Michigan Department of Transportation

Asset Management

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Chief Operations Officer
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MDOT Asset Management

MDOT has followed an asset management process for more than 20 years, supporting all Michigan I, US and M Routes




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Roads & Bridges

122,000 road miles
11,700 bridges

1 MDOT
83 County Road Agencies
531 Municipal Jurisdictions

Transportation Asset Management Council www.michigan.gov/tamc

Federal Aid Oversight

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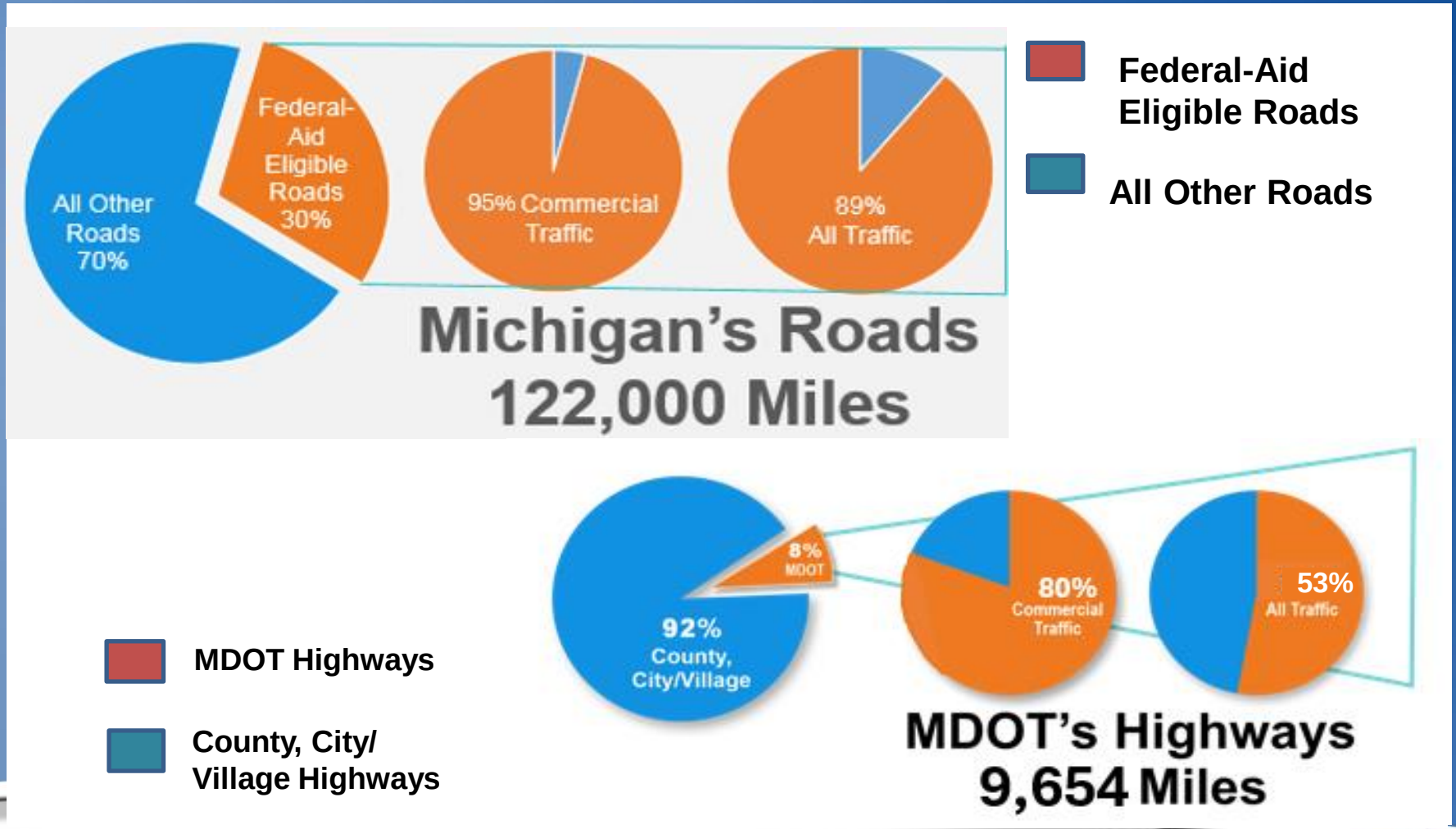
Michigan's Road Network



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State Trunkline Roads & Bridges

9,654 miles
4,811 bridges
82 roadside parks
77 rest areas

Planning ♦ Design Construction ♦ Operation Maintenance ♦ Permitting

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Construction by Low Bid

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Asset Management Goals

- Public Safety
- Accountability
- Transparency
- Economic Benefit
- State of Good Repair
- Quality of Life

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What is Asset Management?

- Policy Driven Strategies
- Objective Based, Data Driven Decision Making
- Performance-Based Project Selection
- Program Monitoring to Provide Accountability
- Utilization of a Mix of Fixes to Maximize Cost Effectiveness

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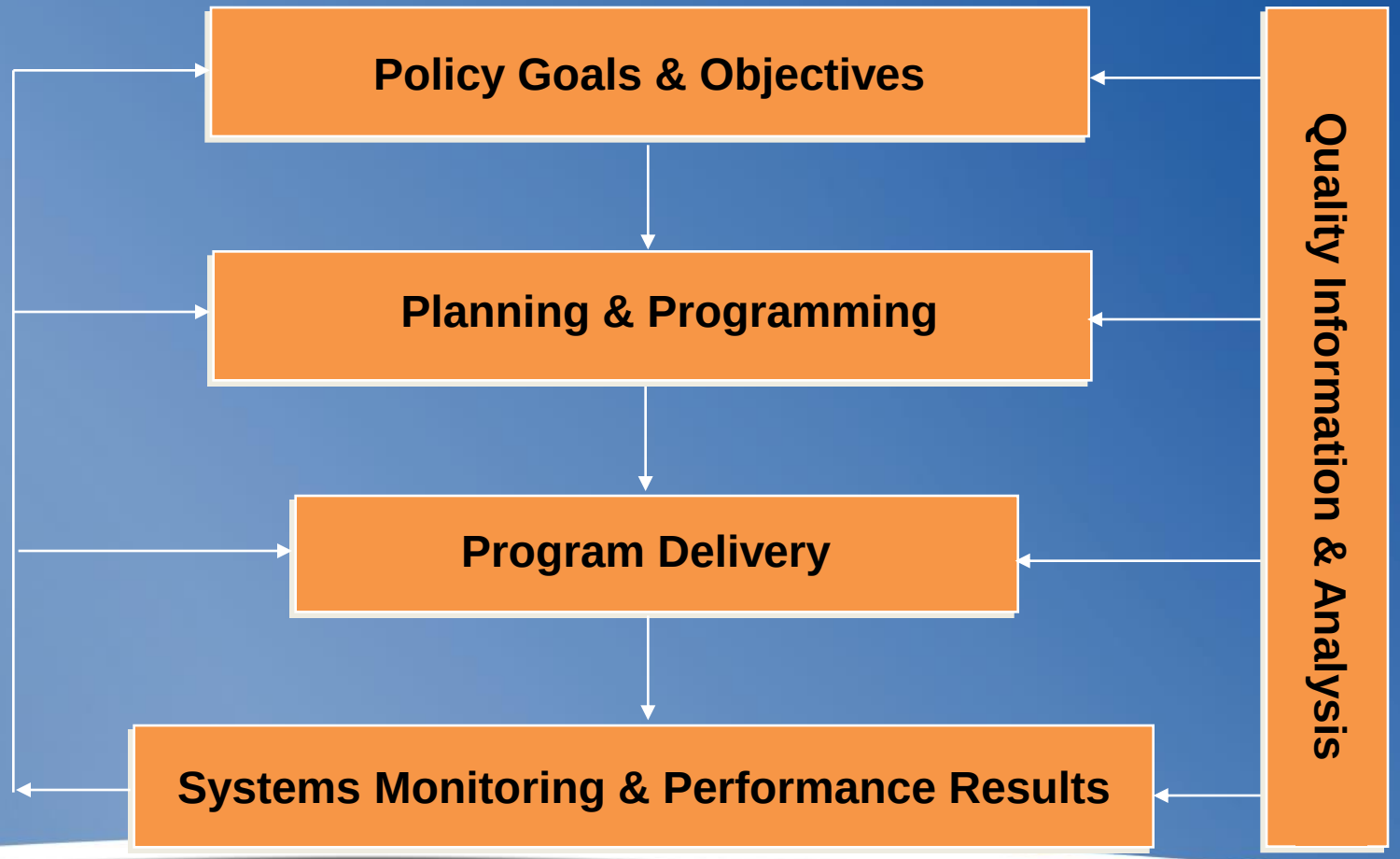
Overall Asset Management Process



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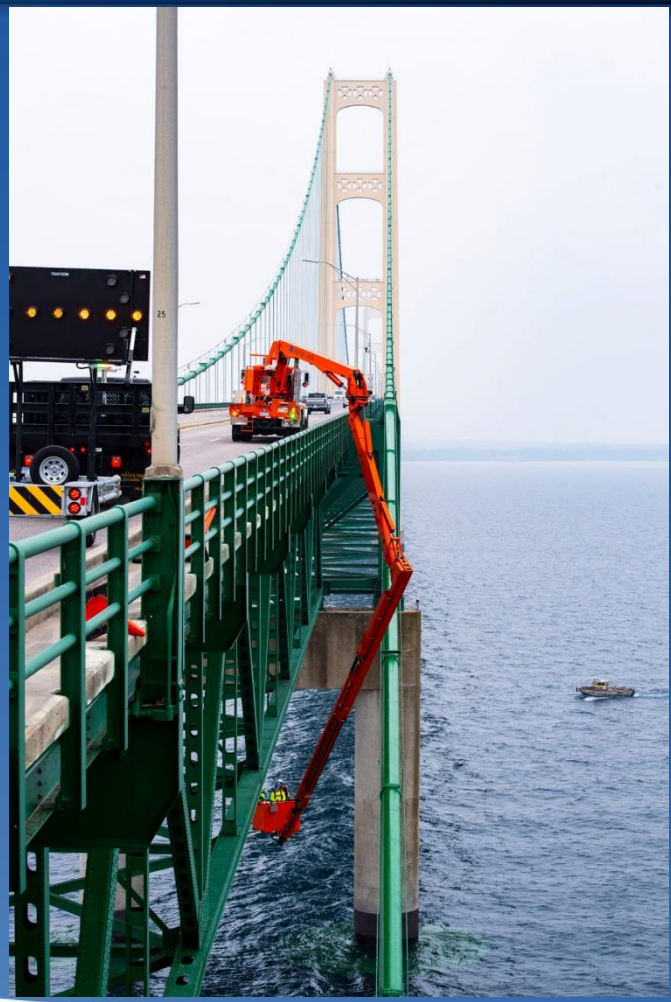
Data Collection and Reporting

- Bridge Inspections
- System Monitoring and Reporting
- Pavement Surface Evaluation Rating (PASER)
- Pavement Condition Collection on the Michigan National Highway System (NHS)*
- Ancillary Structure Inspections



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Data Management and GIS

- MDOT GIS Services
- Road Asset Inventory (RAI)
- Online Mapping and Open Data
- Transportation Asset Management System (TAMS)

Public GIS Resources:
MDOT's ArcGIS Online Portal
http://mdot.maps.arcgis.com
MDOT's Open Data Portal
http://gis.mdot.opendata.arcgis.com

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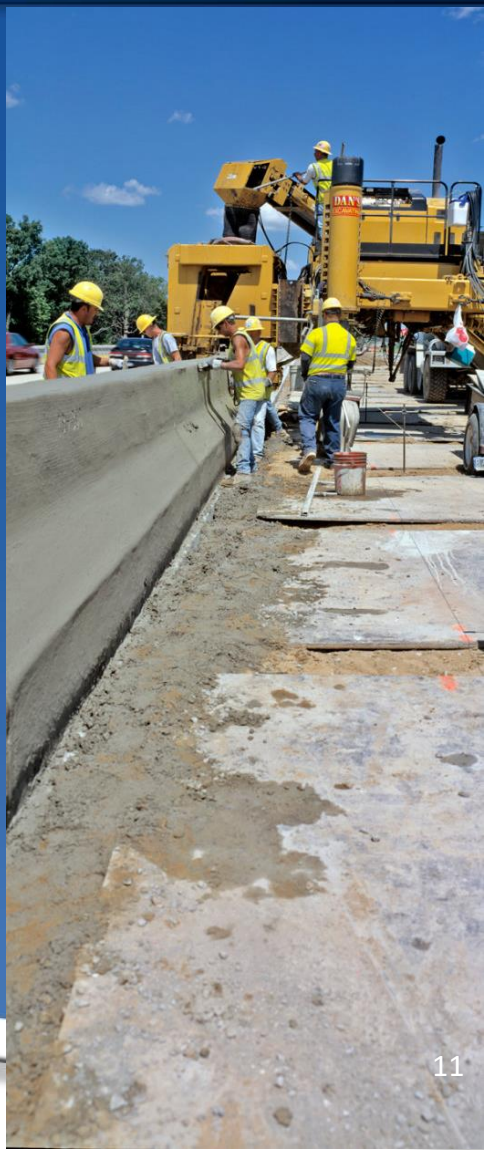
Highway Call for Projects

- Annual process that aligns project selection with MDOT's Goals, Policies and Strategic Plan
- Coordinates numerous statewide programs
- Direction given to each region for investments
- Develop and submit fix strategies
- Reviewed prior to approval



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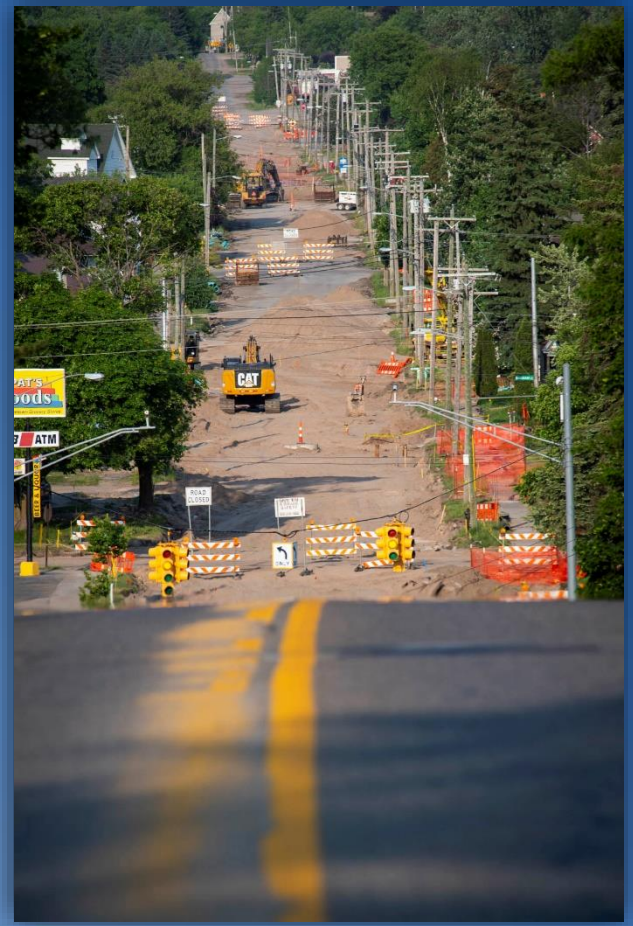
Why a Mix of Fixes?

Preservation
- Low Cost
- Protect Assets

Rehabilitation
- Medium Cost
- Restore Assets

Reconstruction
- High Cost
- Rebuild Assets



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Fixed Type Examples

- **Reconstruction**
  - Full bridge replacement
  - Pavement and base replacement
- **Rehabilitation**
  - Bridge concrete overlay
  - Multiple course asphalt overlay
  - Road concrete overlay
- **Capital Preventative Maintenance**
  - Single course asphalt overlay
  - Chip seals
  - Concrete joint repairs

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MDOT Mix of Fixes

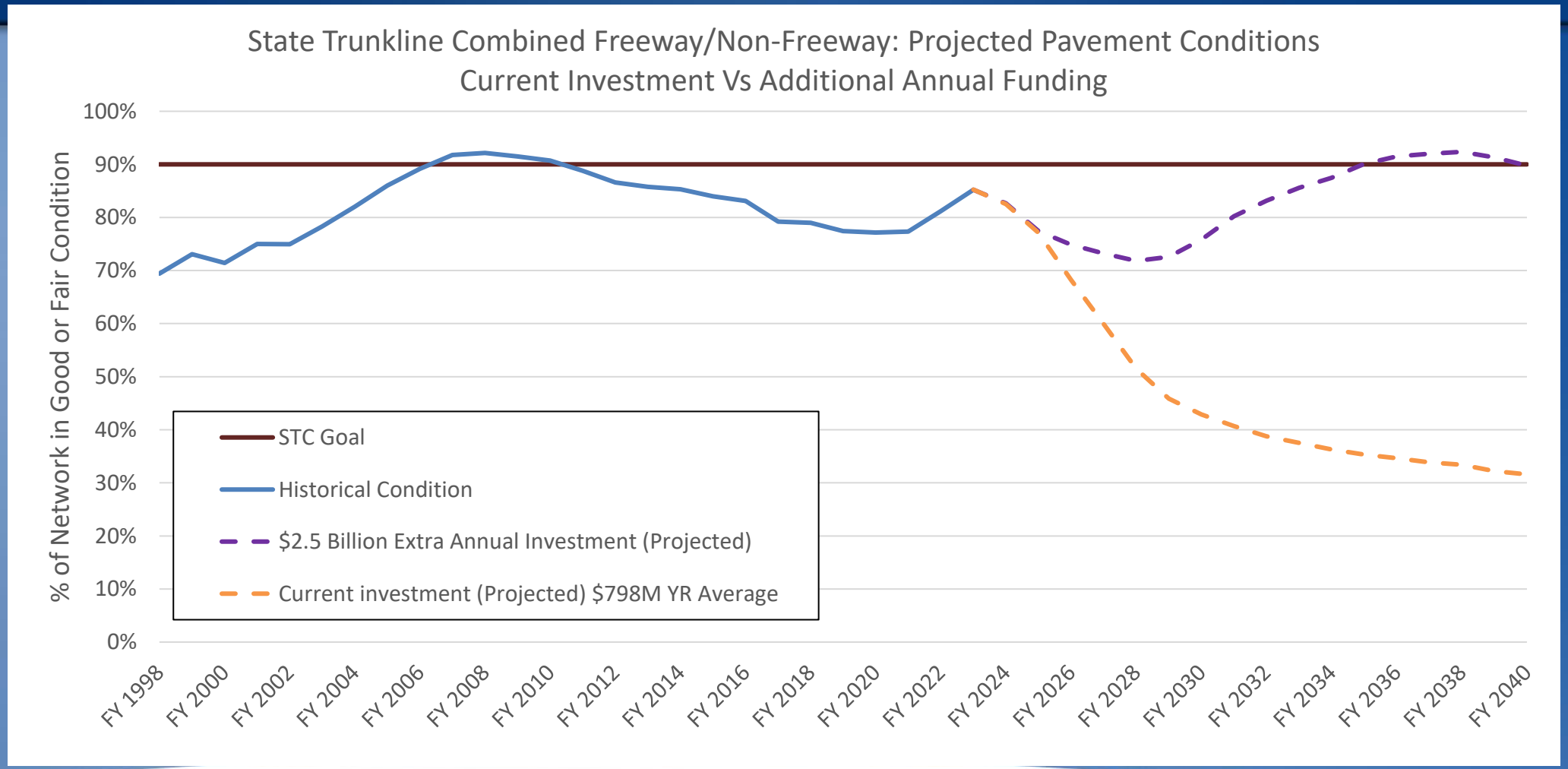
Road 2020-2025 Annual Average (RBMP years)		
Road CPM	$181,046,106	13.23%
Road Rehabilitation	$329,023,393	24.04%
Road Reconstruction	$858,429,305	62.73%
Total	$1,368,498,804	100%

Bridge 2020-2025 Annual Average (RBMP years)		
Bridge CPM	$67,209,316	19.34%
Bridge Rehabilitation	$61,602,287	17.73%
Bridge Replacement	$218,633,816	62.93%
Total	$347,445,419	100%

Road 2026-2030 Annual Average		
Road CPM	$207,364,510	27.40%
Road Rehabilitation	$193,033,411	25.50%
Road Reconstruction	$356,468,584	47.10%
Total	$756,866,505	100%

Bridge 2026-2030 Annual Average		
Bridge CPM	$24,593,813	10.85%
Bridge Rehabilitation	$15,061,959	6.64%
Bridge Replacement	$187,034,321	82.51%
Total	$226,690,093	100%

State Trunkline Combined Freeway/Non-Freeway Historical and Projected RSL Pavement Condition



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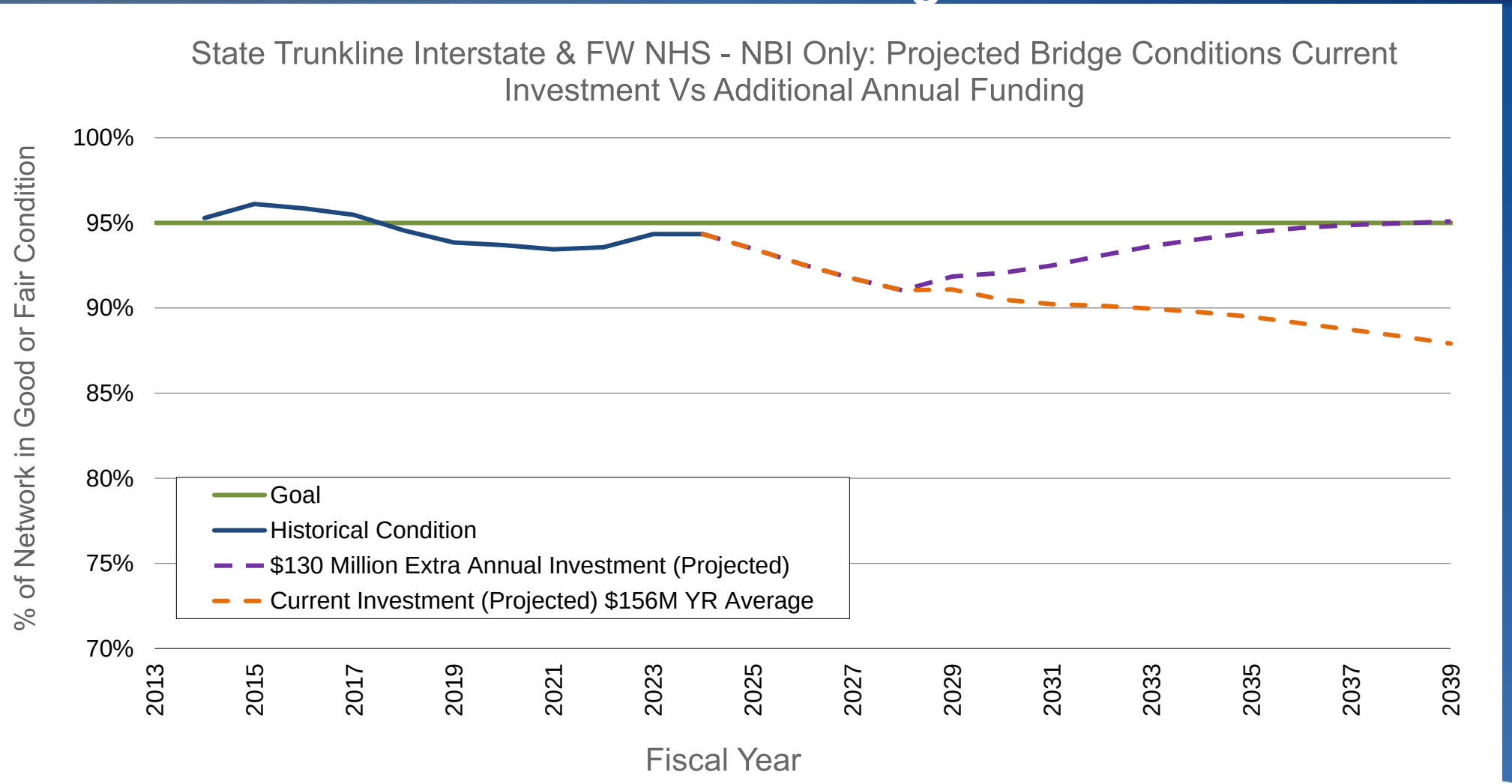
State Trunkline Interstate & FW NHS - NBI Only: Projected Bridge Conditions Current Investment Vs Additional Annual Funding



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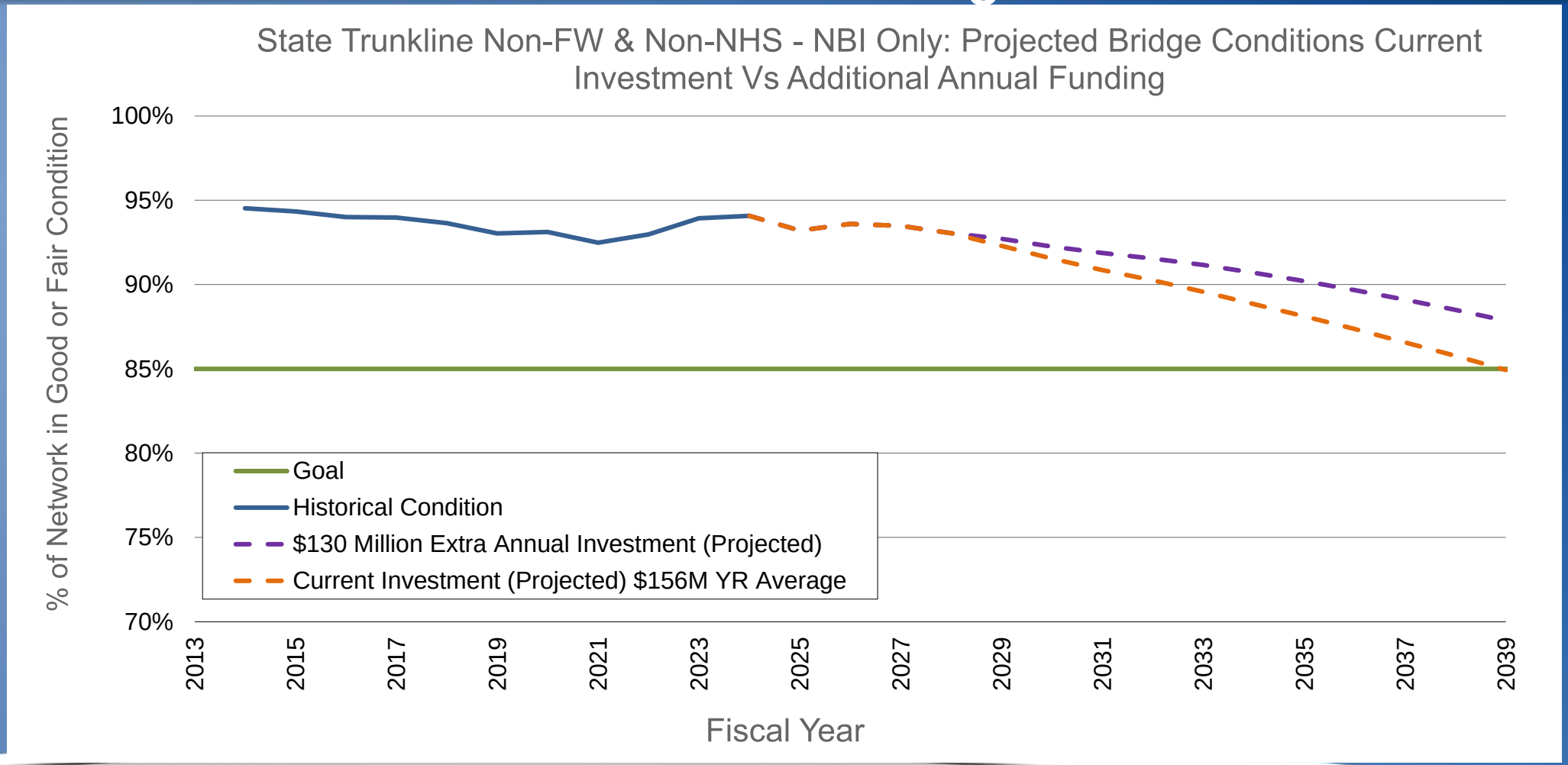
State Trunkline Non-FW & Non-NHS - NBI Only: Projected Bridge Conditions Current Investment Vs Additional Annual Funding



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Transportation Asset Management Council (TAMC)

- Formed under Michigan State Law: Public Act 499 of 2002 to promote asset management practices among all 600+ road agencies.
- Uses Pavement Surface Evaluation and Rating (PASER) for collecting condition data on the federal-aid network.
- Requires Local Asset Management Plans for all local agencies with 100+ miles of certified roads.
- MDOT provides Administrative Staffing to TAMC Board.

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MDOT Asset Management Strategy Ties with TAMC

- Pavement and Bridge Strategic Direction
- Transportation Asset Management Plan (TAMP) Coordination on National Highway System (NHS)
- Culvert Data Collection
- Coordination between Investment Reporting Tool and JobNet tracking of projects and investments
- Long-Term Goal: link MDOT's MiTAM vision with TAMC strategic plan and goals

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Benefits of Asset Management

- Define Desired Levels of Service
- Track and Predict Performance
- Improve Transparency in Decision Making
- Support Informed Funding Decisions
- Minimize Risk for Assets and Users
- Promote Resiliency

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Questions?