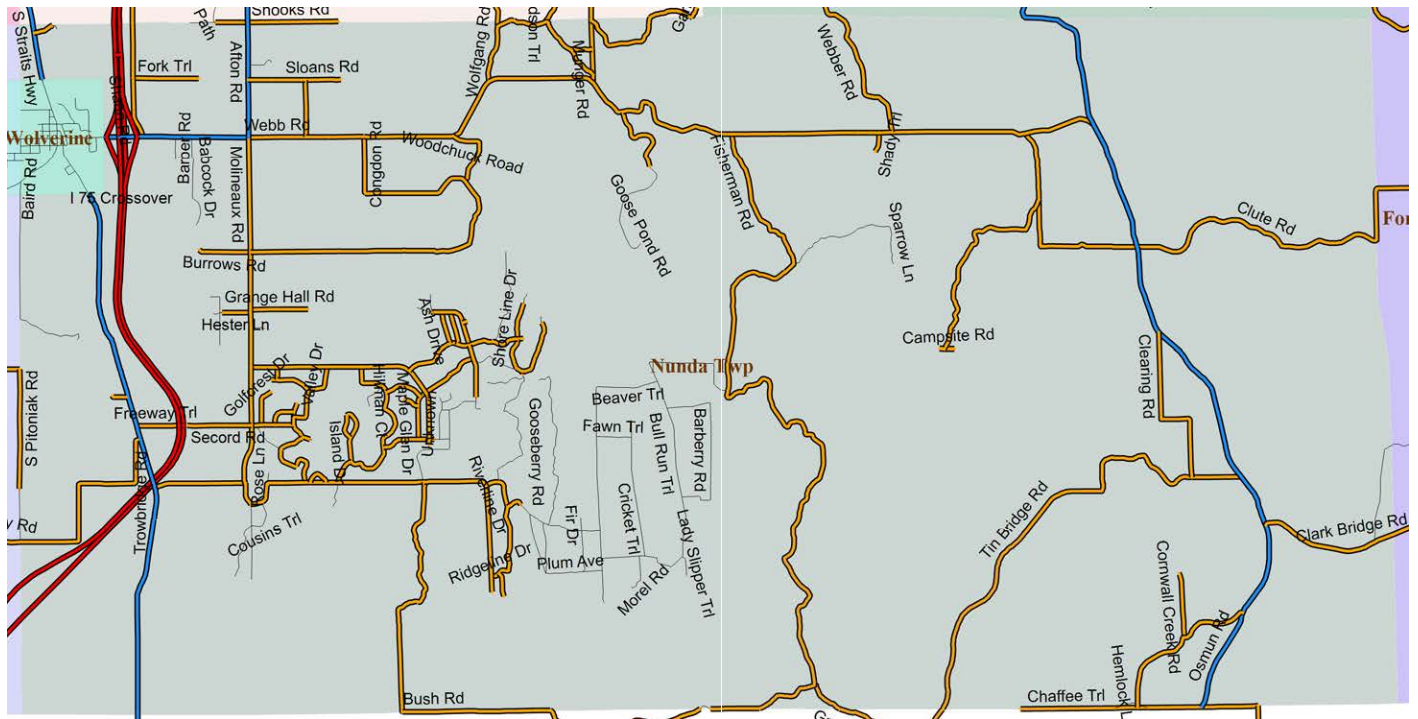


Cheboygan County Road Commission

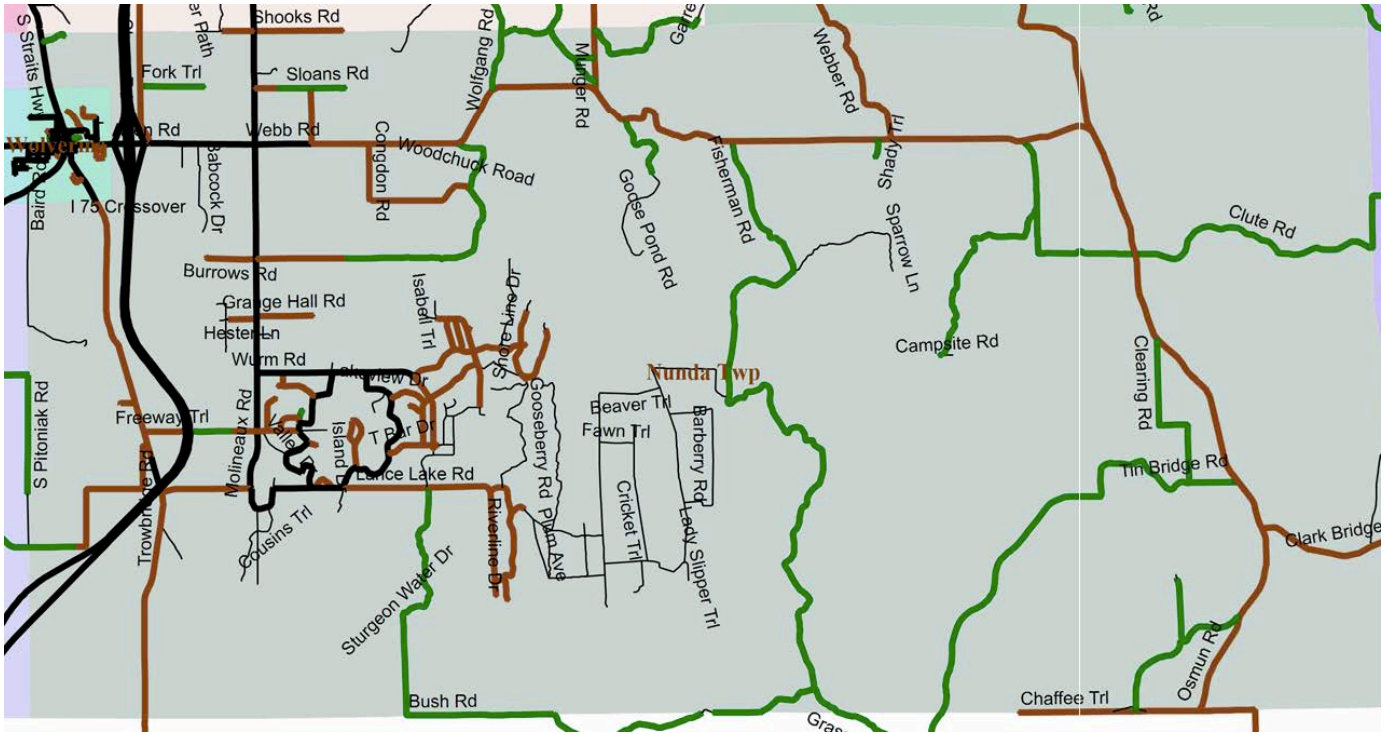
Nunda Township Local Road Ratings Report for 2021

The goal of the Road Commission is to use Asset Management Strategies when planning projects for the roads under the jurisdiction of the Cheboygan County Road Commission. Asset management, as defined by Public Act 199 of 2007, is an “ongoing process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment. Using asset management will allow the Road Commission and Township to invest the available road funds in a manner that will provide the greatest return.



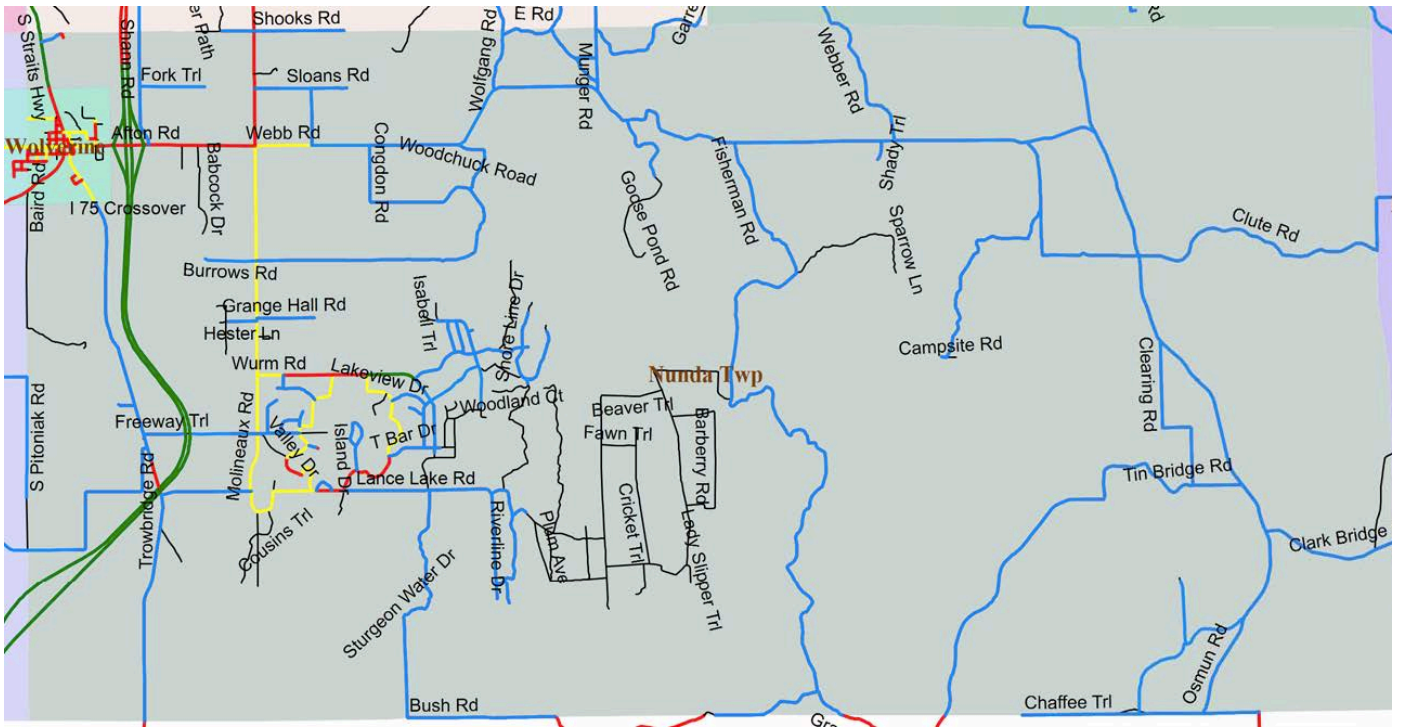
Township Roads by Legal System

Red = State Highways – Blue = County Primary Roads – Orange = County Local Roads



Roads by Surface Type

Black = Pavement – Brown = Gravel – Green = Seasonal



**Good / Fair / Poor Condition
Paved Roads (primary and local)**

Green = Good - Yellow = Fair – Red = Poor – Blue = Non-paved

PASER Road Rating System

All the local paved roads are rated each year using the PASER Road Rating system in the Township (seasonal roads are not included). PASER, or Pavement Surface Evaluation and Rating, is the rating system that is used in collecting data for RoadSoft. The roads are rated on a scale of 1 to 10 according to surface conditions of the pavement. The tables below show the rating and the suggested maintenance that would be required to preserve the road along with an estimated cost of repair.

PASER Rating and Treatments for Paved Roads

Road Rating	Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
9	No Maintenance necessary. Smooth Surface.	\$ 0
8	Minor Crack Sealing	\$ 600
7	General Crack Sealing and/or Minor Patching	\$ 3,200
6	Patching and Sealcoat	\$ 29,000
	Ultra-thin Asphalt Overlay	\$ 63,000
5	Asphalt Wedging	\$ 47,000
	Asphalt Wedging and Sealcoat	\$ 75,000
	Asphalt Wedging and Ultra-thin Asphalt Overlay	\$ 106,000
4	Asphalt Wedging and Overlay	\$ 142,000
3	Pulverize, gravel and pave	\$ 240,000
2	Reconstruction.	\$ 350,000
1	Reconstruction. Failed Road.	\$ 350,000

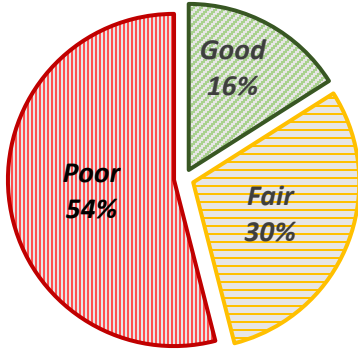
Gravel roads are rated using the Inventory-Based Rating System™ for Gravel Roads (IBR). The IBR system considers three characteristics of a road segment to determine a rating for the segment. Surface width, drainage adequacy and structural adequacy are all evaluated to determine the segment rating. From this evaluation a rating of 1 to 10 is calculated.

IBR Rating and Treatments for Gravel Roads

Road Rating	Existing Condition / Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
8 – 9	Good crown and drainage throughout. Adequate gravel for traffic. Maintain with grading and dust control.	\$ 500
6 - 7	Existing crown with drainage on 50% or more of roadway. Additional gravel needed in some areas along with ditching.	\$ 55,000
3 - 5	Little or no crown. Ditched on less than 50% of the road. Additional gravel needed on entire road along with ditching.	\$ 95,000
1 - 2	Failed road. Reconstruction.	\$ 250,000

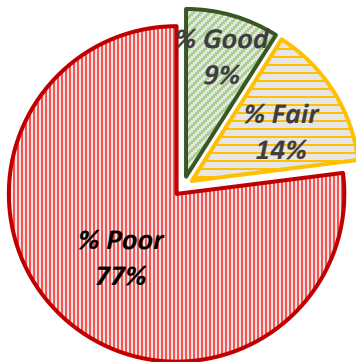
Nunda Township Paved Local Road Ratings

Statewide Local Roads



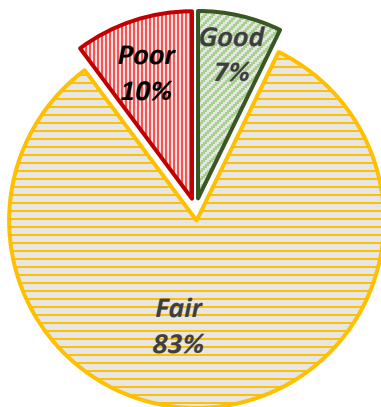
Condition of paved local roads across the State

Countywide Paved Local Roads



Condition of paved local road in Cheboygan County

Nunda Township Paved Local Roads



Condition of paved local roads in Nunda Township

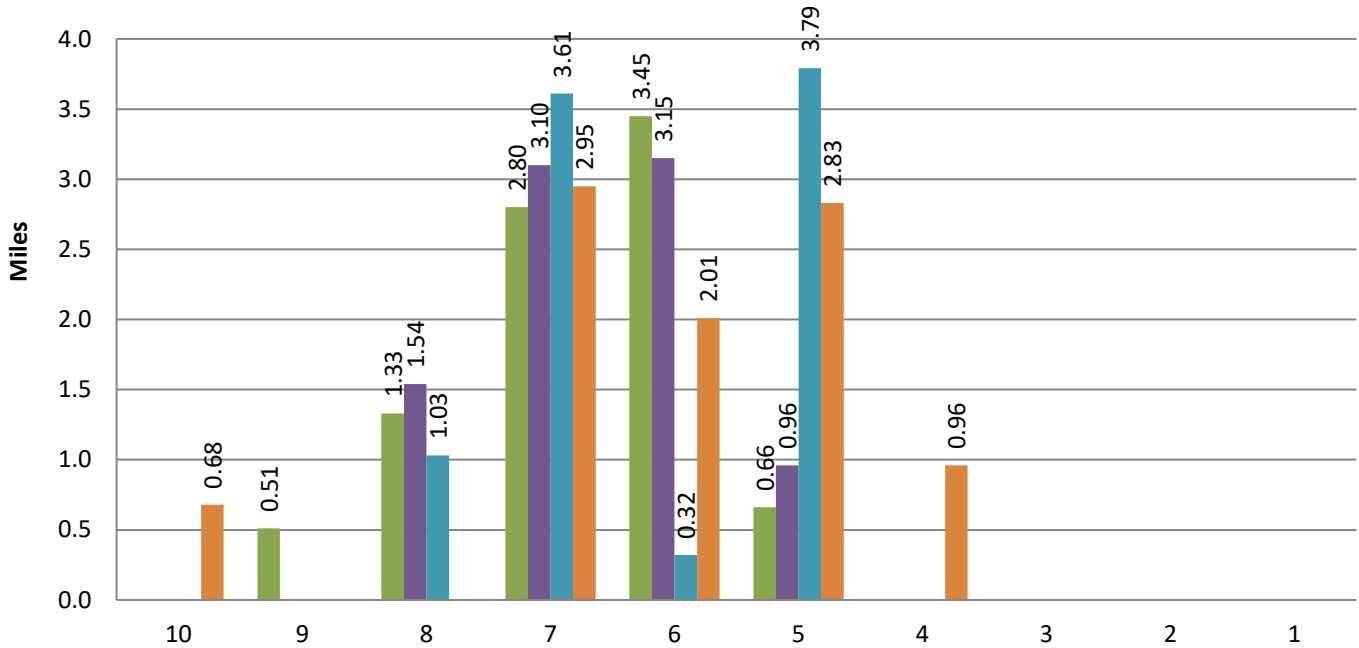
Good = PASER Rating 10-9-8 / Fair = PASER Rating 7-6-5 / Poor = PASER Rating 4-3-2-1

Current Paved Road Ratings

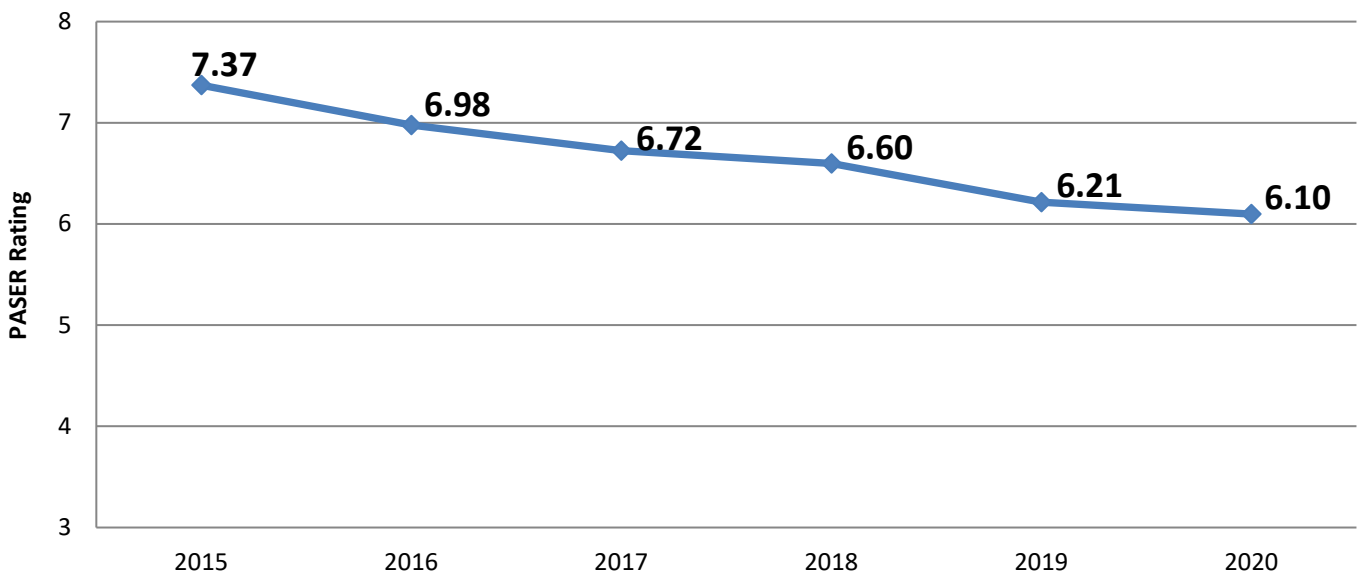
PASER Rating	Road Name	Limits	Length (miles)
10	Wurm Road	Lakeview Road to Maple Glen Road	0.68
9			
8			
7	Lance Lake Road	Molineaux Road to Lakeview Drive.	1.09
	Molineaux Road	Lance Lake Road to Wurm Road.	1.03
	North View Drive	Lance Lake Road to Lakeway Drive.	0.32
	Webb Road	Molineaux Road to Square Trail.	0.51
6	Molineaux Road	Wurm Road to Webb Road.	2.01
5	Lakeway Drive	North View Drive to Valley Drive.	0.52
	Lakeview Drive	Lance Lake Road to Wurm Road.	1.44
	Valley Drive	Lakeway Drive to Wurm Road.	0.87
4	Wurm Road	Molineaux Road to Lakeview Drive.	0.96
3			
2			
1			

2017 - 2020 PASER Ratings for Paved Local Roads

■ 2017 ■ 2018 ■ 2019 ■ 2020



Average PASER Rating for Paved Local Roads



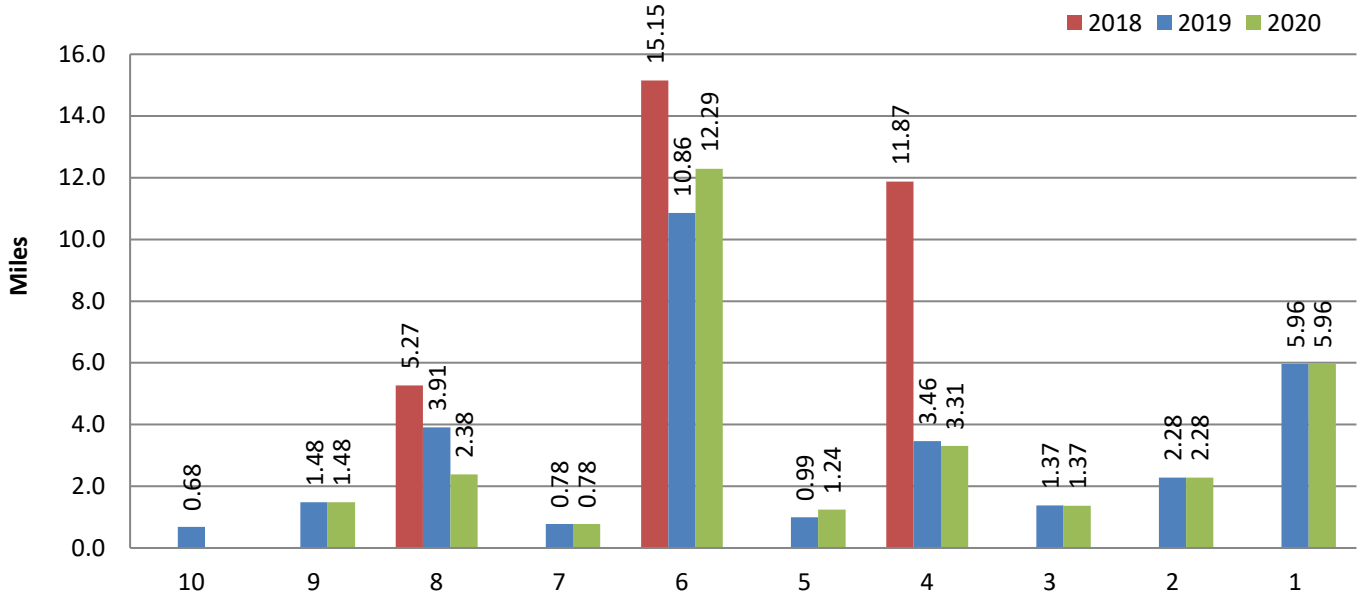
Nunda Township Gravel Local Road Ratings

Current Gravel Road Ratings

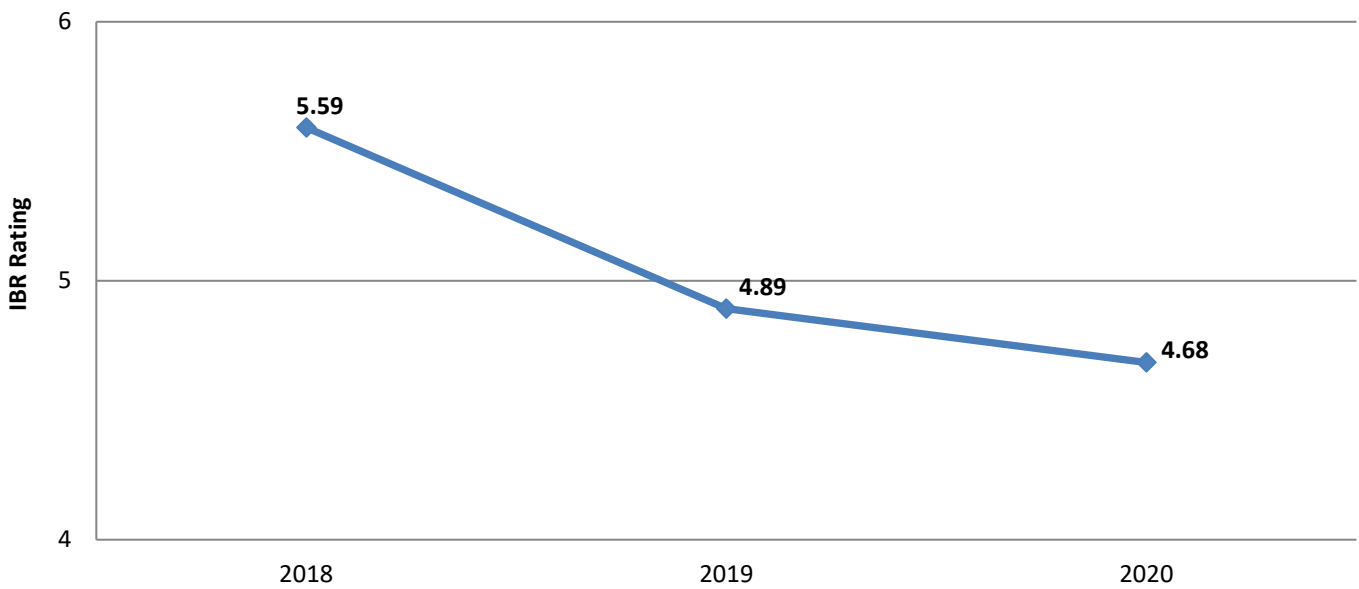
IBR Rating	Road Name	Limits	Length (miles)
10			
9	Avenue-Du-Chalet	Mont Gabriel Road south to end of public road.	0.46
	Chemin-De-La-Montagne	Wurm Road to Avenue-Du-Chalet.	0.52
	Webb Road	Square Trail to Congdon Road.	0.50
8	Lance Lake Road	Lakeview Road to Ericson's Road.	0.59
	Munger Road	Webb Road to Township Line.	0.50
	Secord Road	Molineaux Road to Golfcrest Road.	0.14
	Shann Road	Webb Road to Township Line.	1.00
7	Glen Rose Drive	River Line Drive to end of road.	0.14
	Golfview Drive	Valley Drive to Wurm Road.	0.42
	Pine Court	Lance Lake Road to Lance Lake Road.	0.22
6	Birch Drive	Lakeview Drive to Maple Glen Drive.	0.32
	Burrows Road	West end of road to Seasonal Road.	1.68
	Evergreen Drive	Ridgeline Drive to end of road.	0.21
	Island Drive	Lakeview Drive to Island Drive.	0.75
	Lakeway Drive	Lakeway Drive to turn around.	0.08
	Lance Lake Road	Ericson's Road to Sky Trail Drive.	0.50
		Trowbridge Road to Molineaux Road.	0.80
	Maple Glen Drive	T-Bar Drive to Wurm Road.	0.43
	Mont Gabriel Road	Wurm Road to end of road.	1.13
	Ridge Line Drive	Timber Line Drive to River Line Drive.	0.16
	River Line Drive	Ridgeline Drive to Timber Line Drive.	0.94
	Riverview Drive	Shoreline Drive to end of road.	0.03
	Secord Road	Molineaux Road west to seasonal road.	0.22
		Par Four Drive to Lakeway Drive.	0.26
	Shoreline Drive	Entire road.	1.15
Sky Trail Drive	Lance Lake Road to River Line Drive.	0.05	
Square Trail	Webb Road then north 0.21 miles.	0.21	
T-Bar Drive	Lakeview Drive to end of public road.	0.41	
Timber Line Drive	Sky Trail Drive to end of road.	0.94	

	Webb Road	Burrows Road to Munger Road.	1.60
	Wurm Road	Maple Glen Drive to T-Bar Drive.	0.42
5	Ash Drive	Mont Gabriel to Aspen Drive.	0.28
	Grange Hall Road	Molineaux Road to end of road.	0.50
	Hester Lane	Molineaux Road to Elk Trail.	0.25
	Sloans Road	Afton Road to seasonal road.	0.21
4	Lakeway Drive	Valley Drive to Par Four Drive.	0.05
	Par Four Drive	Secord Road to Valley Drive.	0.24
	Secord Road	Golfcrest Drive to Par Four Drive	0.20
	Webb Road	Congdon Road to Burrows Road.	0.77
		Munger Road to Goose Pond Road.	0.78
	Woodchuck Road	Congdon Road to Burrows Road.	1.27
3	Freeway Trail	Trowbridge Road to end of road.	0.34
	East Perry Road	Change if road condition westerly to Township Line	1.03
2	Aspen Drive	End of public road to Spruce Drive.	0.23
	Chalet Drive	Oak Drive to Mont Gabriel Road.	0.30
	East Perry Road	Trowbridge Road change in road condition.	0.39
	Spruce Drive	Aspen Drive to Mont Gabriel Road.	0.28
	Congdon Road	Woodchuck Road to Webb Road.	0.50
	Golfcrest Drive	Secord Road to end of road.	0.33
	Golfview Drive	Golfview Drive to turn around.	0.05
	Hill Top Drive	Maple Glen Drive to end of road.	0.16
	Oak Drive	Chalet Drive to end of road.	0.04
1	Clark Bridge Road	Osmun Road to Township Line.	1.23
	Webb Road	Goose Pond Road to Osmun Road.	3.87
	Webber Road	Webb Road north to Township line.	0.86

2018 - 2020 IBR Ratings for Gravel Local Roads



Average IBR Rating for Gravel Local Roads



Service Life of Treatments

Service life is the expected time that a treatment will last before needing complete reconstruction. In the table below, an expected service life for a particular treatment is listed. Before a treatment reaches the expected service life, preventative maintenance should be performed. Preventative maintenance will extend the expected service life of the pavement and treatment.

Service Life of Treatments for Paved Roads

Road Rating	Recommended Repair	Expected Service Life (years)
8	Minor Crack Sealing	5
7	General Crack Sealing and/or Minor Patching	5
6	Patching and Sealcoat Ultra-thin Asphalt Overlay	7 7 – 10
5	Asphalt Wedging Asphalt Wedging and Sealcoat Asphalt Wedging and Ultra-thin Asphalt Overlay	7 7 – 10 10
4	Asphalt Wedging and Overlay	12 – 15
3	Pulverize, gravel and pave	15 – 25
2	Reconstruction.	25 - 30
1	Reconstruction. Failed Road.	25 - 30

For example, if a road has a PASER rating of 6, a treatment of a ultra-thin asphalt overlay is recommended (see the Table titled PASER Ratings and Treatment on page 1). The expected service life for an ultra-thin asphalt overlay is 7-10 years. Preventative maintenance in the form of crack sealing may be required after 2 years.

Expected service life may be shorter if the road is on poor soils that are not addressed as part of the treatment. If a project is selected that is not the recommended treatment, the service life listed in the table above will be shorter and preventative maintenance will need to be performed sooner.

Service Life for a gravel road is difficult to predict. Gravel road conditions can change rapidly based on weather, grading and traffic effects on the roads.

Road Plan

The proposed road plan is based on the PASER rating and the associated repairs for the surface. The plan provides budgetary numbers, actual project costs will still need to be estimated on a per project basis. Review of the expected service life must also be considered when selecting projects and repairs based on the PASER rating. If a longer service life is desired then a different repair would be selected. The following plan does not incorporate maximum service life (ie. total reconstruction) in the proposed repairs. The Road Commission matching dollars is expected to grow moving forward as Road Commission funding increases.

2021 Proposed Projects

Option 1: Single Chip Seal

A single chip seal would extend the road life approximately 5 – 7 years.

Road Name / Limits	Project Type	Length (miles)	Estimated Cost	PASER RATING
North View Drive Lance Lake Road to Lakeway Drive	Single Chip Seal	0.32	\$10,600	7
Lakeway Drive North View Drive to Valley Drive	Single Chip Seal	0.52	\$17,100	5
Valley Drive Lakeway Drive to Wurm Road	Single Chip Seal	0.87	\$28,600	5
Lakeview Drive Lance Lake Road to Wurm Road	Single Chip Seal	1.44	\$52,800	5

Single Chip Seal Projects \$ 109,100

Option 2: Single Chip Seal with Fog Seal

A single chip seal with fog seal would extend the road life approximately 8 – 10 years.

Road Name / Limits	Project Type	Length (miles)	Estimated Cost	PASER RATING
North View Drive Lance Lake Road to Lakeway Drive	Single Chip Seal	0.32	\$15,000	7
Lakeway Drive North View Drive to Valley Drive	Single Chip Seal	0.52	\$24,400	5
Valley Drive Lakeway Drive to Wurm Road	Single Chip Seal	0.87	\$40,800	5
Lakeview Drive Lance Lake Road to Wurm Road	Single Chip Seal	1.44	\$67,500	5

Single Chip Seal with Fog Seal Projects \$ 147,700