

MISSAUKEE COUNTY ROAD COMMISSION

2022 ANNUAL REPORT





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WHAT WE DO

The Missaukee County Road Commission is responsible for 833.58 miles of road in the county along with 65 miles of state highway.

Of the 833.58 miles, primary roads make up 222.46 miles and local roads make up 611.12 miles.

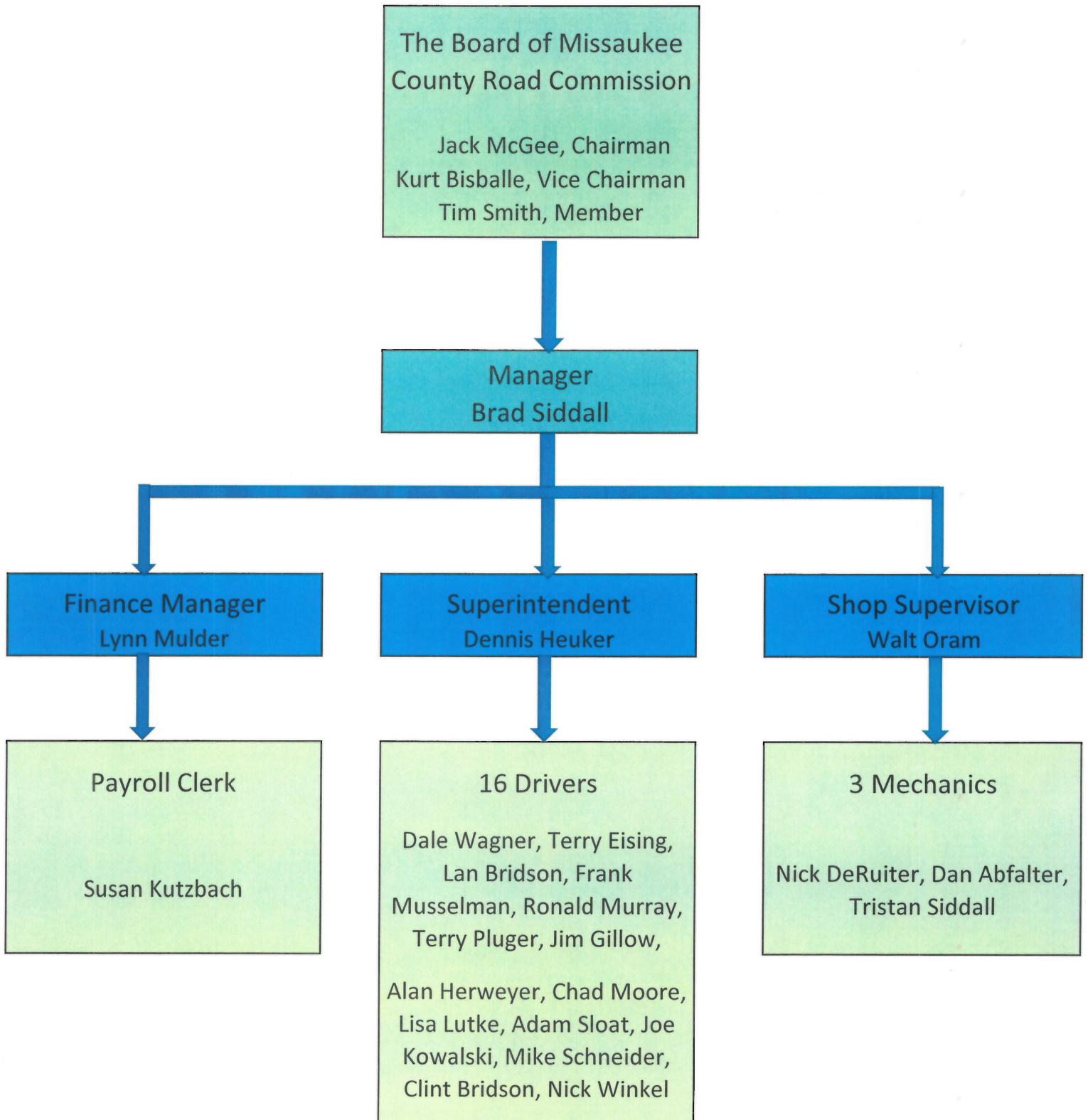
A primary road is a major road within the county road system. They typically accommodate 85% of the county's traffic and are usually paved, but not always. Local roads include seasonal and platted roads.

MCRC pays for 100% of the cost of upgrading primary roads, whether it is paving, sealcoating, graveling and large projects such as a crush & shape or a mill & fill.

On local roads, the townships participate in the cost of anything other than routine maintenance. The typical township contribution on overlays and other heavy maintenance is 75%. For sealcoating/fog sealing, the township is responsible for 50% of the cost.

Routine maintenance work includes crack sealing, pothole filling, roadside mowing, pavement marking, dust control, gravel road grading, guardrail repair, tree and brush cutting, culvert replacement, shoulder work and, of course, plowing and winter maintenance.

WHO WE ARE



REVENUE

MICHIGAN TRANSPORTATION FUND

The Michigan Transportation Fund (MTF) is the repository of motor fuel taxes and vehicle registration fees collected by the state and is the principal source of road commission funding. The collected funds are distributed to the Michigan Department of Transportation, 276 cities and 257 villages, and 83 county road agencies using a formula based on variables that include the density of population, road mileage by classification and collected vehicle registration fees.

Federal Summary of Revenue Paid at the Pump

18.4 cents gas / 24.4 cents diesel:

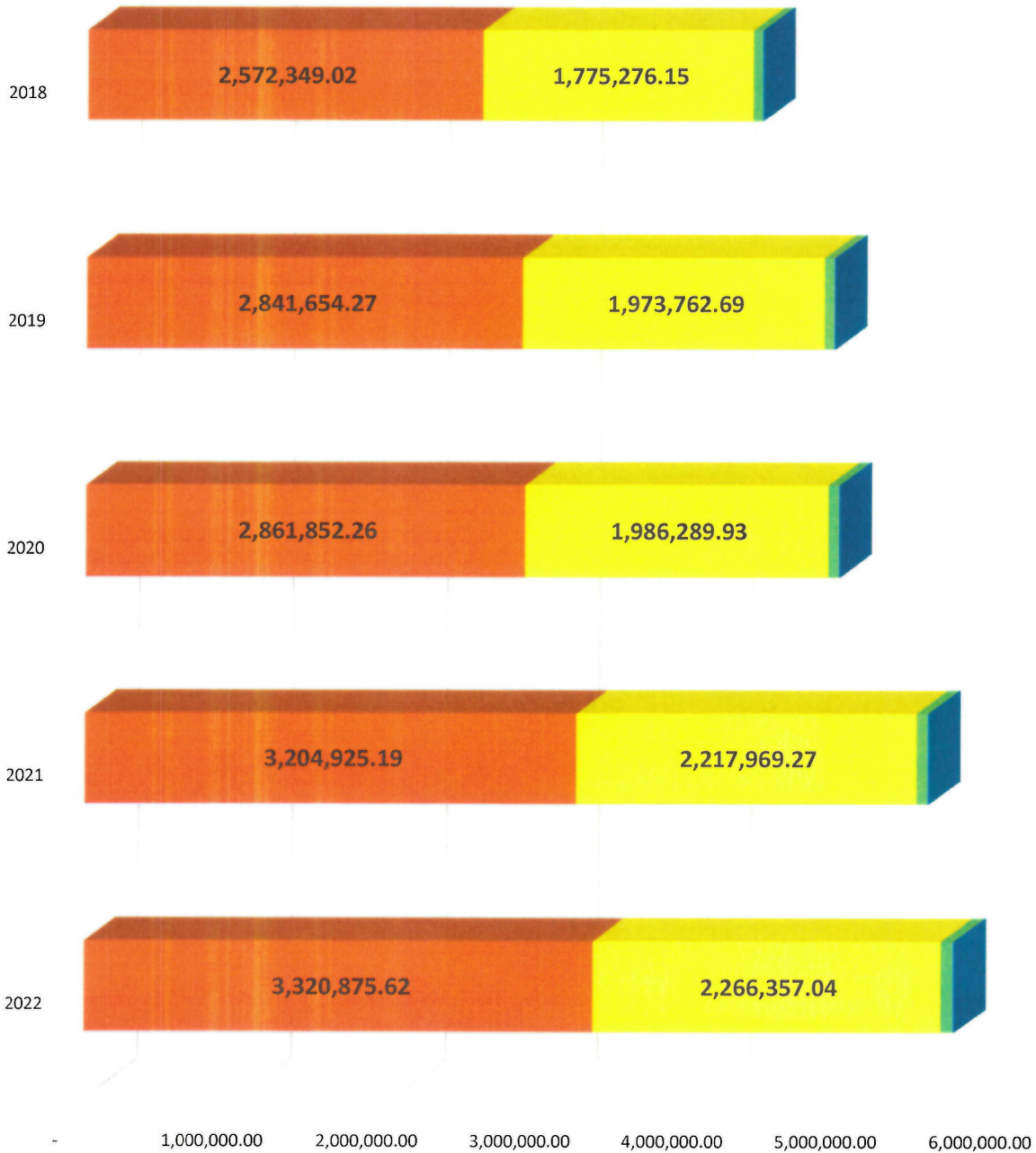
92% back to Michigan:

75% to MDOT

*25% to Cities, Villages, Road Agencies
(4.2 cents gas / 5.6 cents diesel)*

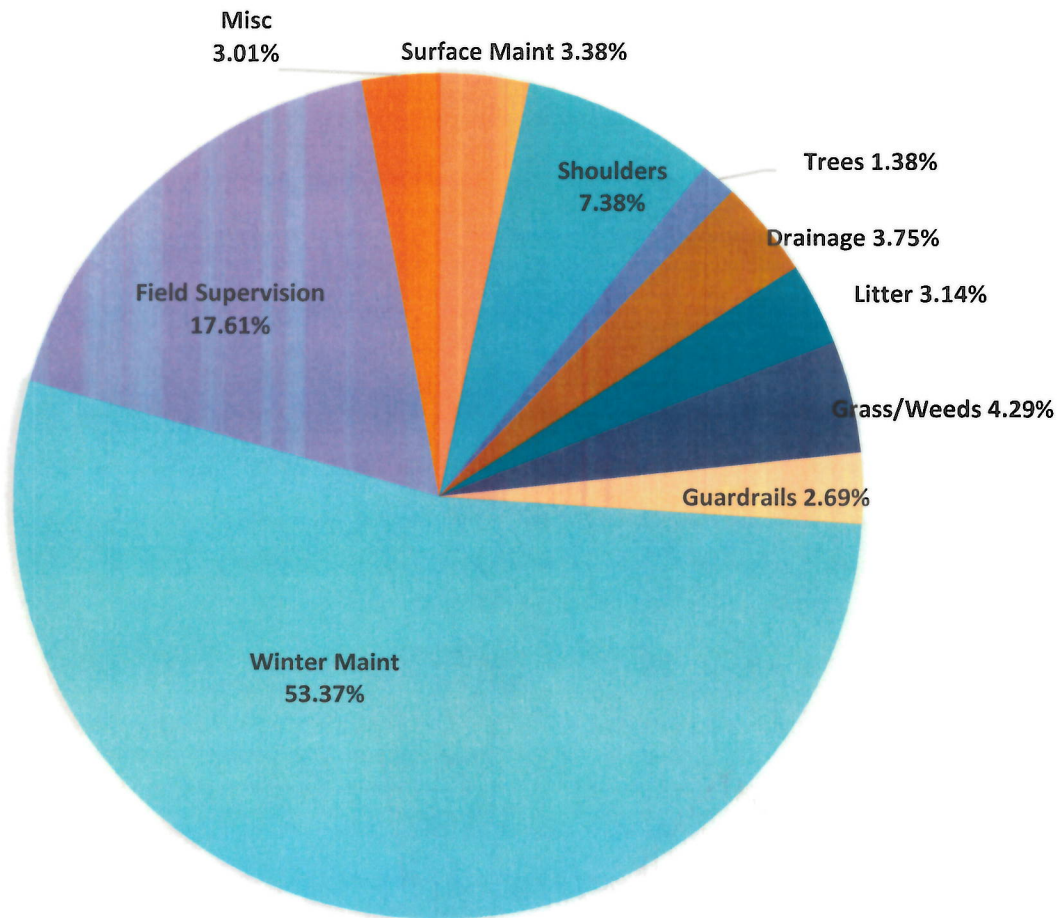
Michigan Transportation Fund Revenue by Year

- Primary Road
- Local Road
- Snow Funds
- Engineering Reimb



STATE TRUNKLINE MAINTENANCE

The Missaukee County Road Commission contracts with MDOT to maintain 65 lane miles of the state trunkline: M-55, M-66 and M-42. During the winter months, three drivers are dedicated to state trunkline routes, during daylight hours. There is also an afternoon shift (7 days per week) and a midnight shift (Sunday through Thursday) with one employee on each shift who dedicate all of their time to the state highways. MDOT reimburses the road commission for all employee time, benefits, equipment, material and overhead allocated to these employees. At times, MDOT will request additional work such as paving shoulders, cleaning around guardrails, replacing culverts or patching which is in addition to the normal maintenance work required.

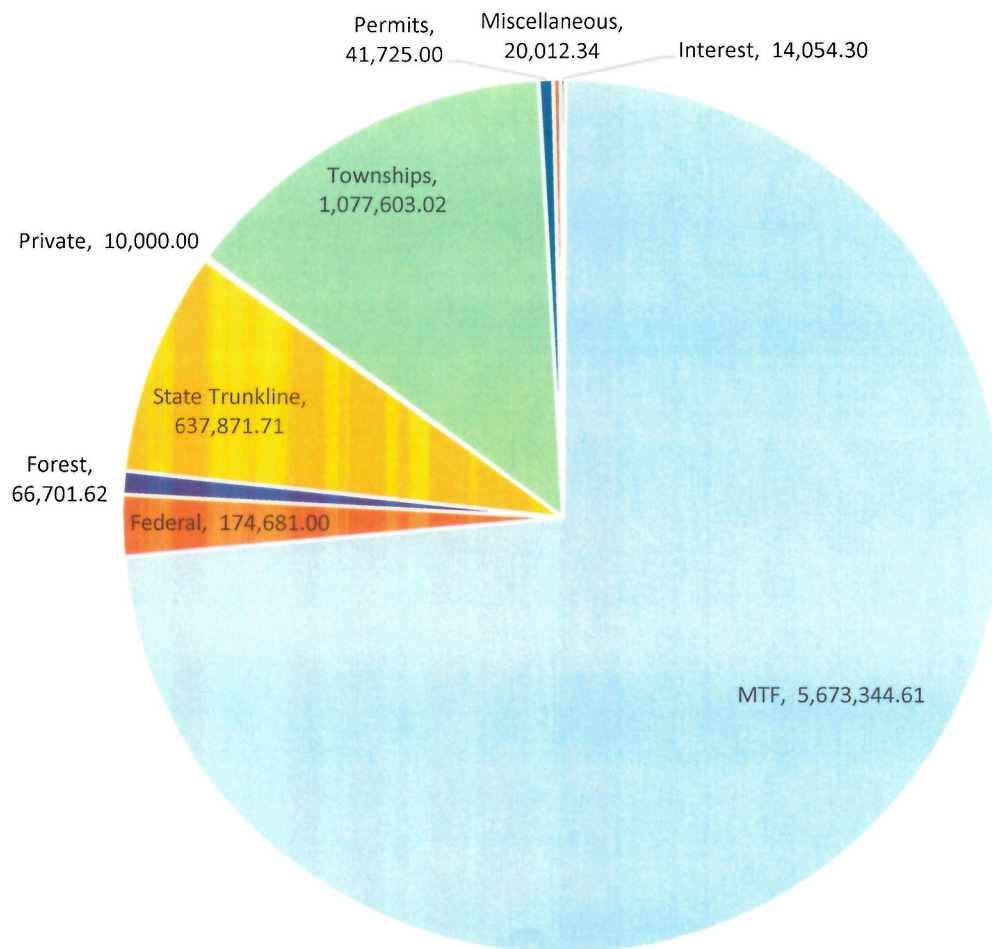


OTHER REVENUE

Other sources of revenue for the Missaukee Road Commission include:

- Forest Funds of approximately \$66,700 annually
- Federal and state funds for large construction projects
- Bridge funds to replace or rehabilitate a bridge
- Private contributions from individuals or businesses
- Township contributions for paving, sealcoating or brining local roads
- Permits fees

2022 FUNDING SOURCES



2022 Primary Road Projects

Bituminous Overlay (Paving):

	Road	Miles	Cost
Butterfield Township	Merritt Road	3.05	\$302,564.48
Richland Township	Cadillac Road	2.18	\$281,703.50

Sealcoat/Fog Seal

	Road	Miles	Cost
Richland Township	Cadillac Road	3.75	\$ 143,806.96

Crush & Shape

	Road	Miles	Cost
Clam Union Township	Forward Road	2.00	\$599,429.07
Caldwell Township	Lucas Road	2.45	\$685,002.89

Paving (Graded/Ditched/Graveled in 2021)

	Road	Miles	Cost
Butterfield Township	Cadillac Road	0.64	\$137,534.33

Permazyme

	Road	Miles	Cost
Aetna Township	9 Mile Road	1.00	\$11,336.54

2022 Local Road Projects

Bituminous Overlay (Paving):

With participation from:	Road	Miles	Cost
Forest Township & LC Manuf.	Industrial Park	1.15	\$116,013.64
Reeder Township	Blue Road	0.68	\$62,280.51
Riverside Township	Hilltop Subdivision	0.46	\$49,037.04
	Meyering Road	3.00	\$236,840.66
Caldwell Township	Broadway Street	0.49	\$60,514.86
	Fairlane Drive	0.35	\$32,434.10
Richland Township	Meyering Road	1.00	\$82,323.37
	LaChance Road	1.50	\$122,970.61
Aetna Township	7 Mile Road	2.50	\$232,004.26
West Branch Township	Wagner Road	0.24	\$24,283.22

Sealcoat/Fog Seal

With participation from:	Road	Miles	Cost
Reeder Township	McGee Road	1.00	\$33,436.10
Caldwell Township	Randall Road	0.50	\$16,371.17
	Al Moses Road	1.84	\$58,798.46
Richland Township	Finkle Road	1.00	\$29,896.08
Forest Township	Sanborn Road	1.00	\$30,807.18

Grade/Ditch/Gravel

With participation from:	Road	Miles	Cost
Aetna Township	Kelly Road	1.00	\$187,046.08

Drain & Widening Project

With participation from:	Road	Miles	Cost
Lake Township	Lakeview Drive	0.47	\$373,796.35

Planned Projects 2023 - 2026

2023 Planned Projects

Road	Project	Miles	Est. Cost
8 Mile Rd from Prosper Rd to Lotan Rd	Reconstruct to All-Season	2.50	\$1,600,000
8 Mile Rd from Lotan Rd to M-55	Reconstruct to All-Season	4.00	\$1,550,000
Kelly Rd from Merritt Rd to 13 Mile Rd	Overlay	0.50	\$110,000
		Total	\$3,260,000

2024 Planned Projects

Road	Project	Miles	Est. Cost
13 Mile Rd from Kelly Rd to Lotan Rd	Crush/Shape/Pave	1.00	\$350,000
Layman Rd from Burns Rd to Village of Jennings	Mill & Fill/Overlay	3.50	\$698,000
8 Mile Rd from Stoney Corners Rd to Prosper Rd	Crush/Shape/Pave	3.50	\$703,000
LaChance Rd from M-42 to Burns Rd	Overlay	0.50	\$150,000
Arnold Rd from ??????	Overlay	1.00	\$300,000
Star City Rd from M-55 to Wagner Rd	Overlay	2.50	\$250,000
		Total	\$2,451,000

2025 Planned Projects

Road	Project	Miles	Est. Cost
13 Mile Rd from Lotan Rd to Blue Rd	Crush/Shape/Pave	1.00	\$400,000
13 Mile Rd from Blue Rd to Finkle Rd	Reconstruct to All-Season	3.00	\$1,684,000
Falmouth Rd from Stevens Rd to 13 Mile Rd	Crush/Shape/Pave	3.00	\$1,110,000
		Total	\$3,194,000

2026 Planned Projects

Road	Project	Miles	Est. Cost
Lucas Rd from Rhoby Rd to Arnold Rd	Reconstruct	1.50	\$1,579,000
Lucas Rd from Arnold Rd to Moorestown Rd	Crush/Shape/Pave	1.50	\$500,000
Stoney Corners Rd from 9 Mile Rd to Young Rd	Overlay	3.50	\$300,000
County Line Rd from Forward Rd west 2640 ft.	Overlay	0.50	\$100,000
Falmouth Rd from M-66 to Prosper Rd	Sealcoat/Fog Seal	6.50	\$250,000
		Total	\$2,729,000

Bridge Projects

Reconstruct

Bridge	Township	Cost	Year
Dolph Rd Bridge over Muskegon	Holland	\$810,000	2023
Dorr Rd Bridge over Haymarsh Creek	Enterprise	0 - Bridge Bundling	2023
Forward Rd Bridge over Clam River	Clam Union	\$1,200,000 (MCRC 20%)	2026

Preventative Maintenance

Bridge	Township	Cost (MCRC 20%)	Year
Merritt Rd Bridge over Muskegon	Enterprise	\$214,000	2026
Turnerville Rd Bridge over Clam	Riverside	\$150,000	2026
Stevens Rd Bridge over Muskegon	West Branch	\$150,000	2026

Bridge Work Definitions

- * *Bridge replacement involves replacing the entire substructure, superstructure, deck and necessary approach work.*
- * *Rehabilitation is the major work required to restore the structural integrity of a bridge, as well as work necessary to correct major safety defects.*
- * *Preventative maintenance includes asphalt overlay, painting, pin & hanger replacement, slope paving repair, joint replacement/repair, crack sealing and similar improvements.*

“NEW” PRODUCT TESTED ON GRAVEL ROADS

In 2020, Missaukee County Road Commission manager, Brad Siddall, was introduced to a product on the market that, once applied to a gravel road, would greatly reduce dust and eliminate constant regrading of the road.

Perma-Zyme is a soil stabilization product that permanently bonds the soil particles together to create a concrete-like surface. The formula was developed in 1972 by John Battistoni. Perma-Zyme is a 100% natural product that mixes with water and is then applied to the road using a motor grader. Other advantages of Perma-Zyme include:

- The road will require less maintenance allowing budgets to stretch further.
- No special equipment or expertise is needed.
- The special enzyme formula lasts up to 10 years.
- Native soil strength increases more than 13 times.
- It is compatible with a variety of soils and climates.
- Perma-Zyme is non-toxic and environmentally friendly.

Riverside Township requested that the Road Commission test this product on one mile of gravel road – Call Road south of Stoney Corners Road. Perma-Zyme was applied in 2021. Throughout the 2022 season, we have learned this product requires minor blading in the spring of the year and minimum amounts of brine.

In 2022, Perma-Zyme was applied to 1 1/2 miles of 9 Mile Road in Aetna Township. So far, we have seen less chatter bumps and potholes. The Road Commission is planning to apply Perma-Zyme on several more roads in the county this summer and will continue to monitor road conditions to determine the effectiveness of the product on our roads.

The Missaukee County Road Commission is pleased to allow our building and grounds to be used for community events.

Some of the events we have participated in are:

Food Distribution

Annual Tree Sale

Car Show

Easter Egg Hunt



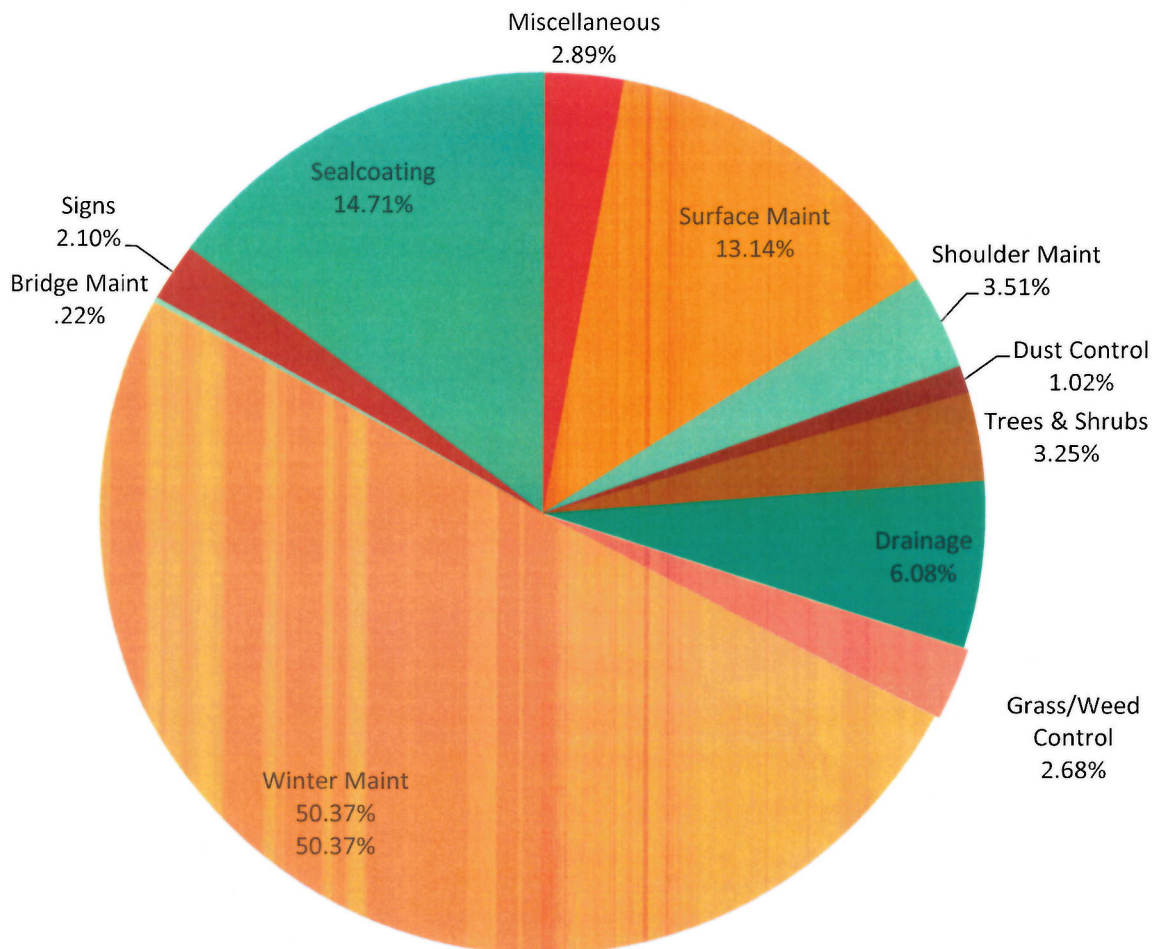
Touch A Truck



PRIMARY ROADS

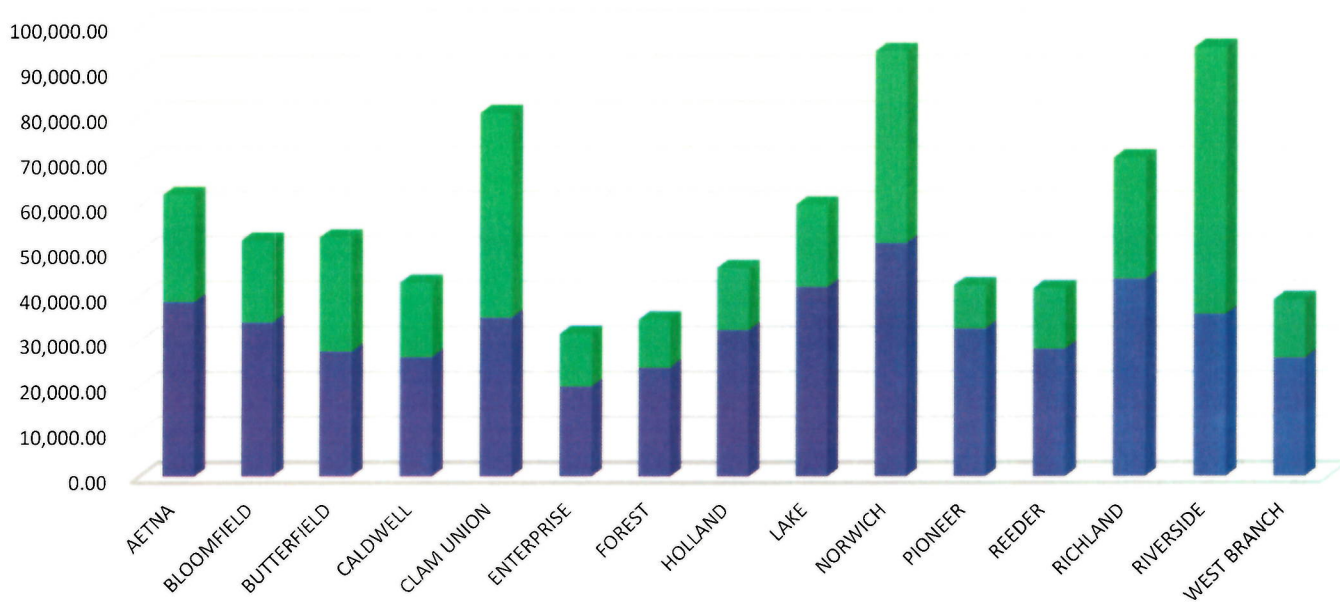
The Missaukee County Road Commission maintains 222.46 miles of primary roads. After state highways, primary roads are usually maintained first. The Road Commission is responsible for 100% of the costs on primary roads which includes winter maintenance, mowing, trimming trees & brush, shoulder maintenance, ditching, replacing and installing culverts, maintaining bridges, pavement marking, sealcoating and paving. In some instances, some roads (especially those on the county border) are maintained by another agency. Local and intergovernmental agreements dictate ownership and maintenance responsibility. Roads inside city limits are typically maintained by that city. The chart below illustrates how routine maintenance expenses on primary roads are allocated, with over 50% spent on winter maintenance.

2022 PRIMARY ROAD MAINTENANCE BY TYPE



PRIMARY ROAD MAINTENANCE BY TOWNSHIP

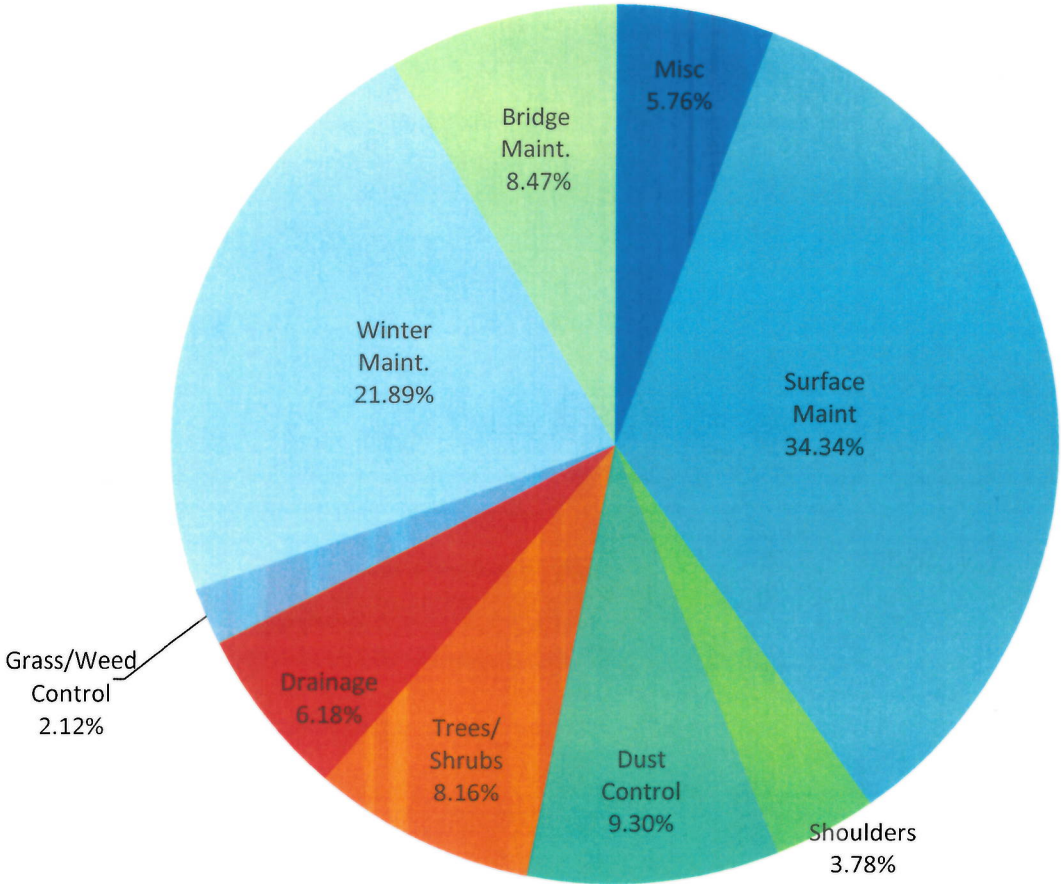
■ Winter Maint ■ Other Maint



LOCAL ROADS

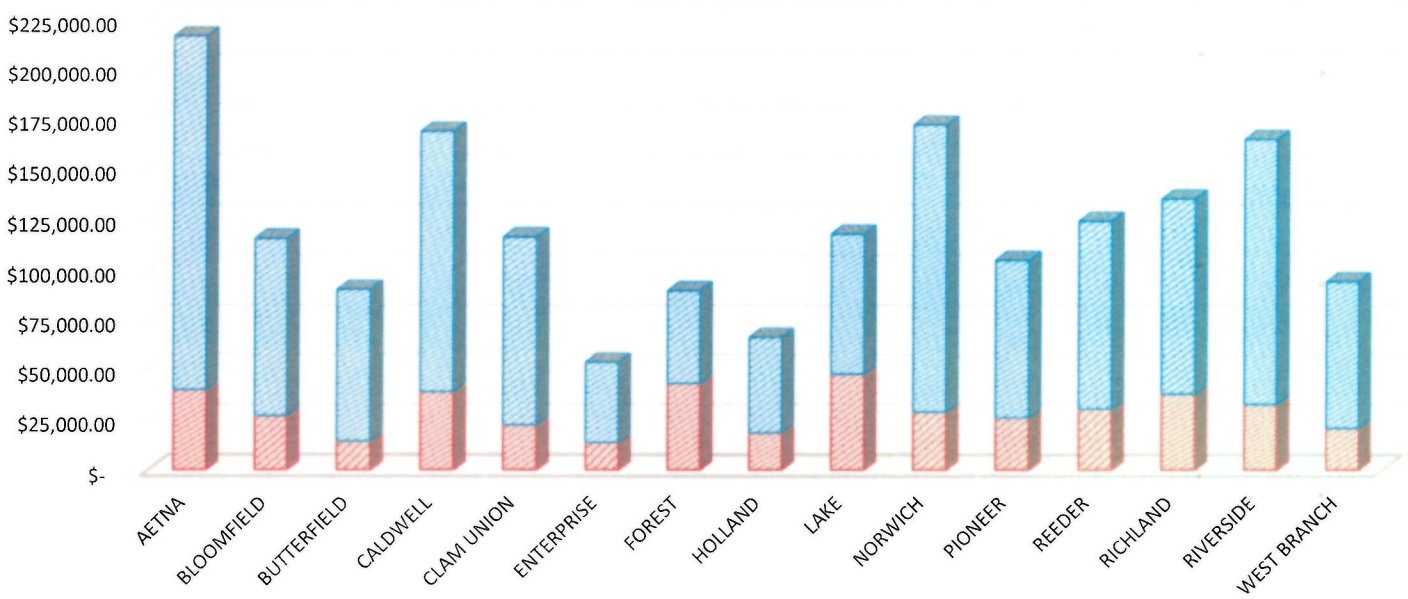
Local roads account for 611.12 miles of the total road miles in the county (833.58). These roads include paved, gravel and seasonal roads. Surface maintenance accounts for almost 35% of the expenses for local roads. Grading gravel roads makes up most of that expense. Other than winter maintenance, dust control applications are the next highest maintenance expense. In the past, brine was applied to gravel roads twice per summer. In 2022, the Road Commission leased the Edwards brine well and were able to apply brine three times which reduced the dust substantially. Seasonal roads are posted as such and the Road Commission grades them once in the spring and again in the fall but they are not maintained or plowed.

2022 LOCAL ROAD MAINTENANCE BY TYPE



LOCAL ROAD MAINTENANCE BY TOWNSHIP

■ Winter Maint ■ Other Maint



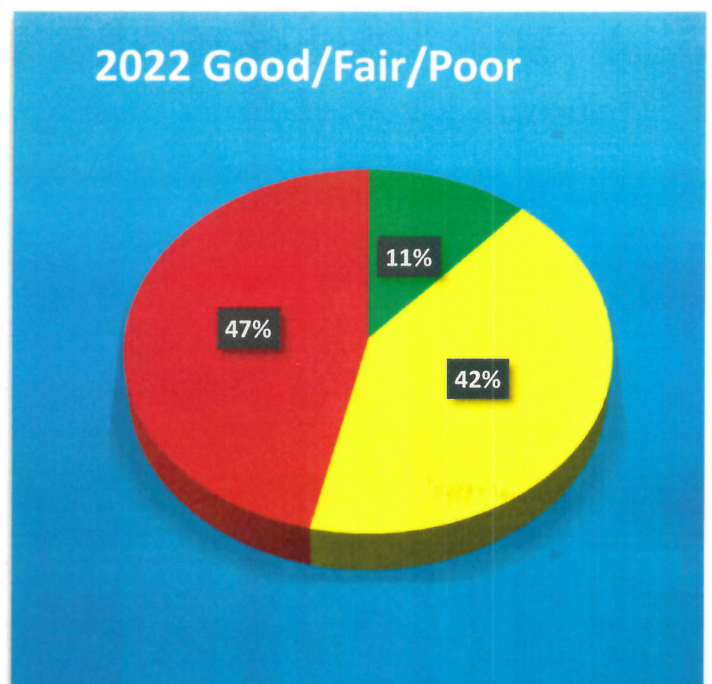
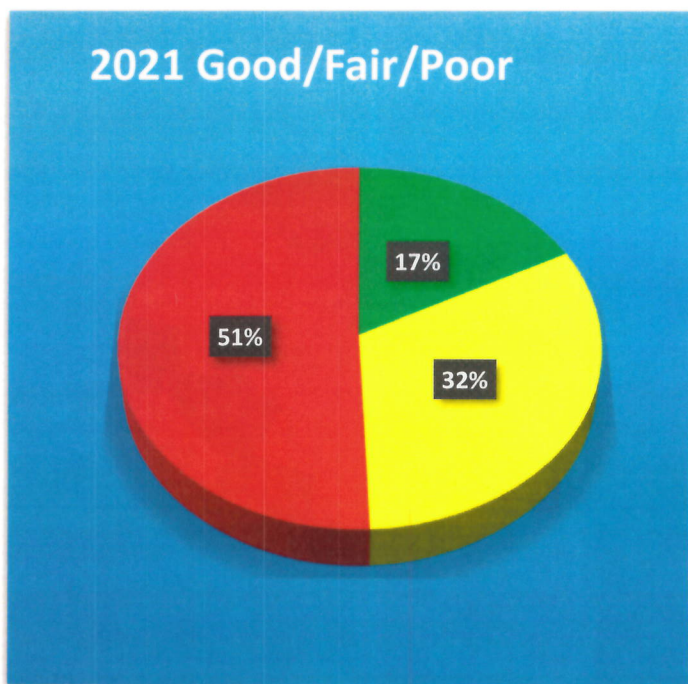
ASSET MANAGEMENT

Transportation Asset Management Council (TAMC)

Local Road Agencies are required to have an *asset management plan*. Beginning in 2020, local road agencies responsible for 100 or more certified miles of road are now required to have an asset management plan.

Infrastructure is a valuable asset in every community. It is important to maintain these assets as efficiently and cost effectively as possible. Determining which roads are higher priority and need the most improvements can be determined by data collection. The Missaukee Road Commission uses the [Pavement Surface Evaluation and Rating \(PASER\)](#) system, as used in the federal aid data collection. PASER rating is based on a numbering system, 1 through 10, 1 being the worst, and 10 being the best, to determine the percentage of good, fair or poor ratings.

The graphs below compare a *Good/Fair/Poor* rating from 2021 and 2022 for OUR local roads
(Does not include the state trunkline.)



***Good (PASER rating >8), Fair (PASER rating = 7,6,5) & Poor (PASER rating <4)**

MISSAUKEE COUNTY PASER RATINGS 2022

- Road
- 2: Very Poor
 - 3: Poor
 - 4: Fair
 - 5: Fair
 - 6: Good
 - 7: Good
 - 8: Very Good
 - 9: Excellent
 - 10: Excellent
 - default

