



Transportation Asset Management Program 2021 Federal Aid PASER Road Survey

February 2022



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**WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION
(WMSRDC)**

The Commission's mission is to "promote and foster regional development in West Michigan through cooperation amongst local governments and regional partners."

The general regional goal of the West Michigan Shoreline Regional Development Commission is to provide assistance to member local governments in addressing regional and public policy issues, especially as they pertain to planning and development.



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Table of Contents

I. Background	1
II. Data Collection Process	3
III. PASER Rating System	4
IV. County Projects	6
Lake County	8
Mason County	12
Muskegon County	16
Newaygo County	20
Oceana County	24
Ottawa County	28

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2021 Federal Aid PASER Road Survey

I. Background

What Is Asset Management?

Asset management is a concept in the transportation industry that has emerged as an important planning tool for public officials, planners, engineers, and others. Asset Management is based on an inventory of each local road network within the region. It will provide data that will allow transportation officials to monitor, plan, and strategically improve the road network. This strategic method of investment marks a break from the traditional “tactical” method of fixing roads that have the most severe problems.

The Michigan Transportation Commission has formed an Asset Management Council, with the objective to implement a state law that enacted the Asset Management Program. The Council is appointed by the Transportation Commission and answers directly to the Commission and legislature. Its five main elements include: policy goals and objectives, data collection, planning and programming, program delivery, and monitoring and reporting. Its goal is to inventory all 39,000 miles of federal aid eligible roads within the State of Michigan, and according to the data collected, determine future distribution of ACT 51 transportation funds. In the future, the Asset Management Council may implement a similar initiative to collect similar information on the remaining local road network.

Regional Commission Involvement

In a typical year, region staff, along with the Michigan Department of Transportation (MDOT) and a county road commission employee, collect this data within the region. Annually, staff attends a training session to review the previous year’s collection process and to keep the training up to date for those who will be involved. In 2021, due to ongoing issues related to COVID-19, WMSRDC staff collected the data without MDOT or Road Commission staff.

Each region within the State of Michigan receives a laptop equipped with GIS, a GPS device, and software to collect the data. The data collection effort will require the collection of three items: PASER rating (Pavement Surface Evaluation and Rating), surface type, and the number of lanes. PASER is a visual rating assessment system that rates the road surface condition for a given segment on a scale of 1-10.

Purpose

The purpose of this task is to help satisfy the requirements of P.A. 499 of 2002, which establishes an Asset Management Council and charges it to develop an Asset Management Process for the State of Michigan. Regional transportation planning agencies play a significant role in this process as outlined in the following task assignments.

Method

The Asset Management Council has developed a statewide process that will result in approximately 50 percent of federal aid eligible roads in the state to be rated per year. Activities to be undertaken as part of this task include:

1. Attendance at training seminars on the use of PASER.
2. Participation as part of a three-person team that will rate the federal-aid eligible roads in the region. For 2021 and 2022, TAMC has authorized two-person teams.
3. Providing the results of the PASER ratings to local agencies to review and revise where appropriate.
4. Public display of PASER ratings on the WMSRDC website or through other public means so it is available for public review and use in project and plan development activities.
5. Transmit PASER ratings along with other roadway data to the TAMC. (i.e., traffic counts).

Products

1. Road network loaded in Roadsoft.
2. PASER data collected on federal-aid eligible roads in region.
3. Web based or other public display of PASER road ratings on network.
4. Report to the Asset Management Council with PASER and other roadway data and transportation project completion information for the region.

II. Data Collection Process

In previous years, regional staff assisted in rating 100 percent of roads on the Federal aid system. Beginning in 2008, regional staff rated 50 percent of the Federal aid system miles. No road ratings took place in 2020 due to COVID-19. In a typical year, region staff, along with an MDOT employee and a county road commission employee, collect this data within the region. However, COVID-19 continued to impact data collection in 2021. MDOT opted not to participate in road ratings in 2021 but did provide a vehicle for region staff, who successfully rated 100 percent of the Federal aid system.

The first step in this process is for each of the county road commissions to create a network in Roadsoft and export it to the region's Laptop Data Collector (LDC). The LDC software is housed on the region's laptop computer and connected to a GPS unit. Roadsoft GIS is an asset management software package created and distributed free of charge by the Michigan Technology Institute's Technology Development Group. The current version of the program was designed with a special module to collect PASER rating data. The rating group then drives the entire network that was previously selected by the Road Commission. For each segment of road, the rating team agrees on a road rating by using the PASER system, giving a numerical value for the condition of the road, 10 being new and 1 being failed.

Once the entire network has been rated, the data is exported back to the county road commission's Roadsoft program. After this is completed, the county's data is exported to the region, which passes the information back to the Asset Management Council.

Computer Equipment and Software

Staff collected data using a laptop computer with the Roadsoft GIS LDC software. A Garmin GPS unit was connected to the laptop to track position and locate road segments.

Staff Time

To collect PASER data, it is most efficient to have three people in the vehicle; one driver, one navigator/rater, and one who is assigned to enter information into the computer. In typical years, for each county road rating project, there is one representative from the region, one road commission employee, and one MDOT representative present.

Training

COVID-19 also has changed the training requirements for asset management. An in-person training was required for all raters pre-COVID-19. New trainees are now required to participate in three webinars containing background information on asset management. Participants receive an overview of the project and are given instruction on how to use the Roadsoft software and the PASER road rating system for data collection. Once out in the field, experienced staff members show the new participants how to use the Roadsoft program and guide them through the rating process. Most participants feel comfortable after an hour of working on the computer and rating the roads. In addition, every three years, raters are required to complete a webinar training on how to rate unpaved roads.

III. PASER Rating System

The PASER road rating system was developed by the University of Wisconsin-Madison Transportation Information Center to be used as the State of Wisconsin's standard road rating system. PASER is a "windshield" road rating system that uses a 1 to 10 rating scale, with a value of 10 representing a new road and a value of 1 representing a failed road. Condition ratings are assigned by monitoring the type and number of visual defects along a road segment while driving the segment. The PASER system interprets these observations into a condition rating. A sample PASER rating chart has been included with this report.

The State of Michigan Asset Management Council has requested that the information gathered in this survey be reported using the following categories:

- **Roads with PASER ratings of 8-10 require Routine Maintenance.** Routine maintenance is the day-to-day maintenance activities that are scheduled, such as street sweeping, drainage clearing, shoulder gravel grading, and sealing cracks to prevent standing water and water penetration.
- **Roads with PASER ratings of 5-7 require Capital Preventive Maintenance.** Capital preventive maintenance is a planned set of cost-effective treatments to an existing roadway system and its appurtenances that preserves, retards future deterioration, and maintains or improves the functional condition of the system without significantly increasing structural capacity. The purpose of capital preventive maintenance is to protect the pavement structure, slow the rate of pavement deterioration and/or correct pavement surface deficiencies. Surface treatments are targeted at pavement surface defects primarily caused by the environment and by pavement material deficiencies.
- **Roads with PASER ratings of 1-4 require Structural Improvements.** This category includes work identified as rehabilitation and reconstruction which address the structural integrity of a road.

This Road Rating system is illustrated on the following page.

Surface Rating		Visible Distress	General Condition / Treatment Measures
10	Excellent	<ul style="list-style-type: none"> None 	New construction
9	Excellent	<ul style="list-style-type: none"> None 	Recent overlay, like new.
8	Very Good	<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	Good	<ul style="list-style-type: none"> Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") spaced due to reflection or paving joints. Transverse cracks (open 1/4") 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	Good	<ul style="list-style-type: none"> Slight raveling (loss of lines) and traffic wear. Longitudinal cracks (open 1/4" - 1/2") due to reflection and paving joints. Transverse cracking (open 1/4" - 1/2") some spaced less than 10 feet. Slight to moderate flushing or polishing. Occasional patching in good condition. 	Show signs of aging, sound structural condition. Could extend life with sealcoat.
5	Fair	<ul style="list-style-type: none"> Moderate to severe raveling (loss of lines and coarse aggregate). Longitudinal cracks (open 1/2") show some slight raveling and secondary cracks. First signs of longitudinal cracks near wheel path or edge. Transverse cracking and first signs of block cracking. Slight crack raveling (open 1/2"). Extensive to severe flushing or polishing. Some patching or edge wedging in good condition. 	Surface aging, sound structural condition. Needs sealcoat or non-structural overlay.
4	Fair	<ul style="list-style-type: none"> Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Block cracking (over 25 - 50% of surface). Patching in fair condition. Slight rutting or distortions (1" deep or less). 	Significant aging and first signs of need for strengthening. Would benefit from recycling or overlay.
3	Poor	<ul style="list-style-type: none"> Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Block cracking over 50% of surface. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes. 	Need patching and major overlay or complete recycling.
2	Very Poor	<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	Failed	<ul style="list-style-type: none"> Severe distress with extensive loss of surface integrity. 	Failed. Needs total reconstruction.

IV. County Projects

Summary: West Michigan Shoreline Regional Development Commission

In 2021, region staff rated approximately 2,049 miles of federal aid eligible roads. Individual county summaries are included in the following pages. A summary of road ratings for all counties is illustrated in the following table.




	# of Miles Needing Structural Improvements	# of Miles Needing Capital Preventive Maintenance	# of Miles Needing Routine Maintenance	# of Miles of Federal aid Unpaved roads
Lake	215.578	51.885	1.943	18.960
Mason	225.426	69.048	3.978	11.558
Muskegon	329.960	252.349	45.079	0
Newaygo	370.962	60.721	24.962	3.997
Oceana	204.963	121.982	44.820	0.996
Ottawa	106.969	74.436	8.725	0.026
TOTAL MILES	1,253.858	630.421	129.507	35.537
PERCENTAGE	61.18%	30.76%	6.32%	1.73%

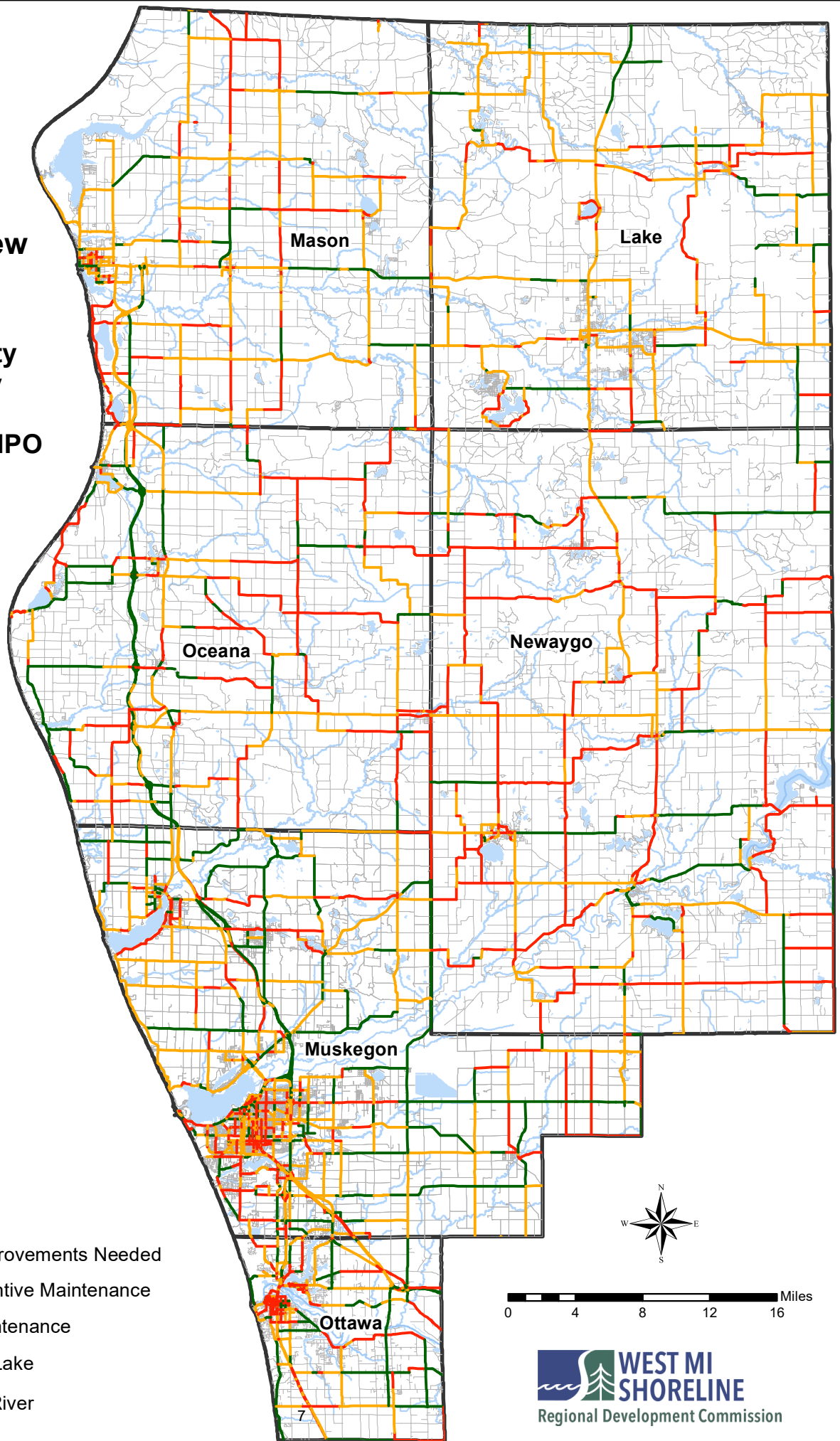
The largest percent of Federal Aid eligible roads, 61.18%, need structural improvements. Typical actions required for this category would consist of reconstruction, major overlay, or complete rehabilitation. The next level of roads, those needing capital preventive maintenance, total 30.76% of the federal aid eligible roads within the region. These activities may include crack sealing, seal-coating, or non-structural overlays. Roads only needing routine maintenance, totalled 6.32% of the network. Roads in this category need little to no maintenance. In addition, staff evaluated 35.537 miles of unpaved roads within the region. (1.73% of all Federal Aid roads)

2021 PASER Ratings Overview

Lake County
Mason County
Muskegon County
Newaygo County
Oceana County
Ottawa County MPO

Legend

- 4-1 - Structural Improvements Needed
- 7-5 - Capital Preventive Maintenance
- 10-8 - Routine Maintenance
- Unrated
-  County
-  Lake
-  River



Lake County

Project overview

In 2021, region staff assessed the condition of 100% of Lake County's federal-aid eligible roads using the PASER road rating system, as requested by the State of Michigan Asset Management Council.

Results

Approximately 288 miles of federal-aid eligible roads were rated in 2021 for this project. This includes approximately 19 miles of unpaved roads which do not receive a number rating. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

- Roads receiving a rating of 8 or higher require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating of 4 or less require Structural Improvements

2021

PASER Rating Prescribed Fix Miles Percent of Total Miles Rated

8-10 Routine Maintenance 1.943 miles (.67%)





5-7 Capital Preventative Maintenance 51.885 miles (17.99%)

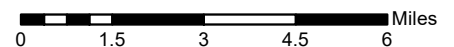
1-4 Structural Improvements 215.578 miles (74.75%)

Unpaved roads 18.96 miles (6.58%)

WEXFORD COUNTY



-  County
 Jurisdiction
 Lake
 River



**WEST MI
SHORELINE**
Regional Development Commission

Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
TAMC Collection Year	=	2021
County	=	Lake

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*
	10	9	8	7	6	5	4	3	2	1	Not Rated	
Asphalt-Standard	0.000	0.000	1.943	8.078	14.758	14.353	20.264	40.631	17.862	0.000	0.000	3.996
Graded Earth	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000
Gravel-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.951	0.000
Sealcoat-Standard	0.000	0.000	0.000	5.433	3.571	5.692	14.210	20.521	56.826	45.264	0.000	2.411
Total Centerline Mileage	0.000	0.000	1.943	13.511	18.329	20.045	34.474	61.152	74.688	45.264	18.986	2.900

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

Mason County

Project overview

In 2021, region staff assessed the condition of 100% of Mason County's federal-aid eligible roads using the PASER road rating system, as requested by the State of Michigan Asset Management Council.

Results

Approximately 310 miles of federal-aid eligible roads were rated for this project in 2021. This includes approximately 12 miles of unpaved roads which do not receive a number rating. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

- Roads receiving a rating of 8 or higher require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating of 4 or less require Structural Improvements

2021

PASER Rating Prescribed Fix Miles Percent of Total Miles Rated

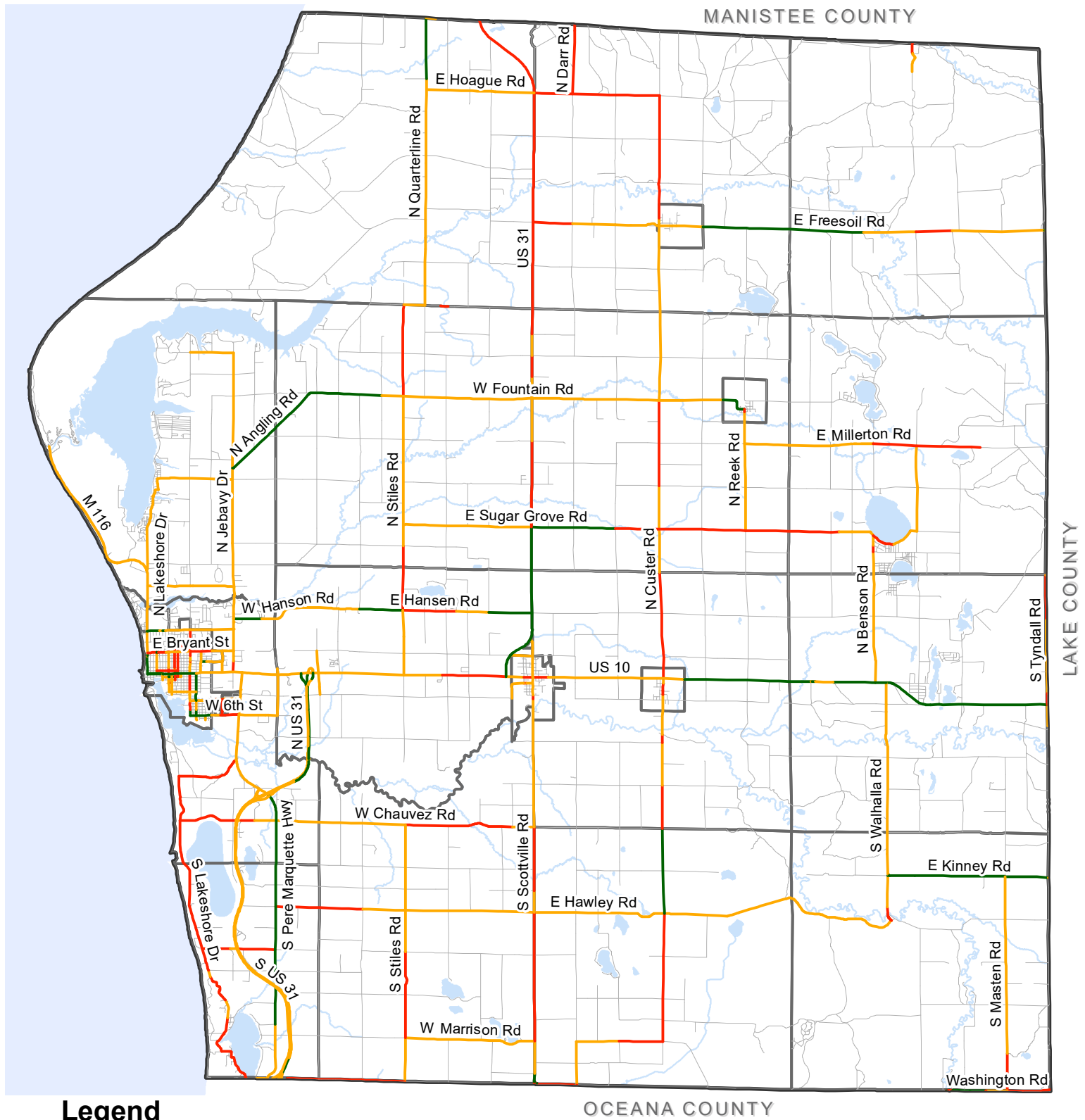
8-10 Routine Maintenance 3.978 miles (1.28%)

5-7 Capital Preventative Maintenance 69.408 miles (22.36%)

1-4 Structural Improvements 225.426 miles (72.63%)

Unpaved roads 11.558 miles (3.72%)

2021 PASER Ratings Mason County



Legend

- 4-1 - Structural Improvements Needed
- 7-5 - Capital Preventive Maintenance
- 10-8 - Routine Maintenance
- Unrated



County



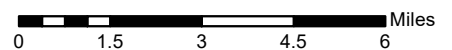
Jurisdiction



Lake



River



Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
County	=	Mason
TAMC Collection Year	=	2021

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*
	10	9	8	7	6	5	4	3	2	1	Not Rated	
Asphalt-Standard	0.000	0.000	3.978	16.094	18.192	30.047	42.281	71.231	85.264	16.810	0.000	3.431
Composite	0.000	0.000	0.000	0.000	2.511	0.665	4.670	0.937	0.000	0.000	0.000	4.541
Concrete-Standard	0.000	0.000	0.000	0.000	1.259	0.640	0.000	0.000	0.000	0.000	0.000	5.663
Gravel-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.558	0.000
Sealcoat-Standard	0.000	0.000	0.000	0.000	0.000	0.000	3.018	0.498	0.717	0.000	0.000	3.544
Total Centerline Mileage	0.000	0.000	3.978	16.094	21.962	31.352	49.969	72.666	85.98	16.810	11.558	3.350

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

Muskegon County

Project overview

In 2021, region staff assessed the condition of 100% of Muskegon County's federal-aid eligible roads using the PASER road rating system, as requested by the State of Michigan Asset Management Council.

Results

Approximately 628 miles of federal-aid eligible roads were rated for this project in 2021. No Federal aid eligible unpaved roads were rated for Muskegon County. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

- Roads receiving a rating of 8 or higher require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating of 4 or less require Structural Improvements

2021

PASER Rating Prescribed Fix Miles / Percent of Total Miles Rated

8-10 Routine Maintenance 45.079 miles (7.19%)

5-7 Capital Preventative Maintenance 252.349 miles (40.22%)

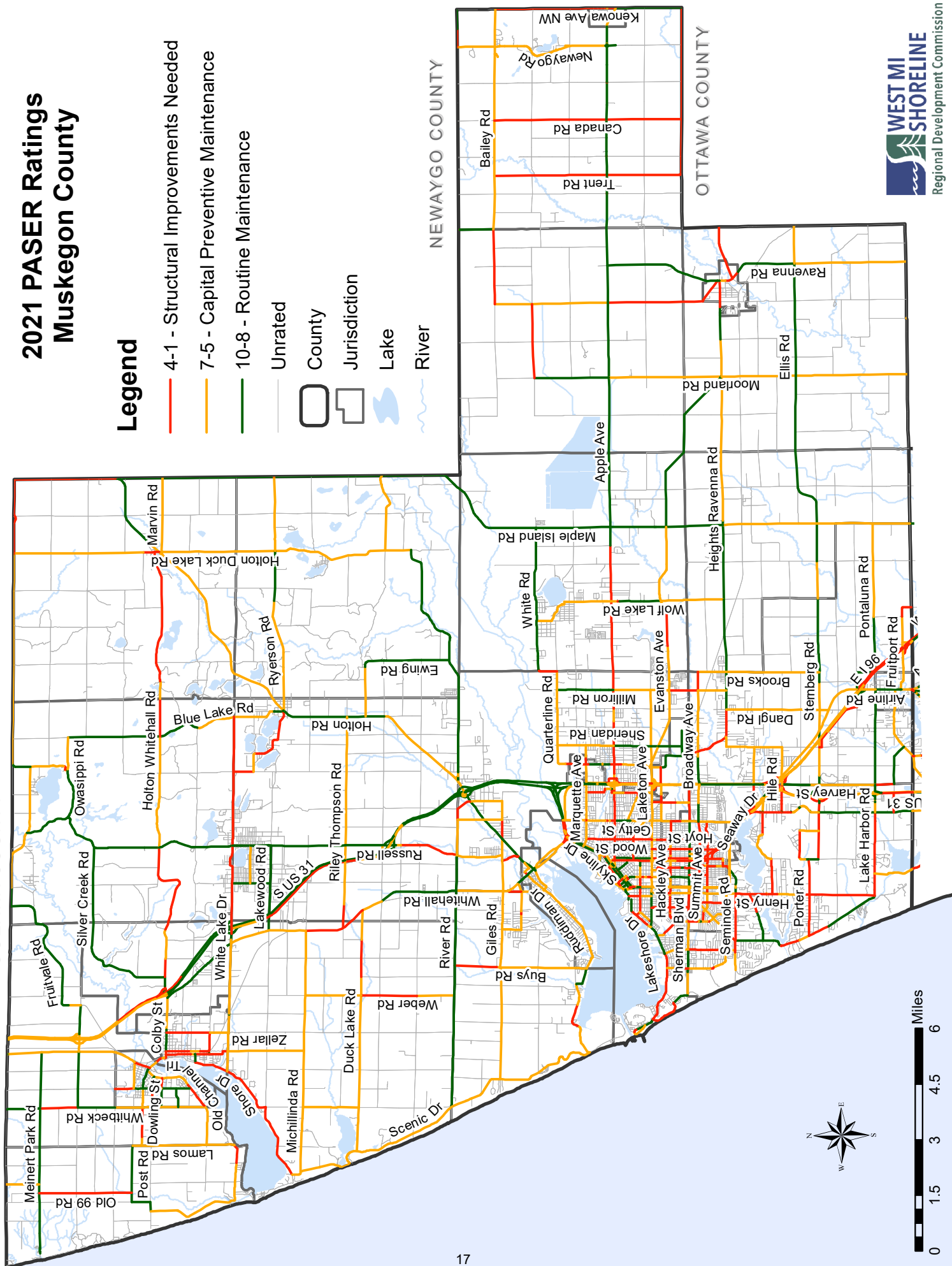
1-4 Structural Improvements 329.96 miles (52.59%)

2021 PASER Ratings Muskegon County

Legend

- 4-1 - Structural Improvements Needed
- 7-5 - Capital Preventive Maintenance
- 10-8 - Routine Maintenance
- Unrated

- County
- Jurisdiction
- Lake
- River



Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
County	=	Muskegon
TAMC Collection Year	=	2021
Federal-aid	=	Yes

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*	
	10	9	8	7	6	5	4	3	2	1			Not Rated
Asphalt-Standard	0.000	0.062	33.431	20.432	80.048	124.543	129.172	98.284	40.650	17.674	0.000	544.296	4.454
Composite	0.000	0.000	11.280	3.582	6.606	9.029	14.015	7.342	1.364	6.253	0.000	59.471	4.829
Concrete-Standard	0.000	0.044	0.000	1.614	4.500	1.299	2.613	9.764	2.576	0.245	0.000	22.655	3.987
Crushed Asphalt Base	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.008	2.000
Rubblized Concrete Base	0.000	0.000	0.000	0.000	0.000	0.696	0.000	0.000	0.000	0.000	0.000	0.696	5.000
Sealcoat-Standard	0.000	0.000	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.262	8.000
Total Centerline Mileage	0.000	0.106	44.973	25.628	91.154	135.567	145.800	115.390	44.591	24.172	0.000	627.388	4.475

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

Newaygo County

Project overview

In 2021, region staff assessed the condition of 100% of Newaygo County's federal-aid eligible roads using the PASER road rating system as requested by the State of Michigan Asset Management Council.

Results

Approximately 460 miles of federal-aid eligible roads were rated for this project. This includes approximately 4 miles of unpaved roads which do not receive a number rating. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

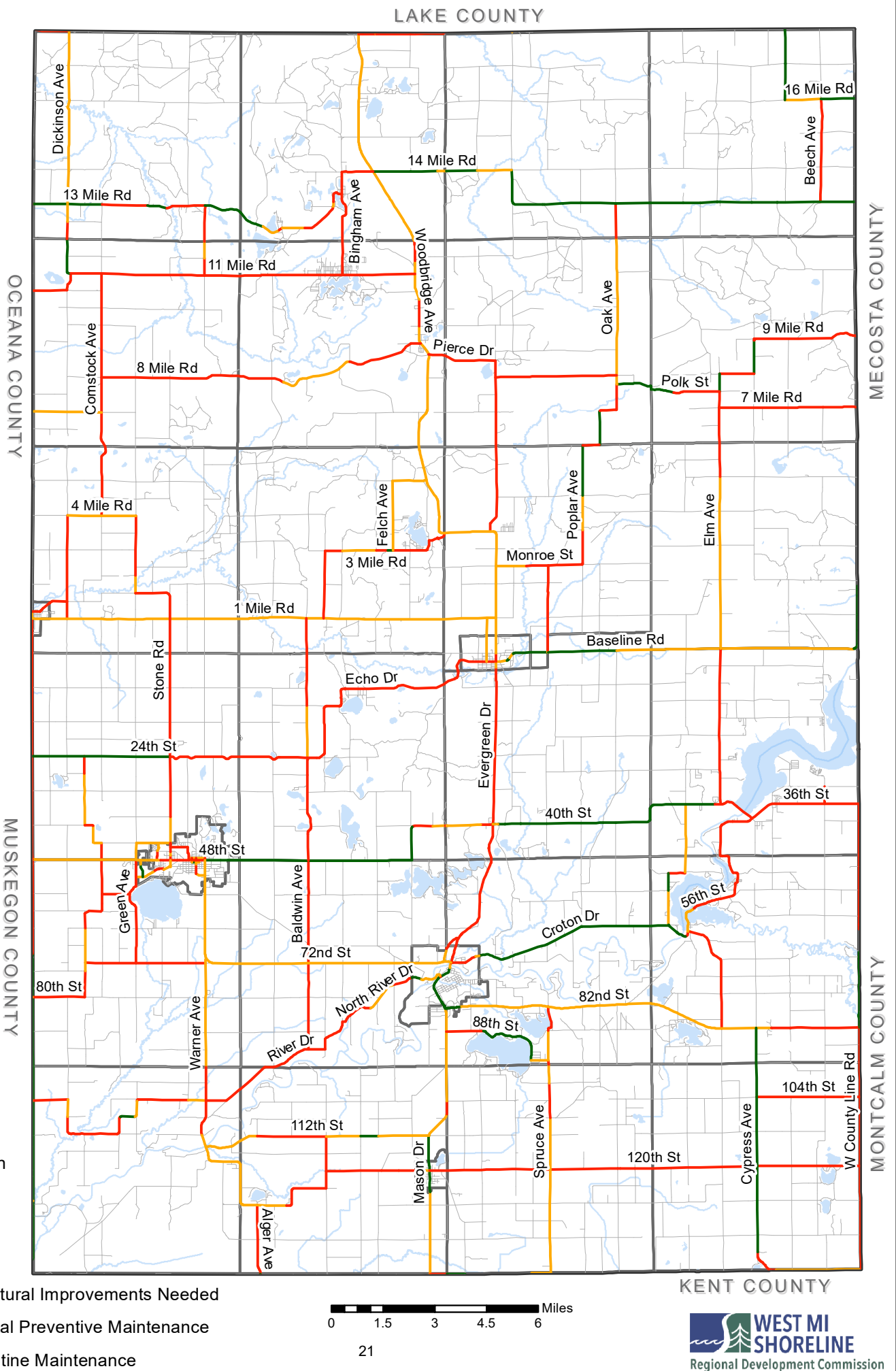
- Roads receiving a rating of 8 or better require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating less than or equal to 4 require Structural Improvements

2021

PASER Rating Prescribed Fix Miles / Percent of Total Miles Rated

8-10 Routine Maintenance 24.962 miles (5.42%)
5-7 Capital Preventative Maintenance 60.721miles (13.18%)
1-4 Structural Improvements 370.962 miles (80.53%)
Unpaved roads **3.997 miles (0.86%)**

2021 PASER Ratings Newaygo County



Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
TAMC Collection Year	=	2021
Federal-aid	=	Yes
County	=	Newaygo

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*
	10	9	8	7	6	5	4	3	2	1	Not Rated	
Asphalt-Standard	0.000	0.000	23.473	6.162	14.255	36.433	43.417	114.167	94.280	90.258	0.000	3.062
Asphalt-Standard2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.009	0.000	0.000	0.000	3.000
Asphalt-Standard2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	2.000
Composite	0.000	0.000	1.489	0.162	0.743	2.966	5.413	5.127	8.765	0.160	0.000	3.507
Gravel-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.072	0.000	3.997	1.119
Sealcoat-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.991	1.301	0.957	0.000	2.010
Total Centerline Mileage	0.000	0.000	24.962	6.324	14.998	39.399	48.830	121.294	109.46	91.375	3.997	3.040

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

Oceana County

Project overview

In 2021, region staff assessed the condition of 100% of Oceana County's federal-aid eligible roads using the PASER road rating system.

Results

Approximately 372 miles of federal-aid eligible roads were rated for this project in 2021. This includes approximately 1 mile of unpaved roads which do not receive a number rating. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

- Roads receiving a rating of 8 or higher require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating of 4 or less require Structural Improvements

2021

PASER Rating Prescribed Fix Miles / Percent of Total Miles Rated

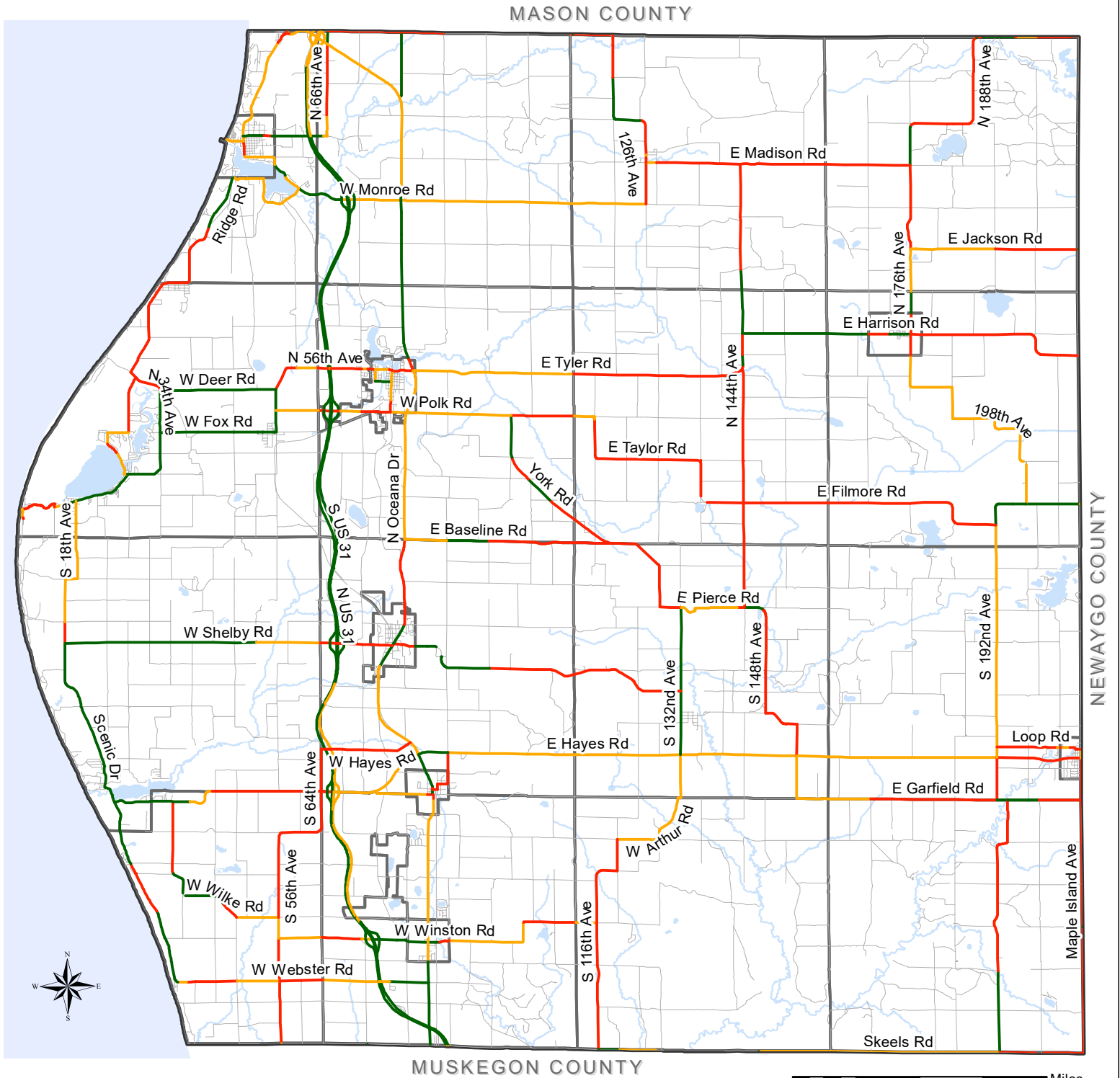
8-10 Routine Maintenance 44.82 miles (12.02%)

5-7 Capital Preventative Maintenance 121.982 miles (32.72%)







1-4 Structural Improvements 204.963 miles (54.99%)

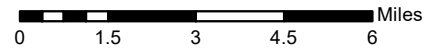
Unpaved roads 0.996 miles (0.27%)

2021 PASER Ratings Oceana County



Legend

-  4-1 - Structural Improvements Needed
 7-5 - Capital Preventive Maintenance
 10-8 - Routine Maintenance
 Unrated
-  County
 Jurisdiction
 Lake
 River



Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
TAMC Collection Year	=	2021
Federal-aid	=	Yes
County	=	Oceana

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*
	10	9	8	7	6	5	4	3	2	1	Not Rated	
Asphalt-Standard	0.000	0.000	18.996	20.353	28.469	31.547	24.530	50.137	55.653	61.031	0.000	3.591
Composite	0.000	0.000	23.659	21.161	6.632	5.111	3.550	5.136	0.000	0.000	0.000	6.626
Concrete-Standard	0.000	0.000	2.165	3.148	3.548	2.013	4.635	0.291	0.000	0.000	0.000	5.704
Gravel-Standard	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.933	0.000
Unimproved Earth	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.063	0.000
Total Centerline Mileage	0.000	0.000	44.820	44.662	38.649	38.671	32.715	55.564	55.65	61.031	0.996	4.202

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

Ottawa County

Project overview

Northern Ottawa County is part of the WestPlan MPO which is administered by WMSRDC. In 2021, region staff assessed the condition of 100% of the federal-aid eligible roads in the Village of Spring Lake, the City of Ferrysburg, the City of Grand Haven, Spring Lake Township, Grand Haven Township, Robinson Township, and Crockery Township using the PASER road rating system.

Results

Approximately 190 miles of federal-aid eligible roads were rated for this project in 2021. This includes less than 1 mile of unpaved roads which do not receive a number rating. The following summarizes the distribution of ratings by mileage and percentage of the total for all roads rated in the project. The Asset Management Council has prescribed a fix for each of the PASER rating categories:

- Roads receiving a rating of 8 or higher require only Routine Maintenance
- Roads receiving a rating of 5-7 require Capital Preventative Maintenance
- Roads receiving a rating of 4 or less require Structural Improvements

2021

PASER Rating Prescribed Fix Miles / Percent of Total Miles Rated

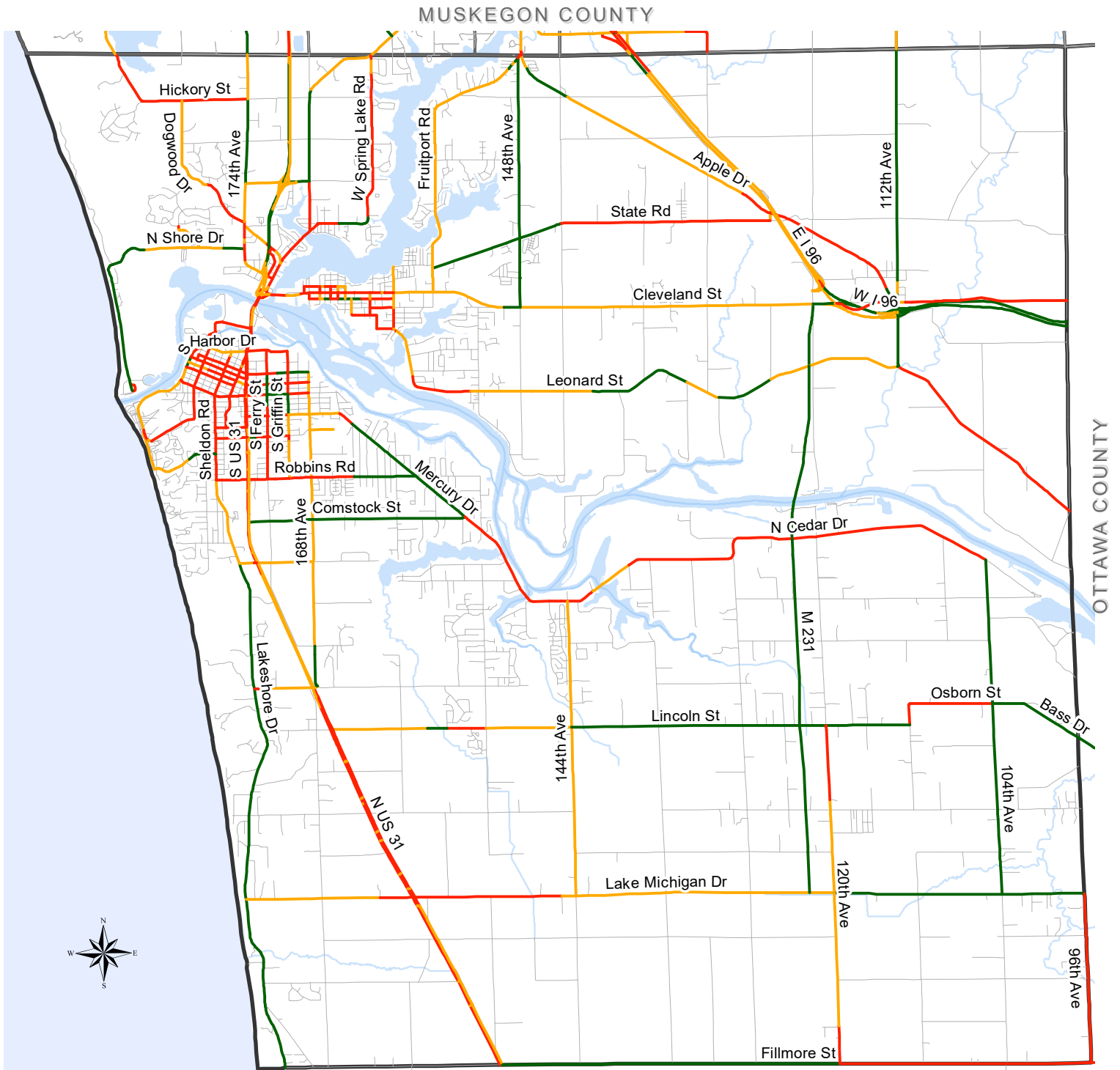
8-10 Routine Maintenance 8.725 miles (4.59%)

5-7 Capital Preventative Maintenance 74.436 miles (39.14%)

1-4 Structural Improvements 106.969 miles (56.25%)

Unpaved roads 0.026 miles (0.01%)

2021 PASER Ratings Ottawa County/MPO



Legend

- 4-1 - Structural Improvements Needed
- 7-5 - Capital Preventive Maintenance
- 10-8 - Routine Maintenance
- Unrated

- County
- Jurisdiction
- Lake
- River

0 0.8 1.6 2.4 3.2 Miles

Current PASER Rating Mileage Summary

Region14_Ottawa

Report Module: Road Surface Management Analysis

Today's Date: Thursday, January 27, 2022

Grouped By:

Report Filter

Field Name	Operator	Value(s)
City/Twp	=	Crockery Twp or Ferrysburg or Grand Haven or Grand Haven Twp or Spring Lake or Spring Lake Twp or Robinson Twp
TAMC Collection Year	=	2021

Current PASER Rating Mileage Summary

Surface Subtype	PASER Rating										Total Centerline Mileage	APR*	
	10	9	8	7	6	5	4	3	2	1			Not Rated
Asphalt	0.000	0.000	0.030	0.000	0.000	0.000	0.142	0.000	0.000	0.000	0.000	0.172	5.523
Asphalt-Standard	0.000	0.000	8.016	10.368	24.491	24.039	31.428	24.692	18.392	2.862	0.000	144.288	4.458
Composite	0.000	0.000	0.679	7.551	1.568	5.617	6.964	9.279	0.742	0.011	0.000	32.411	4.720
Concrete	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.014	4.000
Concrete-Standard	0.000	0.000	0.000	0.000	0.108	0.552	0.933	8.224	3.428	0.000	0.000	13.245	2.919
Unimproved Earth	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.026	0.000
Total Centerline Mileage	0.000	0.000	8.725	17.919	26.167	30.350	39.339	42.195	22.56	2.873	0.026	190.156	4.396

*APR=Average Paser Rating calculated by weighting the mileage with the paser value

