

**Torch Lake Township
Current Pavement Condition Status
April 2016**

This report is provided for information on the current status of the local county paved roads in the township. For some, it is a useful tool when looking at potential road projects. It is by no means meant as a final determination of road projects. The Antrim County Road Commission has a cost share policy which allows it to share in a portion of the cost of most local road improvements that a township may decide to accomplish.

The included priorities are based on Asset Management principals. Asset Management is a systematic approach to selecting the best investment at the right time to maximize the life of the asset being measured, in this case, road pavements. The goal is to maintain a pavement in a good condition, making periodic investments in the pavement that keep it in a good condition, rather than letting it deteriorate to a level that requires a major investment to bring it back to a good condition. The periodic investments typically total less than the major investment required to rebuild a pavement.

This report uses the PASER pavement condition rating system. PASER stands for Pavement Surface Evaluation and Rating. PASER ratings range from 1, failed condition, to 10, brand new pavement. A pavement will only be a 10 the first year of its life, the second year automatically becoming a 9. Any condition of 8 or greater is considered to be a good condition, 7 through 5 is fair, with 4 and below poor.

Table 1 shows the typical pavement treatments for each PASER rating and the estimated costs per mile of roadway for each option.

Table 1

PASER Road Rating	Typical Treatment	Estimated Cost Per Mile
10	No maintenance - new road - first year only	\$0
9	No maintenance - like new	\$0
8	Minimal routine maintenance	\$0
7	Crack filling - minor maintenance	\$4,500
6	Chip seal with crack filling	\$33,500
5 - 6	Ultra-thin HMA overlay (road cannot be distorted)	\$50,000
5	Chip seal with HMA wedging or 1 1/2" HMA overlay	\$85,000
4	Wedge and 1 1/2" HMA overlay or 2" HMA overlay	\$120,000
3	Crush and shape, 2" HMA paving	\$135,000
1 - 2	Reconstruction - very poor condition	\$180,000 +

HMA - Hot Mix Asphalt

The treatments listed in Table 1 are for general estimating purposes. A specific treatment can only be determined with a close inspection of the actual road. Using the PASER ratings and the listed treatment will give fairly accurate budgeting numbers. Different treatments than those listed in Table 1 for a given PASER rating may be appropriate in certain cases.

A hot mix asphalt (HMA) pavement will typically last from 15 to 20 years. At that point, it is usually beyond a preservation treatment and requires a major investment. Good pavement management would involve less expensive treatments earlier in the life of the pavement in order to extend the useful life. A variety of treatments and repairs are listed in this report. An emphasis is placed on early preventive maintenance treatments as suggested by the principals of asset management.

Table 2 shows the most current PASER ratings for all local county roads in the township along with the termini and length for each segment rated. Also included is the age of the pavement. The Last PM column shows the year that a preventive maintenance treatment was applied. This is typically something less than two inches of HMA and other treatments such as a chip seal.

Table 2

PASER Rating	Road Name	From	To	Length (miles)	Age	Last PM
9	3rd St	US 31	end of pavement	0.18	1	
9	Lake St	Third	end of pavement	0.07	1	
9	Prospect St	Public Dock	Third	0.07	1	
9	Birch View Dr	Erickson Rd	end of road	1.595	2	
9	Erickson Rd *	US 31	Joe Marks Trl	1.416	6	
8	Public Dock Rd	US 31	end of public road	0.214	9	
8	Servers Dr	US 31	entire loop	0.437	9	
8	Thierry Cir	US 31	US 31	0.306	9	
8	Beechwood Dr	Barnes	Barnes	0.406	13	
8	Torch View Dr	Beechwood	Barnes	0.153	13	
8	Manitou Trl	US 31	Michigan	0.458	14	
8	Michigan Trl	Manitou	Ojibway	0.484	14	
8	Ojibway Trl	Michigan	Manitou	0.187	14	
8	Farrell Rd *	M 88	Bennett Hill	0.942	15	2011
8	Sugarbush Dr	Barnes	end of public road	0.61	15	
8	Moulton Rd	US 31	end of public road	0.52	16	
8	Pearl St	US 31	M 88	0.26	17	
8	Barnes Park Rd	US 31	Barnes Park entrance	0.7	18	
7	Lore Rd *	Old Dixie	end of pavement	0.353	13	
7	Creswell Rd	end of pavement	Golden Beach	0.13	16	
7	McLachlan Rd	US 31	West Torch Lake	1.01	17	
7	Baker St	US 31	Pearl	0.087	29	
7	Old Park Rd	Barnes Park	Barnes Park	0.129	?	
6	Kruger Rd	US 31	Fernway Trl	0.412	11	
6	Bay Colony Rd	US 31	end of public road	1.302	15	
6	Creswell Rd	Golden Beach	US 31	1.273	16	
6	Hjelte Rd	West Torch Lake	US 31	1.165	16	
6	Fisher Dr	US 31	entire loop	0.671	17	
6	Golden Beach Dr	Creswell	Pottawottamie	1.464	17	
5	Kruger Rd	Fernway Trl	Dead End or Start	0.038	11	

* township line roads

(age as of 2016)

Total

17.042

These are the latest pavement condition ratings and will change over time as the pavement ages and deteriorates. A suggested fix may not be the appropriate fix the following year depending on the rate of deterioration. Repair costs are current estimates and will increase with inflation every year.

The township spent an average of \$48,000 per year over the last five years. A 0.25 mil road millage is levied by the township which generates approximately \$59,000. Based on these amounts, a suggested road improvement / pavement maintenance strategy is presented on the following page for the next five years.

The graph on page 5 shows the pavement condition trends from 2010 to 2014. The numbers represent centerline miles. All the paved local county roads within Torch Lake Township are in fair or good shape. This was an improvement from 2010. Roads were last rated in late 2014 with 2015 projects appropriately reflected for this report.

Five Year Suggested Pavement Work Priorities

2016 Suggested Priorities

Cost per Mile	Miles	Total Cost	Township Share	Selected Roads	Suggested Repair
\$ 33,500	0.450	\$ 15,075	\$ 13,568	Kruger Rd	crack fill and chip seal
\$ 33,500	1.464	\$ 49,044	\$ 44,140	Golden Beach Dr	crack fill and chip seal
Total township share =			\$ 57,707		

2017 Suggested Priorities

Cost per Mile	Miles	Total Cost	Township Share	Selected Roads	Suggested Repair
\$ 33,500	0.671	\$ 22,479	\$ 20,231	Fisher Dr	crack fill and chip seal
\$ 33,500	1.165	\$ 39,028	\$ 35,125	Hjelte Rd	crack fill and chip seal
Total township share =			\$ 55,355		

2018 Suggested Priorities

Cost per Mile	Miles	Total Cost	Township Share	Selected Roads	Suggested Repair
\$ 34,000	1.403	\$ 47,702	\$ 42,932	Creswell Rd	crack fill and chip seal
\$ 34,000	0.087	\$ 2,958	\$ 2,662	Pearl St	crack fill and chip seal
\$ 34,000	0.260	\$ 8,840	\$ 7,956	Baker St	crack fill and chip seal
Total township share =			\$ 53,550		

2019 Suggested Priorities

Cost per Mile	Miles	Total Cost	Township Share	Selected Roads	Suggested Repair
\$ 34,500	1.302	\$ 44,919	\$ 40,427	Bay Colony Rd	crack fill and chip seal
\$ 34,500	1.010	\$ 34,845	\$ 31,361	McLachlan Rd	crack fill and chip seal
Total township share =			\$ 71,788		

2020 Suggested Priorities

Cost per Mile	Miles	Total Cost	Township Share	Selected Roads	Suggested Repair
\$ 35,000	0.520	\$ 18,200	\$ 16,380	Moulton Rd	crack fill and chip seal
\$ 35,000	0.610	\$ 21,350	\$ 19,215	Sugarbush Dr	crack fill and chip seal
\$ 35,000	0.700	\$ 24,500	\$ 22,050	Barnes Park Rd	crack fill and chip seal
\$ 35,000	0.129	\$ 4,515	\$ 4,064	Old Park Rd	crack fill and chip seal
Total township share =			\$ 61,709		

5 year cost summary

2016	\$ 57,707	Annual average
2017	\$ 55,355	\$ 56,531
2018	\$ 53,550	\$ 55,538
2019	\$ 71,788	\$ 59,600
2020	\$ 61,709	\$ 60,022

Total \$ 300,109

Surface Condition Trend

