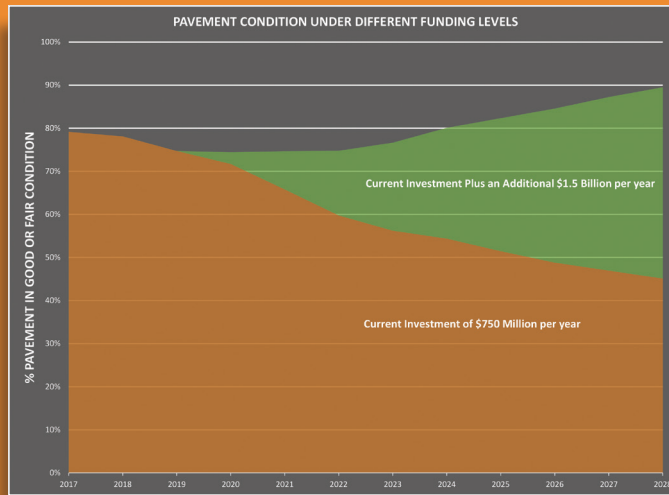


MDOT Trunkline System Stratification

MDOT roads are stratified into four tiers for program development and investment purposes:

- Interstate
- Non-Interstate Freeway
- Non-Freeway National Highway System (NHS)
- Non-NHS

This stratification ensures the department's pavement preservation resources are focused on the most important corridors throughout the state.



The Challenge

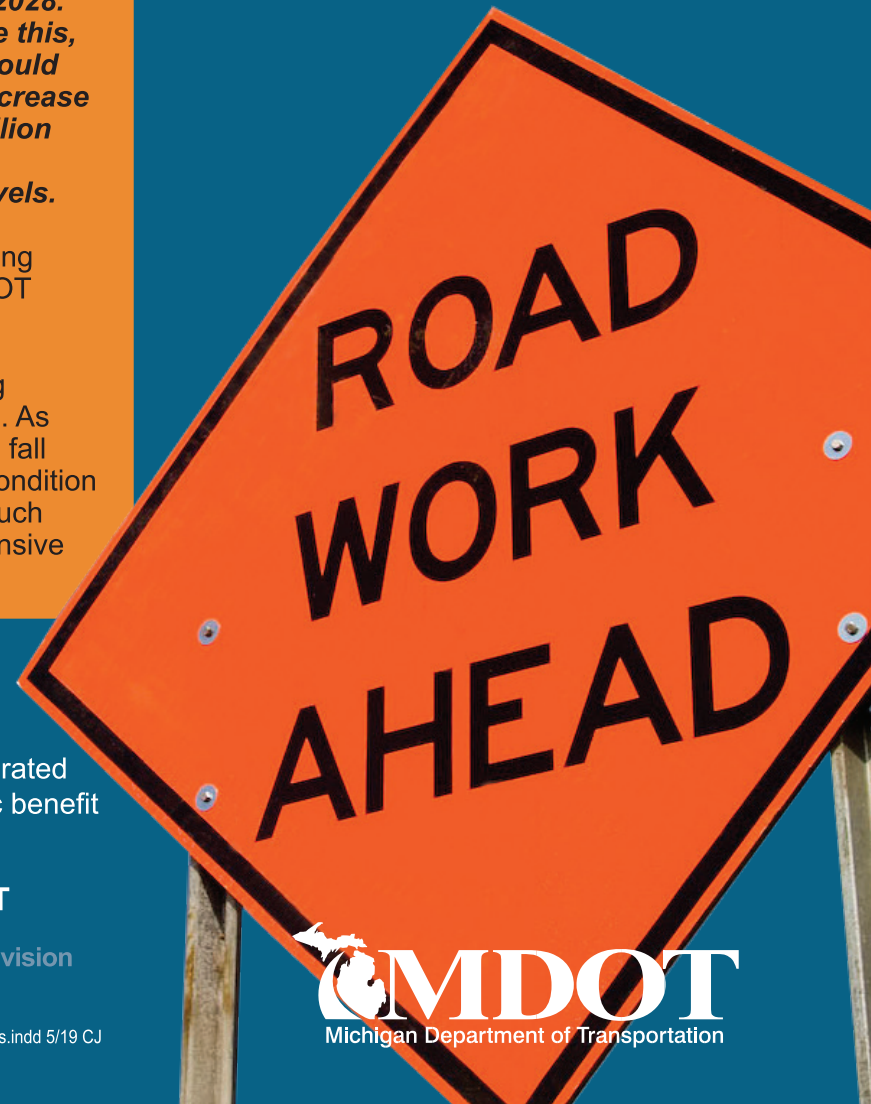
MDOT makes the most of its limited resources to keep as many roads in good or fair condition as possible.

- *The orange area represents forecasted pavement condition based on current investments, and shows pavement condition continually deteriorating.*
- *The green area represents 90 percent of the system condition rated good or fair by 2028. To achieve this, funding would need to increase by \$1.5 billion more than current levels.*

In the coming years, MDOT faces the challenge of declining pavements. As pavements fall into poor condition they are much more expensive to replace.

Which Roads to Fix?

How MDOT Decides



MDOT prioritizes projects based on:

- Safety
- Road Condition
- Traffic Volume
- Public Input
- Maintenance Costs
- System Stratification



Providing the highest quality integrated transportation services for economic benefit and improved quality of life.

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Statewide Transportation Planning Division

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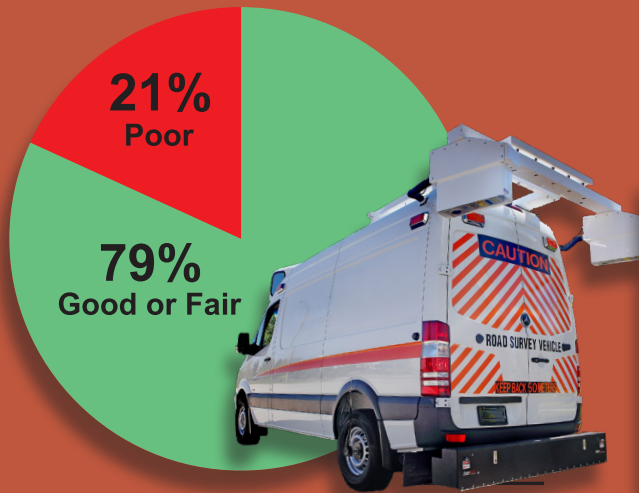


How does the Michigan Department of Transportation (MDOT) select which roads to fix?

Factors MDOT takes into account:

PAVEMENT CONDITION OF MDOT ROADS AS OF 2017

(I, US and M routes)



1. Current Condition

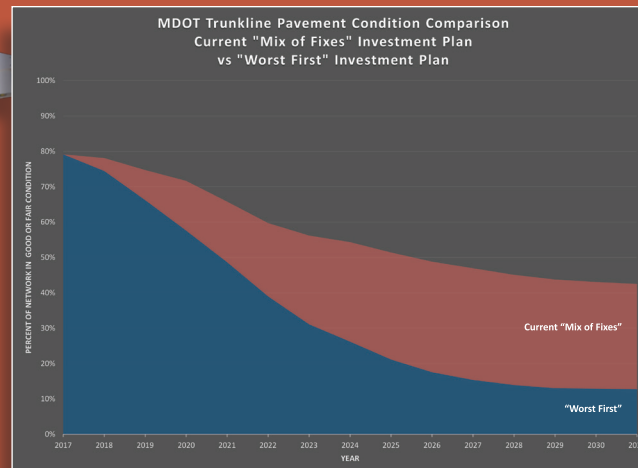
MDOT uses multiple techniques to determine a road's surface condition as good, fair or poor. This information also helps determine the number of years left until the road will need to be rebuilt.

- "Windshield" survey
- Measure roughness
- Identify crack types and severity

2. Forecasted Condition

MDOT forecasts pavement conditions with the Road Quality Forecasting System (RQFS), which takes into account:

- Current road condition
- Projected pavement deterioration
- How long a proposed fix will last
- Types of fixes



3. Strategy

MDOT monitors and manages the condition of the entire network, not just focusing on fixing the worst roads first. In order to maximize limited resources, MDOT uses a mix of fixes (reconstruction, resurfacing and preventive maintenance).

Current Average Annual Investments for FY2019-FY2023 (in Millions)

Reconstruction	\$310.4
Resurfacing	\$320.9
Preventive Maintenance	\$119.0
Total Annual Budget	\$750.3

Using this information, MDOT selects road construction projects that are the "right fix at the right time on the right road."

Reconstruction Fixes

- Repair the surface and base under the road
- Lasts 14-26 years
- Used for roads in poor condition
- Most expensive (about \$2.4 million per lane mile)

Resurfacing Fixes

- Repair or replace surface
- Lasts 10-15 years
- Used for roads in fair/poor condition
- Mid-price (about \$0.7 million per lane mile)

Preventive Maintenance Fixes

- Patch concrete or seal surface
- Lasts 3-7 years
- Used for roads in good condition
- Least expensive (about \$0.1 million per lane mile)

ROAD DETERIORATION

