# VAN BUREN COUNTY ROAD COMMISSION

# TRANSPORTATION ASSET MANAGEMENT PLAN 2021-2024


GRADALL
XL3100

# WELCOME

Roads are one of the foundations for any civilization. Without a good road network, commerce cannot move, ideas cannot be exchanged, and people cannot interact. Every great civilization first created a road system to move their armies to expand their empires and engage in commerce. Today, roads are more important than ever. Sixty years ago, most people lived and worked in the same community and families had only one vehicle. Today, it is not unheard of for people to have a thirty to forty-minute commute and every one of driving age to have their own vehicle. All this added traffic has placed an increased stress load on roads built to older specifications.

Not only must roads be built, but they must also be maintained. The American Society of Civil Engineers has rated the infrastructure in America a "D". Roads were built without funding to maintain them. America focused on expansion and building new roads. We designated the responsibility to maintain roads to the local communities that are serviced by this infrastructure but did not give the locals the tools with which to raise money to maintain the road system. While the revenues allocated for road maintenance and improvement have not changed, the costs have.

This Asset Management Plan is the tool for which we will decide how to spend future dollars to maintain and improve a road system throughout Van Buren County. The basic criteria for these decisions will be traffic counts, connectivity, PASER road ratings, and funding sources. We will work with our transportation partners to serve the travelers of Van Buren County as efficiently as we can.

*Daniel Bishop*
*Managing Director*

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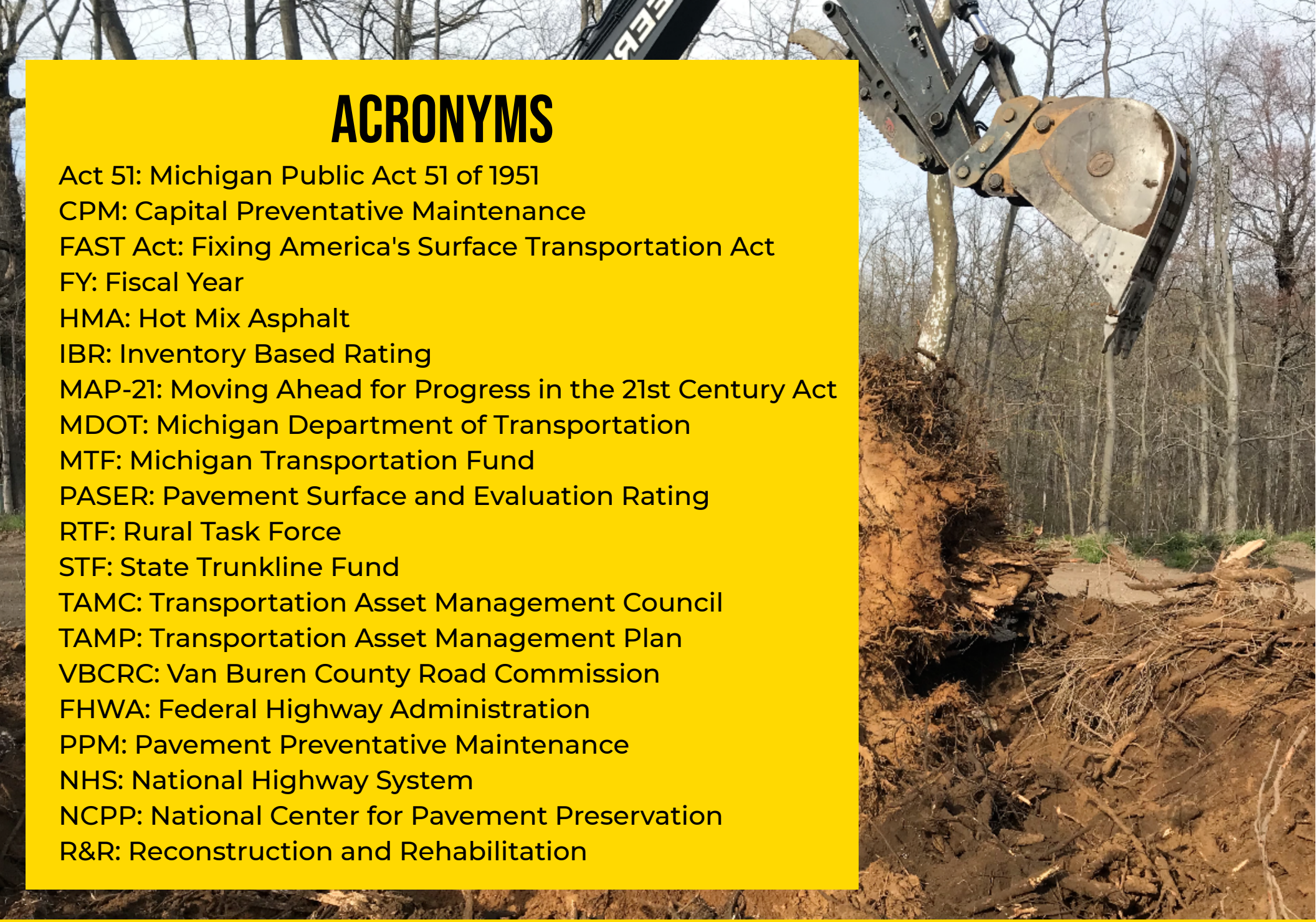


# ACRONYMS

Act 51: Michigan Public Act 51 of 1951
CPM: Capital Preventative Maintenance
FAST Act: Fixing America's Surface Transportation Act
FY: Fiscal Year
HMA: Hot Mix Asphalt
IBR: Inventory Based Rating
MAP-21: Moving Ahead for Progress in the 21st Century Act
MDOT: Michigan Department of Transportation
MTF: Michigan Transportation Fund
PASER: Pavement Surface and Evaluation Rating
RTF: Rural Task Force
STF: State Trunkline Fund
TAMC: Transportation Asset Management Council
TAMP: Transportation Asset Management Plan
VBCRC: Van Buren County Road Commission
FHWA: Federal Highway Administration
PPM: Pavement Preventative Maintenance
NHS: National Highway System
NCPP: National Center for Pavement Preservation
R&R: Reconstruction and Rehabilitation

# INTRODUCTION

In 2002, the Michigan Legislature created the Transportation Asset Management Council (TAMC). The TAMC developed a statewide asset management practice first for federal-aid-eligible highways, followed by non-federal-aid-eligible roadways, and gravel road surfaces across state and local jurisdictions. The group developed tools that local agencies could use, as well as a methodology that all agencies could agree on for data collection and analysis.

Asset management is a process that uses data to manage and track assets, such as roads and bridges, in a cost-effective manner using a combination of engineering and business principles. The Van Buren County Road Commission utilizes four engineering and business principles in the development of this Transportation Asset Management Plan (TAMP); Pavement and Surface Evaluation Rating (PASER) and/or Inventory Based Rating (IBR) ratings, traffic counts, connectivity routes, and available funding and budget. Collectively these principles provide investment on the routes that provide the greatest impact on the road network.

This TAMP describes the steps of the asset management process by which the Van Buren County Road Commission makes its program and project decisions. It also includes inventory and condition information, a description of performance goals and outcomes, analyzes risk management contingency plans, and outlines a financial plan. Finally, this TAMP includes a 5-year plan, estimating future costs and budgets.



# ASSET INVENTORY

Building a mile of new road can cost over $1 million due to the large volume of materials and equipment that are necessary. The high cost of constructing road assets underlines the critical nature of properly managing and maintaining the investments made in this vital infrastructure. The specific needs of every mile of road within an agency's overall road network is a complex assessment, especially when considering rapidly changing conditions and the varying requirements of road users; understanding each road-mile's needs is an essential duty of the road agency.

In Michigan, many different governmental units (or agencies) own and maintain roads, so it can be difficult for the public to understand who is responsible for items such as planning and funding construction projects, patching, repairs, traffic control, safety, and winter maintenance for any given road. MDOT is responsible for state trunkline roads, which are typically named with "M", "I", or "US" designations regardless of their geographic location in Michigan. Cities and villages are typically responsible for all public roads within their geographic boundary with the exception of the previously mentioned state trunkline roads managed by MDOT. County road commissions (or departments) are typically responsible for all public roads within the county's geographic boundary, with the exception of those managed by cities, villages, and MDOT.

In cases where non-trunkline roads fall along jurisdictional borders, local and intergovernmental agreements dictate ownership and maintenance responsibility. Quite frequently, roads owned by one agency may be maintained by another agency because of geographic features that make it more cost-effective for a neighboring

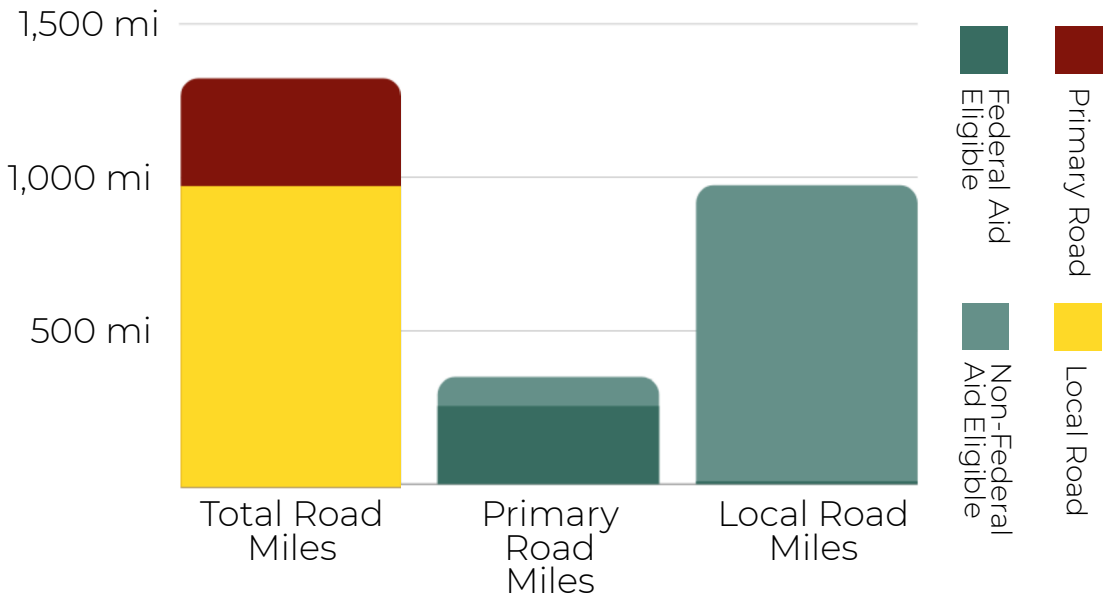
agency to maintain the road instead of the actual road owner. Other times, road agencies may mutually agree to coordinate maintenance activities in order to create economies of scale and take advantage of those efficiencies.

Michigan Public Act 51 of 1951 (PA 51), which defines how funds from the Michigan Transportation Fund (MTF) are distributed to and spent by road-owning agencies, classifies roads owned by VBCRC as either county primary or county local roads. State statute prioritizes expenditures on the county's primary road network.

The Van Buren County Road Commission (VBCRC) is responsible for 1,318.66 centerline of certified public roads.  347.06 of these miles are considered county primary roads and 971.6 miles are considered county local roads.

Approximately 73% (or 253.35 miles) of these county primary roads are classified as federal aid eligible, which allows them to receive federal funding for their maintenance and construction. Only 1% of County Local roads are considered federal aid eligible, which means state and local funds must be used to manage these roads.

For more details on locations and sizes of assets, please refer to the agency contact listed in the Introduction of this pavement asset management plan.



# PAVEMENT CONDITIONS

The road characteristic that road users most readily notice is surface condition. Surface condition is a major factor in determining the most cost-effective treatment—that is, routine maintenance, capital preventive maintenance, or structural improvement—for a given section of roadway. The VBCRC uses surface condition and age to anticipate when a specific section of roadway will be a potential candidate for preventive maintenance. Surface condition data enables VBCRC to evaluate the benefits of preventive maintenance projects and to identify the most cost-effective use of road construction and maintenance dollars. Historic surface condition data can be used to predict future road conditions based on budget constraints and to determine if a road network's condition will improve, stay the same, or degrade at the current or planned investment level. This analysis helps to determine how much additional funding is necessary to meet a network's condition improvement goals.

VBCRC is committed to monitoring the condition of its road network and using

surface condition data to drive cost-effective decision-making and preservation of valuable road assets. VBCRC uses the Pavement Surface Evaluation and Rating (PASER) system for asphalt surfaces, which has been adopted by the TAMC for measuring statewide pavement conditions, to assess its paved roads. The PASER system provides a simple, efficient, and consistent method for evaluating road conditions through visual inspection. More information regarding the PASER system can be found in the Appendix.

The surface condition of unpaved roads can rapidly change, which makes it difficult to obtain a consistent surface condition rating over the course of weeks or even days. The PASER system works well on most paved roads, which have a relatively stable surface condition over several months, but it is difficult to adapt to unpaved roads. To address the need for a reliable condition assessment system for unpaved roads, the TAMC adopted the Inventory Based Rating (IBR) System and VBCRC also uses the IBR System for rating its unpaved roads. The link to information about the IBR System can be found in the Appendix.

The IBR System gathers reliable condition assessment data for unpaved roads by evaluating three features—surface width, drainage adequacy, and structural adequacy. These three assessments come together to generate an overall 1-10 IBR rating.

A high IBR rating reflects a road with wide surface width, good drainage, and a well-designed and well-constructed base, whereas a low IBR rating reflects a narrow road with no drainage and little gravel. A good, fair, or poor assessment of each feature is not an endorsement or indictment of a road's suitability for use but simply provides context on how these road elements compare to a baseline condition.

Unpaved roads are constructed and used differently throughout Michigan. A narrow, unpaved road with no drainage and very little gravel (low IBR rating) may be perfectly acceptable in a short, terminal end of the road network, for example, on a road segment that ends at a lake or serves a limited number of unoccupied private properties. However, high-volume unpaved roads that serve agricultural or other industrial activities with heavy trucks and equipment will require wide surface width, good drainage, and a well-designed and well-constructed base structure (high IBR rating). Where the unpaved road is and how it is used determines how the road must be constructed and maintained: just because a road has a low IBR rating does not necessarily mean that it needs to be improved. The IBR rating is not an endorsement or indictment of the road's suitability for use but rather, an indication of a road's capabilities to support different traffic volumes and types in all weather.

“Good” roads, according to the TAMC, have PASER or IBR scores of 8, 9, or 10. Roads in this category have very few, if any, defects and only require minimal maintenance; they may be kept in this category longer using PPM. These roads may include those that have been recently sealcoated or newly constructed.

“Fair” roads, according to the TAMC, have PASER or IBR scores of 5, 6, or 7. Roads in this category still show good structural support, but their surface is starting to deteriorate. CPM can be cost-effective for maintaining the road’s “fair” condition or even raising it to “good” condition before the structural integrity of the pavement has been severely impacted. CPM treatments can be likened to shingles on a roof of a house: while the shingles add no structural value, they protect the house from structural damage by maintaining the protective function of a covering.

“Poor” roads, according to the TAMC, have PASER or IBR scores of 1, 2, 3, or 4. These roads exhibit evidence that the underlying structure is failing, such as alligator cracking and rutting. These roads must be rehabilitated with treatments like a heavy overlay, crush and shape, or total reconstruction.

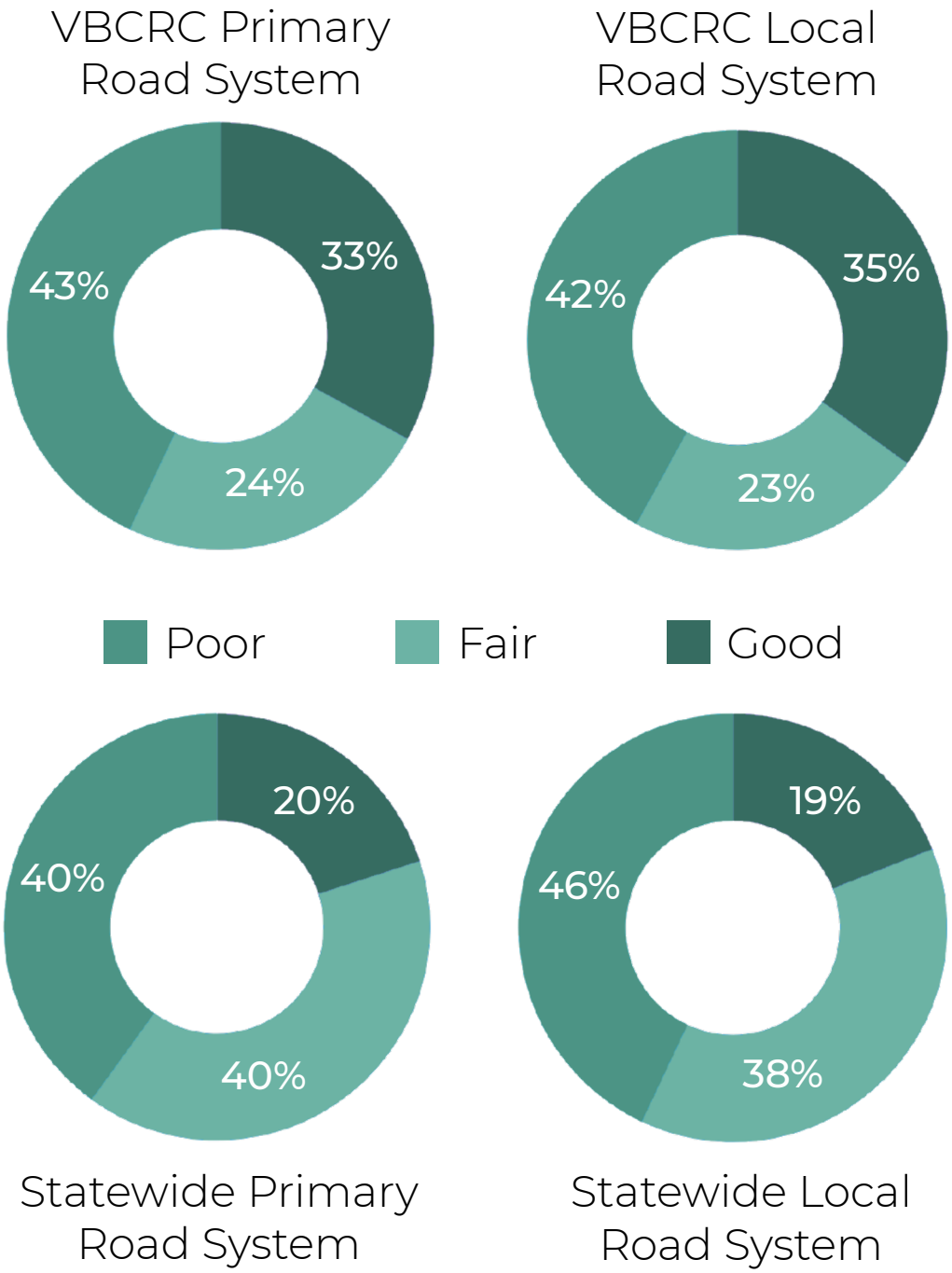
VBCRC collects PASER data on 100 percent of its asphalt roads and collects 100 percent of its IBR data every three years. For federal-aid-eligible roads, the Road Commission partners with the Southwest Michigan Planning Commission and the Michigan Department of Transportation to collect data on half of this network annually. For all other data collection, the Road Commission utilizes its own staff and resources.

The TAMC has developed statewide definitions of road condition by creating three simplified condition categories—“good”, “fair”, and “poor”—having similar contexts with regard to maintenance and/or reconstruction.

The definitions of these rating conditions and image examples are located on the left side of this page.

VBCRC's 2020 paved county primary road network has 33 percent of roads in the TAMC good condition category, 24 percent in fair, and 43 percent in poor. The paved county local road network has 35 percent in good, 23 percent in fair, and 42 percent in poor. In comparison, the statewide paved county primary road network has 20 percent of roads in the TAMC good condition category, 40 percent in fair, and 40 percent in poor. The statewide paved county local road network has 19 percent in good, 38 percent in fair, and 46 percent in poor.

Other road condition graphs can be viewed on the TAMC pavement condition dashboard, the link can be found in the Appendix.



# PERFORMANCE GOALS AND OUTCOMES

Goals help set expectations for how roadway conditions will change in the future. Surface condition changes are influenced by water infiltration, soil conditions, sunlight exposure, traffic loading, and repair work performed. VBCRC is not able to control any of these factors fully due to seasonal weather changes, traffic pattern changes, and its limited budget. In spite of the uncontrollable variables, it is still important to set realistic network condition goals that efficiently use budget resources to build and maintain roads meeting taxpayer expectations.

## GOALS FOR PAVED COUNTY PRIMARY ROADS

The overall goal for VBCRC's paved county primary road network is to maintain or improve road conditions network-wide from 2020 conditions.

VBCRC's network-level pavement condition strategy for paved county primary roads is:
1. Prevent those paved county primary roads in the good and fair categories (PASER 10 – 5) from deteriorating to the poor category (PASER 4 - 1). At the point which a roadway transitions from fair to poor, the cost to return that road segment to good or fair condition is exponentially higher than to maintain it in good or fair condition.

# GOALS FOR PAVED COUNTY LOCAL ROADS

The overall goal for VBCRC's paved county local road network is to maintain or improve road conditions network-wide from 2020 conditions. At this time, the funding received by the Van Buren County Road Commission does not support investment in the local road system beyond general maintenance.

The VBCRC partners with the 18 Townships within Van Buren County to prioritize the funding of preventative maintenance and improvements efforts to the paved local road network.

VBCRC's network-level pavement condition strategy for paved county local roads is:
1. Build an effective partnership with the 18 Townships within Van Buren County to prevent those paved county local roads in the good and fair categories (PASER 10 - 5) from deteriorating to the poor category (PASER 4 - 1).
a. Provide recommendations and maintenance and improvement options to meet this goal.
b. Assist in the development of road plans for each of the 18 Townships to prioritize this goal.

# GOALS FOR UNPAVED/GRAVEL ROADS

The overall goal for VBCRC's unpaved or gravel road network is to maintain or improve road conditions network-wide based upon 2020 levels.

Our unpaved gravel roads will be maintained through general maintenance through grading and scraping. Any improvements to the 2.122 miles of county primary gravel roads will be funded through the Road Commission's budget at which time they are prioritized through the criteria set forth in this plan. Improvements to the 243.121 miles of county local gravel roads will be funded through Township Contributions at which time they are prioritized through the Township's road budget. No additional gravel road miles will be paved without a planned and budgeted maintenance strategy.

# PROJECT SELECTION

An important part of this asset management plan is the project selection criteria used to prioritize road improvement projects.

The Van Buren County Road Commission utilizes the following four criteria to determine the prioritization of projects:

1. PASER/IBR ratings – Prioritization of road projects in the good and fair categories ensures the most efficient use of the Road Commission's financial resources. Improving roads from the poor category to the good or fair categories is exponentially more expensive and less efficient than maintaining roads in good and fair condition. As such, the Road Commission will prioritize the more efficient improvements to good and fair condition road segments.

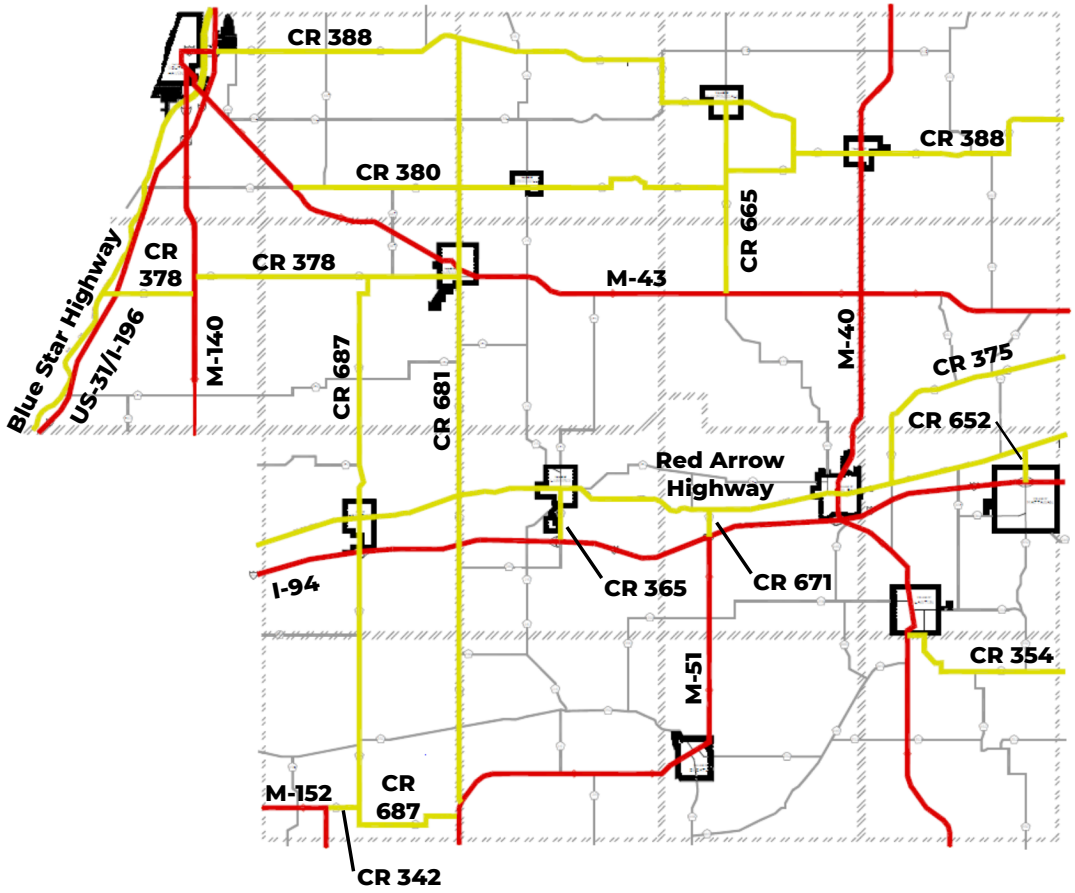
2. Traffic Counts – Prioritization of road projects based upon traffic counts ensures the financial resources of the Road Commission provide the greatest impact to the traveling public.

The Road Commission has developed a three-tiered prioritization level. Roads in the first category are more highly prioritized than those in the second and third categories and so on.

3. Connectivity/Arterial Routes – Prioritization of road projects based upon the connection of roads within the Road Commission's jurisdiction is another criteria that ensures the proper utilization of resources. For the greatest impact to the traveling public, those road segments and/or routes that connect population centers with State highways or other population centers create the greatest positive impact. Additionally, while entire routes cannot necessarily be prioritized in any given budget year or even several budget years, it is important to coordinate the allocation of resources to complete improvements to improve an entire route rather than move resources around. For example, the positive impact to the traveling public is limited when a mile of improved roadway is surrounded by other unimproved road segments.

Alternatively, beginning with one segment of a route, followed by an attached segment, and another, resulting in a route between population centers or state highways, ensures the greatest positive impact to the traveling public.

A map of the prioritized connectivity/arterial routes is shown below. MDOT's roads are shown in red, VBCRC's road system is shown in yellow.



4. Funding Sources – Prioritization of road projects based upon available funding sources (besides the Road Commission's general funding through the Michigan Transportation Fund (MTF) or County-Wide Millage revenues) is an important factor in project selection. The Van Buren County Road Commission submits projects through various funding sources, including Congestion Mitigation and Air Quality (CMAQ), Economic Development, Safety Funds, Local Bridge Program, and other Federal and State Aid sources based upon the criteria of each funding source. Additionally, the Road Commission receives Township Contributions for which the Townships dictate the project criteria.

## PERFORMANCE MEASURE

The Van Buren County Road Commission utilizes a various array of project types to address the needs of the road system. The selection of repair treatments for roads aims to balance costs, benefits, and road life expectancy.

All pavements are damaged by water, traffic weight, freeze/thaw cycles, and sunlight. Each treatment and strategy—reconstruction, structural improvements, capital preventive maintenance, and others used by VBCRC—counter at least one of these pavement-damaging forces. The various "mix of fixes" are outlined on the next two pages. Every potential road treatment references the PASER at which the treatments are most effective.

These identified scores "trigger" the timing of projects appropriately to direct the right fix at the right time, thereby providing the best chance for a successful project. The Road Commission utilizes RoadSoft to evaluate the performance effectiveness of these treatments.

• Total Road Reconstruction: Reconstruction includes: 1) clearing the road right-of-way of brush, trees, and stumps; 2) installing a proper drainage system; 3) constructing a 12" sub-base of compacted sand, and a minimum of 8" of compacted gravel; and 4) HMA paving the roadway with a minimum of two courses of asphalt (base and top), with shoulder material being added to match the elevation of the new pavement.

• HMA Overlay (With or Without Milling): HMA overlay is placing 1 1/2"-2" of new pavement material over existing pavement that is not distorted, extensively cracked, or patched. Shoulder material is added to match the elevation of the new pavement. Milling, sometimes used prior to a HMA overlay, is grinding off the top layer of the existing pavement to place the new HMA surface on top of non-distorted pavement.

• Crush and Shape: Crushing and shaping the road creates a new structural base from the existing pavement. A pulverizer grinds the existing asphalt and 1-2" of the underlying gravel. The material is then re-graded and compacted.

• Chip Seal: Chip seal, or sealcoat, is a thin layer of emulsion or asphalt covered with a layer of crushed slag, rock, or stone to seal the surface of an existing paved roadway. Crack seal is occasionally applied prior to chip sealing a pavement surface. Fog seal can be applied over a chip seal for additional protection from weather.

• Slurry Seal/Microsurface: Slurry seal is an application of an emulsion, but with very small crushed rock as a part of the mixture. Microsurfacing is a polymer modified asphalt, aggregate, mineral filler, additives, and water. Microsurfacing aids in skid resistance on existing paved surfaces.

• Crack Seal: Crack sealing is a rubber material consisting of polymers, virgin rubber, and asphalt emulsion combined to form an elastic moisture barrier over cracks in the road that when heated and applied, will maintain their form over extreme heat and cold fluctuations in the roadway.

More in-depth descriptions of these fixes, as well as other maintenance projects, can be found in VBCRC's Transportation Partners Booklet. The link to this booklet can be found in the Appendix.

| Type of Fix | Suggested PASER Rating | Life Expectancy |
|---|---|---|
| Total Road Reconstruction | 1-3 | 14 Years |
| Hot-mix Asphalt (HMA) Overlay with/without Milling | 4-7 | 5-10 Years |
| Crush and Shape | 1-3 | 14 Years |
| Chip Seal | 7-9 | 5 Years |
| Slurry Seal/Microsurface | 7-9 | 4-7 Years |
| Crack Seal | 5-8 | 2 Years |

# RISK MANAGEMENT

In consideration of VBCRC's goals, hazards and threats to the agency and to programs and projects VBCRC aims to complete have been identified and evaluated for their impact on the agency. These risks are both natural (e.g., extreme weather patterns and storm events) and man-made threats (e.g., cyberattacks and labor shortages). The hazards and threats can have system-wide impacts or focused impacts and can be caused by circumstances outside of VBCRC's control.

Transportation infrastructure is designed to be resilient. The system of interconnecting roads and bridges maintained by VBCRC provides road users with multiple alternate options in the event of an unplanned disruption of one part of the system. There are key links in the transportation system that may cause significant inconvenience to users if they are unexpectedly closed to traffic. These key links may include some of the following characteristics:

· Geographic divides: Areas where a geographic feature (river, lake, mountain or limited access road) limits crossing points of the feature.

· Emergency alternate routes for high-volume roads: Roads which are routinely used as alternate routes for high volume roads or roads that are included in an emergency response plan.

· Limited access areas: Roads that serve remote or limited access areas that result in long detours if closed.

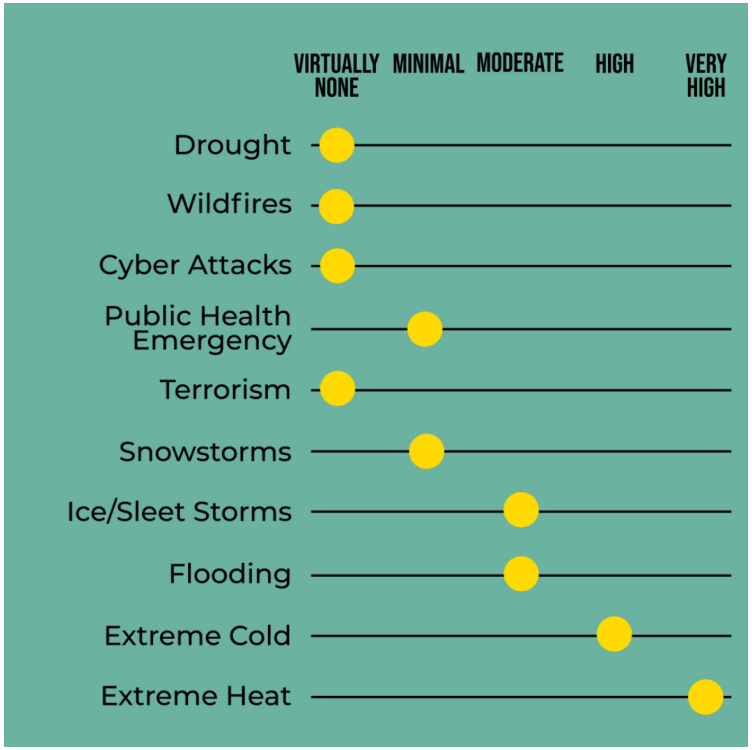
· Main access to key commercial districts: Areas where a large number of large size businesses will be significantly impacted if a road is unavailable.



# IMPACT OF THREATS TO VBCRC

Several threats to VBCRC's mission are outside of the control of VCBRC. These are usually naturally occuring weather patterns, but can also be categorized as extreme storm impacts, crisises that impact human health, and human-designed attacks meant to stall or destroy for political or financial gain.

The overall impact of these hazards are outlined below.




# AGENCY THREATS

Agency threats are risks that directly impact VBCRC's ability to develop a program or complete projects. These risks have varying levels of consequences to VBCRC, either in the way VBCRC does business or in VBCRC's ability or achieve its goals based on out mission, vision, and values. The severity of these threats are shown in the table below.

| Threat Categories | Threats | Threat Consquences (1-minimal; 5-severe) |
|---|---|---|
| Labor | Staffing Shortage | 4 |
| | Inability to Attract New Talent | 4 |
| Technology | Ability to Procure and Manage Changing and New Transportation System Technologies | 3 |
| | Ability to Procure State-of-the-Practice Technology Support for Day-to-Day Staff Support | 3 |
| Financial | MTF and Local Funding Levels | 5 |
| | MTF and Local Funding Structure | 5 |
| | Changes in Regulations and VBCRC's Ability to Comply | 2 |
| | Trust Funding Levels/Trust Fund Cliff | 1 |

# PROGRAM THREATS

VBCRC's program threats can affect a project, multiple projects, or the ability to reach VBCRC's goals. These threats can be site-specific like weather conditions, or systematic like economic downturn. These threats and their consequence rating can be found below.

| Threat Categories | Threats | Threat Consquences (1-minimal; 5-severe) |
|---|---|---|
| Systems Maintenance | Spikes in Maintenance Costs | 4 |
| | Needed Support for Winter Operations in Response to Severe Winter Season | 3 |
| Project-Costs | Spikes in Material Costs | 4 |
| | Spikes in Labor Costs | 2 |
| | Reoccuring Congestion | 2 |
| Climate Change | Long-term Climate Change and Threats to System Operations and Infrastructure | 2 |
| System Disruption | Economic Downturn | 2 |
| | Failure to Address Critical Functions | 2 |
| | Demographics | 2 |
| Project-level Disruptions | Extreme Weather Conditions at the Project Level | 2 |
| | Labor Disputes | 1 |

# CONSEQUENCE RATING

VBCRC's consequence ratings are chosed based on the degree of disruption to the transportation system if a hazard occurs. This rating system is numerical from 1 being minimal to 5 being severe. The definitions for these ratings can be found in the table below.

| | |
|---|---|
| 1 | No loss or significant threat to health or life; limited effect on the outcomes and/or objectives of VBCRC; and impact can be managed within current resources. |
| 2 | Minor health and safety incident involving a member of the public; minor impact on service delivery; and impact can be managed within current resources with some re-planning. |
| 3 | Health and safety incident involving multiple members of the public; compromise of the strategic objectives and goals of VBCRC; and impact can be managed with some re-planning and modest extra financial or human resources. |
| 4 | Significant health and safety incident involving multiple members of the public; significant compromise of the strategic objectives and goals of VBCRC; and impact cannot be managed without re-prioritization of VBCRC programs. |
| 5 | Loss of life; severe compromise of the strategic objectives and goals of VBCRC; and impact cannot be managed without additional funding from government. |

# FINANCIAL PLANNING

Public entities must balance the quality and extent of services they can provide with the financial resources while maximizing how efficiently funds are used. VBCRC will overview its general expenditures and financial resources currently devoted to pavement maintenance and construction. This financial information is not intended to be a full financial disclosure or a formal report. Michigan agencies are required to submit an Act 51 Report to the Michigan Department of Transportation each year; this is a full financial report that outlines revenues and expenditures. This report can be obtained on our website at www.vbcrc.org.

## COUNTY PRIMARY NETWORK

With recent changes to the funding the Van Buren County Road Commission receives through the Michigan Transportation Fund (MTF), the agency now budgets approximately $7.5 million annually on roadway preservation and improvement projects. Over the next three years, the VBCRC plans to continue budgeting $7.5 million annually for county primary-network projects consisting of, but not limited to, reconstruction, overlay, culvert replacement, and preventive maintenance. Spending on projects depends on revenue from the Michigan Transportation Fund (MTF), county-wide road millage, township contributions, and federal/state aid programs.

## COUNTY LOCAL NETWORK

Funding for preservation and improvement projects on the county local network is allocated from the 18 Townships within Van Buren County. These dollars come from an allocation to each Township from the county-wide road millage as well as each Township's general fund and/or Township road millage.

Annually, approximately $4 million is spent on roadway preservation and improvement projects for the county's local road network. Over the next three years, VBCRC anticipates that this level of funding from the Townships will remain consistently between $3.5 and $4.5 million annually on county local-network projects consisting of, but not limited to, reconstruction, overlay, culvert replacement, and preventive maintenance.

## GAP BETWEEN FUNDING AND GOALS

The current funding levels that VBCRC receives are not sufficient to meet the goals for the paved county primary road network, the paved county local road network, and the unpaved road network. The Perfomance Goals section of this plan provides further detail about the goals and provides further detail on the shortfall given the current budget. However, VBCRC believes that the overall condition of this network can be maintained or improved with additional funding for construction and maintenance.

# MULTI-YEAR PLANNING

VBCRC plans construction and maintenance projects several years in advance. A multi-year planning threshold is required due to the time necessary to plan, design, and finance construction and maintenance projects on the paved county primary road network. This includes planning and programming requirements from state and federal agencies that must be met prior to starting a project and can include studies on environmental and archeological impacts, review of construction and design documents and plans, documentation of rights-of-way ownership, planning and permitting for stormwater discharges, and other regulatory and administrative requirements.

Per PA 499 of 2002 (later amended by PA 199 of 2007), road projects for the upcoming three years are required to be reported annually to the TAMC. Planned projects represent the best estimate of future activity; however, changes in design, funding, and permitting may require VBCRC to alter initial plans. Project planning information is used to predict the future condition of the road networks that VBCRC maintains.

VBCRC has created a five year plan consisting of projects planned for the primary road system through 2026 totally over $36 million, as well as Federal and State Aid submissions that will be added to the five year plan accordingly when awarded or added to the plan as funding allows if not awarded. All projects of these projects can be found on the following pages.

# FIVE YEAR PLAN FOR PRIMARY ROAD SYSTEM

The following list of projects is the planned 5 year road plan for the primary road system. This list is subject to change based upon funding, project modifications or other unforseen issues.

| PROJECT LOACTION | PROJECT SCOPE | ESTIMATED COST |
|---|---|---|
| **2022** | | |
| CR 380; Village of Breedsville to Bloomingdale Township Line | Top Course Asphalt | $ 704,000.00 |
| CR 374; Red Arrow Highway to 45th Street | Top Course Asphalt | $ 538,000.00 |
| CR 687; 90th Avenue to CR 342 | Trench, Widen, Crush, Shape, and Pave | $ 520,000.00 |
| CR 687; South of I-94 | Culvert Replacement | $ 500,000.00 |
| CR 380; Columbia Township Line to CR 665 | Drainage Corrections, Crush, Shape, Base Pave | $ 834,294.00 |
| Red Arrow Highway; Village of Paw Paw to CR 671 | Mill and Fill | $ 1,000,000.00 |
| CR 215; Village of Breedsville to M-43 | Crush, Shape, Pave | $ 915,000.00 |
| Primary Sealcoat and Fog Seal | 60 miles | $ 1,980,000.00 |
| Primary Crackseal | | $ 100,000.00 |
| | **TOTAL:** | **$ 7,091,294.00** |

# FIVE YEAR PLAN FOR PRIMARY ROAD SYSTEM (CONT.)

| PROJECT LOACTION | PROJECT SCOPE | ESTIMATED COST |
|---|---|---|
| **2023** | | |
| CR 689; CR 388 to 8th Avenue | Road Rehabilitation | $ 940,000.00 |
| CR 388; 29th Street to CR 653 S | Restore and Rehab | $ 1,790,000.00 |
| CR 380; Columbia Township Line to CR 665 | Top Course Asphalt | $ 313,500.00 |
| Red Arrow Highway; CR 671 to Village of Lawrence | Mill and Fill | $ 977,000.00 |
| CR 352; CR 687 to 60th Street | Crush, Shape, Pave | $ 1,200,000.00 |
| Primary Sealcoat and Fog Seal | 60 miles | $ 2,079,000.00 |
| Primary Crackseal | | $ 100,000.00 |
| | **TOTAL:** | **$ 7,399,500.00** |

# FIVE YEAR PLAN FOR PRIMARY ROAD SYSTEM (CONT.)

| PROJECT LOACTION | PROJECT SCOPE | ESTIMATED COST |
|---|---|---|
| **2024** | | |
| Federal/State Aid Projects or Submitted Projects | TBD Once Funding is Allocated | $ 3,000,000.00 |
| Red Arrow Highway; Village of Lawrence to CR 681 | Mill and Fill | $ 1,830,000.00 |
| Primary Sealcoat and Fog Seal | 60 Miles | $ 2,182,950.00 |
| Primary Crackseal | | $ 100,000.00 |
| | **TOTAL:** | **$ 7,112,950.00** |

# FIVE YEAR PLAN FOR PRIMARY ROAD SYSTEM (CONT.)

| PROJECT LOACTION | PROJECT SCOPE | ESTIMATED COST |
|---|---|---|
| **2025** | | |
| Federal/State Aid Projects or Submitted Projects | TBD Once Funding is Allocated | $ 3,000,000.00 |
| CR 352; 60th Street to CR 681 | Crush, Shape, Pave | $ 1,200,000.00 |
| CR 388; CR 380 to Village of Gobles | Mill and Fill | $ 575,000.00 |
| Primary Sealcoat and Fog Seal | 60 miles | $ 2,292,097.50 |
| Primary Crackseal | | $ 100,000.00 |
| | **TOTAL:** | **$ 7,167,097.50** |

# FIVE YEAR PLAN FOR PRIMARY ROAD SYSTEM (CONT.)

| PROJECT LOACTION | PROJECT SCOPE | ESTIMATED COST |
|---|---|---|
| **2026** | | |
| Federal/State Aid Projects or Submitted Projects | TBD Once Funding is Allocated | $ 3,000,000.00 |
| CR 653; Red Arrow Highway to 22nd Street (Van Kal) | Crush, Shape, Pave | $ 2,056,000.00 |
| Primary Sealcoat and Fog Seal | 60 Miles | $ 2,406,702.38 |
| Primary Crackseal | | $ 100,000.00 |
| | **TOTAL:** | **$ 7,562,702.38** |

# FEDERAL AND STATE AID SUBMISSIONS

The following projects have been submitted for funding through various funding sources as indicated. Once funding is allocated, these projects will enter into the 5 year road plan accordingly. Additionally, projects that are NOT awarded funding will be added to the 5 year road plan as funding allows.

| SUBMITTED FOR AID 2024-2026 | FUNDING PROGRAM | SCOPE OF WORK | EST. COSTS | EST. RC COST SHARE |
|---|---|---|---|---|
| CR 352; CR 215 to CR 358 | RTF 2024-2026 | Crush and Shape | $ 1,540,000.00 | 20% |
| CR 652; CR 354 to 72nd Avenue | RTF 2024-2026 | Mill and Fill | $ 425,000.00 | 20% |
| CR 681; M-51 to CR 352 | RTF 2024-2026 | Crush and Shape | $ 1,315,000.00 | 20% |
| Red Arrow Highway; CR 681 to Village of Lawrence | RTF 2024-2026 | Crush and Shape | $ 1,830,000.00 | 20% |
| CR 388; Village of Bloomingdale to CR 380 | RTF 2024-2026 | Mill and Fill | $ 373,000.00 | 20% |
| CR 652; 72nd Avenue to Robinson Avenue | RTF 2024-2026 | Mill and Fill | $ 658,750.00 | 20% |
| CR 687; CR 372 to CR 376 | RTF 2024-2026 | Crush and Shape | $ 1,956,521.00 | 20% |
| Red Arrow Highway; 26th Street to CR 652 S | RTF 2024-2026 | Mill and Fill | $ 400,000.00 | 20% |
| Red Arrow Highway; 59.5 Street to CR 681 | RTF 2024-2026 | Mill and Fill | $ 300,000.00 | 20% |

# FEDERAL AND STATE AID SUBMISSIONS (CONT.)

| SUBMITTED FOR AID 2024-2026 | FUNDING PROGRAM | SCOPE OF WORK | EST. COSTS | EST. RC COST SHARE |
|---|---|---|---|---|
| CR 364; CR 657 to Western Avenue | KATS 2024-2026 | Crush and Shape | $ 1,058,000.00 | 20% |
| CR 652; 72nd Avenue to Robinson Avenue | KATS 2024-2026 | Mill and Fill | $ 658,750.00 | 20% |
| CR 665; 64th Avenue to CR 358 | KATS 2024-2026 | Crush and Shape | $ 1,035,500.00 | 20% |
| CR 671; Red Arrow Highway to 60th Avenue | KATS 2024-2026 | Mill and Fill | $ 330,200.00 | 20% |
| CR 653; M-40 to I-94 | Urban 2024-2026 | Crush and Shape | $ 839,500.00 | 18.15% |
| Red Arrow Highway; City of Hartford to 59.5 Street | Urban 2024-2026 | Mill and Fill | $ 979,625.00 | 18.15% |
| CR 374; 39th Street to Village of Paw Paw | Urban 2024-2026 | Crush and Shape | $ 632,500.00 | 18.15% |
| CR 665; Village of Paw Paw to Bridge | Urban 2024-2026 | Crush and Shape | $ 1,293,750.00 | 18.15% |
| CR 380; Blue Star Highway to City of South Haven | Urban 2024-2026 | Crush and Shape | $ 165,000.00 | 18.15% |
| Kalamazoo Street; Blue Star Highway to City of South Haven | Urban 2024-2026 | Mill and Fill | $ 115,000.00 | 18.15% |
| Ruggles Road; 20th Avenue to Blue Star Highway | Urban 2024-2026 | Crush and Shape | $ 195,000.00 | 18.15% |
| Red Arrow Highway @ CR 652 S | CMAQ 2024-2026 | Signal Upgrade | $ 45,000.00 | 20% |

# OPTIONAL PROJECTS

The following are optional projects to be added to the 5 year primary road plan as funding allows.

| PROJECT LOCATION | SCOPE OF WORK | ESTIMATED COSTS |
|---|---|---|
| CR 380; CR 665 to CR 388 | TBD | $ TBD |
| CR 388; CR 653 to 12th Avenue | Trench, Widen, Crush, Shape, Pave | $ 930,000.00 |
| CR 388; 12th Avenue to County Line | Trench, Widen, Crush, Shape, Pave | $ 1,315,000.00 |
| CR 378; City of Bangor to M-140 | TBD | $ TBD |
| CR 665; Fisk Lake Road to M-43 | Mill and Fill | $ 720,800.00 |
| CR 665; 60th Avenue to CR 358 | Mill and Fill | $ 272,000.00 |
| CR 388; 62nd Street to Grand Junction | Mill and Overlay | $ 654,051.00 |
| CR 681 @ Red Arrow Highway | Intersection Improvements | $ TBD |

# CONCLUSION

In the early 1990s, new legislative and reporting requirements gave rise to the adoption of asset management practices. Today, the widely demonstrated benefits of asset management in transportation decision-making encourage its adoption by agencies such as the Van Buren County Road Commission.

Many challenges continue to intensify, such as stretched budgets, declining staff resources, more stringent accountability requirements, deteriorating transportation infrastructure, etc. Transportation Asset Management is the key to finding the most effective and cost-efficient balance of preserving, upgrading, and replacing highway assets in this environment.

In this Asset Management Plan, the Van Buren County Road Commission has focused transportation asset management decision-making on factors, such as connectivity, PASER data collection, traffic volume, and surface condition for improvement. This Plan creates a clear and concise path for the Van Buren County Road Commission to meet its goals to improve the road network under its jurisdiction.

# SUMMARY

The objective of road asset management is to ensure that assets provide their required levels of services in the most cost-effective manner.

To efficiently utilize Michigan Transportation Funds, Federal and State Aid, and other local funds requires good planning and the accurate identification of appropriate rehabilitation projects. Assessing roadway conditions is an essential step in this process. Finding effective and creative solutions for stretching existing funds to provide for longevity of the road network is also an important consideration. Finally, identifying the roadways that provide the greatest benefit to the traveling public is of utmost importance.

The Van Buren County Road Commission continues to focus on making improvements to the Primary Roads under its jurisdiction as these are the roadways that provide the greatest positive impact.
This Asset Management Plan focuses on the management of the Van Buren County Road Commission's road infrastructure assets, which include road surfaces, paved and unpaved, and bridges.

# APPENDIX

More information regarding PASER ratings, collection of data, and TAMC's role in PASER ratings: https://www.michigan.gov/tamc/0,7308,7-356-82158_82627---,00.html

More information regarding IBR ratings: https://ctt.mtu.edu/inventory-based-rating-system

The Transportation Asset Management Council's Dashboard: https://www.michigan.gov/tamc/

Van Buren County Road Commission's Transportation Partners Booklet and Mix of Fixes: https://www.vbcrc.org/transportationpartners

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