

Road Commission of Kalamazoo County



**2018
Annual Report**

**109 Years of Service
1909-2018**

**Your Local Road
Professionals
Since 1909**

www.kalamazooountyroads.com



Road
Commission
of Kalamazoo
County

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Honorable Board of County Commissioners
County of Kalamazoo
Administrative Building
201 West Kalamazoo Avenue
Kalamazoo, Michigan 49007

Commissioners:

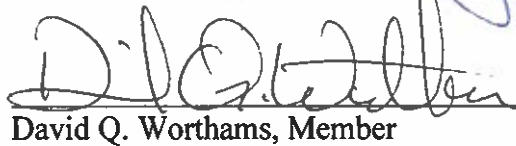
The one hundred ninth annual activities and financial report of the Board of County Road Commissioners of the County of Kalamazoo for the calendar year 2018 is herewith submitted in compliance with the provision of P.A. 283 of 1909, as amended.

Respectfully submitted,

Board of County Road Commissioners
of the County of Kalamazoo


Daniel J. Moyle, Chair


Deborah J. Buchholtz, Vice Chair


David Q. Worthams, Member


David C. Pawloski, Member


Larry Stehouwer, Member

109 YEARS OF SERVICE

The Road Commission of Kalamazoo County was formed by a vote of the people in 1909. Five county residents are appointed by the Kalamazoo County Board of Commissioners to serve staggered six-year terms as road commissioners. To better serve our County and local officials, each Road Commissioner has also been assigned as liaison to a township.

MEET THE 2018 ROAD COMMISSIONERS



David C. Pawloski **Larry Stehouwer**

Deborah J. Buchholtz **Daniel J. Moyle** **David Q. Worthams**

Daniel J. Moyle –Chair

Mr. Moyle, Chair, is a Texas Township resident who was originally appointed to the road commission in November 2007. He is the 2018 Chair of the Board and served as Chair of the Board in 2013, 2014, 2015, 2016 and 2017 and Vice Chair of the Board in 2012. Mr. Moyle has many years of experience managing a company that maintained and constructed highways, roads and airports. Mr. Moyle is retired from Globe Construction Company. Mr. Moyle also served 12 years on the Mattawan Consolidated Public Schools Board of Education. He has served on the Environmental Health Advisory Council. He was reappointed in January 2013 and his term expires 12/31/2018. Township liaison for Brady, Charleston, and Climax townships.

Deborah J. Buchholtz – Vice Chair

Ms. Buchholtz, Vice Chair, is a Cooper Township resident who was appointed to the road commission in January 2015. She is the 2018 Vice Chair of the Board. She previously gained familiarity with the road commission through her five and a half terms on the County Board from 2001-2011, serving as Chair and Vice Chair each for four years. She is the founder and owner of Synergy Health Strategies, L.L.C., an employee benefits and healthcare consulting business, with previous work experience including Executive Director of Big Brothers Big Sisters for the region, Vice President of Operations and Finance for her family's carbon commodities and global transportation business, Business Development Analyst at a fortune 100 company, and most memorable, various management roles at the High Wheeler Ice Cream Parlour & Restaurant founded by her father. Ms. Buchholtz is an active nature-lover who enjoys hiking, biking, and running. Her term expires 12/31/2020. Township liaison for Cooper, Kalamazoo, and Wakeshma townships.

David Q. Worthams – Member

Mr. Worthams, Member, is a Kalamazoo Township resident who was appointed to the road commission in January 2013. He formerly served as the Transportation Policy Advisor to former Michigan House Speakers Rick Johnson, Craig DeRoche and currently serves as the Policy Director for the Michigan Bankers Association (MBA). He is a Past President of the Kalamazoo Junior Chamber (Jaycees) and the Michigan Jaycees. He also served on the Kalamazoo County Metropolitan Planning Commission, serving as their Chairman for 6 years. A lifelong resident of Kalamazoo County, his term expires 12/31/2018. Township liaison: Alamo, Oshtemo and Richland townships.

David C. Pawloski—Member

Mr. Pawloski, Member is a resident of the City of Kalamazoo who was appointed to the road commission in March 2017. David is the current Community Services Liaison for the United Way of the Battle Creek & Kalamazoo Region. He also currently serves on the Local Officers Compensation Committee for the City of Kalamazoo which sets the salaries of the Mayor, Vice Mayor and Commissioners. Mr. Pawloski also serves on various organization and non-profit boards. He has been a resident of Kalamazoo County since 1994. He serves on the Kalamazoo County Environmental Health Advisory Council. David and his wife Molly are the proud parents of their son, Joseph, who attends Kalamazoo Public Schools. His term expires 12/31/2022. Township liaison for Prairie Ronde, Schoolcraft, and Texas townships.

Larry Stehouwer – Member

Mr. Stehouwer, Member, is a Cooper Township resident who was appointed to the road commission in March 2017. He previously worked as a professional civil engineer on public infrastructure and development projects, primarily for townships in Kalamazoo, Allegan and Ottawa counties. He retired in 2010 from the consulting engineering firm of Prein & Newhof. He volunteers at several nonprofits including the Friends of the Kalamazoo River Valley Trail, Kalamazoo Christian School Foundation, Appalachia Reach Out, Kalamazoo Deacons Conference, Calvary Community Church - Plainwell, Sea to Sea and has served on township appointed boards including Cooper Township's Planning Commission and Board of Review, and the Southwest Michigan Building Authority which services Cooper and Oshtemo townships. He serves on the Kalamazoo County Parks and Recreation Commission. He enjoys helping others, time with family, the outdoors, road trips, and bicycling. His term expires on 12/31/2022. Township liaison for Comstock, Pavilion, and Ross townships.

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Road Improvements

Alamo Township
Brady Township
Charleston Township
City of Portage
Climax Township
Comstock Township
Cooper Township
Kalamazoo Township
Oshtemo Township
Pavilion Township
Prairie Ronde Township
Richland Township
Ross Township
Schoolcraft Township
Texas Township
Wakeshma Township

CHAPTER 1

Road Commission of Kalamazoo County Overview

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**W Avenue – Schoolcraft Village Limit to Portage Road, Schoolcraft Township
Scrap Tire Experimental Project**

Facts and Figures

For Calendar Year Ending December 31, 2018

The Board

Daniel J. Moyle, Chair
 Deborah J. Buchholtz, Vice Chair
 David Q. Worthams, Member
 David C. Pawloski, Member
 Larry Stehouwer, Member

County Bridge System

- Bridges 62
- Restricted Bridges 7
- *Closed Bridges 0

Signs and Signals

- Signs Posted 23,922
- Stop Signs 2,547
- Signalized Intersections 48
- Intersections with Flashing Signal 40
-

Project Summary 2018

- Miles of Primary Roads Paved 26
- Miles of Primary Roads Chip Sealed 56
- Miles of Local Roads Paved 39
- Miles of Local Roads Chip Sealed 47
- Miles of Local Roads Regraveled 2
- Reconditioned Bridges 0
- Reconstructed Bridges 1
- Projects Managed by RCKC 187

Certified Miles

Township	Primary Miles	Local Miles
Alamo	31	38
Brady	29	47
Charleston	21	24
Climax	25	47
Comstock	43	75
Cooper	31	63
Kalamazoo	26	75
Oshtemo	42	77
Pavilion	27	48
Prairie Ronde	22	52
Richland	27	49
Ross	26	53
Schoolcraft	28	34
Texas	32	92
Wakeshma	25	48
City of Portage	11	0
Total Primary Road Miles	446	
Total Local Road Miles		822
Total Miles		1,268
Total Gravel Local Road Miles		105
Total All-season Road Miles		300



*Bridge totals are based on information from the National Bridge Inventory. Bridges taken out of service that have more than 5 years with no progress toward scheduling replacement are deemed not of significant importance and removed from the bridge inventory.



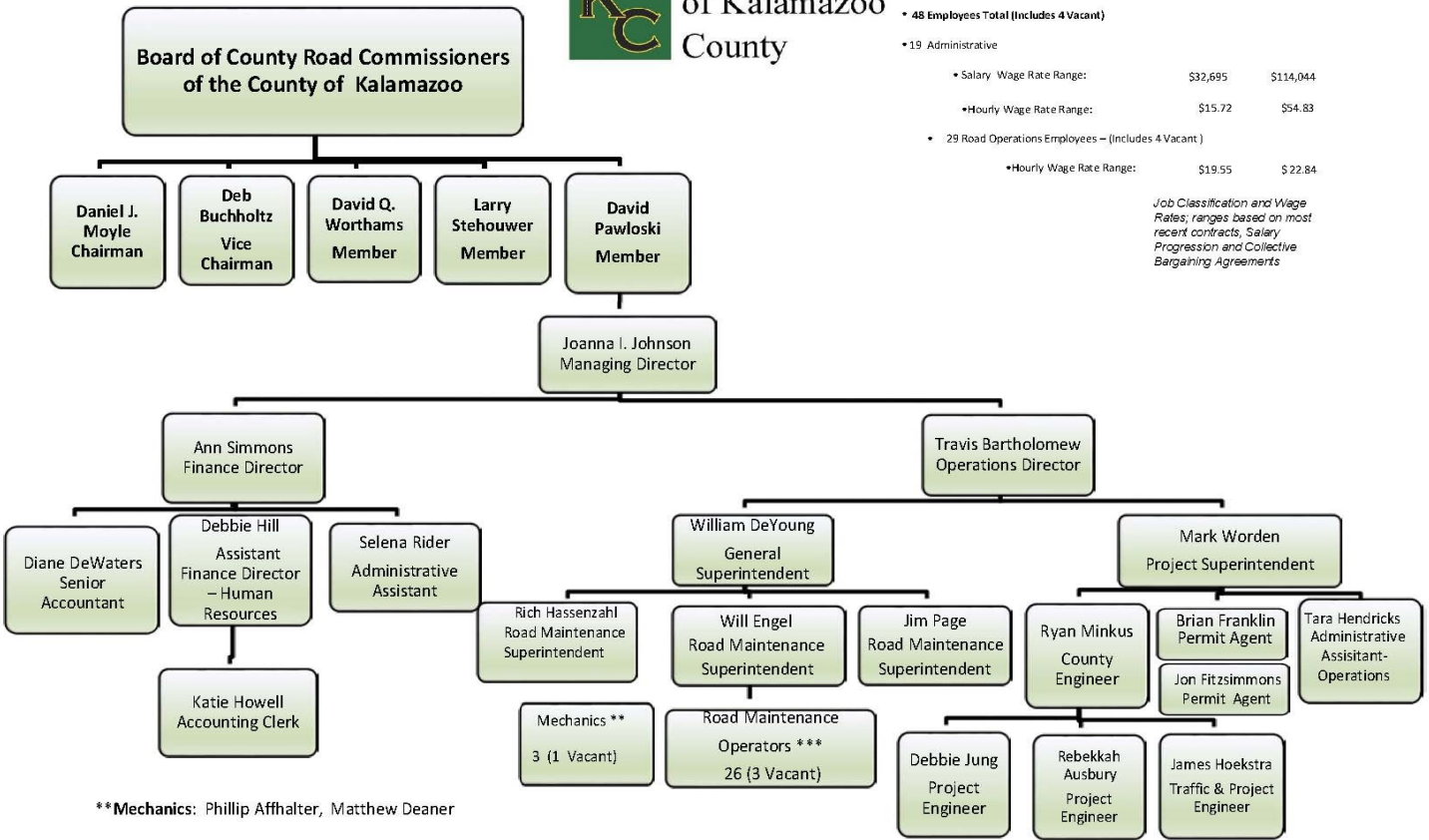
Road Commission of Kalamazoo County

December 2018

- 5 Road Commissioners
- 48 Employees Total (Includes 4 Vacant)
- 19 Administrative

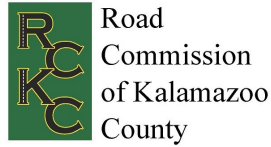
• Salary Wage Rate Range:	\$32,695	\$114,044
• Hourly Wage Rate Range:	\$15.72	\$54.83
• 29 Road Operations Employees – (Includes 4 Vacant)		
• Hourly Wage Rate Range:	\$19.55	\$22.84

Job Classification and Wage Rates; ranges based on most recent contracts, Salary Progression and Collective Bargaining Agreements



**Mechanics: Phillip Affhalter, Matthew Deaner

*** Road Maintenance Operators: Todd Hill, James Frederick, Ricky McClish, Peter Snyder, Joseph Peck, James D. Brown, Melvin Guyton, Tarrance DeKilder, Aaron Srackangast, Donald Easley, Jason Mikkilborg, Joseph Rix, Shelby Harris, Kevin Davis, Steven Kuilema, Robert Robinson, Tori Simpson, William Oxx, Rob Kern, Donald Hinga, Brian Stauffer, James T. Hill, Dirk Stapert



Road
Commission
of Kalamazoo
County

The goal of the Board of County Road Commissioners of the County of Kalamazoo is using our expertise, energy and funds to provide the safest and most convenient road system possible, and to contribute to economic development and high quality of life throughout the county.

INTRODUCTION

The Road Commission of Kalamazoo County (RCKC) has provided a brief overview of our funding, operations, and assets within this report. Additional financial and audit information, publications and resources can be found on our website at www.kalamazooountyroads.com.

This report provides a citizens' guide to the efforts by RCKC in public service. These efforts are on-going and continuously developed to meet the needs of our changing reality, while improving our infrastructure. Our work is never complete and we will continue to be focused on continuous improvement, leadership and public service. Our goal is to be the BEST road commission in the State. This is only accomplished by our team of employees vested in the spirit of leadership and service. Thank you for allowing us the opportunity to serve you.

The RCKC is the jurisdictional authority over all public roads lying outside the incorporated cities and villages within Kalamazoo County, exclusive of any state trunkline highway. At the end of 2018, RCKC maintains 1,268 miles of roads throughout the 576 square-mile county. The RCKC certified primary road system consists of 446 miles; the remaining 822 miles comprise the local road system. Along with the road system, RCKC maintains bridges, traffic signs/signals, culverts, storm sewers, and roadsides throughout the county. The State's 83 county road agencies are responsible for approximately 90,000 miles of county roads.

PROJECT SELECTION

The RCKC establishes road improvement priorities for the primary road system. Annually, our staff develops an improvement plan spanning five years that is based on engineering assessments and on-site reviews. This plan is reviewed and projects undertaken based on current and future road needs and anticipated funding. On October 31, 2017 the RCKC adopted a \$53 million, five-year Primary Road Capital Improvement Plan (CIP) for the period 2018 through 2022. The plan includes such preservation-structural improvement projects as resurfacing, reconstructing and widening roads, upgrading certain roads to all-season status, safety projects, bridge replacements, upgrading traffic signals, and non-motorized facilities.

For the local road system, RCKC establishes road improvement priorities which are developed in conjunction with township governments. Each township works with our team to develop a 5-year Local Road CIP supporting asset management for planning purposes and local road preservation. In 2018, staff continued to work with our townships to develop these plans. The RCKC maintains a local road participation fund program that provides funds for each township that must be matched on a dollar-for-dollar basis for local road improvement projects. In 2018, RCKC applied \$1,700,000 toward this local match program. The Board on April 17, 2018 shared an additional allocation of dollars to our local road system from Public Act (PA) 82 of 2018 for use in 2018. This is a unique one time allocation that did not require local township match. Additional allocation of PA 82 funds in the amount of \$300,000 provided a total local road commitment for 2018 to \$2,000,000. Projects included local road preservation-structural improvement, preventive maintenance and construction projects such as chip seal, hot mix asphalt (HMA) overlays and road reconstruction. There continues to be a significant impact to the investments in the local road system with our township partners.

The financial commitment of townships and residents through the years has proven invaluable. These partnerships help provide better service to our joint constituencies and a long term collaborative effort. Also available for funding, under the provisions of [Act 246, Public Acts of 1931, as amended](#), is the special assessment district option. The State statute provides an opportunity to fund local road improvement projects through the creation of a special assessment district. This can be initiated either by response to a township board resolution or by a petition of landowners. There was one special assessment district by a petition from landowners in 2018—East Long Lake Drive – R Avenue to 25th Street, Pavilion Township, which was approved October 2, 2018 to be constructed in 2019.

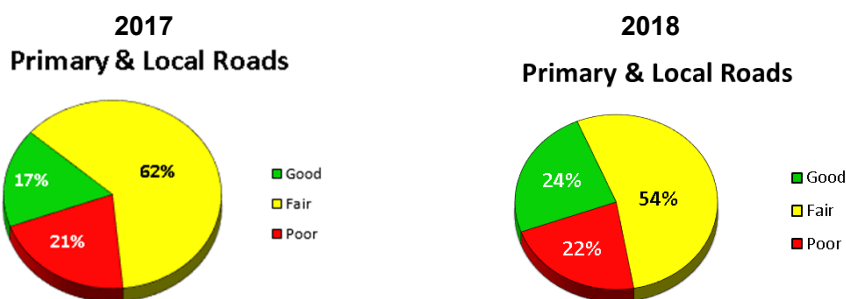
Texas Township in 2010, Alamo Township in 2014 and Ross Township in 2017 approved a special assessment district under the provisions of **Act 188, Public Acts of 1954, as amended**, by Township board resolution to assist in local road improvements. Comstock Township in 2016 and Charleston Township in 2018 for 2019, in accordance with **Act 51, Public Acts of 1951 (Act 51)**, Section 20, as amended (**MCL 247.670**), authorized to appropriate general fund monies and to also levy a property tax not to exceed three mills in any year, and to pay the same into the county road fund of the county for the maintenance and/or improvement of county roads within the Township, pursuant to an agreement between the Township and the RCKC to assist in local road improvements. Climax Township was the only township in Kalamazoo County with a dedicated road millage for many years, until the residents of Wakeshma Township also approved a dedicated road millage in November of 2018. Kalamazoo Township residents approved a \$9.75 million bond proposal in February 2015 to also assist in 3-year local road improvements (2017 was the 3rd year).

ASSET MANAGEMENT

In 2018, three Public Acts (PA) were enacted related to asset management. PA 323, 324 and 325. These laws established two new councils: the Michigan Infrastructure Council (MIC) and the Water Asset management Council (WAMC). The Transportation Asset Management Council (TAMC), which has been in existence since 2002, scope was modified including requirements to address asset management plans for local agencies. Beginning in 2020, local road agencies responsible for 100 or more certified miles of road will be required to have an asset management plan. This includes the RCKC. The RCKC and its history in supporting the principles of asset management is well situated to meet these requirements in 2020.

Infrastructure is a valuable asset in every community. It is important to maintain these assets as efficiently and cost effectively as possible. A transportation asset management program allows RCKC to plan and prioritize road improvements. Since 2004, federal aid eligible road asset management data has been collected in Kalamazoo County. In 2009, the RCKC began a process of collecting data on the non-federal aid system and to date all 15 townships have been completed. Updated data will be gathered on a 3-year township rotation for the non-federal aid system. In 2018, updated federal aid ratings were completed and local ratings were completed for Texas, Ross, Brady, Alamo and Climax Townships. The data collected used the Pavement Surface Evaluation and Rating (PASER) system, as is used in the federal aid data collection. The method of collection using the Roadsoft Geographic Information Systems (GIS) laptop data collector and trained RCKC staff consisted of a survey of roads and each pavement was assigned a rating based on PASER criteria. PASER rating is based on a number system, 1 through 10 with 1 being the worst and 10 being the best. This data will assist in establishing a strategic plan for project selection and maintaining our infrastructure with the right fix at the right time for our primary and local road system. The RCKC has completed asset management plans for both paved roads and bridges building on the asset management principles in place which can be found on our RCKC website "Road Data" page.

In 2018, our overall road network condition improved slightly after approximately \$14 million of investments. However, ongoing investment in asset management on our roads is needed to maintain them in good condition.



For additional local asset management information, please visit the RCKC website "[Road Data](#)" or the TAMC website Dashboards at www.michigan.gov/tamc for additional information on asset management statewide federal aid system. It is important to share the RCKC manages over \$139 million of infrastructure assets.

Please review our asset management graphs, in this report, that reflect data for RCKC's primary and local road system.

FINANCES

The RCKC is a special purpose government engaged in a single government program of road and bridge maintenance, preservation and construction for the county of Kalamazoo, Michigan. Our annual audited financial statements are included in the basic financial statements of Kalamazoo County, Michigan as a discretely presented component unit. Our Board of County Road Commissioners adopts an annual budget in accordance with the [Uniform Budgeting Act \(P.A. 621 of 1978\)](#). An independent audit is performed annually on RCKC financial statements, and we annually submit our PA 51 Financial Report to the Michigan Department of Transportation (MDOT) as required by PA 51. In 2018, we continued to take every possible step to increase our efficiency by controlling expenditures, including overhead and administrative costs. Steps taken include staffing changes, benefit modifications, technology enhancements, equipment investments, on-going collaboration, modifications to our winter maintenance operations, road innovations and modifications to our material usage.

Please review our financial graphs in this report, that reflect data for our revenues, expenditures, pension/other post-employment benefits, historical information, and winter maintenance operations.

PA 298 of 2012 allows the MDOT to request the local agency to engage an auditor to conduct a performance audit of whether it has expended funds in compliance by PA 51. If requested, this audit is completed in accordance with the Government Auditing Standards, issued by the Comptroller General of the United States. The RCKC engaged our auditors, even without the request of MDOT, to complete a PA 51 audit. **“For the road commission’s year ending December 31, 2018. The RCKC is in compliance with PA 51, as amended. “**

REVENUES

MICHIGAN TRANSPORTATION FUND

The Michigan Transportation Fund (MTF), the repository of motor fuel taxes and vehicle registration fees collected by the state, is the principal source of road commission funding. The collected funds are distributed to the MDOT, 533 cities and 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. Motor fuel and vehicle registration tax revenue is restricted for transportation purposes by Article IX, Section 9 of the 1963 Michigan Constitution. Motor fuel taxes are excise taxes—a per gallon tax not based on price. The tax on gasoline is cents per gallon whether the pump price is \$2.50 a gallon or \$4.00 per gallon. The cost of materials and services continue to rise and MTF is also used to match any federal aid projects.

Those constitutional provisions are implemented through Michigan Statute – PA 51. Revenue from motor fuel taxes and vehicle registration taxes is first credited to the MTF and then distributed to the following primary recipients in accordance with provisions of PA 51:

- Comprehensive Transportation Fund (CTF) for public transportation programs
- State Trunkline Fund (STF) for construction and preservation of the state trunkline system and administration of the MDOT
- 83 county road agencies for construction and preservation of the county road system and administration
- 533 cities and villages for construction and preservation of the city/village road system and administration

PA 51 also earmarks MTF revenue for certain targeted transportation funds and categorical programs including Transportation Economic Development Fund (TEDF), the rail grade crossing account and the Local Bridge Fund.

On November 10, 2015 Governor Rick Snyder signed a package of legislative transportation funding bills (Michigan Revenue Package) designed to generate \$1.2 billion in new MTF revenues by 2021. This was the first increase in State road funding in approximately 20 years. Approximately half of this total will come from increases in fuel taxes (\$400 million) and vehicle registration fees (\$200 million) starting in 2017. Then, beginning in 2019, increasing amounts of general fund dollars, which are not guaranteed, are anticipated to be transferred to the MTF, reaching \$600 million in 2021. Lastly, the fuel taxes will be indexed to inflation, using the Consumer Price Index (CPI), beginning January 1, 2022.

A summary of the revenue package which began in 2017 is below:

- 7.3 cent increase in State gas tax to 26.3 cents
 - * Constitutionally dedicated to MTF
 - * Note: Michigan also levies a sales tax at the pump, which most states do not; these taxes do not go into the MTF
- 20% increase in State registration fees for passenger vehicles and most commercial trucks

- 11.3 cent increase in diesel fuel bringing it equal to State gas tax
- New taxes on alternative fuels and registration surcharges on electric vehicles

In early 2019, cities, villages and county road agencies were informed of issues impacting the 2018 MTF distribution. The result was a return to the State of MTF distributions. As a result of the over allocation for RCKC was a total reduction in MTF of \$833,250. The State attributed this error to a variety of variables including the conversion to a new computer system. MDOT has taken steps to better manage the process and procedures going forward. Unfortunately, this impacted our budget and infrastructure projects.

During our Construction season in 2018, the RCKC was also caught between the Michigan Infrastructure & Transportation Association (MITA) and Operating Engineers 324 statewide work stoppage. This issue caused active 2018 construction projects to be delayed and a few RCKC projects were not able to be completed. Those affected were carried over for completion in 2019. The RCKC had to address timeline extension and potential recovery of damages due to projects not being completed timely.

Please review our revenue graphs in this report.

STATE AND FEDERAL TRANSPORTATION FUNDS

The RCKC also works diligently to qualify for special sources of revenue for road improvement projects from other state and federal sources.

State sources include TEDF

- TEDF Category A funds are competitively available for road projects related to industry development and redevelopment opportunities
- TEDF Category D funds are available for use to upgrade roads to all-season standards and to develop a network of roads that are not weight restricted during seasonal weight restriction periods
- TEDF Category F funds are competitively available for use to upgrade roads to complete broken links in the all-season-road network in the urban area

FEDERAL SURFACE TRANSPORTATION PROGRAM FUNDS

On December 4, 2015, President Obama signed the Fixing America’s Surface Transportation (FAST) Act which provides funding for transportation programs through 2020. The FAST Act funds surface transportation programs—including, but not limited to, Federal-aid highways—at over \$305 billion for fiscal years (FY) 2016 through 2020. Michigan expects to see a modest increase in federal transportation dollars over the next 5 years. The FAST Act makes federal funds available to state departments of transportation through three U.S. Department of Transportation (DOT) agencies; the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Federal Railroad Administration (FRA).

Federal funding, including Surface Transportation Program (STP) is distributed to the RCKC through the Kalamazoo Area Transportation Study ([KATS](#)), the Metropolitan Planning Organization (MPO) for the Kalamazoo urbanized area. The Rural Task Force (RTF) Program provides STP-Rural federal dollars to rural areas.

Congestion Mitigation Air Quality (CMAQ) programs reduce vehicle pollutant emissions by improving the flow of traffic, or by providing transportation choices that reduce pollution. CMAQ funds are designated to the Kalamazoo region to support projects that will result in improved air quality.

Under the Federal Aid Highway Program, Michigan is also eligible for Local Safety Program funds which are federal funds to be used for road improvements that provide countermeasures that improve and potentially reduce crashes. The FHWA also provides funds from the Highway Safety Improvement Program (HSIP) and a portion of those funds are for the High Risk Rural Road (HRRR) program.

Projects in 2018 utilizing STP funds include:

- **KL Avenue from 11th Street to Drake Road, Oshtemo Township**

Projects in 2018 using CMAQ funds include:

- **KL Avenue at Drake Road, Oshtemo Township (with the City of Kalamazoo)**

Projects in 2018 utilizing Safety Improvement Program funds include:

- Almena Drive at KL Avenue and 1st Street, Oshtemo Township (HRRR)
- 9th Street at KL Avenue and Quail Run Drive, Oshtemo Township
- Q Avenue at 10th Street, Texas Township

Projects in 2018 utilizing RTF funds include:

- 42nd Street from Z Avenue to Y Avenue, Wakeshma Township

TITLE VI NON-DISCRIMINATION PLAN

On August 26, 2014 the RCKC adopted the [Title VI Non-discrimination Plan](#). Training was held internally on October 26, 2018

and we will continue to serve all people of the county of Kalamazoo, including minority populations, low-income populations, the elderly, persons with disabilities, and those who traverse the State of Michigan. The RCKC recognizes its responsibility to provide fairness and equity in all of its programs, services, and activities, and that it must abide by and enforce federal and state civil rights legislation.

LOCAL BRIDGE PROGRAM FUNDS

Under the Federal Aid Highway Program, Michigan is eligible to use federal funds to improve the condition of highway bridges through replacements, rehabilitation, and preservation activities.

Established by 2004 Public Act 384, an amendment to Act 51, provides financial assistance to local highway authorities for the preservation, improvement, reconstruction of existing bridges, or the construction of bridges to replace existing bridges in whole or part. Revenues are provided from an Act 51 earmark of ½ cent of the gasoline excise tax (approximately \$22 million), and a separate (approximately \$5 million) Act 51 earmark of MTF revenue. Through legislation in 2004, Michigan created a Local Bridge Fund to be administered by the Local Bridge Advisory Board and seven Regional Bridge Councils. Funding from the Local Bridge Fund is allocated to each region based on available funds and weighted ratios provided in the legislation. The recent Michigan Revenue Package which began in 2017, did not allocate additional funding to the local bridge program.

These funds are available on a statewide competitive basis for which we apply annually. The funds can be used for bridge replacement, rehabilitation, and preventive maintenance projects. Bridges with high traffic volumes, that are structurally deficient, or do not function in a way that meets traffic needs are more likely to receive funding. In 2018, the RCKC did not receive any local bridge program funding revenue. **However, we completed the 36th Street over Dorrance Creek, Climax Township, bridge replacement to eliminate the only structural deficient bridge on the primary road system using MTF funding. Three of our 62 bridges are noted as structurally deficient on our local road system.**

The TAMC annual report on deficient bridges is available on the TAMC website at www.michigan.gov/tamc.

In 2018, 4.8% of RCKC (3 bridges) are rated as structurally deficient: Structurally Deficient (SD) status – A highway bridge is classified as structurally deficient if the deck, superstructure, substructure, or culvert is rated in “poor” condition (0 to 4 on the National Bridge Inventory (NBI) rating scale). A bridge can also be classified as SD if its load carrying capacity is significantly below current design standards or if a waterway below frequently overtops the bridge during floods.

Please review our Bridge Rating Summary graph in this report.

NON-MOTORIZED FACILITIES

The Board of County Road Commissioners are committed to working with local governments to develop safe and efficient non-motorized transportation routes throughout the communities within Kalamazoo County and adopted a [Non-motorized Facilities Policy](#). This policy provides the practical application in working with our partners in the approach to Complete Streets. The RCKC recognizes the value of non-motorized facilities, while simultaneously acknowledging the necessity of working within applicable funding requirements and fiscal limitations and competing needs of other public use considerations including utilities, engineering issues such as proper drainage, safety, right-of-way (ROW) dimensions maintenance issues, as well as the competing interests of users such as pedestrians, joggers, runners, strollers and bicyclists. All of these community and administrative interests should be valued appropriately in facilitating the development of a non-motorized facilities. The RCKC typically serves as the grant applicant for non-motorized facilities when using public funding sources. In Act 51, of the funds allocated from MTF, not less than 1%

of those funds shall be expanded for construction or improvement of non-motorized transportation and facilities. These non-motorized facilities included paving of road shoulders, and widening of lanes. Ten years of qualified expenditure for non-motorized improvements for the RCKC total \$6,689,192.78 with \$864,497.40 in 2018.

Non-motorized Facilities Applications/Agreements Approved in 2018 include:

Kalamazoo Township
Oshtemo Township
Kalamazoo River Valley Trail

OTHER AREAS OF EXPERTISE

RCKC engineering and maintenance operations are responsible for providing engineering and technical expertise for road commission projects, operations, preventive maintenance and improvement projects on the county road system. These efforts also include our traffic safety operations. RCKC operations are supported by our administrative team, equipment and capital outlay expenditures.

EXPENDITURES

Routine maintenance activities and safety improvements, outside of construction projects, include surface patching, sign maintenance, roadside mowing, tree cutting/removal, culvert repair, guardrail maintenance, and winter maintenance.

During 2018, approximately 65 miles of roads were paved and to preserve the capital investment in our roads, 103 miles of roads were chip sealed. Over \$14 million dollars was spent on our primary road system and over \$11 million on our local road system for both construction and maintenance operations in 2018.

RCKC Announced First Road Commission Apprenticeship in the State of Michigan

Apprenticeship Program in 2018

The RCKC was proud to announce the approval to move forward with the Municipal Maintenance Technician (Roadway Technician) Registered Apprenticeship Program. The program was approved by the Board of County Road Commissioners of the County of Kalamazoo at their April 3, 2018 Board Meeting and the Standards of Apprenticeship were signed at the Board of County Road Commissioners Board Meeting on July 24, 2018. This program is nationally registered with the US Department of Labor and is the first of its kind in the State of Michigan, as it relates to road commissions.



The RCKC worked collaboratively with the Teamsters Local 214, the US Department of Labor, Michigan Human Resources Development Inc. (M-HRDI) and Michigan Works (MIWORKS) Southwest to develop this registered apprenticeship as a way to support recruitment and retention in this unique industry, and assist in further developing the skill trades in the State of Michigan.

Achievements in 2018

In addition to the investment in our infrastructure through projects and maintenance, the RCKC team continued to focus on delivering the very best in public service in Kalamazoo County by other means listed below.

Communication:

- We continued our Township Joint meeting presentations and completed a Township Joint meeting survey.
- We began to Tweet on Twitter.
- We participated in public outreach including the Touch a Truck, Put the Brakes on Fatalities Day supported by the Kalamazoo Bicycle Club, MIWorks Employer of the Day and International Walk to School Day.
- We had a variety of public educational opportunities with special thanks to Public Media Network which showcased our winter maintenance program, 2018 projects and chip seal.
- We helped organize a variety of educational workshops including Utility and Plat Development, Railroad Network, and Integrated Infrastructure Mapping.
- We had further permit application updates and availability of on-line payments.

The Team:

- We continued opportunities in a operations variety of staff training throughout the year – too numerous to mention.
- We became a registered Apprentice Program for our Road Maintenance with the US Department of Labor. A joint effort with our Teamsters Local 214.
- Various staff continue in a variety of leadership positions in industry associations throughout the state.
- Our Managing Director Johnson served as the County Road Association (CRA) President (20 years since Kalamazoo held this position) in 2018—2019 and in various infrastructure asset management capacities.

MISC :

- Wakeshma Township - informational meetings and citizens supported 3 mills for a dedicated road improvement program beginning in 2019.
- Charleston Township .5 mills MCL 247.670 by the Township Board.
- Southwest Michigan Bikeway signs placed in specific locations support of non-motorized efforts, and sign policy.
- RCKC policies approved this year included the Sign Policy, Road Commissioners Code of Conduct, and Community Engagement.
- We continued collaborative efforts with the MDOT, Drain Commissioner, Villages, City of Kalamazoo, City of Portage and Road Commissions in the State.

EDUCATIONAL OPPORTUNITIES

In 2018, the RCKC held educational sessions including;

**Rail Network Training for Local Officials
October 2018**



**PASER Training
April 2018**



PUBLIC OUTREACH

In 2018, the RCKC participated in the following events:

**Touch-A-Truck
May 2018**



Put the Brakes on Fatalities Day
October 2018



We hope this report provides a better understanding of the RCKC, our commitment to Kalamazoo County, the role we play in improving our infrastructure and how we contribute to economic development and high quality of life throughout the county and state. We are proud of our accomplishments and our operations. **Our TEAM continues to be dedicated to enhancing our road network and putting those limited transportation dollars to efficient use. Our Local Roads Matter!**

Your Local Road Professionals since 1909

● GLOSSARY



All-season Roads—roads that have a sub-base, base and surface of adequate thickness and composition to withstand year-round use of heavy vehicles without damage.

Asset Management – Asset Management is a systematic approach to selecting the best investment at the right time to maximize the life of the asset being measured.

Cape Seal—a combination surface treatment that preventative maintenance incorporates an application of micro seal over a newly constructed surface treatment of chip seal. Cape seals provide a dense, waterproof surface with improved skid resistance and ride quality.

6-8 Year Service Life

Chip Seal—a surface treatment in which the pavement is sprayed with asphalt emulsion and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement.

5-7 Year Service Life

Crack Fill - the placement of bituminous material into nonworking or low movement cracks to reduce infiltration of water and incompressible materials into the crack. Filling typically involves less crack preparation than sealing and performance requirements may be lower for the filler materials. Filling is often considered a short-term treatment to help hold the pavement together between major maintenance operations or until a scheduled rehabilitation activity.

1-3 Year Service Life

Crack Seal—is the placement of a bituminous material into working cracks. Crack sealing requires thorough crack preparation and often requires the use of specialized high quality materials placed either into or above working cracks to prevent the intrusion of water and incompressible materials. Crack sealing is generally considered to be a longer-term treatment than crack filling.

1-2 Year Service Life

Double Seal—two applications of chip seal applied to a prepared gravel base. Another chip seal should be applied within 1-2 years.

8-10 Year Service Life

Epoxy Overlay—an application of polymer epoxy followed immediately with an application of aggregate to a concrete bridge deck. The overlay provides a long lasting seal to protect the deck from the effects of traffic and harsh weather conditions. Epoxy overlays are used to extend the life of a structure by sealing moderate to extensive deck cracking.

10-15 Year Service Life

Fog Seal—a light application of asphalt emulsion diluted with water and without addition of any aggregate applied to the surface of a bituminous pavement or recent chip seal. Fog seals are used to renew aged asphalt surfaces and seal minor cracks. When applied over a recent chip seal, the fog seal reduces dust and lock in aggregate.

1-3 Year Service Life

Hot Mix Asphalt (HMA) Overlay—the application of HMA (hot mix asphalt), a combination of aggregates, mineral fillers, RAP (recycled asphalt pavement), and asphalt binder placed over an HMA surface.

15-20 Year Service Life

HMA Paving—the application of HMA (hot mix asphalt), a combination of aggregates, mineral fillers, RAP (recycled asphalt pavement, and asphalt binder placed on top of a gravel surface.

15-20 Year Service Life

HMA Ultra-Thin Overlay—a thin overlay of hot-mix asphalt typically a thin lift of ¾ inch.

5-7 Year Service Life

HMA Wedge—a repair patch placed by a paving machine that varies in depth and length.

Infrared— heating and blending new blacktop with infrared heated existing blacktop to create a joint-free integral patch.

Local Roads—county roads not classified as primary roads in the county road system. RCKC has 817.76 miles of these roads, including those in plats.

Micro Seal—a mixture of polymer modified asphalt emulsion, mineral aggregate, mineral filler, water, and other additives, properly proportioned, applied to a paved surface. Also utilized to correct rutting on high volume roads.

6-8 Year Service Life

Onyx —preventative maintenance treatment that seals the pavement surface preventing water infiltration and oxidation from the sun.

● GLOSSARY



Preservation— structural improvement roadwork, including placing a hard surface on a gravel road, reconstructing an existing road or bridge, resurfacing a road with a HMA overlay or installing new culverts or catch basins.

PASER—PASER stands for Pavement Surface Evaluation and Rating. The PASER system is a tool to rate the current surface condition of roads.

Preventive Maintenance—roadwork, including chip sealing, pavement crack seal, and wedging to preserve roads by retarding deterioration.

Primary Roads—major roads within the county road system in Kalamazoo County. Primary roads typically accommodate 85 percent of the county's road system traffic and include 448.35 miles of roadway.

Pulverizing/Pulverization – is a recycling process that grinds existing asphalt in place and blends it with the underlying materials to form a quality aggregate base. Typically a layer of gravel is placed on top of the asphalt surface before grinding.

Reconstruction—removing the existing road surface and replacing it with materials of a thickness that conforms to current standards for pavement design. Vertical and horizontal alignment drainage improvements are also factors of reconstruction.

Service Life Varies

Rehabilitation – placing additional surface material or doing other work to return a road, including its shoulders, to structural or functional adequacy.

Service Life Varies

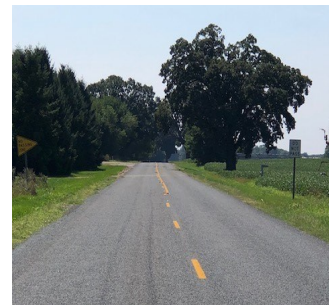
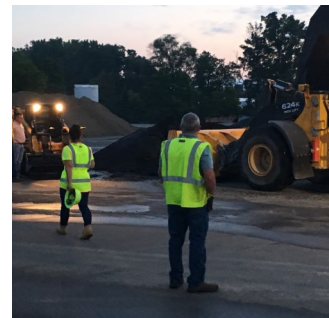
Resurfacing—placing new bituminous pavement material HMA over existing pavement. Shoulder material is added to match the elevation of the new pavement. *Service Life Varies*

RoadSoft - road data geographic information systems software used to compile and report on the condition assessments. RoadSoft was developed by Michigan Technological University for all road agencies in Michigan

Routine Maintenance—roadwork, including winter maintenance, pothole filling, roadside mowing, pavement marking, traffic signal maintenance, dust control, gravel road grading, guardrail repair, minor drainage corrections, etc.

Rubblizing— concrete pavement broken into an aggregate base and the rubblized roadbed is left in place and used as part of the new pavement structure.

Texas Underseal— an application of a chip seal, prior to a HMA overlay application. The Underseal treatment provides an impervious membrane to stop the intrusion of moisture.



CHAPTER 2

Road Commission of Kalamazoo County Overview

Road and Bridge Improvements

Primary Road Preservation Structural Improvements	Pages 15—18
Primary Structures Structural Improvements	Page 19
Primary Road Preventive Maintenance	Pages 20—23
Primary Structure Preventive Maintenance	Page 24
Local Road Preservation Preventive Maintenance and Structural Improvements	Pages 25—34



Idlewild Drive—Ross Township

- **PRIMARY ROAD PRESERVATION**
- **STRUCTURAL IMPROVEMENTS**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
ALAMO TOWNSHIP	
Ravine Road - 12th Street to F Avenue, Project No. 210069 Pulverize, Mill, HMA Paving, and Intersection Improvements	387,724.78
Ravine Road - F Avenue to D Avenue, Project No. 210103 Mill and HMA Overlay	360,441.08
BRADY TOWNSHIP	
26th Street - UV Avenue to TU Avenue, Project No. 210104 Mill and HMA Overlay	109,999.91
S. Sprinkle Road – S Avenue to V Avenue, Project No. 210150 (Brady Township and Pavilion Township) Mill and HMA Overlay	353,504.80
V Avenue/24th Street - Vicksburg Village limit to S Sprinkle Road, Project No. 210151, Mill and HMA Overlay	60,966.41
CHARLESTON TOWNSHIP	
38th Street – O Avenue to MN Avenue, Project No 210106 (Charleston Township and Climax Township) Mill and HMA Overlay	65,460.65
CLIMAX TOWNSHIP	
36th Street - at O Avenue, Project No. 210073 (2016) Design for intersection improvement	195.69
38th Street – O Avenue to MN Avenue, Project No 210106 (Charleston Township and Climax Township) Mill and HMA Overlay	132,904.94
COMSTOCK TOWNSHIP	
Cork Street - Park Circle Drive to 26th Street, Project No. 210133 Mill and HMA Overlay	74,851.24
N Avenue - at Grand Trunk Railroad, Project No. 210499 Design for future widening to 3 lanes	4,728.42
N Avenue – Sprinkle Road to 26th Street, Project No. 210321 (2017) HMA Overlay (Comstock Township and Pavilion Township)	23,335.68
Old Cork Street - Midlink Drive to Park Circle Drive, Project No. 210113 Mill and HMA Overlay	12,399.83

- **PRIMARY ROAD PRESERVATION**
- **STRUCTURAL IMPROVEMENTS**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Comstock Charter Township Continued)	TOTAL
Park Circle Drive - Sprinkle Road to Cork Street, Project No. 210112 Mill and HMA Overlay	146,077.91
River Street - ML Avenue to E Michigan Avenue, Project No. 210148 Mill and HMA Overlay	261,006.01
Sprinkle Road – 600' south of Lake Street to 600' north of Lake Street, Mill and HMA Overlay Project No. 210144	92,141.95
Sprinkle Road - Lake Street to Park Circle Drive, Project No. 210157 Traffic Signal Upgrades	163,532.13
Sprinkle Road - E Michigan Avenue to E Main Street, Project No. 210317 (2013/2014) Design, Federal Safety Program	88.11
Sprinkle Road - G Avenue/Market Street to Kilgore Road-Zylman Avenue, (2016) Design Traffic Signal (Shared - City of Portage) Project No. 210025	15,318.16
 COOPER TOWNSHIP	
D Avenue – Douglas Avenue to 17th Street, Project No. 210074 Mill, HMA Overlay, Intersection Improvement	497,506.15
D Avenue - Grand Elk RR west .25, Project No. 210075 Design for Drainage and Shoulder Improvements	42,270.79
D Avenue – Rolling Meadows Drive to Douglas Avenue, Project No. 210494 Design, Mill and HMA Overlay	17,045.92
G Avenue at Riverview Drive Project No. 210088 Traffic Signal Design (Cooper Township/City of Parchment)	2,574.35
Riverview Drive – G Avenue to Mt Olivet Road, Project No. 210087 Design, Signal, Mill, HMA Overlay and Drainage	58,948.52
 KALAMAZOO TOWNSHIP	
Nazareth Road – 1478' south of East Main to M-43, Project No. 210146 Mill and HMA Overlay	219,720.50
Lake Street – Olmstead Road to S. Sprinkle Road, Project No. 210154 Mill and HMA Overlay	121,896.48

- **PRIMARY ROAD PRESERVATION**
- **STRUCTURAL IMPROVEMENTS**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION

OSHTEMO TOWNSHIP

9th Street - at Quail Run and KL Avenue, Project No. 210089 Traffic Signal Upgrades	230,956.36
11th Street - at Michigan Avenue, Project No. 210143 (2017) Traffic Signal Modernization and Interconnect	240.52
Alemna Drive - at KL Avenue/1st Street, Project No. 210090 Intersection Realignment-Federal Aid HRRR	402,033.64
KL Avenue - 9th Street to 11th Street, Project No. 210111 Mill and HMA Overlay	247,821.50
KL Avenue - 11th Street to Drake Road, Project No. 210078 Widen to 3 Lanes / HMA Overlay-Federal Aid STP	355,087.77
N Avenue - 6th Street to 9th Street, Project No. 210147 Mill and HMA Overlay	256,124.62
Stadium Drive – 9th Street to US-131, Project No. 210068 (2017) Construction engineering and contractor payment by State for HMA	15,085.58
Stadium Drive - 6th Street to 8th Street, Project No. 210110 Mill and HMA Overlay	325,645.30
Stadium Drive - 4th Street to 6th Street, Project No. 210034 (2017) Construction engineering and contractor payments by State for intersection	614.48

PAVILION TOWNSHIP

25th Street - R Avenue to QR Avenue, Project No. 210095 Mill and HMA Paving	66,554.08
29th Street - S Avenue to N Avenue, Project No. 210149 HMA Overlay	854,856.85
S. Sprinkle Road – S Avenue to V Avenue, Project No. 210150 Mill and HMA Overlay (Brady Township and Pavilion Township)	174,114.31

PRAIRIE RONDE TOWNSHIP

8th Street - 7225' s/o S Avenue to TU Avenue, Project No. 210159 Temporary Road Repair for Flooding (Prairie Ronde Township and Texas Townships)	164,389.68
8th Street - TU Avenue to 5280' south of S Avenue, Project No. 210160 Design for HMA Overlay	29,289.01
W Avenue - 2nd Street to 4th Street, Project No. 210498 Design	15,439.12

- PRIMARY ROAD PRESERVATION
- STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
RICHLAND TOWNSHIP	
32nd Street - M-43 to North County Line, Project No. 210108 Mill and HMA Overlay	114,145.77
DE Avenue - North Sprinkle Road to 26th Street, Project No. 210145 HMA Overlay	102,883.43
SCHOOLCRAFT TOWNSHIP	
W Avenue - Schoolcraft Village Limit to Portage Road, Project No. 380665 Chip Seal/HMA Overlay Experiment Scrap Tire	256,476.02
TEXAS TOWNSHIP	
9th Street - Cracker Barrel Drive to I-94, Project No. 210962 Mill and HMA Overlay	56,820.56
12th Street - Q Avenue to Texas Drive, Project No. 210134 Mill and HMA Overlay	424,502.70
Q Avenue - at 10th Street, Project No. 210082 New Traffic Signal	270,596.22
WAKESHMA TOWNSHIP	
42nd Street - Y Avenue to W Avenue, Project No. 210063 (2016) Construction engineering and contractor payments by State	78.05
42nd Street - Z Avenue to Y Avenue, Project No. 210064 Reconstruction	843,288.71
OTHER	
Sprinkle Road - G Avenue/Market Street to Kilgore Road-Zylman Avenue, Project No. 210025, Traffic Signal, (Shared with City of Portage/Comstock Township)	13,048.73
TOTAL PRIMARY STRUCTURAL IMPROVEMENTS	8,444,733.42



**W Avenue - Schoolcraft Village Limit to Portage Road,
Schoolcraft Township**

- PRIMARY STRUCTURES
- STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
BRADY TOWNSHIP	
U Avenue - Over the Portage River, Project No. 220062 (2015) Design (2016) Bridge Construction	1,615.13
CLIMAX TOWNSHIP	
36th Street - Bridge over Dorrance Creek, Project No. 220310 Bridge Replacement	948,054.93
PAVILION TOWNSHIP	
Q Avenue Bridge - over Portage River, Project No. 220309 Bridge Replacement	1,251.01
S Avenue Bridge - over Portage River, Project No. 220308 Bridge Replacement	1,300.89
ROSS TOWNSHIP	
C Avenue - over Augusta Creek, Project No. 220311 Design - Bridge Replacement	53,808.71
<hr/> TOTAL PRIMARY BRIDGE	<hr/> 1,006,030.67



36th Street - over Dorrance Creek, Climax Township

- **PRIMARY ROAD**
- **PREVENTIVE MAINTENANCE**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
BRADY TOWNSHIP	
27th Street – TU Avenue to T Avenue, Project No. 380592. Chip Seal and Fog Seal	13,124.57
TU Avenue – South Sprinkle Road to 27th Street, Project No. 380660. Chip Seal and Fog Seal	34,132.41
CHARLESTON TOWNSHIP	
E. Michigan Avenue – Galesburg City Limit to 40th Street, Project No. 380606 HMA Wedging, Chip Seal and Fog Seal	59,962.28
CLIMAX TOWNSHIP	
36th Street - W Avenue to PQ Avenue (Climax Township and Wakeshma Township), Project No. 380597 Chip Seal and Fog Seal	94,455.71
42nd Street – O Avenue to MN Avenue, Project No. 380599. Chip Seal and Fog Seal	42,011.68
COMSTOCK TOWNSHIP	
26th Street – N Avenue to ML Avenue, Project No. 380589. HMA Wedging, Chip Seal and Fog Seal	82,205.80
26th Street – E. Main Street to H Avenue, Project No. 380590. Chip Seal and Fog Seal	47,294.58
26th Street – H Avenue to M-43, Project No. 380591. Chip Seal and Fog Seal.	28,999.05
29th Street – N Avenue to MN Avenue, Project No. 380593. Chip Seal and Fog Seal	18,499.04
34th Street – N Avenue to MN Avenue, Project No. 380594. Chip Seal and Fog Seal	18,594.38
35th Street – I-94 to M-96, Project No. 380595 Chip Seal and Fog Seal	83,386.56
35th Street – MN Avenue to ML Avenue, Project No. 380596 Chip Seal and Fog Seal.	30,759.63

- **PRIMARY ROAD**
- **PREVENTIVE MAINTENANCE**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
COOPER TOWNSHIP	
G Avenue – Riverview Drive to North Sprinkle Road, Project No. 380607 HMA Wedging, Chip Seal and Fog Seal	91,715.38
Riverview Drive – North County Line to Mount Olivet Road, Project No. 380656 HMA Wedging, Chip Seal and Fog Seal	169,833.88
KALAMAZOO TOWNSHIP	
Alamo Avenue – Nichols Road to Kalamazoo City Limit, Project No. 380603 Chip Seal and Fog Seal	37,288.36
Kendall Avenue – M-43 to Kalamazoo City Limit, Project No. 380612 Chip Seal and Fog Seal	14,188.63
Mosel Avenue – Douglas Avenue to North Westnedge Avenue, Project No. 380613 Chip Seal and Fog Seal	22,464.91
Parchmount Avenue – 845' west of Nazareth Road to Nazareth Road, Project No. 380652 Chip Seal and Fog Seal	11,860.57
Ravine Road – Drake Road to Kalamazoo City Limit, Project No. 680655 HMA Wedging, Chip Seal and Fog Seal	19,126.68
N. Westnedge Avenue – Business US-131 Ramp to G Avenue, Project No. 380614 HMA Wedging, Chip Seal and Fog Seal	39,588.09
OSHTEMO TOWNSHIP	
9th Street – M-43 to H Avenue, Project No. 380602. HMA Wedging, Chip Seal and Fog Seal.	47,404.60
H Avenue – 10th Street to Drake Road, Project No. 380611. Chip Seal and Fog Seal	31,357.61
Stadium Drive – 9th Street to US-131, Project No. 380659. Chip Seal and Fog Seal	146,627.51

- **PRIMARY ROAD**
- **PREVENTIVE MAINTENANCE**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
PAVILION TOWNSHIP	
24th Street – South Sprinkle Road to R Avenue, Project No. 380588 Chip Seal and Fog Seal	14,252.74
R Avenue – 24th Street to East Long Lake Drive, Project No. 380654 HMA Wedging, Chip Seal and Fog Seal	13,079.63
South Sprinkle Road – Centre Avenue to Milham Road, Project No. 380658 Crack Fill, (City of Portage RCKC Jurisdiction)	8,886.39
PRAIRIE RONDE TOWNSHIP	
W Avenue – West County Line to 2nd Street, Project No. 380664 HMA Wedging, Chip Seal and Fog Seal	26,407.53
RICHLAND TOWNSHIP	
G Avenue – 32nd Street to 37th Street, Project No. 380609 Chip Seal and Fog Seal, (Richland Township and Ross Township)	67,101.24
G Avenue – M-43 to North Sprinkle Road, Project No. 380610. Chip Seal and Fog Seal	34,708.69
Sprinkle Road – DE Avenue to G Avenue Partial Construction Joint Only 2018, Project No. 380424. Chip Seal 2nd Application	7,757.96
ROSS TOWNSHIP	
G Avenue – 32nd Street to 37th Street, Project No. 380609 Chip Seal and Fog Seal, (Ross Township and Richland Township)	24,818.26
East Gull Lake Drive – C Avenue to north county line, Project No. 380605 HMA Wedging, Chip Seal and Fog Seal	78,939.59
G Avenue – 37th Street to 39th Street, Project No. 380608. Chip Seal and Fog Seal	45,272.13
SCHOOLCRAFT TOWNSHIP	
U Avenue – Oakland Drive to Portage Road, Project No. 380661. HMA Wedging, Chip Seal and Fog Seal.	37,881.46
W Avenue – Schoolcraft Village Limit to Portage Road, Project No. 380665 Chip Seal Hot Rubber Trial /HMA Overlay Trial	265,223.38

- **PRIMARY ROAD**
- **PREVENTIVE MAINTENANCE**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
TEXAS TOWNSHIP	
3rd Street – Q Avenue to P Avenue, Project No. 380598 HMA Wedging, Chip Seal and Fog Seal	32,978.76
6th Street / PQ Avenue – N Avenue to 5th Street, Project No. 380600 HMA Wedging, Chip Seal and Fog Seal	102,696.07
WAKESHMA TOWNSHIP	
36th Street - W Avenue to PQ Avenue, Project No. 380598 Chip Seal and Fog Seal, (Climax Township and Wakeshama Township)	80,462.26
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TOTAL PRIMARY PREVENTIVE MAINTENANCE	2,025,348.00



**East Michigan Avenue west of 40th Street,
Charleston Township**

- **PRIMARY STRUCTURE**
- **PREVENTIVE MAINTENANCE**
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	TOTAL
BRADY TOWNSHIP	
W Avenue - Bridge Over Portage River, Project No. 220061 Bridge Preventative Maintenance	1,547.67
CHARLESTON TOWNSHIP	
E Michigan Avenue - Bridge over Kalamazoo River, Project No. 220060 (2015) Design (2016/2017) Bridge Preventive Maintenance	1,110.26
ROSS TOWNSHIP	
D Avenue Bridge - Over Gull Lake Outlet to west of 37th Street Project No. 220079, (2016) Bridge Preventive Maintenance Design for future project	14,326.85
TOTAL PRIMARY STRUCTURE PREVENTIVE MAINTENANCE	16,984.78



**East Michigan Avenue Bridge,
Charleston Township**

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
ALAMO TOWNSHIP ~ 37.88 Local Road Miles		
7th Street - G Avenue to Owen Drive, Project No. 680633 Chip Seal and Fog Seal	38,558.75	
B Avenue - Van Kal to 2nd Street, Project No. 680634 Chip Seal and Fog Seal	20,076.81	
F Avenue - 6th Street to 7th Street, Project No. 680635 Chip Seal and Fog Seal	12,681.21	
Owen Drive – C Avenue to 3500' north of C Avenue, Project No. 510623 Gravel, Pulverize and HMA Overlay		197,548.25
Owen Drive – 3500' north of C Avenue to B Avenue, Project No. 510624 HMA Overlay		43,026.98
ALAMO TOWNSHIP TOTALS	71,316.77	240,575.22
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BRADY TOWNSHIP ~ 46.63 Local Road Miles		
26th Street – TU Avenue to T Avenue, Project No. 680625 HMA Wedging, Crack Fill and Chip Seal	24,050.46	
32nd Street – U Avenue to T Avenue, Project No. 510619 Gravel, Pulverize, HMA Overlay-Base Course Only		175,565.50
32nd Street – 1900' south of T Avenue (over Asher Drain), Project No. 510671, Culvert Inspection and Scoping		4,617.33
33rd Street – X Avenue to W Avenue, Project No. 680626 HMA Wedging, Crack Fill and Chip Seal	29,421.05	
34th Street – UV Avenue to U Avenue, Project No. 680627 Crack Fill and Chip Seal	12,212.36	
BRADY TOWNSHIP TOTALS	65,683.87	180,182.82
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CHARLESTON TOWNSHIP ~ 23.95 Local Road Miles		
38th Street – M-96 to 5200' north of M-96, Project No. 510666 Gravel, Pulverize, HMA Paving, Base Course Only		212,506.28
L Avenue – 38th Street to 7288' east of 38th Street (stop at concrete pavement), Project No. 680568 2nd Application Chip Seal	23,295.28	
CHARLESTON TOWNSHIP TOTALS	23,295.28	212,506.28

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
CLIMAX TOWNSHIP ~ 47.40 Local Road Miles		
OP Avenue – 44th Street to 47th Street, Project No. 680685 HMA Wedging, Crack Fill and Chip Seal	60,111.60	
43rd Street – Q Avenue to P Avenue, Project No. 680686 Crack Fill and Chip Seal	27,389.32	
Jamieson Street – 36th Street to Woodin Street, Watson Street – QR Avenue to Norscot Street, Project No. 680688 HMA Wedging, Crack Fill and Chip Seal	22,992.33	
Norscot Street – 36th Street to Woodin Street, QR Avenue – 36th Street to Woodin Street, Erick Road – QR Avenue to Norscot Street, Woodin Street – QR Avenue to 314' north of Project No. 510664, HMA Overlay		55,805.88
CLIMAX TOWNSHIP TOTALS	110,493.25	55,805.88

COMSTOCK CHARTER TOWNSHIP ~ 74.50 Local Road Miles

Chestnut Trail – HJ Avenue to Wild Coyote Trail, Wild Coyote Trail – Chestnut Trail to 1482' north of Chestnut Trail (Chestnut Hills) Project No. 680636, Crack Fill, Chip Seal and Fog Seal	23,654.16	
Docsa Street – Lucerne Avenue to East Main Street, Lucerne Avenue – 425' west of Docsa Street to 26th Street, Lantana Avenue – Carter Street to Verleen Street, Elaine Avenue – Magnolia Street to Verleen Street, Susan Avenue – Patricia Street to Verleen Street, Angelo Avenue – Magnolia Street to Verleen Street, Verleen Street – Angelo Avenue to Lucerne Avenue, Magnolia Street – Angelo Avenue to East Main Street, Patricia Street – Susan Avenue to Lois Avenue, Carter Street – Lois Avenue to East Main Street, Lois Avenue – Carter Street to Patricia Street (East Main Homesites No. 1, 2, 3) Project No. 510618, Restoration		26,453.28
MN Avenue – 26th Street to 28th Street, Project No. 510625 Mill and HMA Paving		174,616.35
Winterburn Street – 650' south of M-96 to M-96, Ocom Street – Gleason Street to M-96, Blalock Street - Gleason Street to M-96, Gleason Street – Ocom Street to 572' east of Project No. 510626, HMA Overlay		99,493.41
Lavender Circle – Daylily Lane to Ivy Street, Ivy Street – Daylily Lane to Treetop Drive, Coral Bells Circle – Daylily Lane to Autumn Joy Street, Autumn Joy Street – Daylily Lane to Candytuft Lane, Buttercup Street – 213' south of Daylily Lane to Candytuft Lane, Juneberry Street – Daylily Lane to Sundrop Avenue, Sundrop Avenue – Buttercup Street to Juneberry Street, Daylily Lane – 33rd Street to Juneberry Street, Candytuft Lane – 895' west of Ivy Street to Buttercup Street (Rolling Meadows) Project No. 510627, HMA Overlay		218,604.60

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Comstock Charter Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
<p>Midway Avenue – Saratoga Avenue to Savannah Avenue, Saratoga Avenue – Gull Road (M-43) to Savannah Avenue, Jennings Drive – Gull Road (M-43) to Mission Avenue, Savannah Avenue – 320' west of Midway Avenue to Saratoga Avenue, Avenue, Mission Avenue – Saratoga Avenue to Jennings Drive, (Jennings Plat) Project No. 510628, HMA Overlay</p>		186,543.32
<p>Miller Drive – 7,392' west of 35th Street to 35th Street, Project No. 510670 HMA Wedging</p>		16,278.25
<p>Woodlea Drive at Glendalock Street, Project No. 510675 Remove 2 broken storm sewer pumps and replace with a single pump that has a higher capacity.</p>		3,023.68
COMSTOCK CHARTER TOWNSHIP TOTALS	23,654.16	725,012.89

COOPER CHARTER TOWNSHIP ~ 63.83 Local Road Miles

<p>Fineview Avenue - Douglas Avenue to N Westnedge Avenue, Project No. 680285, Fog Seal</p>	8,796.99	
<p>E Avenue - 23rd Street and DE Avenue, Riverview Drive to N Sprinkle Road Project No. 680286, Fog Seal</p>	4,412.52	
<p>E Avenue - 12th Street to 14th Street, Project No. 680558 Chip Seal Partial 2nd Application</p>	19,794.34	
<p>Eaglehead Avenue – Red Rock Trail to 650' east of Rolling Meadows Drive, Rolling Meadows Drive – Eaglehead Avenue to D Avenue (Walker Meadows) Project No. 510622, Mill and HMA Paving</p>		262,561.13
<p>Old Douglas Avenue - G Avenue to F Avenue, Project No. 680631 HMA Wedging, Crack Fill, Chip Seal and Fog Seal</p>	43,074.15	
<p>17th Street - D Avenue to C Avenue, Project No. 680632 Crack Fill, Chip Seal and Fog Seal</p>	25,802.53	
<p>G Avenue - 14th Street to Douglas Avenue, Project No. 680667 Crack Fill and Chip Seal (Cooper Township and Kalamazoo Township)</p>	41,604.96	
COOPER CHARTER TOWNSHIP TOTALS	143,485.50	262,561.13

KALAMAZOO CHARTER TOWNSHIP ~ 74.89 Local Road Miles

<p>Bixby Road – Humphrey Street to M-43, Elkerton Avenue – Humphrey Street to M-43, Wayside Road – Humphrey Street to 880' north of Humphrey Street Project No. 510641, HMA Overlay</p>		96,632.58
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- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Kalamazoo Charter Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
Colgrove Avenue – M-43 to 195' north of Ida Street, Ida Street – Colgrove Avenue to Elkerton Avenue, Elkerton Avenue – M-43 to 176' north of Ida Street, Clark Avenue – M-43 to Brook Drive Project No. 510643, HMA Overlay		74,135.74
Dayton Avenue – Charles Avenue to East Main Street (Eastwood Heights, Vosler's Addition, Sherwood Plat, Washburn Plat and East Highland Park Project No. 510639, Mill and HMA Paving		114,473.02
Fenimore Avenue – East Main Street to Humphrey Street, Chicago Avenue – East Main Street to Humphrey Street, Briar Place – Fenimore Avenue to Chicago Avenue Project No. 510642, HMA Overlay		47,051.62
Nichols Road – Barney Road to G Avenue, Project No. 680668 Chip Seal and Fog Seal	42,568.45	
G Avenue - Douglas Avenue to Pitcher Street, Project No. 680669 Crack Fill, Chip Seal and Fog Seal	34,847.33	
Stamford Avenue – East Main Street to Gertrude Street, Woodrow Drive – East Main Street to Gertrude Street, Upland Drive – East Main Street to 682' north of Gertrude Street, Baker Drive – East Main Street to Mulhearn Avenue, Craft Avenue – East Main Street to 675' north of East Main Street Project No. 510640, HMA Overlay		172,721.21
Stewart Drive – Olmstead Road to 1271' east of Olmstead Road Project No. 510638, Mill and HMA Paving		31,547.06
KALAMAZOO CHARTER TOWNSHIP TOTALS	77,415.77	536,561.24
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OSHTEMO CHARTER TOWNSHIP ~ 76.56 Local Road Miles		
Crystal Lane – Parkview Avenue to 11th Street, Project No. 510668 HMA Overlay		57,663.01
H Avenue – 3rd Street to 6th Street, Project No. 510629 HMA Overlay		161,358.45
Highland View Drive – 3rd Street to 4696' east of 3rd Street, Kullenbrooke Drive – Highland View Drive to 436' east of Highland View Drive (Forest Glen Estates) Project No. 680637, Crack Fill, Chp Seal and Fog Seal	30,615.59	
J Avenue - Van Kal Street to 2nd Street, Project No. 680638 HMA Wedging, Crack Fill and Chip Seal	38,457.33	

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Oshtemo Charter Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
<p>Saint Charles Place – 573’ west of Belle Chase Boulevard to 8th Street, Baton Rouge Street – Belle Chase Boulevard to 8th Street, Belle Chase Boulevard – 206’ south of Saint Charles Street to Baton Rouge Street, Bayou Vista Street – Saint Charles Street to Baton Rouge Street, Cajun Drive – 175’ west of Belle Chase Boulevard to Belle Chase Boulevard (Lasalle Homesites)</p> <p>Project No. 680639, Crack Fill, Chip Seal and Fog Seal</p>	27,632.56	
<p>Saint James Avenue – 6th Street to La Jessica Circle, La Jessica Circle – Saint James Avenue to 1588’ east of Saint James Avenue, La Lisa Lane – 233’ south of La Jessica Circle to La Jessica Circle, La Lisa Lane – La Jessica Circle to 865’ north of La Jessica Circle (Oak Park)</p> <p>Project No. 680640, Crack Fill, Chip Seal and Fog Seal</p>	27,165.40	
<p>Antiqua Circle – 11th Street to 368’ east of Tropicana Street, Tropicana Street – Brandy Avenue to Antiqua Circle, Brandy Avenue – Tropicana Street to Fountain Square Drive, Fountain Square Drive – 183’ south of Brandy Avenue to Sweet Briar Drive, Caribia Avenue – Fountain Square Drive to 203’ east of Fountain Square Drive (Rose Arbor)</p> <p>Project No. 680641, Crack Fill, Chip Seal and Fog Seal</p>	19,904.85	
<p>Toscana Street – Mirabella Avenue to L Avenue, Mirabella Avenue – Toscana Street to 252’ east of Toscana Street, Calabria Avenue – 261’ west of Toscana Street to Toscana Street</p> <p>Project No. 680642, Crack Fill, Chip Seal and Fog Seal</p>	18,226.96	
<p>Valley Industrial Drive – 9th Street to 610’ east of 9th Street,</p> <p>Project No. 680643, Crack Fill, Chip Seal and Fog Seal</p>	10,616.42	
OSHTEMO CHARTER TOWNSHIP TOTALS	172,619.11	219,021.45
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PAVILION TOWNSHIP ~ 48.35 Local Road Miles		
<p>R Avenue – 29th Street to 4000’ east of 29th Street, Project No. 510663 Gravel, Pulverize and HMA Overlay</p>		185,761.28
<p>R Avenue Over Adams Drain, Project No. 510674 Culvert Design</p>		11,214.39
<p>R Avenue over Portage River, Project No. 520587 Aluminum Box Bridge</p>		26,841.38
<p>T Avenue – 32nd Street to 34th Street, Project No. 680665 HMA Wedging, Crack Fill and Chip Seal</p>	43,973.07	
PAVILION TOWNSHIP TOTALS	43,973.07	223,817.05

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
PRAIRIE RONDE TOWNSHIP ~ 52.11 Local Road Miles		
10th Street – U Avenue to Texas Township line, Project No. 680655 Chip Seal	19,126.68	
YZ Avenue – Prairie Brook Road to east township line, Project No. 680659 HMA Wedging and Chip Seal	32,469.10	
4th Street – U Avenue to Paw Paw Lake Drive, Project No. 680660 Chip Seal	31,770.50	
Paw Paw Heights Drive – 2nd Street to Beach Bay Drive, Rainbow Ridge – Paw Paw Heights Drive to 770' east of Paw Paw Heights Drive, Beach Bay Drive – Paw Paw Heights Drive to 673' east of Paw Paw Heights Project No. 510637, HMA Overlay		75,174.92
PRAIRIE RONDE TOWNSHIP TOTALS	83,366.28	75,174.92
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RICHLAND TOWNSHIP ~ 49.24 Local Road Miles		
D Avenue – 34th Street to east township line, Project No. 680628 HMA Wedging	23,187.53	
D Avenue – M-89 to 34th Street, Project No. 510621 HMA Overlay		47,111.91
34th Street – M-89 to D Avenue, Project No. 510620 HMA Overlay		9,622.17
35th Street – G Avenue to DE Avenue, Project No. 680629 HMA Wedging, Crack Fill and Chip Seal	103,562.79	
EF Avenue – 32nd Street to 3317' east of 32nd Street, Project No. 680630 HMA Wedging and Chip Seal	17,132.56	
RICHLAND TOWNSHIP TOTALS	143,882.89	56,734.08
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ROSS TOWNSHIP ~ 53.44 Local Road Miles		
38th Street / 39th Street – FG Avenue to D Avenue, Project No. 510644 HMA Overlay		212,827.24
41st Street – 5800' south of M-89 to M-89, Project No. 510645 Gravel, Pulverize and HMA Overlay		296,172.14
43rd Street – M-89 to C Avenue, Project No. 510646 Gravel, Pulverize and HMA Overlay		364,748.95

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Ross Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
43rd Street – B Avenue to 4364' north of B Avenue, Project No. 680672 HMA Wedging and Chip Seal	16,441.65	
46th Street – Augusta Drive to M-89, Project No. 680673 Crack Fill and Chip Seal	31,175.93	
47th Street – B Avenue to Baseline Road, Project No. 680674 HMA Wedging and Chip Seal	26,956.40	
AB Avenue – 43rd Street to 44th Street, Project No. 680675 Crack Fill and Chip Seal	20,445.35	
B Avenue – East Gull Lake Drive to 40th Street, Project No. 510647 HMA Overlay		104,540.86
B Avenue – 40th Street to 42nd Street, Project No. 510648 HMA Overlay		71,246.50
B Avenue – 44th Street to 48th Street, Project No. 680681 HMA Wedging and Chip Seal	59,147.84	
Baseline Road – 800' west of 45th Street to 47th Street, Project No. 680682 HMA Wedging and Chip Seal	21,429.88	
D Avenue – 37th Street to 38th Street, Project No. 510649 HMA Overlay		75,800.26
D Avenue – 39th Street to 40th Street, Project No. 680683 Chip Seal	9,689.70	
D Avenue – West Township Line to 37th Street, Project No. 680618 Partial 2nd Application Chip Seal	4,753.88	
EF Avenue – 41st Street to 42nd Street, Project No. 680684 HMA Wedging and Chip Seal	15,977.73	
East Gull Lake Drive – D Avenue to C Avenue, Project No. 510650 HMA Overlay		180,276.51
South Gull Lake Drive – D Avenue to D Avenue, Green Avenue – South Gull Lake Drive to Lewis Street, Avery Street – South Gull Lake Drive to Lewis Avenue, Lewis Avenue – Avery Street to Green Avenue, Yorkville Lane – D Avenue north to South Gull Lake Drive, West Gull Lake Drive – D Avenue to Shoal Avenue, Shoal Avenue – 37th Street to 280' east of West Gull Lake Drive, Lake Vista Drive – 37th Street to 944' east of 37th Street, Project No. 510653, HMA Overlay		229,235.69
Idlewild Drive – 2860' west of Wild Drive to 922' south of Idle Avenue, Wild Drive – Idlewild Drive to 568' east of Idlewild Drive, Idle Avenue – 37th Street to Idlewild Drive, 37th Street – CD Avenue to Idlewild Drive, CD Avenue – 37th Street to West Gull Lake Drive, West Gull Lake Drive – Shoal Avenue to CD Avenue (Idlewild Plat), Project No. 510656, HMA Overlay		129,040.41

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

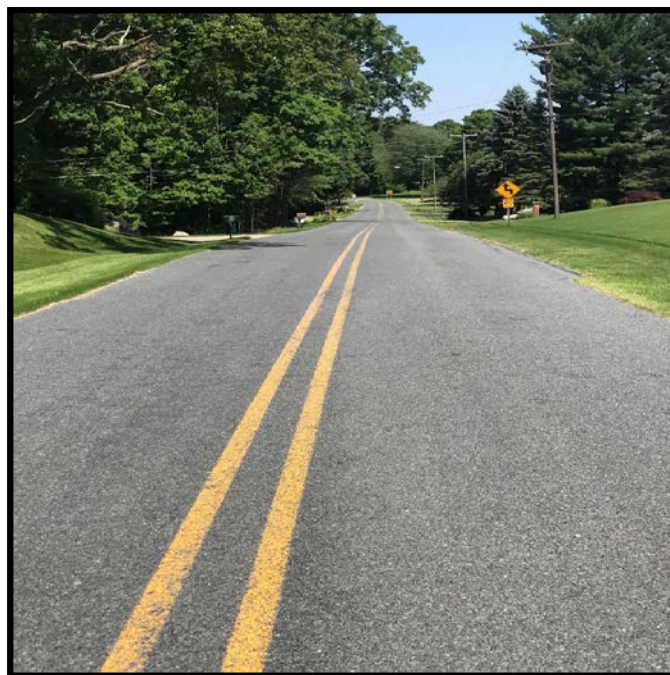
PROJECT DESCRIPTION (Ross Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
Forney Avenue – 220' west of East Gull Lake Drive to Gull Lake Drive, Oakdale Avenue – 1350' south of Forney Avenue to Forney Avenue (Oakwood Park) Project No. 510660, Mill and HMA Overlay		31,259.14
North Sherman Lake Drive – 3605' west of 38th Street to 38th Street Project No. 510661, HMA Overlay		81,913.14
Stoney Creek Drive – Augusta Drive to M-89, Stoney Creek Court – Stoney Creek Drive to 890' east of Stoney Creek Drive, Pin Oak Circle – Marsh Ridge Trail to 1549' north of Marsh Ridge Trail, Marsh Ridge Trail – 2088' west of Stoney Creek Drive to Stoney Creek Drive (Stoney Creek Plat) Project No. 510662, HMA Overlay		299,714.03
ROSS TOWNSHIP TOTALS	206,018.37	2,076,774.88
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SCHOOLCRAFT TOWNSHIP ~ 34.23 Local Road Miles		
16th Street – XY Avenue to W Avenue, Project No. 680661 HMA Wedging and Chip Seal	54,601.80	
16th Street – W Avenue to VW Avenue, Project No. 680662 Crack Fill	5,034.55	
14th Street – VW Avenue to U Avenue, Project No. 680664 HMA Wedging and Crack Fill	18,842.26	
18th Street – XY Avenue to W Avenue, Project No. 680666 HMA Wedging, Crack Fill and Chip Seal	54,598.68	
SCHOOLCRAFT TOWNSHIP TOTALS	133,077.29	0.00
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TEXAS CHARTER TOWNSHIP ~ 92.35 Local Road Miles		
Atwater Court – Texas Drive to 750' north of Texas Drive, Project No. 510632, HMA Overlay		25,496.40
Autumn Glen Street – Shane Street to N Avenue, Autumn Court – Autumn Glen Street to 235' east of Maple Hollow Avenue, Oakwood Avenue – Shane Street to Autumn Glen Street, Timberview Avenue – Shane Street to Autumn Glen Street, Maple Hollow Avenue – 211' south of Autumn Court to Autumn Court, Shane Street – Autumn Glen Street to N Avenue (Autumn Woods) Project No. 680650, Chip Seal and Fog Seal	46,773.46	

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Texas Charter Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
Crestway Drive – 5th Street to Fieldwood Point, Fieldwood Point – 230’ south of Crestway Drive to Crestway Drive, Fieldwood Circle – Crestway Drive to 230’ north of Crestway Drive (Timber Highlands) Project No. 680648, Chip Seal and Fog Seal	14,341.85	
Glade Trail – Windsong Way to 8th Street, Windsong Way – Gladeview Drive to Glade Trail, Gladeview Drive – Windsong Way to Hobblesh Lane, Hobblesh Lane – Gladeview Drive to Lakeridge Place, Lakeridge Place – 1,015’ south of Glade Trail to Glade Trail Project No. 680652, Crack Fill, Chip Seal and Fog Seal	30,753.00	
Glenwynd Drive – 6th Street to O Avenue, Project No. 680649 Chip Seal and Fog Seal	13,353.78	
N Pine Island Court – 1000’ west of Finnagen Street to Finnagen Street, S Pine Island Court – 970’ west of Finnagen Street to Finnagen Street (Pine Island Lake) Project No. 680645, Chip Seal and Fog Seal	7,679.63	
Paw Paw Lake Drive – S Avenue to RS Avenue, Project No. 510634 HMA Overlay		52,935.74
Pennycress Lane – P Avenue to 1st Street, Chicory Trail – Pennycress Lane to 1st Street (Mattawan Heights) Project No. 510631, HMA Overlay		196,244.99
Percheron Street – Q Avenue to Belgian Avenue, Belgian Avenue – 344’ west of Percheron Street to 95’ west of Clydesdale Avenue (Applegate Farms) Project No. 680644, Chip Seal and Fog Seal	16,604.82	
Rolling Pines Court – 10th Street east to 1,230’ east of 10th Street Project No. 680646, Chip Seal and Fog Seal	8,570.71	
RS Avenue – 2nd Street to 6th Street, Project No. 680651 HMA Wedging, Crack Fill and Chip Seal	47,367.90	
Saddle Club Drive – Stoney Brook Road to Dunwoody Court, Dunwoody Court – 542’ south of Saddle Club Drive to Saddle Club Drive, Stoney Brook Road – Braeburn Court to Farmington Avenue, Braeburn Court – 298’ east of Stoney Brook Road to Stoney Brook Road, Vista Ridge Court – 383’ west of Stoney Brook Road to Stoney Brook Road, Bramblewood Drive – 780’ south of Stoney Brook Road to Stoney Brook Road, Cobblewood Drive – 1201’ south of Stoney Brook Road to Stoney Brook Road, Brandy Chase – Bramblewood Drive to Cobblewood Drive, Thrasher Court – 227’ east of Thrasher Lane to Thrasher Lane, Thrasher Lane – Foxcroft Drive to Stoneybrook Road (Rudgate) Project No. 510633, Mill and HMA Overlay		278,097.28

- LOCAL ROAD PRESERVATION
- PREVENTIVE MAINTENANCE AND STRUCTURAL IMPROVEMENTS
- Including Administrative and Equipment Allocations

PROJECT DESCRIPTION (Texas Charter Township Continued)	PREVENTIVE MAINTENANCE	STRUCTURAL IMPROVEMENT
Windscape Drive – Plum Hollow Circle to Bay Ridge Road, Bay Ridge Road – 590’ south of Windscape Drive to Texas Drive, Plum Hollow Circle – 375’ south of Windscape Drive to Windscape Drive, Bentley Drive – 615’ south of Windscape Drive to Texas Drive, Quail Hollow Circle – 290’ west of Bay Ridge Road to Bay Ridge Road, Arbor Pointe Circle – Bay Ridge road to 220’ east of Bay Ridge Road (Bay Ridge No 2) Project No. 680647, Chip Seal and Fog Seal	35,197.48	
TEXAS CHARTER TOWNSHIP TOTALS	220,642.63	552,774.41
WAKESHMA TOWNSHIP ~ 47.52 Local Road Miles		
UV Avenue – 47th Street to 45th Street (Carryover), Project No. 680599 HMA Wedging and Chip Seal	31,944.66	
38th Street – W Avenue to V Avenue, Project No. 680689 HMA Wedging and Chip Seal	39,738.56	
WAKESHMA TOWNSHIP TOTALS	71,683.21	0.00
Total Local Road Preventive Maintenance	1,590,607.45	
Total Local Road Preservation Structural Improvements		5,417,502.25



**Finview Avenue - Douglas Avenue to N. Westnedge Avenue,
Cooper Township**

CHAPTER 3

Road Commission of Kalamazoo County Overview

Financials

Local Road Participation Funds	Page 36
Local Road Township Contributions	Page 37
Local Road Project Summary Expenditures	Page 38
Routine and Preventive Maintenance Expenditures	Page 39
Local Road Routine Maintenance Expenditures and Revenues	Page 40
Combined Balance Sheet	Page 41
Statement of Revenues and Expenditures	Page 42
Supplemental Information—Graphs	Pages 43—64



Q Avenue at 10th Street, Texas Township

● **LOCAL ROAD PARTICIPATION FUNDS**

The Board of County Road Commissioners of the County of Kalamazoo determines, annually, the amount of primary road funds allocated to the local road participation (PAR) fund program that will be made available to each township.

The distribution of the funds is based on township mileage and population and is determined on the same basis that local road fund money is distributed to the RCKC from the MTF.

PAR funds are made available to the townships for use on local road preservation-structural improvements, preventive maintenance, construction and special assessment projects. Townships, in order to receive local road participation funds, must match funds on a dollar-for-dollar basis.

Carryover Funds: Remaining obligated, yet unspent funds for local road projects which may be carry over to the following year, per RCKC policy.

Reallocation: Re-distribution of initial allocation based on township's January 20th response for use of allocated PAR funds by township, per RCKC policy.

Township	2018 Initial Allocation	2017 Carryover Funds	Reallocation of PAR Funds	PA 82 Local Allocation	Total Township Allocation
Alamo	\$58,864		\$0	\$10,389	\$69,253
Brady	\$70,289		\$0	\$12,405	\$82,694
Charleston	\$35,317	\$3,833	\$0	\$6,231	\$45,381
Climax	\$59,606		\$0	\$10,518	\$70,124
Comstock	\$197,513		\$0	\$34,854	\$232,367
Cooper	\$137,836	\$28,033	\$0	\$24,324	\$190,193
Kalamazoo	\$232,707		\$0	\$41,067	\$273,774
Oshtemo	\$210,575	\$54,726	\$0	\$37,161	\$302,462
Pavilion	\$95,759		\$0	\$16,899	\$112,658
Prairie Ronde	\$68,328	\$3,187	\$0	\$12,057	\$83,572
Richland	\$100,979		\$0	\$17,820	\$118,799
Ross	\$77,966	\$29,985	\$0	\$13,758	\$121,709
Schoolcraft	\$77,359	\$3,014	\$0	\$13,653	\$94,026
Texas	\$217,738		\$0	\$38,424	\$256,162
Wakeshma	\$59,164	\$16,678	\$0	\$10,440	\$86,282
Total	\$1,700,000	\$139,456	\$0	\$300,000	\$2,139,456



LOCAL ROAD TOWNSHIP CONTRIBUTIONS

Township	Preservation - Structural Improvement Contributions	Preventive Maintenance Contribution	Special Assessment Contribution	Total Township Contributions
Alamo	162,401.16	38,333.52		200,734.68
Brady	78,029.41	36,483.87		114,513.28
Charleston	105,405.66	0.00		105,405.66
Climax	30,678.44	49,945.89		80,624.33
Comstock	442,263.90	7,206.55		449,470.45
Cooper	108,306.99	41,506.34		149,813.33
Kalamazoo	262,694.68	44,931.85		307,626.53
Oshtemo	81,353.93	78,772.86		160,126.79
Pavilion	81,173.74	19,709.07		100,882.81
Prairie Ronde	28,295.15	36,676.91		64,972.06
Richland	16,492.42	66,515.15		83,007.57
Ross	1,764,848.03	166,595.71		1,931,443.74
Schoolcraft	0.00	54,231.31		54,231.31
Texas	316,772.98	137,573.60		454,346.58
Wakeshma	0.00	25,964.82		25,964.82
Total	3,478,716.49	804,447.45	0.00	4,283,163.94

Preservation-Structural Improvement Contributions: Payments made by township for preservation-structural improvement projects.

Preventive Maintenance Contributions: Payments made by township for preventive maintenance projects.

Routine Maintenance Contributions: Payments made by township for dust control, and miscellaneous.

Special Assessment Contributions: Payments made by township for special assessment projects.

- **LOCAL ROAD PROJECT SUMMARY EXPENDITURES**
- **Preservation - Structural Improvements and Preventive Maintenance Expenditures**
- Including Administrative and Equipment Allocations

Township	Local Preventive Maintenance	Local Preservation Structural Improvements	Total Township Projects
Alamo	71,316.77	240,575.22	311,891.99
Brady	65,683.87	180,182.82	245,866.69
Charleston	23,295.28	212,506.28	235,801.56
Climax	110,493.25	55,805.88	166,299.13
Comstock	23,654.16	725,012.89	748,667.05
Cooper	143,485.50	262,561.13	406,046.63
Kalamazoo	77,415.77	536,561.24	613,977.01
Oshtemo	172,619.11	219,021.45	391,640.56
Pavilion	43,973.07	223,817.05	267,790.12
Prairie Ronde	220,642.63	75,174.92	295,817.55
Richland	143,882.89	56,734.08	200,616.97
Ross	206,018.37	2,076,774.88	2,282,793.25
Schoolcraft	83,366.28	0.00	83,366.28
Texas	133,077.28	552,774.41	685,851.69
Wakeshma	71,683.21	0.00	71,683.21
Total	1,590,607.44	5,417,502.25	7,008,109.69

Preservation-Structural Improvements: Roadwork, including placing a hard surface on the gravel road, reconstructing an existing road or bridge, resurfacing a road with HMA overlay or installing new culverts or catch basins.

Preventive Maintenance: Roadwork, including chip sealing, pavement crack seal, and HMA wedging to preserve roads by retarding surface deterioration.



YZ Avenue - Prairie Brook Rd to East Township Line, Prairie Ronde Township

● **ROUTINE & PREVENTIVE MAINTENANCE EXPENDITURES**

● **For Calendar Year Ending December 31, 2018**

● Including Administrative and Equipment Allocations

	2018 Cost	Average Cost Per Mile	2017 Cost	Average Cost Per Mile	Increase (Decrease) Per Mile
PRIMARY ROAD SYSTEM	445.82 Miles		447.3 Miles		
Surface Maintenance	2,723,999.43	6,110.09	5,104,035.65	11,410.77	(5,300.68)
Roadside Maintenance	1,209,411.02	2,712.78	793,204.92	1,773.32	939.46
Traffic Control	917,128.01	2,057.17	698,567.31	1,561.74	495.43
Winter Maintenance	906,270.56	2,032.82	853,801.07	1,908.79	124.03
Total	5,756,809.02	12,870.13	7,449,608.95	16,654.62	(3,784.49)
LOCAL ROAD SYSTEM	821.88 Miles		820.51 Miles		
Surface Maintenance	3,383,714.05	4,117.04	3,691,293.63	4,498.78	(381.74)
Roadside Maintenance	1,430,046.32	1,739.97	1,285,533.14	1,566.75	173.22
Traffic Control	429,122.21	522.12	268,479.46	327.21	194.91
Winter Maintenance	791,621.10	963.18	622,073.09	758.15	205.03
Total	6,034,503.68	7,354.58	5,867,379.32	7,150.89	203.69



Winter Maintenance Operations, Wakeshma Township

● LOCAL ROAD ROUTINE MAINTENANCE EXPENDITURES
 ● AND REVENUES
 ● Including Administrative and Equipment Allocations

Township	Michigan Transportation Fund Revenues	Township Revenue for Maintenance*	Total Revenue for Maintenance	Less Maintenance Expenditures	Difference By Township
Alamo	217,802.76	0.00	217,802.76	182,228.53	(35,574.23)
Brady	268,113.59	0.00	268,113.59	218,120.64	(49,992.95)
Charleston	137,707.92	0.00	137,707.92	151,158.60	13,450.68
Climax	272,540.94	0.00	272,540.94	300,286.95	27,746.01
Comstock	428,360.76	0.00	428,360.76	353,479.24	(74,881.52)
Cooper	361,260.49	0.00	361,260.49	182,002.44	(179,258.05)
Kalamazoo	430,603.19	0.00	430,603.19	440,293.57	9,690.38
Oshtemo	440,205.37	0.00	440,205.37	381,437.10	(58,768.27)
Pavilion	278,003.26	0.00	278,003.26	265,852.92	(12,150.34)
Prairie Ronde	299,622.54	0.00	299,622.54	328,662.13	29,039.59
Richland	283,120.59	0.00	283,120.59	179,094.25	(104,026.34)
Ross	307,269.79	0.00	307,269.79	435,968.94	128,699.15
Schoolcraft	196,815.96	0.00	196,815.96	89,897.75	(106,918.21)
Texas	530,994.84	0.00	530,994.84	573,621.81	42,626.97
Wakeshma	273,230.92	0.00	273,230.92	361,791.35	88,560.43
Total	4,725,652.92	0.00*	4,725,652.92	4,443,896.22	(281,756.70)

Local road routine maintenance includes winter snow removal, roadside mowing, pavement marking, traffic signal maintenance, dust control, gravel road grading, pothole repair, etc.

The chart above represents, for 2018, the total revenue collected less the total expenditures to arrive at either a deficit or surplus, by township, for the local road routine maintenance activities. The MTF revenue received includes local mileage, local urban mileage, and a factor for population. RCKC receives MTF as a collective amount based on the county as a whole. This data is presented for illustrative purposes only, and reflects the expenditures in each township outside of annual projects. As you can see, RCKC must annually apply primary road dollars to cover the deficit for local road routine maintenance expenditures. Please note, weather and other issues may result in activity expenditures varying across the county.

* This was the first year of the change for RCKC to fund the dust contraol program without local road cost sharing.

- **COMBINED BALANCE SHEET**
- **For Calendar Year 2018**
-

ASSETS

General Operating Fund:

Cash Account		7,070,903.39	
Interest Bearing Deposits		1,628,128.64	
Accounts Receivable:			
Michigan Transportation Fund	2,792,552.30		
Due on County road Agreements	107,225.52		
Due on Special Assessments	13,116.50		
Sundry Accounts Receivable	<u>1,438,407.30</u>	4,351,301.62	
Inventories:			
Equipment Material	891,744.30		
Road Material	<u>195,576.44</u>	1,087,320.74	
Advances - Township & Other		184,602.54	
Prepaid Insurance		161,685.28	
Deferred Expense - Federal and State		<u>31,359.39</u>	
Total General Operating Assets			14,515,301.60

FIXED ASSET GROUP			139,621,858.17
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TOTAL ASSETS			154,137,159.77
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LIABILITIES AND FUND EQUITIES

Accounts Payable		1,680,201.68	
Accrued Liability		227,396.88	
Deferred Revenue - Special Assessment		13,116.50	
Due to State of Michigan		505,935.07	
Advances: Townships and Other		184,602.54	
Available Operating Equity:			
Primary Road - Reserved	9,332,241.81		
Local Road - Reserved	0.00		
County Road Commission	<u>2,571,797.12</u>	<u>11,904,038.93</u>	
Total General Operating Liabilities and Equity			14,515,291.60

FIXED ASSET GROUP			
Plant and Equipment Equity			<u>139,621,858.17</u>

TOTAL LIABILITIES AND FUND EQUITIES			154,137,149.77
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● STATEMENT OF REVENUES AND EXPENDITURES

● For Calendar Year Ending December 31, 2018

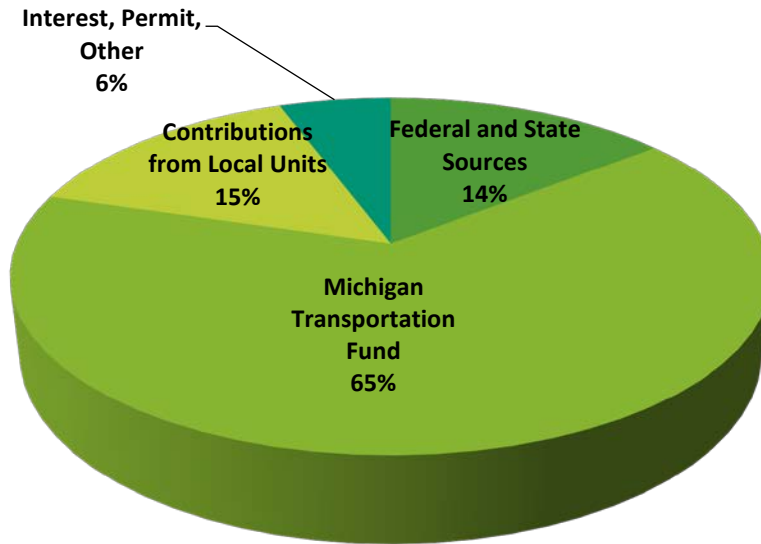


	Primary Road Fund	Local Road Fund	Road Commission Fund	Total
REVENUE				
Michigan Transportation Fund	14,609,456.98	4,722,825.35	0.00	19,332,282.33
Optional Transfer	(1,345,882.76)	1,345,882.76	0.00	0.00
Critical Bridge Fund	3,491.82	0.00	0.00	3,491.82
Snow Removal Fund	1,536.63	2,827.57	0.00	4,364.20
Other State Revenue	3,165,140.12	1,031,756.73	0.00	4,196,896.85
Economic Development Fund	79,656.29	0.00	0.00	79,656.29
Federal Revenue	1,098,027.59	0.00	0.00	1,098,027.59
County Raised Revenue	13,978.98	4,346,121.76	220,549.15	4,580,649.89
Gain on Disposal of Equipment	15,396.21	0.00	56,298.79	71,695.00
Contributions from Private Sources	0.00	0.00	0.00	0.00
Special Assessment Districts	0.00	14,534.88	0.00	14,534.88
Miscellaneous Revenue	257,133.17	1,636.01	27,674.92	286,444.10
Total Revenue	17,897,935.03	11,465,585.06	304,522.86	29,668,042.95
EXPENDITURES				
Construction/Capacity Improvement	0.00	0.00	0.00	0.00
Preservation - Structural Imp.	9,052,102.71	5,087,152.74	0.00	14,139,255.45
Routine and Preventive Maintenance	5,405,769.18	5,666,530.52	0.00	11,072,299.70
Other: Work for Others	0.00	0.00	111,336.94	111,336.94
Administration	720,086.61	535,596.35	0.00	1,255,682.96
Interest Expense	0.00	0.00	0.00	0.00
Equipment Account	149,303.98	176,305.45	24,147.31	349,756.74
	15,327,262.48	11,465,585.06	135,484.25	26,928,331.79
Non-Operating Expenditures				
* Net Capital Outlay	(265,761.25)	0.00	151,475.50	(114,285.75)
Total Expenditures	15,061,501.23	11,465,585.06	286,959.75	26,814,046.04
Increase (Decrease) in Available Operating Fund	2,836,433.80	0.00	17,563.11	2,853,996.91
Total Allocated Expenditures	17,897,935.03	11,465,585.06	304,522.86	29,668,042.95

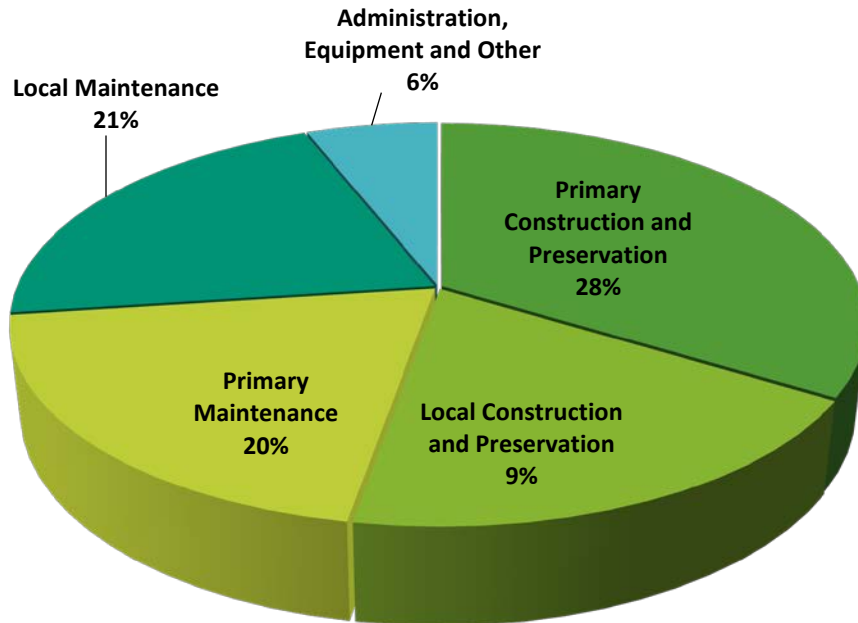
*Net Capital Outlay - Expenditures less depreciation and depletion.

- Revenues and Expenditures
- 2018
-

2018 Revenues

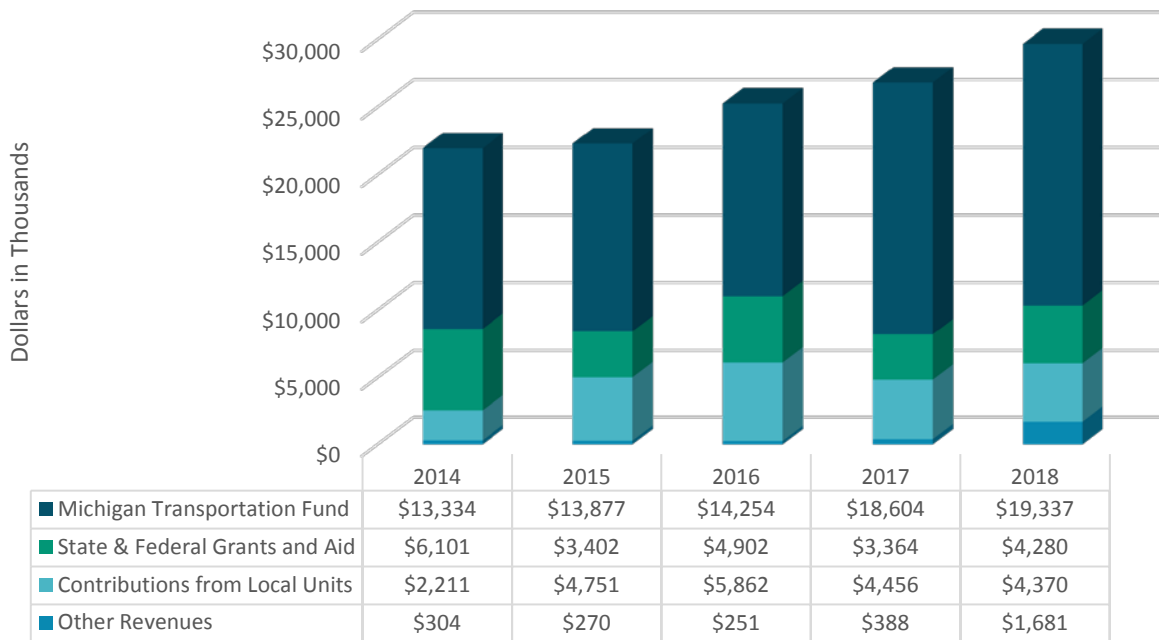


2018 Expenditures

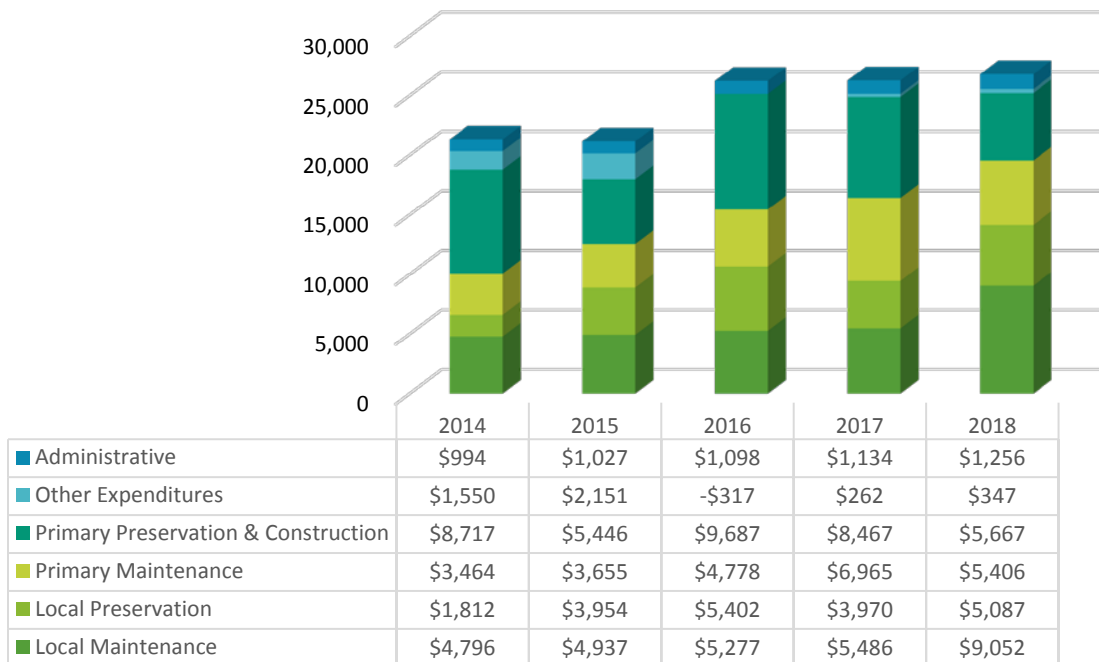


- Revenues and Expenditures History
- 2014 through 2018
-

Revenue History



Expenditure History



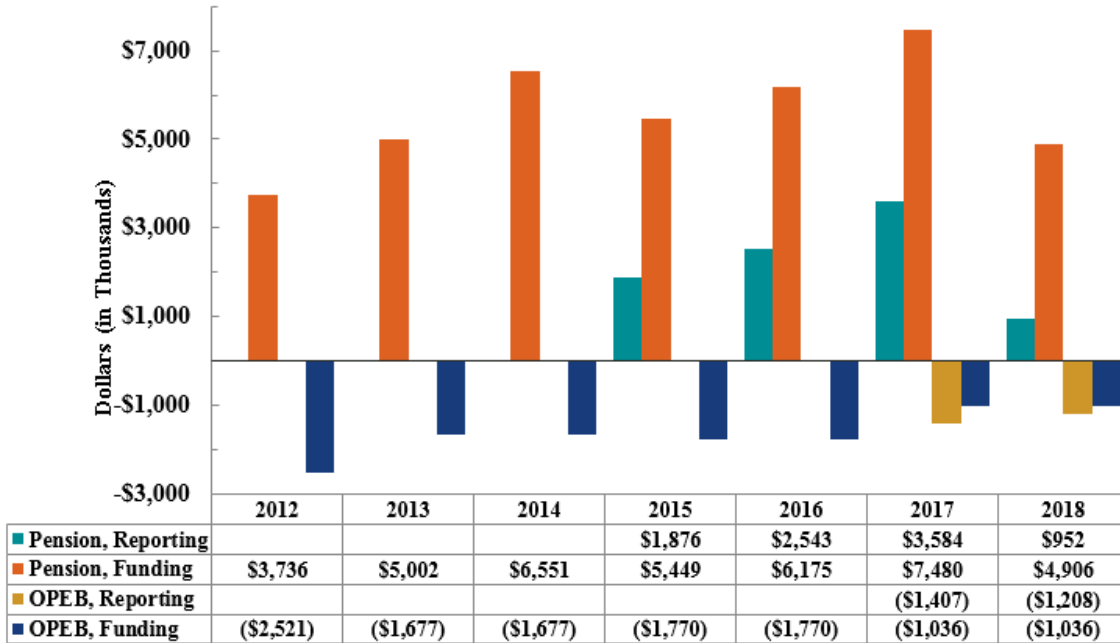
- **Overfunded Pension and Unfunded Other Post Employment Benefit (OPEB) Obligations**
- **2012 through 2018**
-



Road Commission of Kalamazoo County

Overfunded Pension and Unfunded OPEB

For the Years Ended December 31, 2012 through 2018

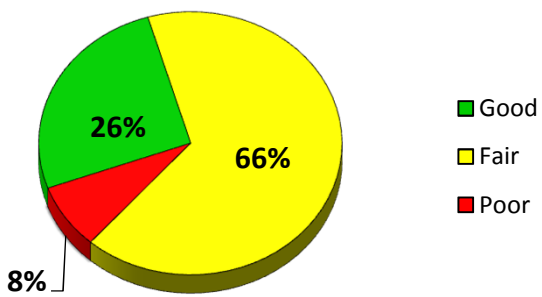


OPEB Funding valuations occur every other year. Pension and OPEB Reporting figures are included only in recent years because of changes in GAAP.

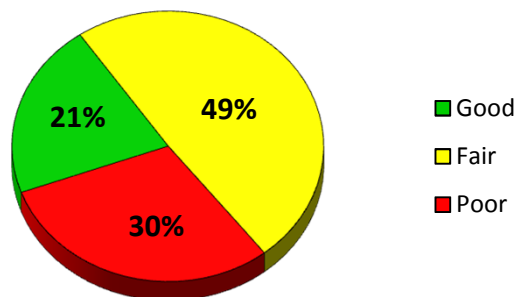
*12/31/2017 is the most recent OPEB valuation report available.

● **Countywide Asset Management PASER Rating Summary**
 ● **2018**
 ●

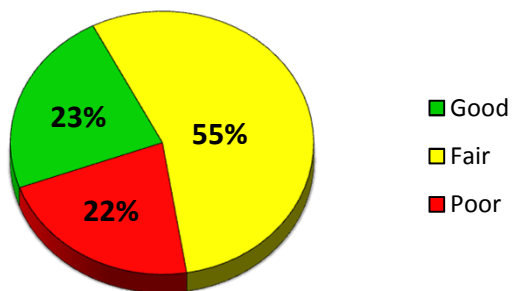
Primary Roads



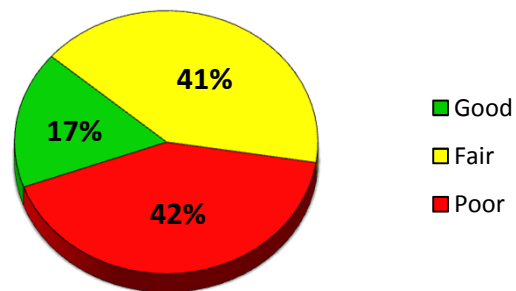
Local Roads



Primary & Local Roads



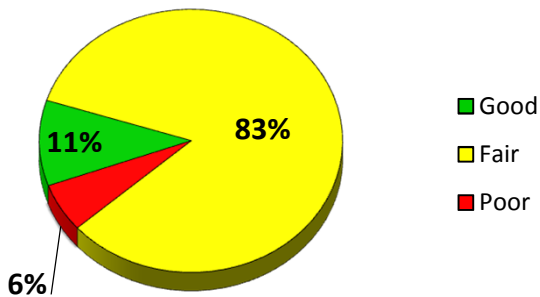
Gravel Roads



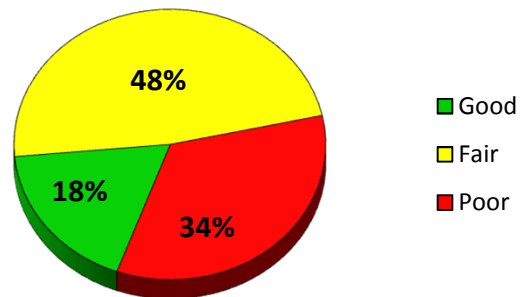
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

- Alamo Township Asset Management PASER Rating Summary
- 2018
-

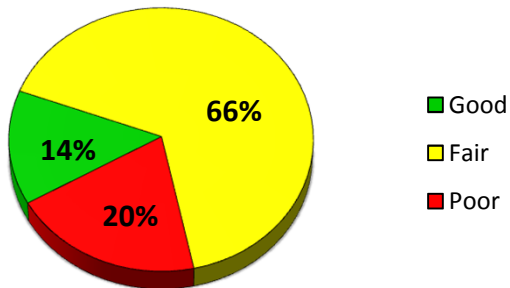
Primary Roads



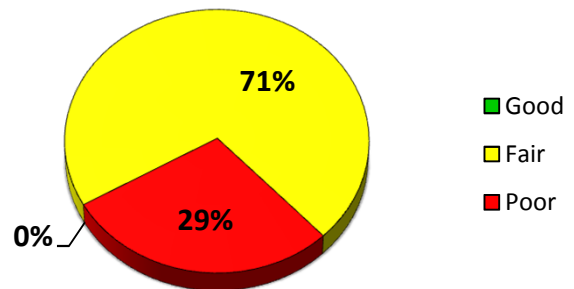
Local Roads



Primary & Local Roads



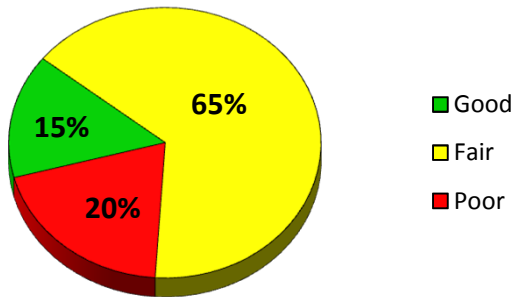
Gravel Roads



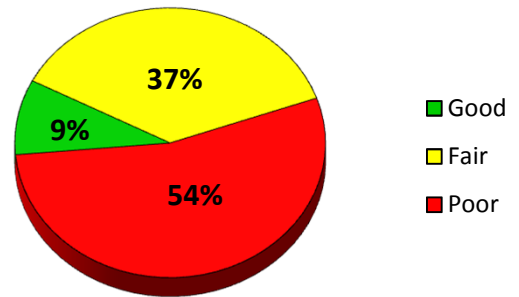
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Brady Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

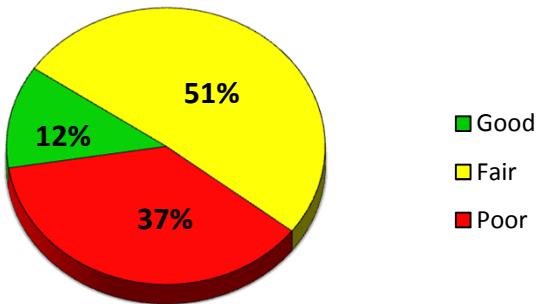
Primary Roads



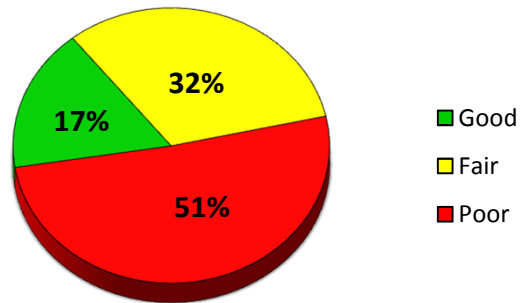
Local Roads



Primary & Local Roads



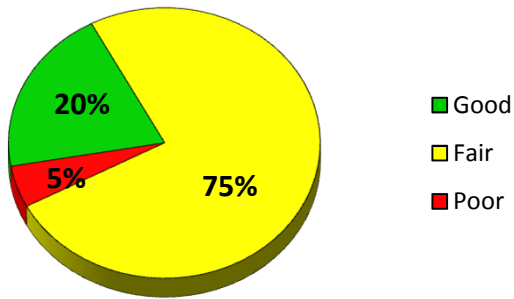
Gravel Roads



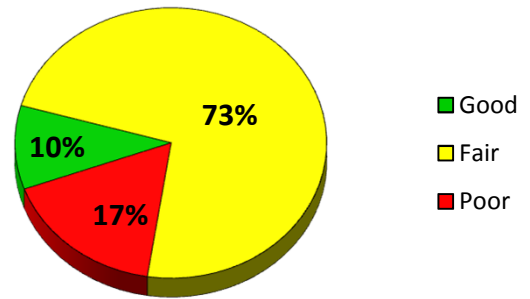
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Charleston Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

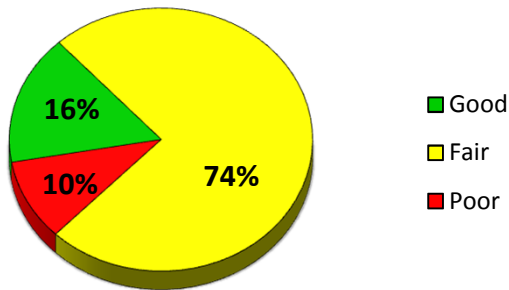
Primary Roads



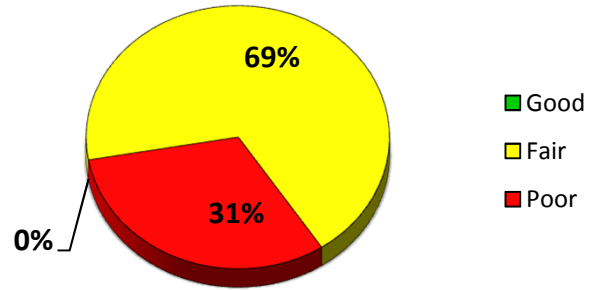
Local Roads



Primary & Local Roads



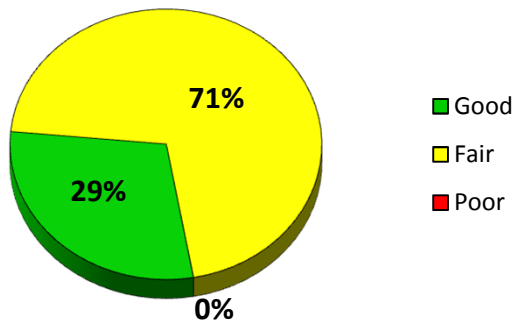
Gravel Roads



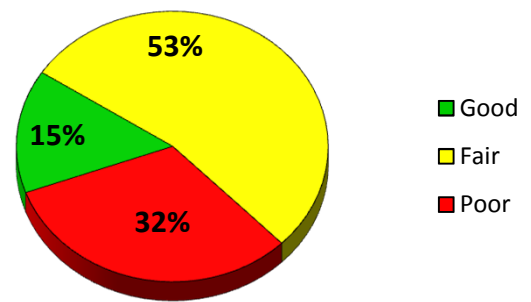
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● Climax Township Asset Management PASER Rating Summary
 ● 2018
 ●

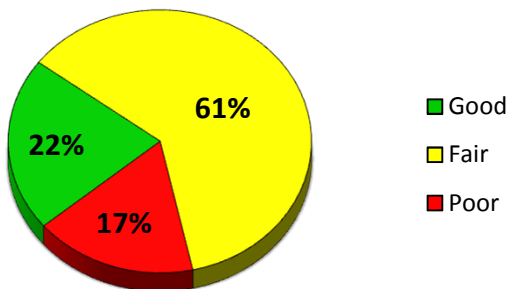
Primary Roads



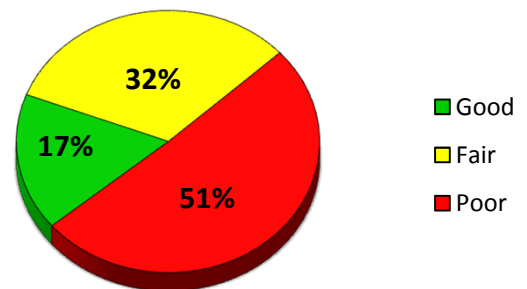
Local Roads



Primary & Local Roads



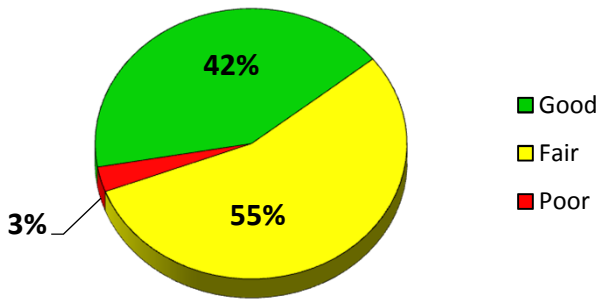
Gravel Roads



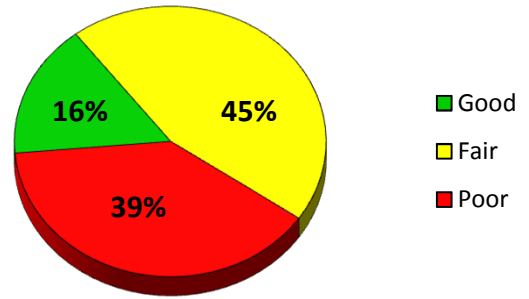
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Comstock Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

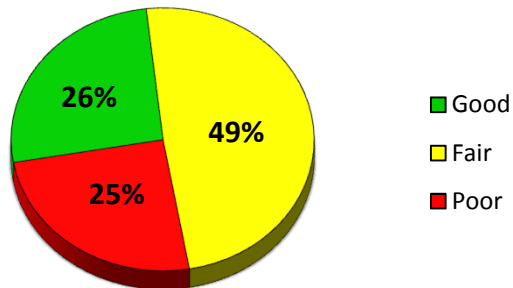
Primary Roads



Local Roads



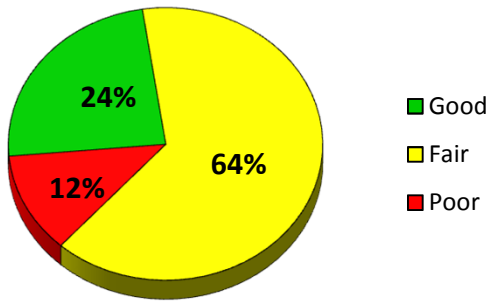
Primary & Local Roads



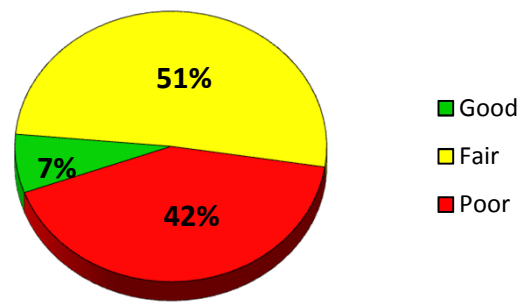
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● Cooper Township Asset Management PASER Rating Summary
 ● 2018
 ●

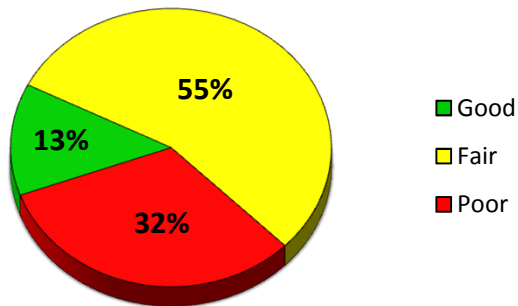
Primary Roads



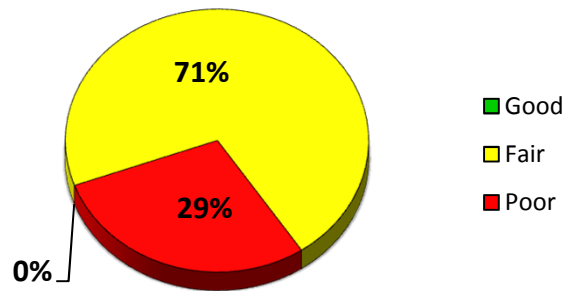
Local Roads



Primary & Local Roads



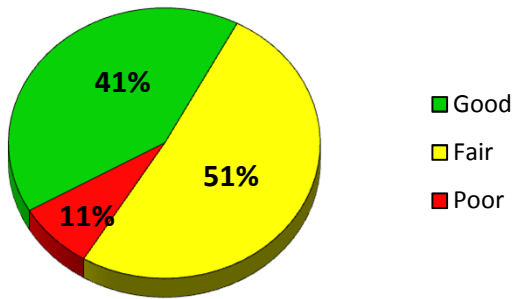
Gravel Roads



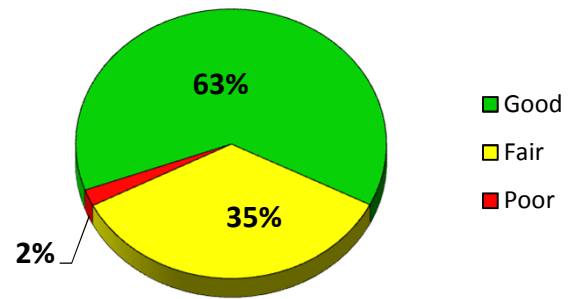
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Kalamazoo Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

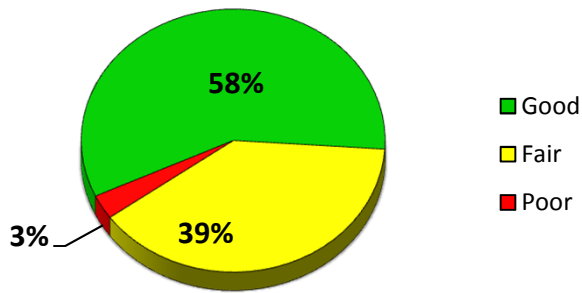
Primary Roads



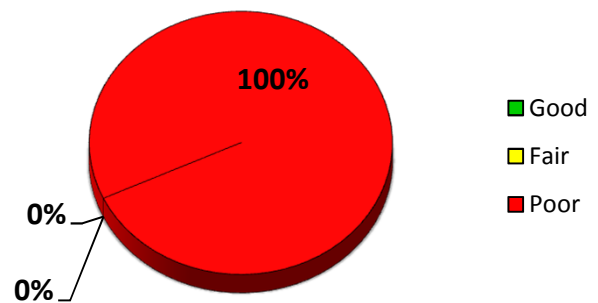
Local Roads



Primary & Local Roads



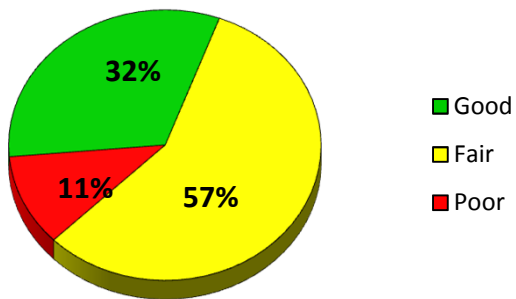
Gravel Roads



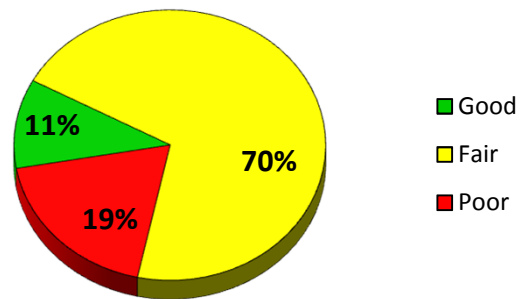
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Oshtemo Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

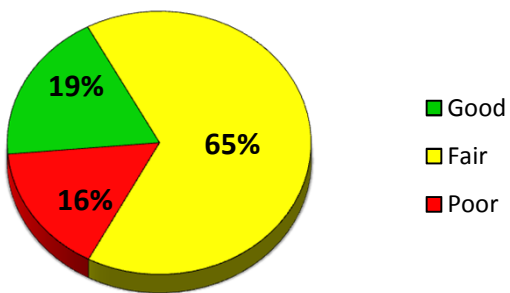
Primary Roads



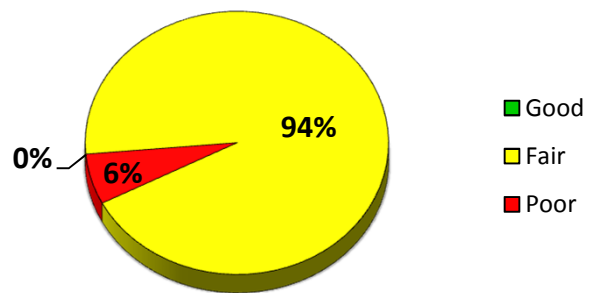
Local Roads



Primary & Local Roads



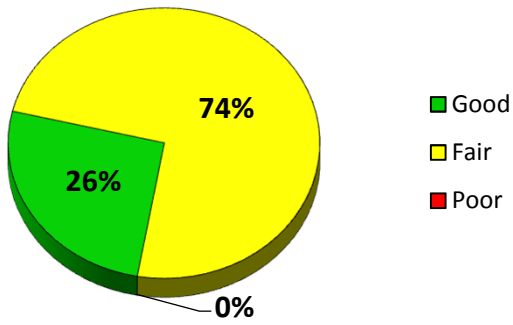
Gravel Roads



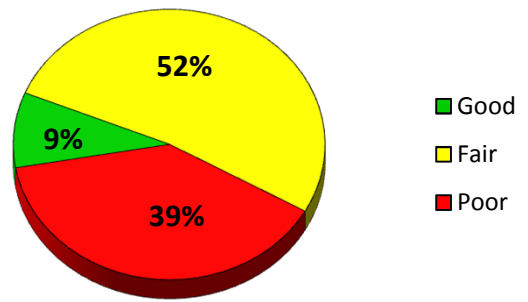
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

- Pavilion Township Asset Management PASER Rating Summary
- 2018
-

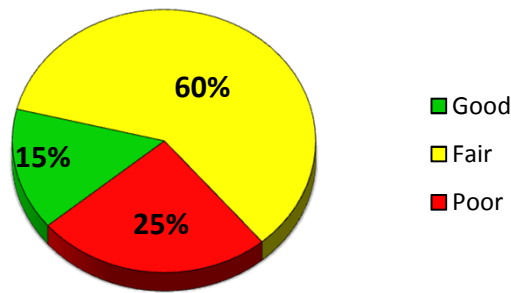
Primary Roads



Local Roads

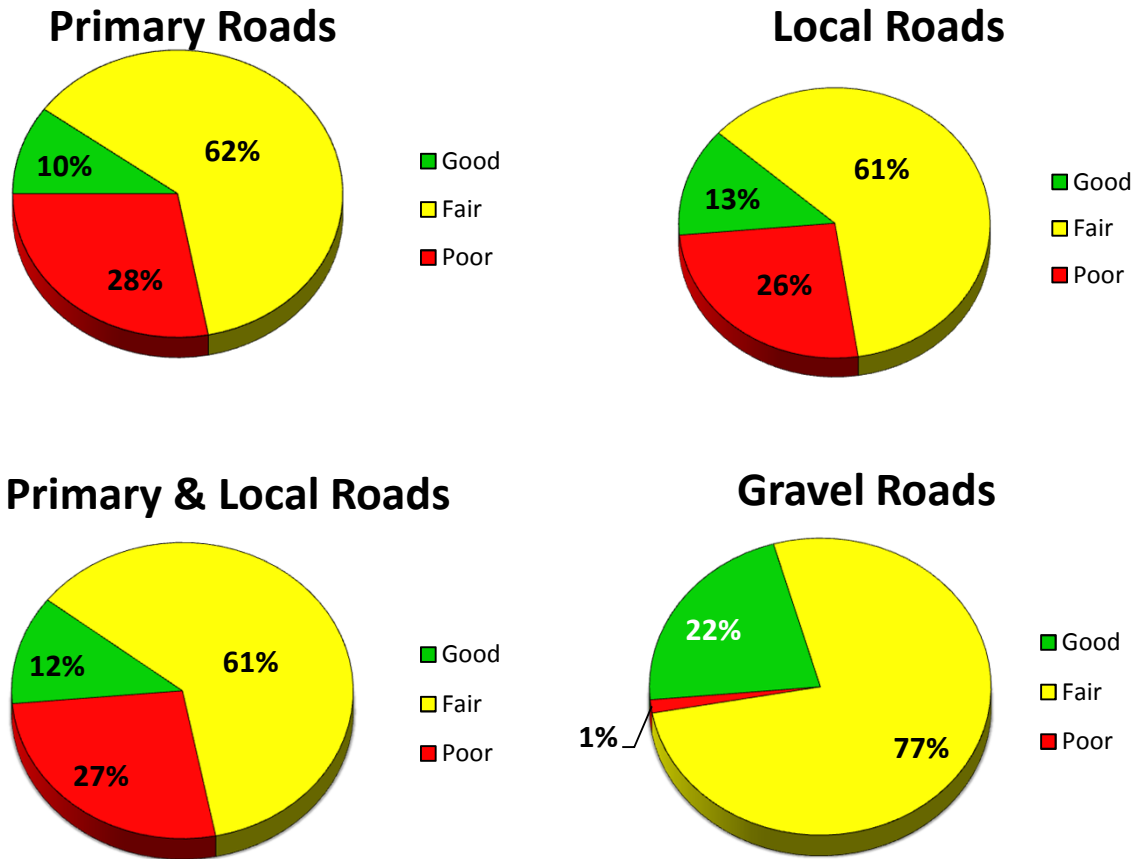


Primary & Local Roads



*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

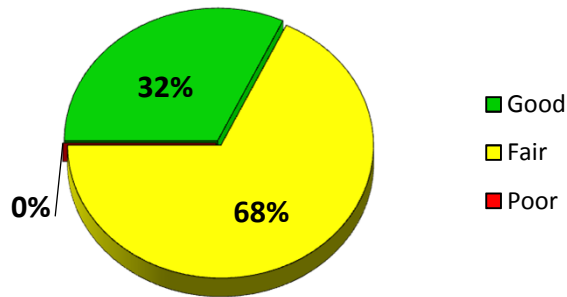
● **Prairie Ronde Township Asset Management PASER Rating Summary**
 ● **2018**
 ●



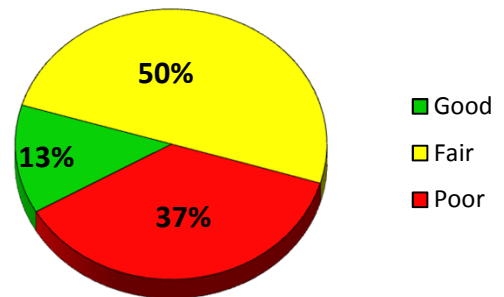
*Good (PASER rating ≥8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Richland Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

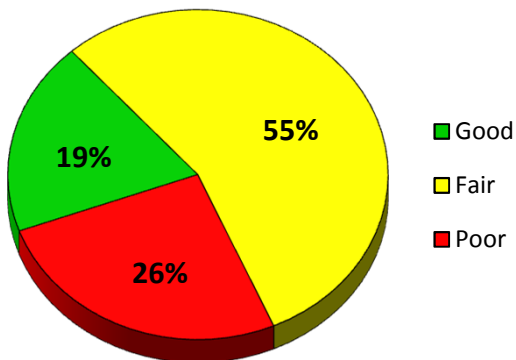
Primary Roads



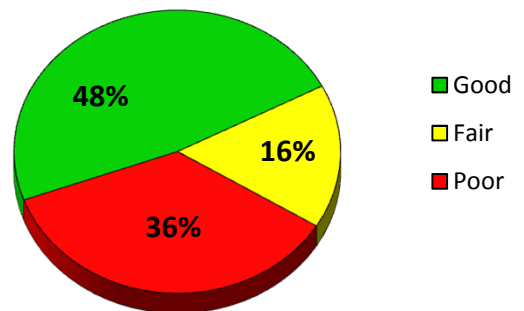
Local Roads



Primary & Local Roads



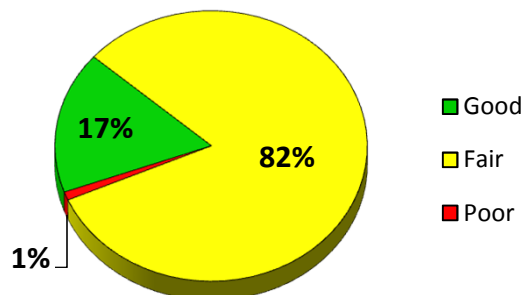
Gravel Roads



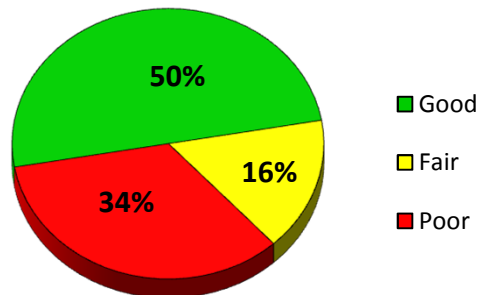
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Ross Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

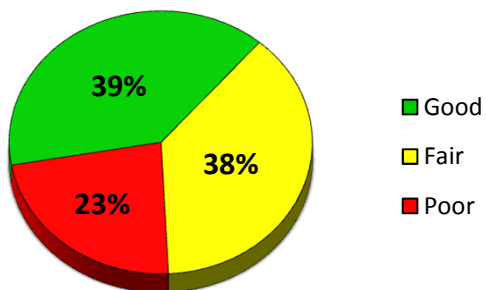
Primary Roads



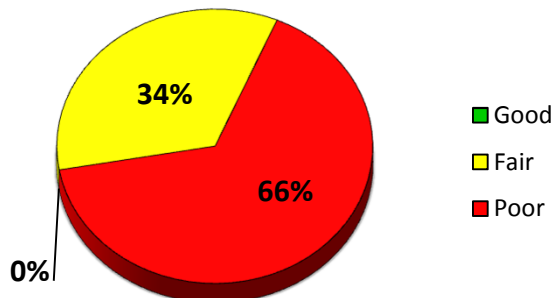
Local Roads



Primary & Local Roads



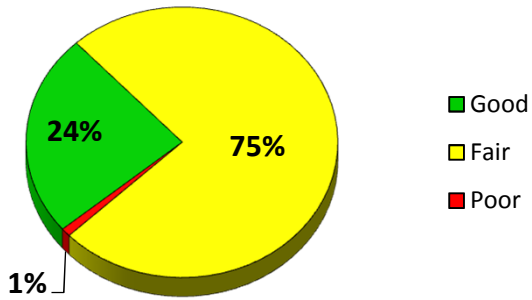
Gravel Roads



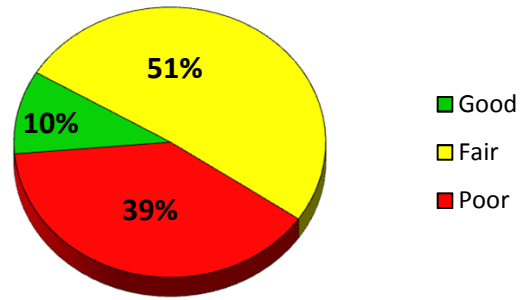
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Schoolcraft Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

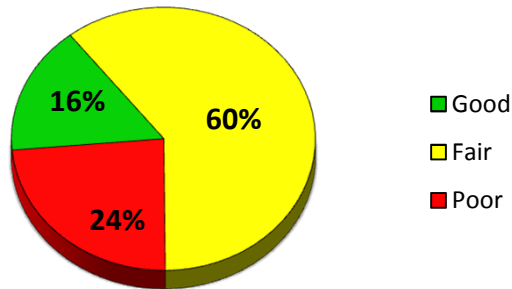
Primary Roads



Local Roads



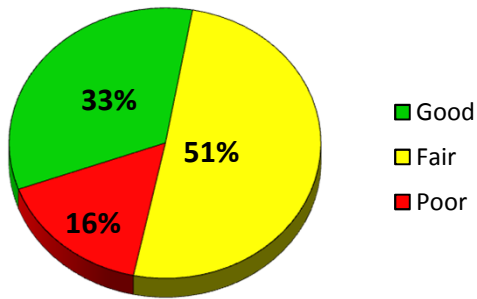
Primary & Local Roads



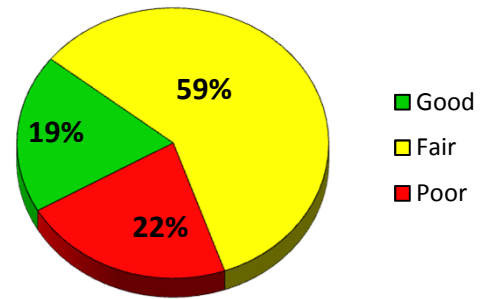
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

- Texas Township Asset Management PASER Rating Summary
- 2018
-

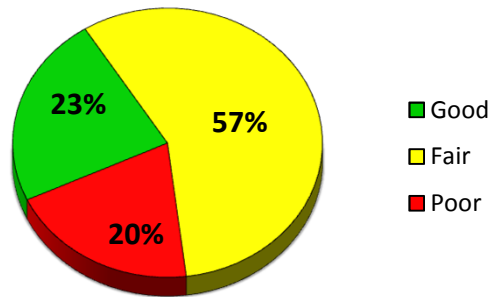
Primary Roads



Local Roads



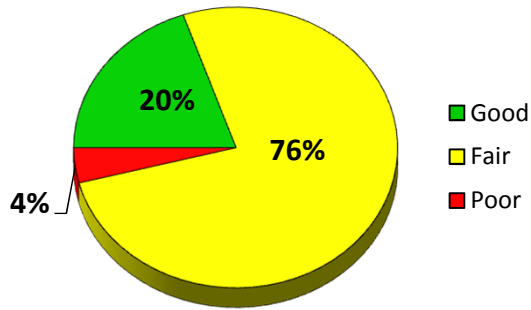
Primary & Local Roads



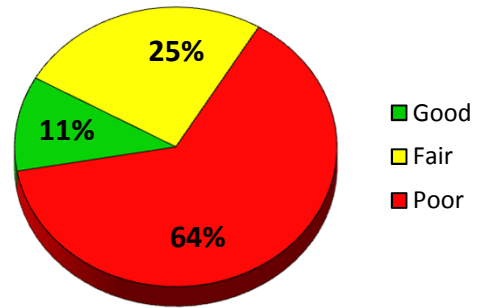
*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

● **Wakeshma Township Asset Management PASER Rating Summary**
 ● **2018**
 ●

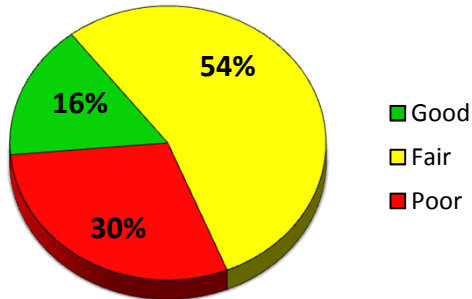
Primary Roads



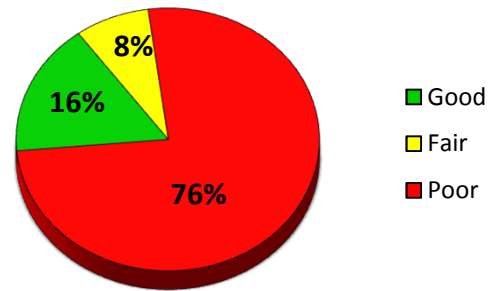
Local Roads



Primary & Local Roads



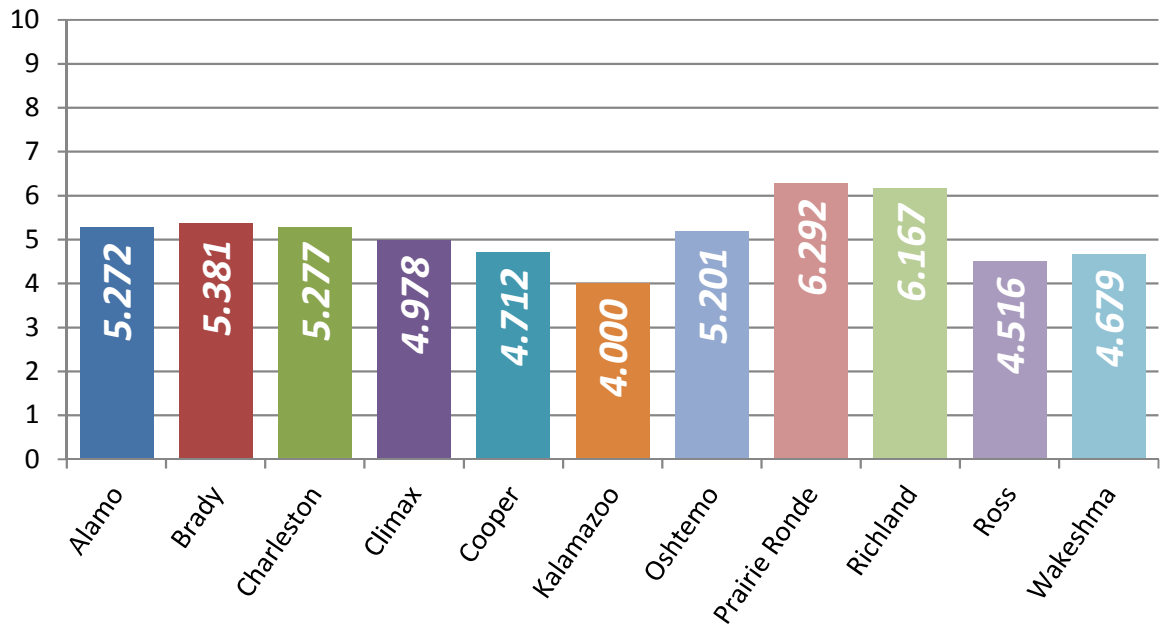
Gravel Roads



*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 Based on year end 2017 PASER data. Gravel roads rated using Inventory Based Rating (IBR).

- Gravel Road Ratings
- 2018 Inventory Based Rating System (IBR)
-

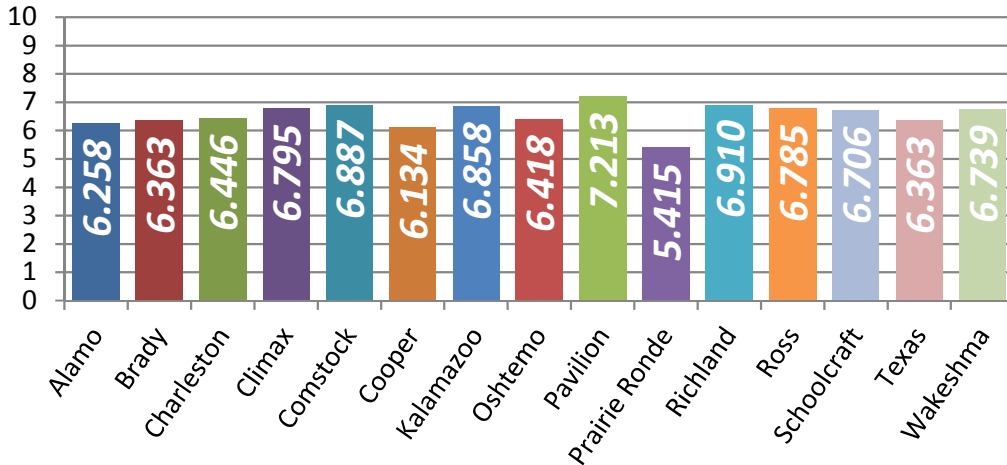
2018
Local Gravel Road IBR by Township
Summary by Township



*Good (rating ≥8), Fair (rating = 7, 6, 5) & Poor (rating ≤4)
 Paved Roads rated using the Pavement Surface Evaluation and Rating (PASER).
 Gravel Roads rated using Inventory Based Rating (IBR).

● **Primary Road Average PASER Rating Summary**
 ● **2018**

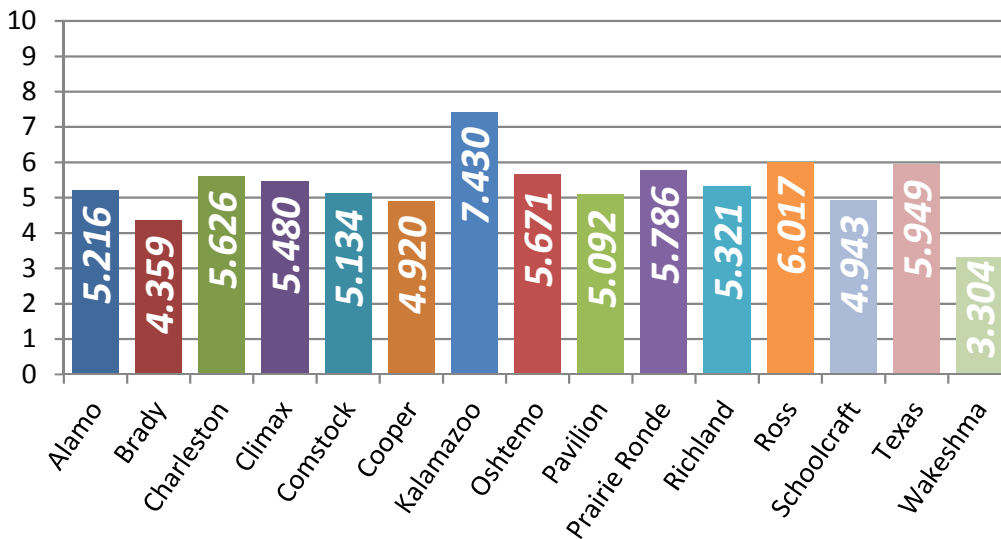
2018
Township Primary Road PASER Rating
Summary by Township



*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 PASER Data does not include gravel roads.

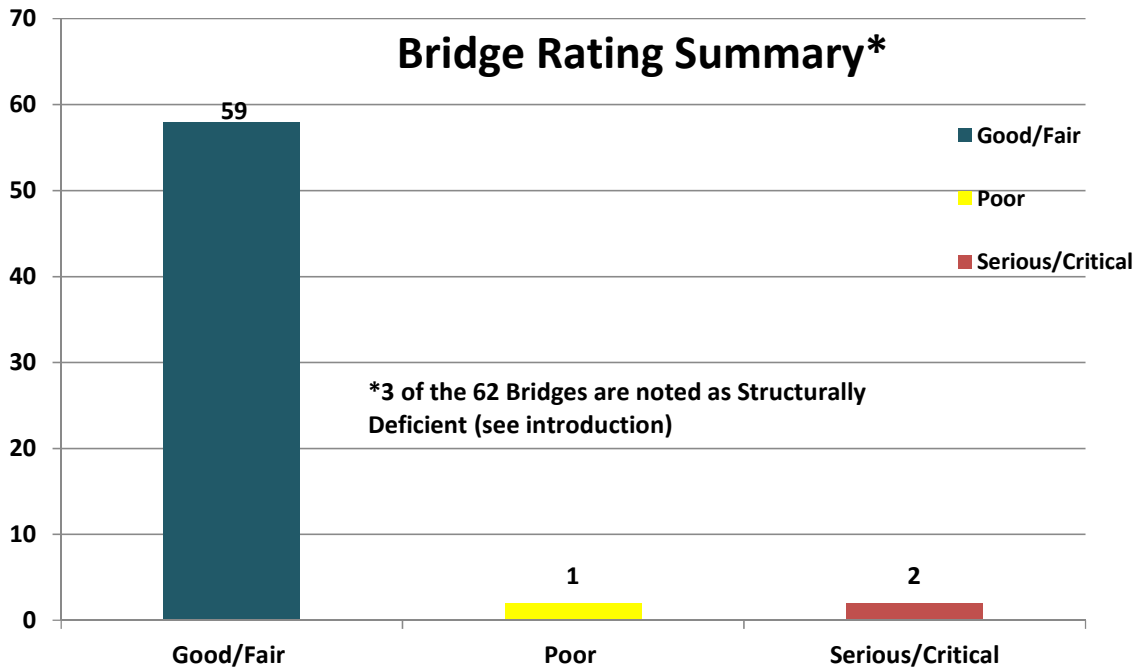
● **Local Road Average PASER Rating Summary**
 ● **2018**

2018
Township Local Road PASER Rating
Summary by Township

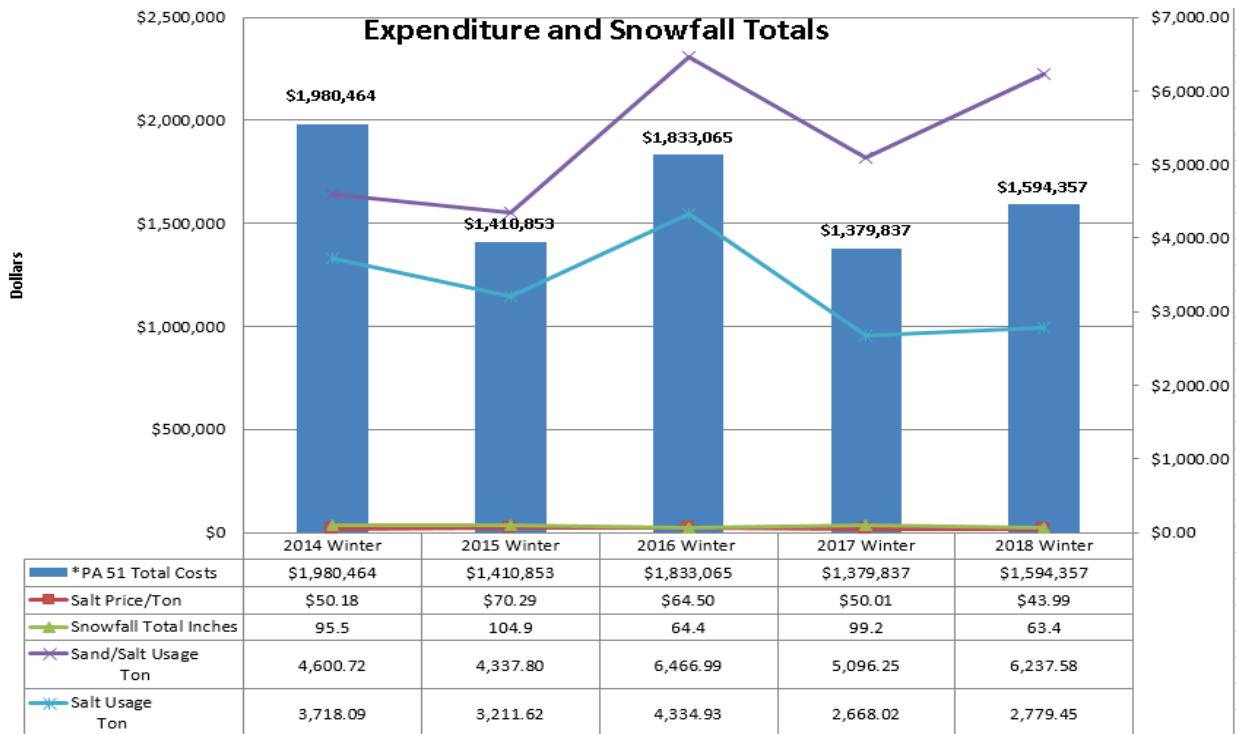


*Good (PASER rating ≥ 8), Fair (PASER rating = 7, 6, 5) & Poor (PASER rating ≤ 4)
 PASER Data does not include gravel roads.

● **Bridge Rating Summary**
 ● **2018**
 ●

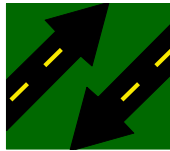


● **Winter Maintenance Expenditure and Snowfall Totals**
 ● **2014 through 2018**
 ●



* Total Cost Does Not Include Administrative and Equipment - See Routine Maintenance Expenditures.

COMMUNICATION TOOLS



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