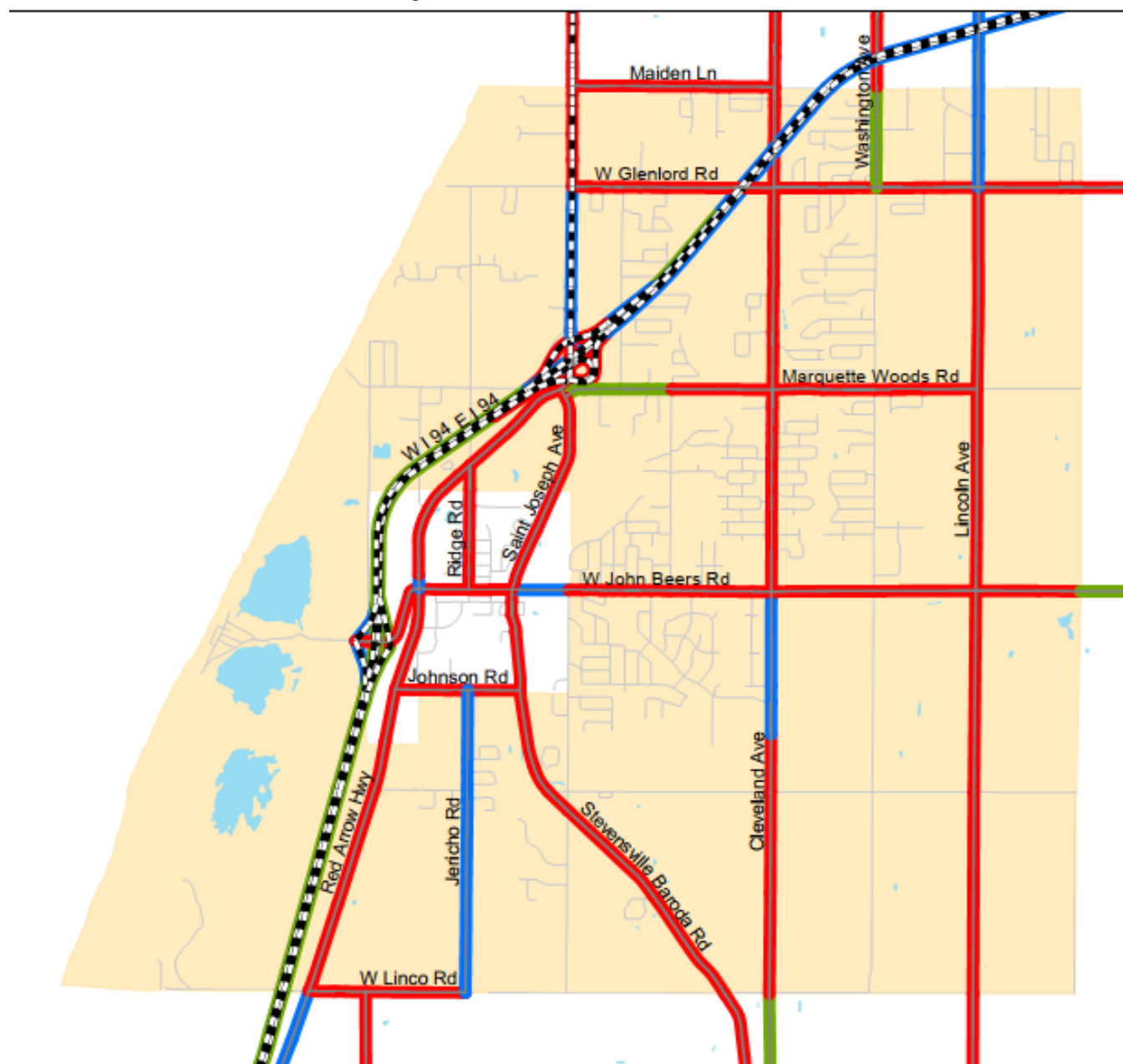
Poor (1-4)



0 0.85 1.7 Miles 1 in = 0.82 mile

2018 Pavement Condition Report for the TwinCATS Area

Lincoln Charter Township



MDOT Maintained

Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

Good (8-10)

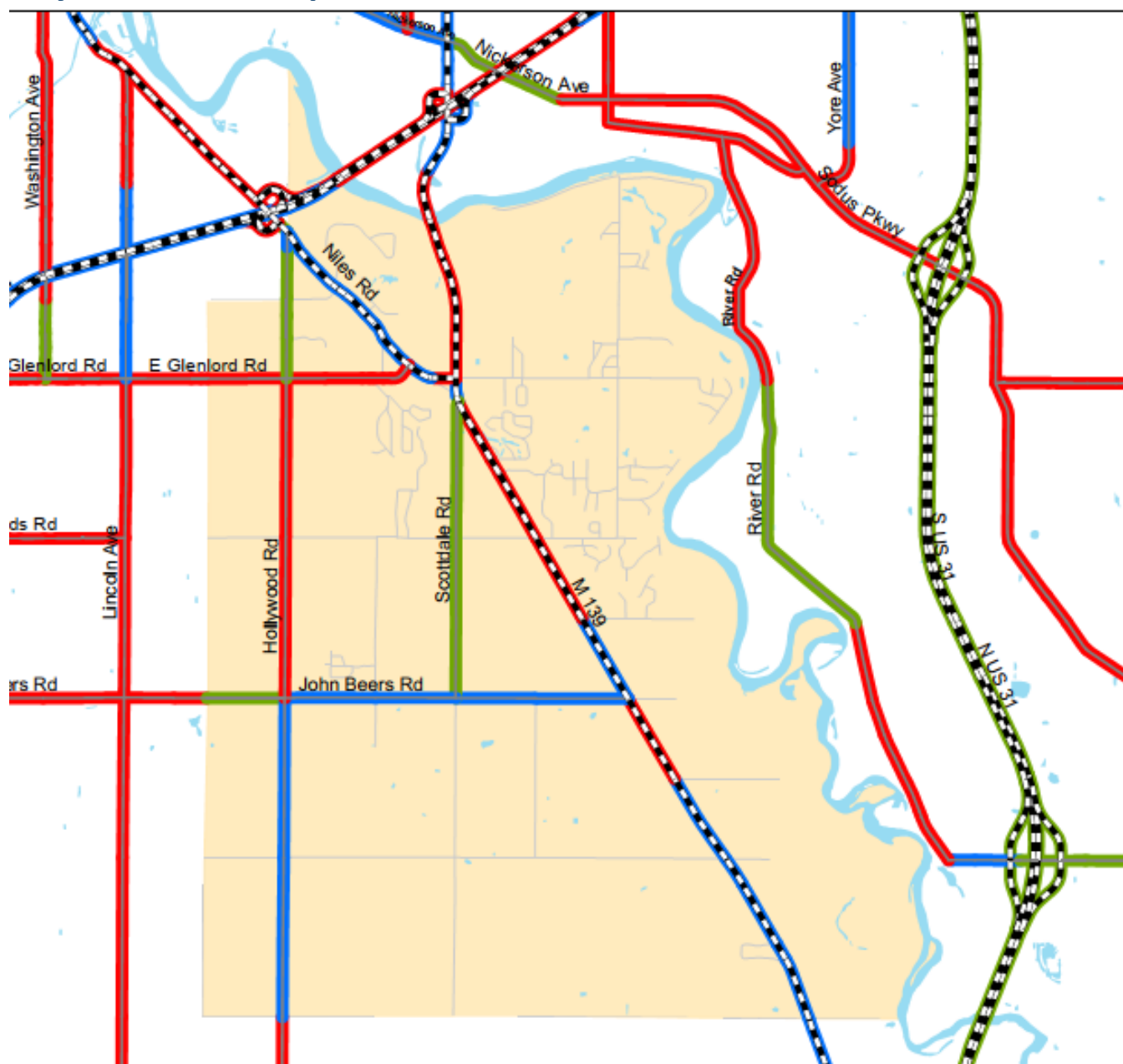
Fair (5-7)

Poor (1-4)



0 0.65 1.3 Miles 1 in = 0.65 mile

Royalton Township



--- MDOT Maintained

— Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

— Good (8-10)

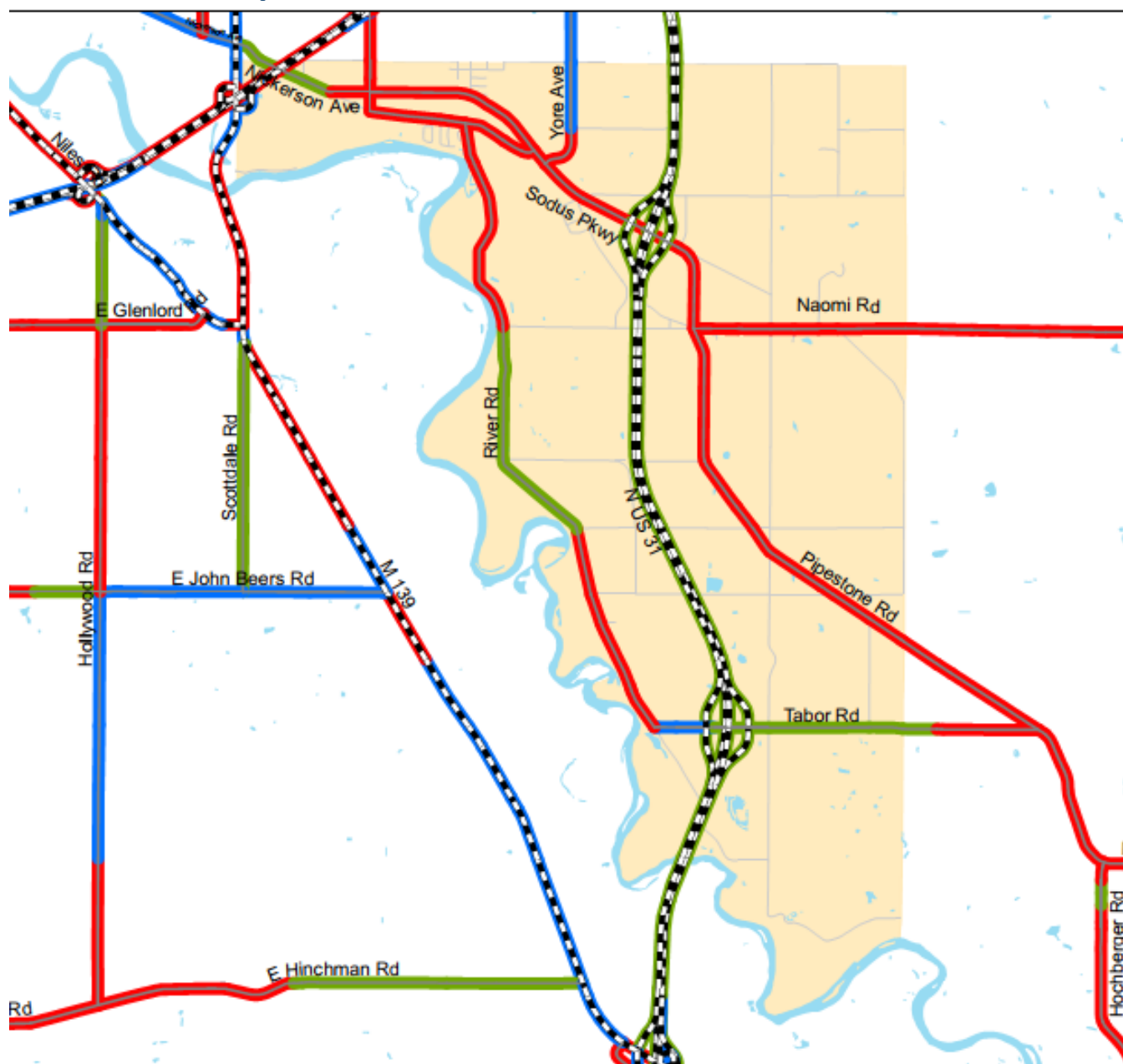
— Fair (5-7)

— Poor (1-4)



0 0.85 1.7
Miles 1 in = 0.82 mile

Sodus Township



MDOT Maintained

Locally Maintained

PASER Ratings
(On Federal Aid Eligible Roads Only)

Good (8-10)

Fair (5-7)

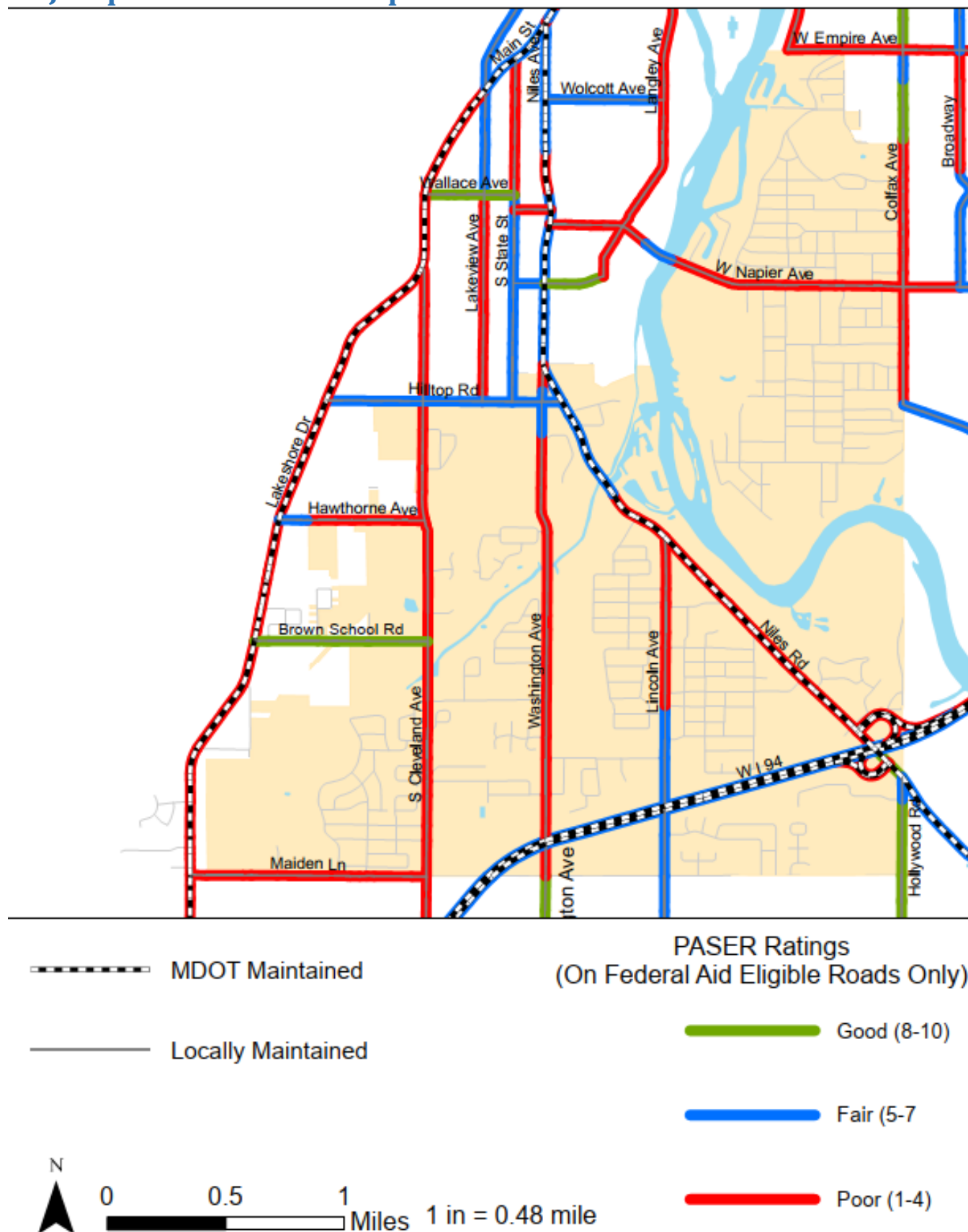
Poor (1-4)



0 1 2 Miles 1 in = 0.99 mile

2018 Pavement Condition Report for the TwinCATS Area

St. Joseph Charter Township



2018 Pavement Condition Report for the TwinCATS Area

PASER Asphalt Rating Chart		
Surface Rating	Visible Distress *	General Condition/ Treatment Measures
10	None	New construction.
9	None	Recent overlay, like new.
8	<ul style="list-style-type: none"> • No longitudinal cracks except reflection of paving joints. • Occasional transverse cracks, widely spaced (40' or greater). 	Recent sealcoat or new road mix. Little or no maintenance required.
7	<ul style="list-style-type: none"> • Very slight or no raveling, surface shows some traffic wear. • Longitudinal cracks (open ¼") due to reflection or paving joints. • Transverse cracks (open ¼") spaced 10 feet or more apart, little or slight crack raveling. • No patching or very few patches in excellent condition. 	First signs of aging. Maintain with routine crack filling.
6	<ul style="list-style-type: none"> • Slight raveling (loss of lines) and traffic wear. • Longitudinal cracks (open ¼" – ½") due to reflection and paving joints. • Transverse cracking (open ¼" to ½") some spaced less than 10 ft. • First sign of block cracking Slight to moderate flushing or polishing. 	Shows signs of aging, sound structural condition. Could extend life with sealcoat.
5	<ul style="list-style-type: none"> • Moderate to severe raveling (loss of fine and coarse aggregate). • Longitudinal and transverse cracks (open ½") show first signs of slight raveling and secondary cracks. • Block cracking up to 50% of surface. • Extensive to severe flushing or polishing. • Some patching or edge wedging in good condition. 	Surface aging, sound structural condition. Needs sealcoat or nonstructural overlay.
4	<ul style="list-style-type: none"> • Severe surface raveling. • Multiple longitudinal and transverse cracking with slight raveling. • Longitudinal cracking in wheel path. • Block cracking (over 50% of surface). • Patching in fair condition. • Slight rutting or distortions (½" deep or less). 	Significant aging and first signs of need for strengthening. Would benefit from recycling or overlay.
3	<ul style="list-style-type: none"> • Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. • Severe block cracking. • Some alligator cracking (less than 25 % of surface). • Patches in fair to poor condition. • Moderate rutting or distortion (1" or 2" deep). • Occasional potholes. 	Needs patching and major overlay or complete recycling.
2	<ul style="list-style-type: none"> • Alligator cracking (over 25 % of surface). • Severe distortions (over 2" deep). • Extensive patching in poor condition. • Potholes. 	Severe deterioration. Needs reconstruction with extensive base repair.
1	<ul style="list-style-type: none"> • Severe distress with extensive loss of surface integrity. 	Failed. Needs total reconstruction.

* Note: Individual pavements will not have all of the types of distress listed for any particular rating. They may have only one or two types.

2018 Pavement Condition Report for the TwinCATS Area

PASER Concrete Rating Chart		
Surface Rating	Visible Distress *	General Condition/ Treatment Measures
10	<ul style="list-style-type: none"> None 	New construction.
9	<ul style="list-style-type: none"> Traffic wear in wheel path. Slight map cracking or pop-outs. 	Recent concrete overlay or joint rehabilitation, like new
8	<ul style="list-style-type: none"> Pop-outs, map cracking, or minor surface defects. Slight surface scaling. Partial loss of joint sealant. Isolated meander cracks and cracks at manholes, well sealed. 	More surface wear or slight defects. Recent asphalt overlay. Little or no maintenance required.
7	<ul style="list-style-type: none"> More extensive surface scaling. Some open joints. Isolated transverse or longitudinal cracks, tight or well sealed. Some manhole displacement and cracking. First utility patch, in good condition. First noticeable settlement or heave area. 	First sign of transverse cracks (all tight) or utility patch. More extensive surface scaling. Seal open joints and other routine maintenance.
6	<ul style="list-style-type: none"> Moderate scaling in several locations. A few isolated surface spalls. Shallow reinforcement causing cracks. Several corner cracks, tight or well sealed. Open (¼" wide) longitudinal or transverse joints and more frequent transverse cracks (some open ¼"). 	First signs of shallow reinforcement or corner cracking. Needs general joint and crack sealing. Scaled areas could be overlaid.
5	<ul style="list-style-type: none"> Moderate to severe polishing or scaling over 25% of the surface. High reinforcing steel causing surface spalling. Some joints and cracks have begun spalling. First signs of joint or crack faulting (1/4"). Multiple corner cracks with broken pieces. Moderate settlement or frost heave areas. 	First signs of joint or crack spalling or faulting. Grind to repair surface defects. Some partial depth joint repairs needed.
4	<ul style="list-style-type: none"> Severe polishing, scaling, map cracking or spalling, > 50% of area Joints and cracks show moderate to severe spalling. Pumping and faulting of joints (1/2") with fair ride. Several slabs have multiple transverse or meander cracks with moderate spalling. Spalled area broken into several pieces. Corner cracks with missing pieces or patches 	Needs some full depth repairs, grinding, and/or asphalt overlay to correct surface defects.
3	<ul style="list-style-type: none"> Most joints and cracks are open, with multiple parallel cracks, severe spalling, or faulting. D-cracking is evident. Severe faulting (1") giving poor ride. Extensive patching in fair to poor condition. Many transverse and meander cracks, open and severely spalled. 	Needs extensive full depth patching plus some full slab replacement.
2	<ul style="list-style-type: none"> Extensive slab cracking severely spalled and patched. Joints failed. Patching in very poor condition. Severe and extensive settlements or front heaves. 	Recycle and/or rebuild pavement.
1	<ul style="list-style-type: none"> Restricted speed. Extensive potholes. Almost total loss of pavement integrity. 	Total reconstruction.

2018 Pavement Condition Report for the TwinCATS Area

2017-2020 Federally Funded Projects

For Federal Aid Roads Maintained by Cities, Villages or the Berrien County Road Department

Year	Location	Project/Road	Limits	Work	Federal cost	Local Cost	Total Cost
2017	Benton Harbor	Colfax Ave	May St. to Emery Ave	Full mill and fill with wide shoulders	\$87,000	\$43,000	\$130,000
2017	Berrien County	Hilltop Rd	M-63 to CSX Railroad Tracks	Mill and resurface	\$564,802	\$125,198	\$690,000
2017	Royalton Twp.	John Beers Rd	approx. 0.7 mi around Hollywood RD Intersection	Resurface existing pavement	\$192,163	\$46,600	\$238,763
2018	Lake Twp.	Shawnee Rd	Jericho to Holden Road	Construct 5 ft. wide shoulders and resurface	\$268,925	\$141,000	\$409,925
2018	Sous Twp.	Nickerson Ave	M-139 to 700 ft. E of Woodley	Mill and Fill 2 inches	\$143,000	\$32,000	\$175,000
2018	St. Joseph	Wallace Avenue	Lakeshore Drive (BL 94) to South State Street	Full reconstruction	\$460,000	\$1,000,000	\$1,460,000
2019	Royalton Twp.	E John Beers Rd	Hollywood to Scottdale	Construct 5 ft. paved shoulders and resurface	\$350,000	\$129,000	\$479,000
2019	St. Joseph Twp.	Napier Ave	SJ River to Colfax	Mill and Fill ADA ramps as required.	\$537,500	\$118,800	\$656,300
2020	Berrien Twp.	Napier Ave	I-94 to 4300 feet West	Mill and Fill. ADA sidewalk ramp upgrades as required.	\$471,000	\$104,000	\$575,000
2020	Lincoln Twp.	Marquette Woods Rd	150 feet East and West of Hickory Creek	Hickory Creek Bridge Widening and/or Replacement	\$485,000	\$379,000	\$864,000