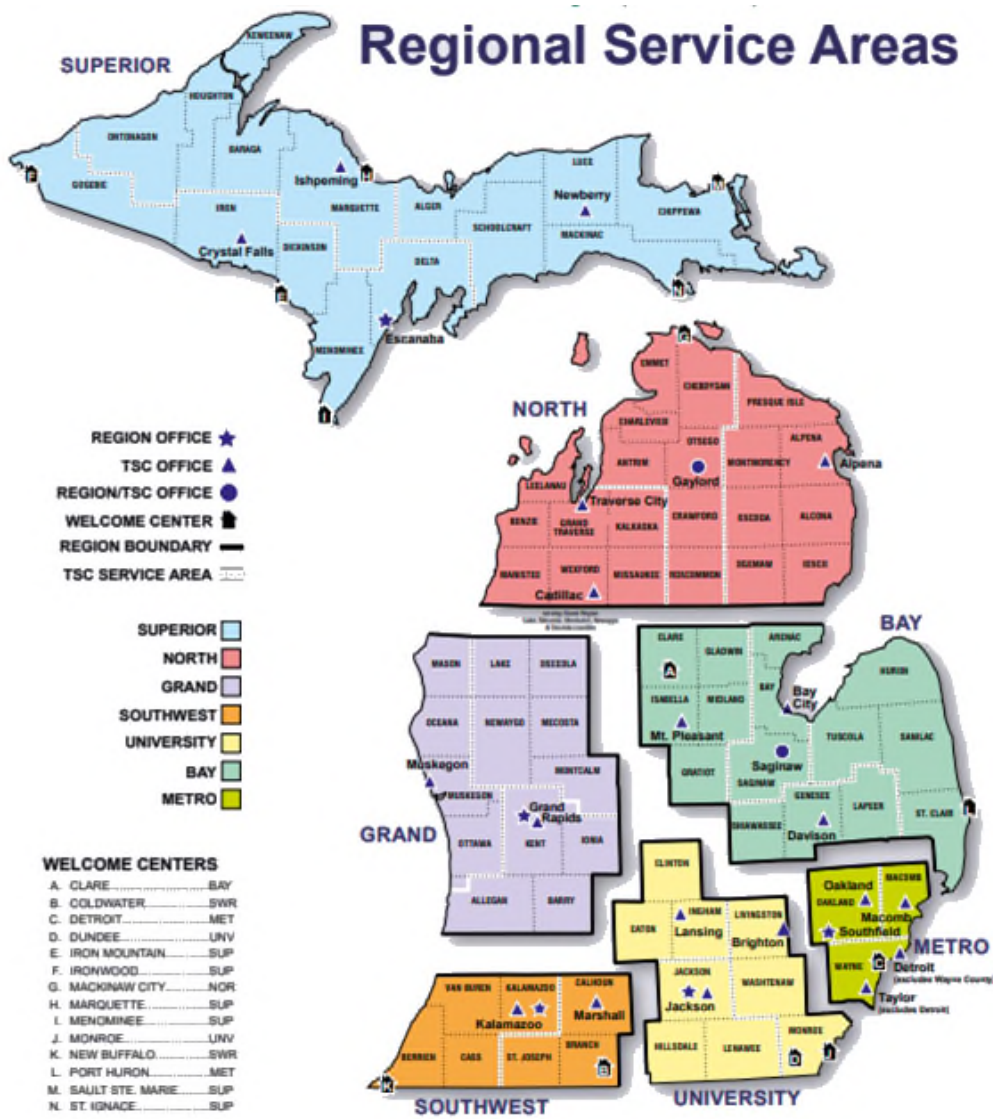
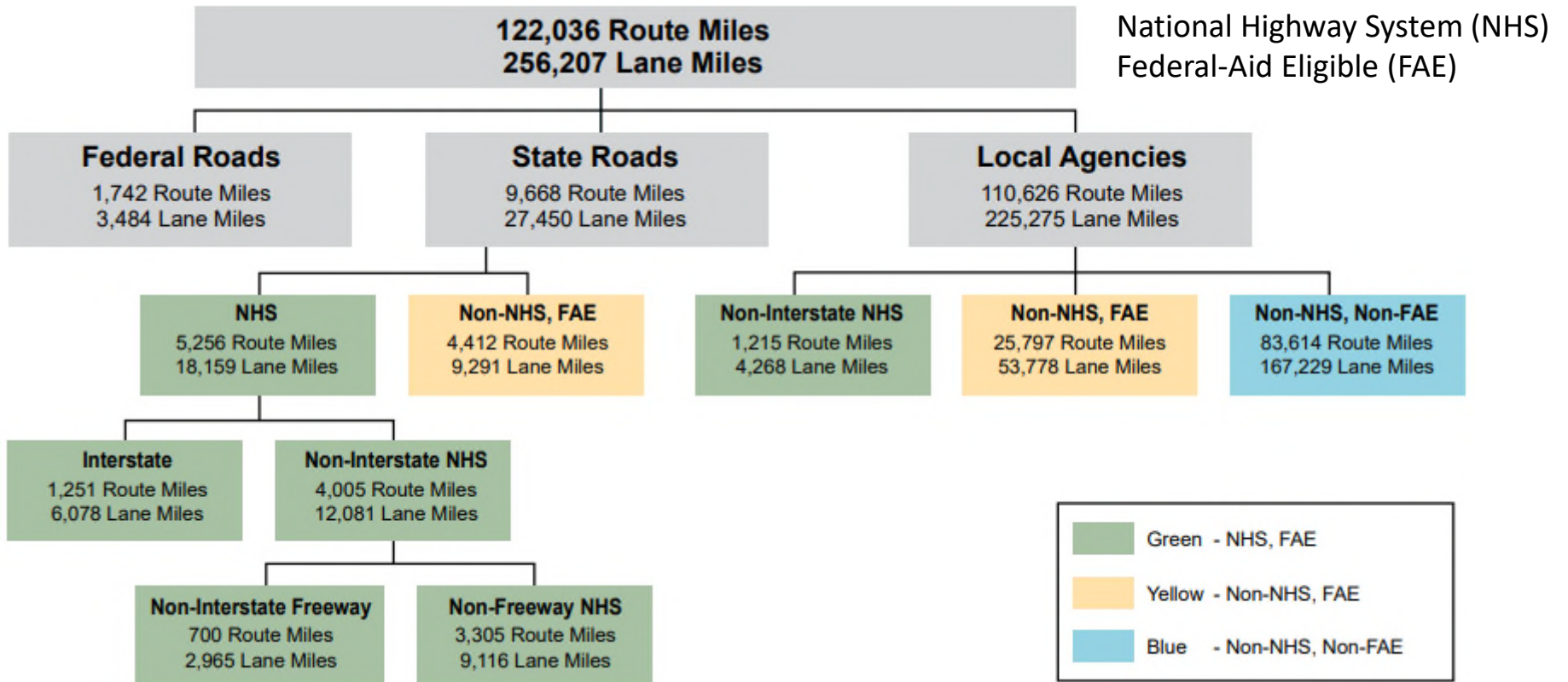


2020 Infrastructure Improvement Highlights

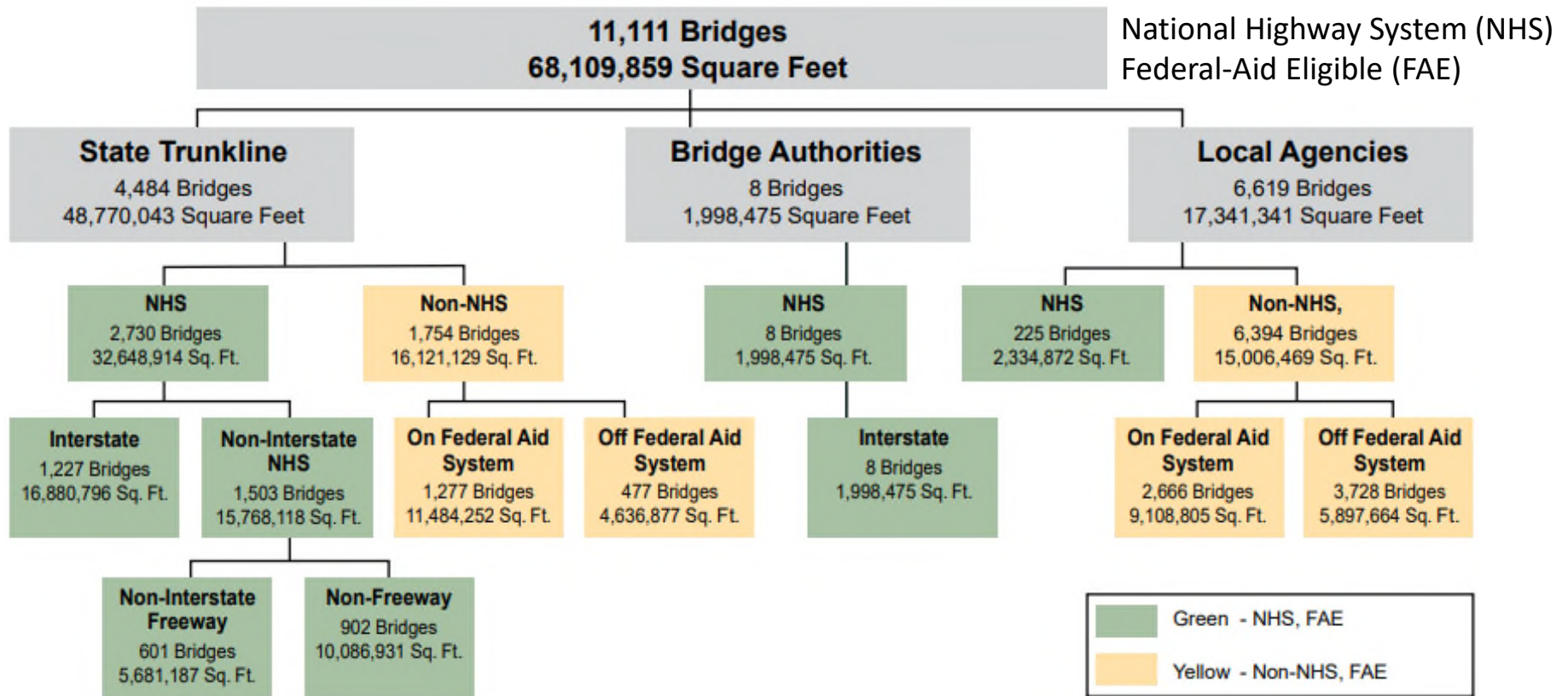


Regional Service Areas



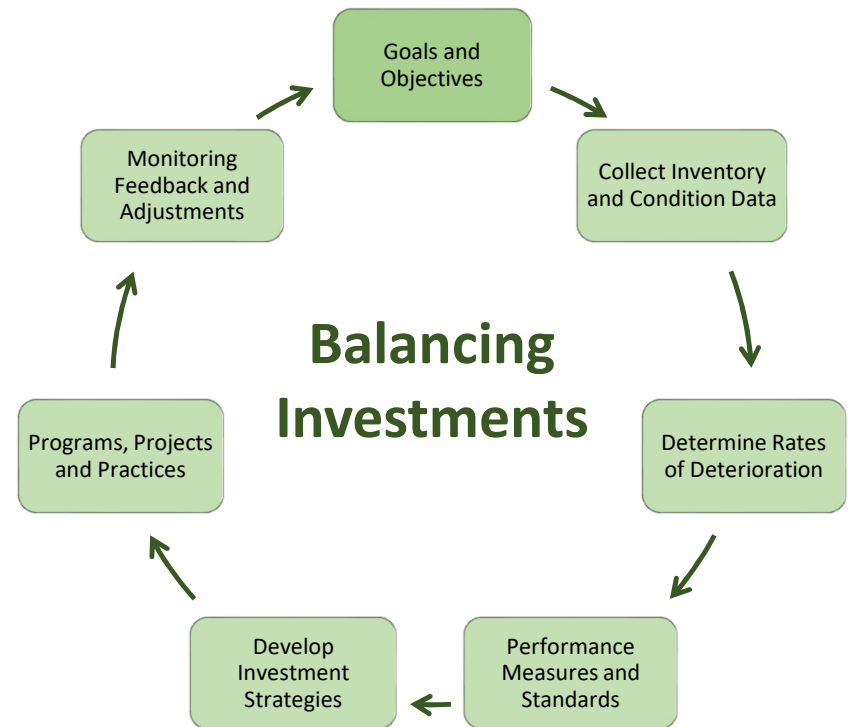


MICHIGAN'S ROAD NETWORK (2019)



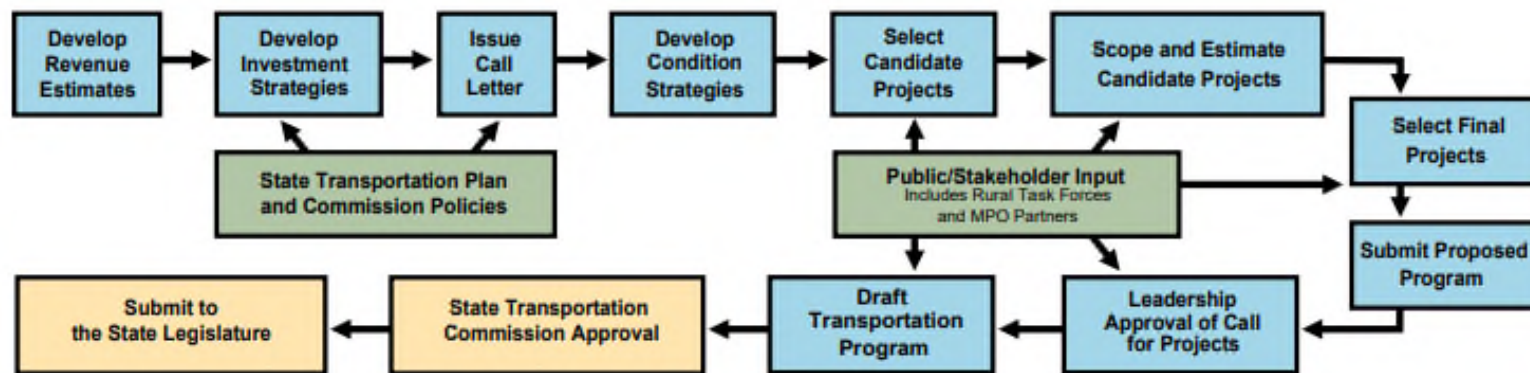
MICHIGAN'S BRIDGE NETWORK (2019)

MDOT takes an asset management approach to managing its diverse transportation investments. Asset management is a strategic approach linking data, goals, investment strategies, programs and projects into a systemic process to achieve desired outcomes.



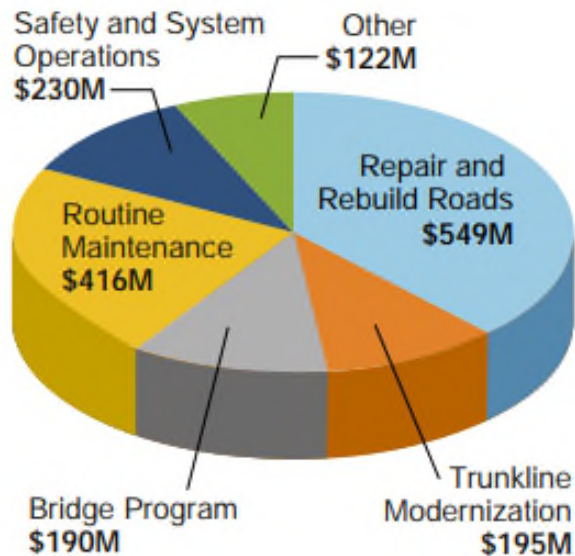
ASSET MANAGEMENT

The MDOT Five-Year Transportation Program development is a rolling, yearlong, multi-stage process. Projects within the program are identified using an annual Call for Projects that includes key areas of emphasis, strategic objectives, and target funding levels. The CFP process aligns department investments with the strategic direction established by the State Long-Range Transportation Plan and the State Transportation Commission.



PROGRAM DEVELOPMENT PROCESS

**FY 2020
Highway Program
\$1.7 Billion**

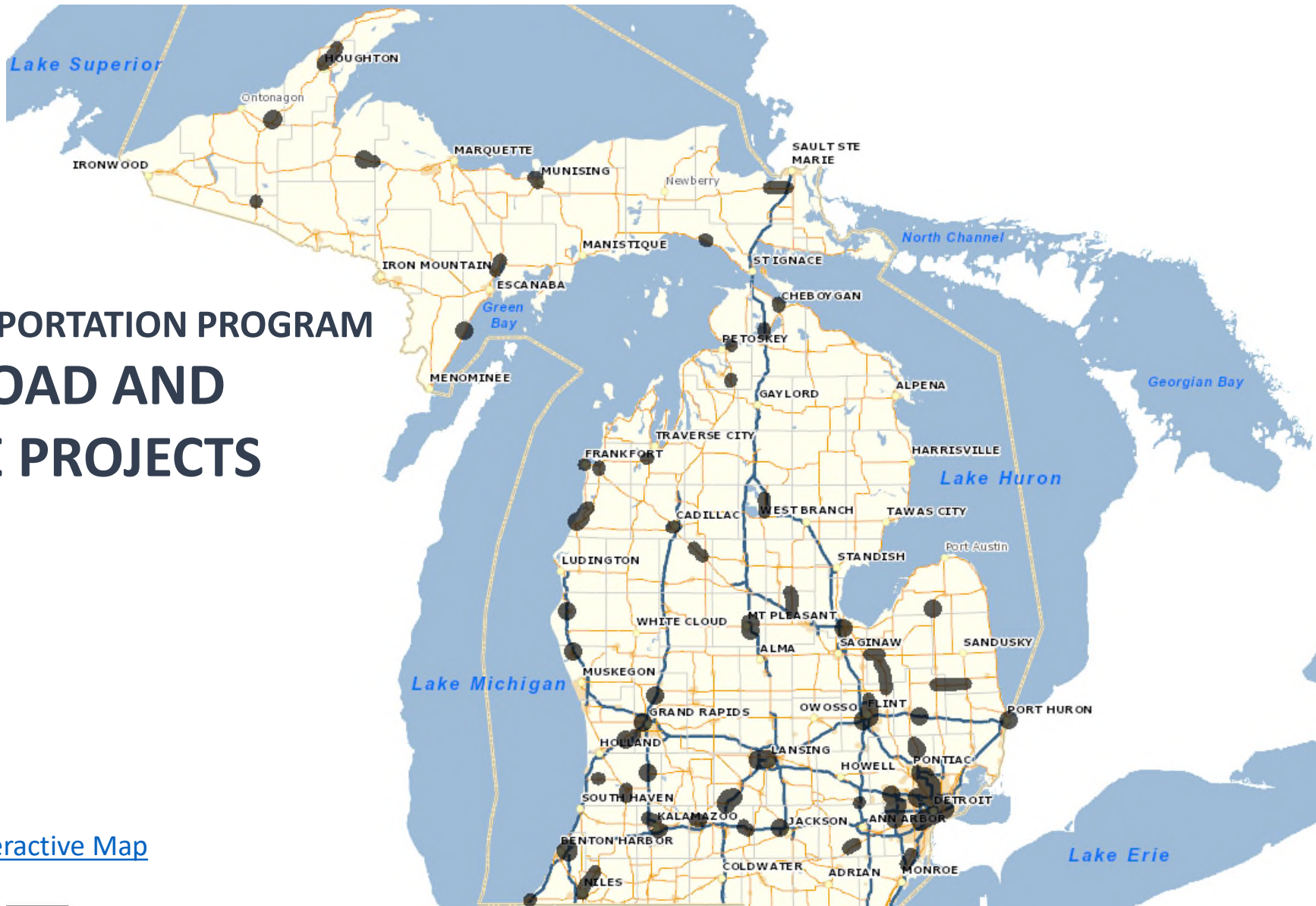


Highway Program Investment Strategy

- The FY 2020 Repair and Rebuild Roads investment of \$549 million includes approximately:
 - 500 lane miles of reconstruction and rehabilitation.
 - 1,500 lane miles of capital preventive maintenance.
 - 400 lane miles of freeway and non-freeway resurfacing.
- The Bridge Program includes replacement, rehabilitation, and capital preventive maintenance, totaling \$190 million.
- The Trunkline Modernization Program totals \$195 million, including the I-75 modernization project in Oakland County and the I-94 modernization project in Wayne County.
- Routine maintenance activities will total an estimated \$416 million.
- The Safety and Systems Operations category includes signs, pavement markings, traffic signals, operational improvements, and other programs that support the safe and efficient operation of the system, at a total investment of \$230 million.
- The Other category includes investment in nonmotorized facilities/streetscapes, recreational trails, roadside facilities, workforce development, and other state and federally funded programs, for a total of \$122 million, and includes a \$39 million federal BUILD grant and required state matching funds for the US-31 freeway project in Berrien County.

5-YEAR TRANSPORTATION PROGRAM 2020 ROAD AND BRIDGE PROJECTS

[Interactive Map](#)



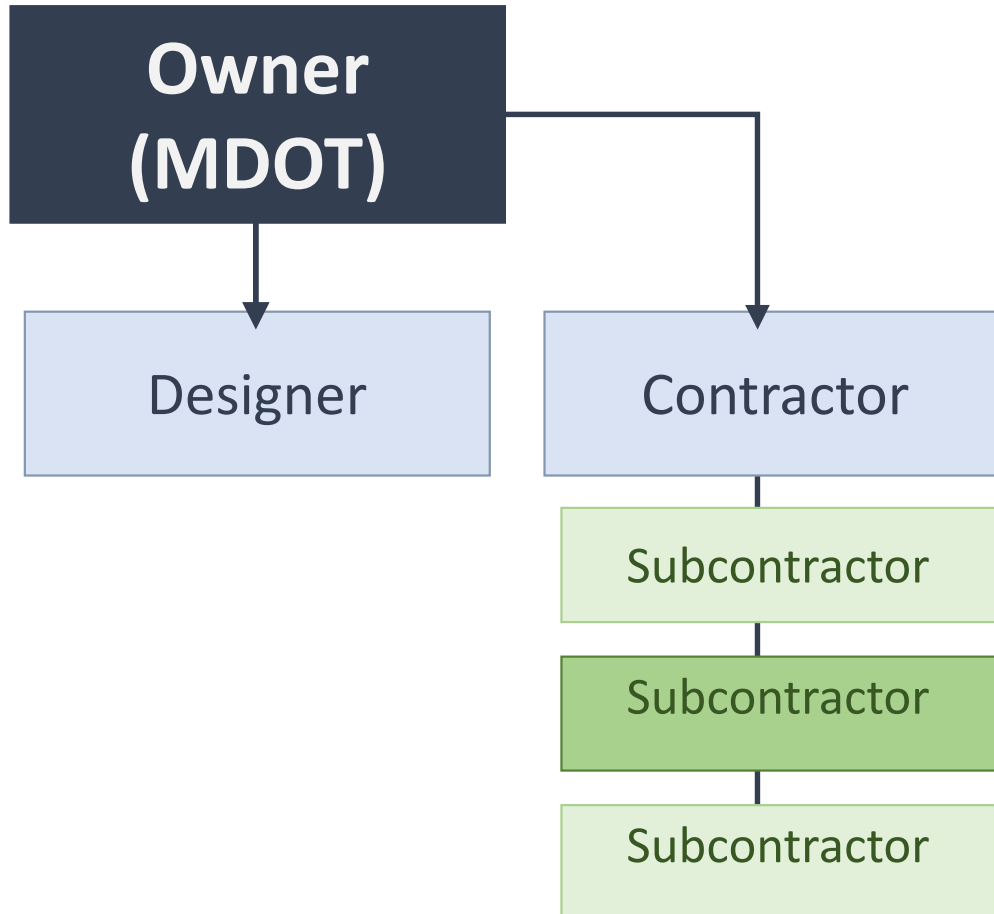
INNOVATIVE DELIVERY METHODS primarily focus on accelerating the time to develop and deliver a project.

- **DESIGN-BUILD (DB):** Project design and construction are contracted with a single entity known as the design-builder. The design and construction phases overlap, significantly reducing the overall project delivery time.
- **DESIGN/BUILD/FINANCE (DBF):** A DB contract where the design-builder is responsible for obtaining financing for DB costs; the design-builder is reimbursed based on a schedule of payments, usually over a term of 5 to 8 years.
- **DESIGN/BUILD/FINANCE/OPERATE/MAINTAIN (DBFOM):** A contract that transfers specific financial, maintenance and sometimes operational responsibilities to the contractor for a specified time period.
- **CONSTRUCTION MANAGER/GENERAL CONTRACTORS (CMGC):** An architectural/engineering firm is contracted for design work, and a separate contract is awarded for construction and construction management. The construction manager acts as consultant to MDOT in the development and design phases and serves as the prime contractor during the construction phase.
- **ALTERNATIVE TECHNICAL CONCEPTS (ATCs):** ATC's allow contractors to propose alternate solutions on a project that meet or exceed the baseline goals established by MDOT prior to project award. ATC's can be used on Design-Bid-Build (DBB) or DB projects.

INNOVATIVE DELIVERY METHODS/CONTRACTING

For more information refer to MDOTs Innovative Contracting Website

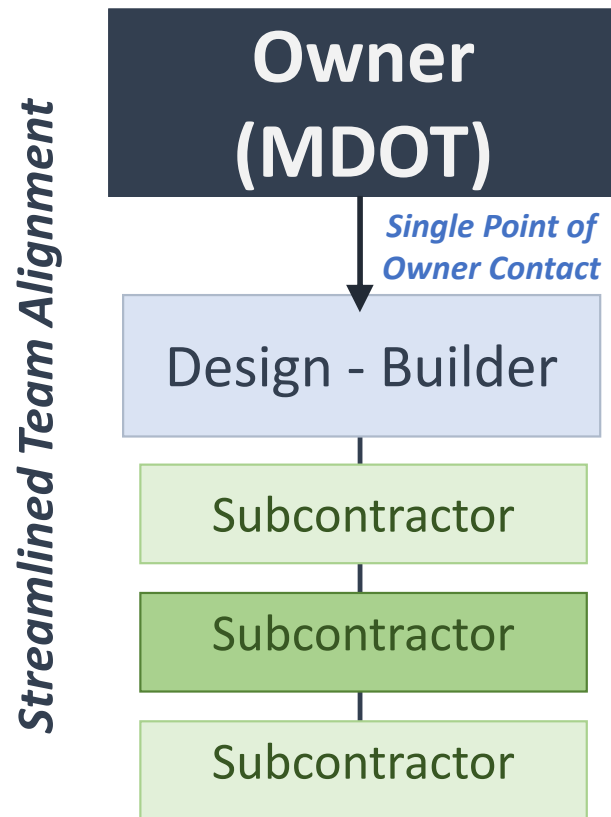
Traditional Delivery: Design-Bid-Build



Design-Bid-Build is the traditional delivery method/ industry standard practice. This method is a linear process of:

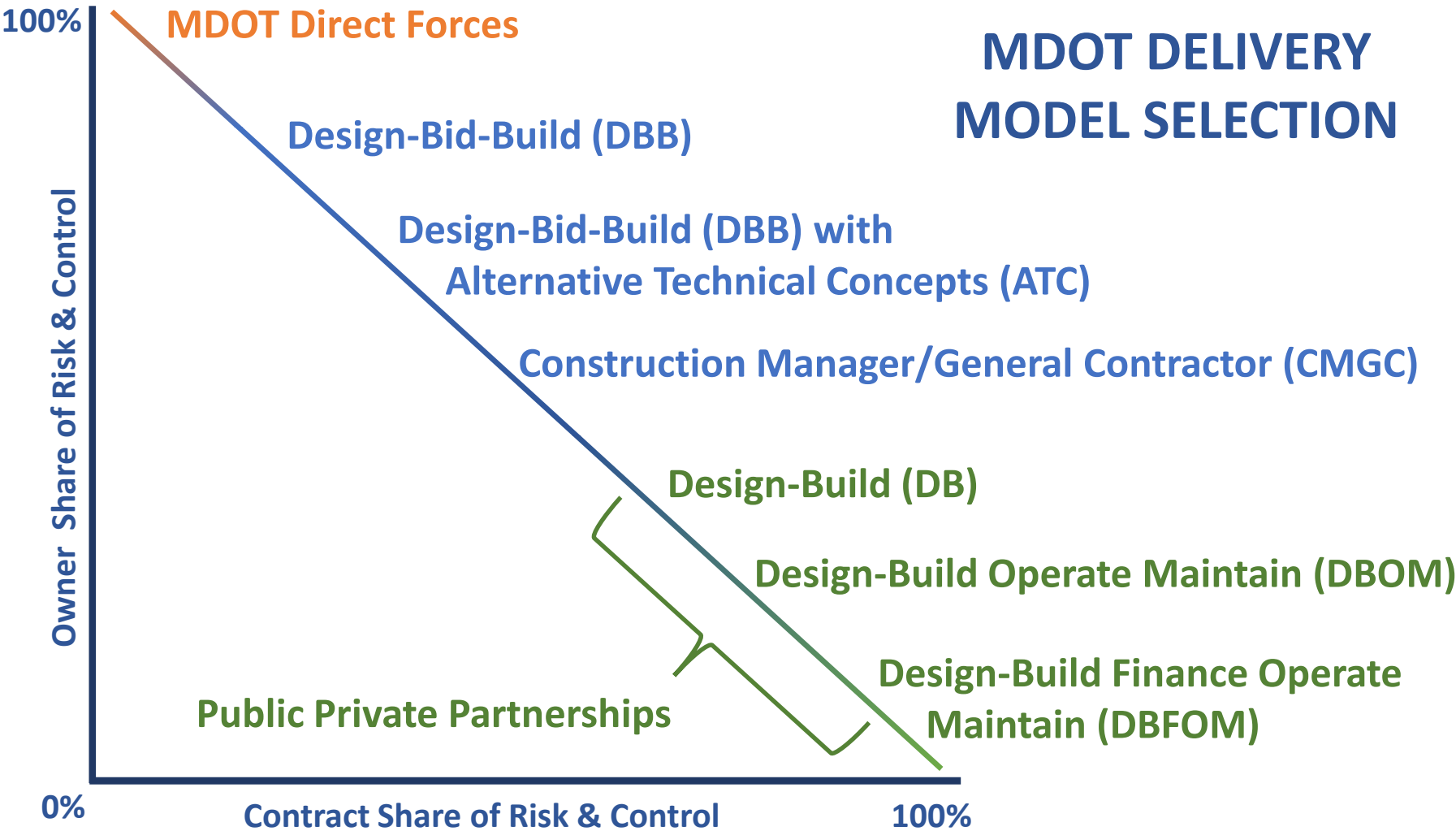
1. Designing the project to 100% plans, specifications and quantity estimates
2. Contractors bid a cost
3. Contracts are awarded to lowest bidders

Innovative Delivery: Design-Build



Design–Build is an innovative delivery method where design and construction services are contracted by a single entity. It relies on a single point of responsibility and is used to minimize risks for the project owner and to reduce the delivery schedule by overlapping the design and construction phase.

MDOT DELIVERY MODEL SELECTION



INNOVATIVE ACCELERATION TECHNIQUES help expedite construction progress and minimize user delays and include:

- Standard Incentives
- A+B Incentives (Cost + Schedule)
- No Excuse Incentives
- Lane Rental
- Accepted for Traffic Incentives (AFT)
- Interim Completion Date Incentives
- Prefabrication Bridge Element Systems (PBES)
- Early Purchasing of Materials

INNOVATIVE PROCUREMENT/PAYMENT TECHNIQUES provide options in the selection of the contractor and/or payment to the contractor. Selection options utilize factors (other than cost alone) to evaluate and award construction contracts with a focus on improved overall performance and value of the project. Innovative payment options can be based on performance and/or other factors that provide more flexible, incentivized contract administration.

- Best Value
- Lump Sum
- Alternative Bids
- Fixed Price/Variable Scope
- Project Specific Qualification
- Performance-Based Incentives
- Best and Final Offer (BAFO) (Design-Build contracts only)

OTHER INNOVATIVE CONTRACTING

For more information refer to MDOTs Innovative Contracting Website

While some projects are identified as a safety improvement project, a safety analysis is a requirement for every project in the highway program.



- Describes the progress being made to implement highway safety improvement projects;
- Assesses the effectiveness of those improvements; and
- Describes the extent to which the improvements have contributed to reducing fatalities and serious injuries on all public roads.

I-94 and I-94 Business Loop
Improvements; US-31 Connection

Berrien County

Start: Summer 2020
End: Summer 2022

Description

Reconstruct I-94 pavement from south of East Britain Ave to I-196 and the I-94/I-94 BL interchange; redesign I-94 BL from four to three lanes (right-sized), remove 2 bridges, construct 2 new bridges, and reconstruct/rehab additional bridges in project area. Construct new segment of US-31 from north of Napier Ave to new I-94/I-94 BL.

Traffic Management

Two lanes of traffic maintained in each direction on I-94 and maintain I-196/US-31 interchange ramps access.

Contracting Method

Design-Build

Approximate Investment

\$115 million including \$20 million in U.S. Better Utilizing Investments to Leverage Development program funds

Contact

Southwest Region at (269) 337-3900

I-69 Reconstruction

Calhoun and Eaton
Counties

Start: August 2020
End: November 2022

Description	Reconstruct I-69 pavement and six interchanges from I-94 in Calhoun County to Island Highway in Eaton County, reconstruct one bridge, rehab 26 bridges and all ramps in project limits, and other improvements.
Traffic Management	Lane closures and shifts on I-69 and I-94. Ramps will be intermittently closed.
Contracting Method	Design-Build
Approximate Investment	\$244 million
Contact	Southwest Region, Marshall TSC at (269) 789-0560

I-496 Improvement

Ingham County

Start: Spring 2020
End: November 2020

Description	Reconstruct I-496 pavement between I-96 and Lansing Road, culvert replacement, preventive maintenance on all bridges in the project area, and operational improvements to entrance and exit ramps.
Traffic Management	Work will be done one direction at a time, with eastbound I-496 closed/detoured for construction first.
Contracting Method	Design-Bid-Build with Alternative Pavement Bidding (APB)
Approximate Investment	\$60 million
Contact	University Region, Lansing TSC at (517) 335-3654

I-94 Improvement

Jackson County

Start: Summer 2018
End: Summer 2020

Description	Reconstruct I-94 bridge and pavement between Lansing Avenue and Elm Road, resurface I-94 segments between M-60 and Sargent Road, and reconstruct I-94/Cooper Street interchange and additional bridges in the project area.
Traffic Management	Two lanes will remain open in each direction with short-term single-lane closures possible at off-peak times.
Contracting Method	Design-Build
Approximate Investment	\$111 million
Contact	University Region, Jackson TSC at (517) 780-7540

I-75 Modernization
(Segment 2)

Oakland County

Start: Fall 2018
End: Fall 2020

Description

Reconstruct freeway pavement, interchanges and bridges of I-75 from North of Coolidge Road to North of 13 Mile Road, construct new High Occupancy Vehicle lane in each direction, and other improvements.

Traffic Management

Two lanes in each direction remain open during construction with intermittent ramp closures.

Contracting Method

Design-Build

Approximate Investment

\$233 million

Contact

Metro Region, I-75 Segment 2 at (313) 518-1078

I-75 Modernization
(Segment 3)

Oakland County

Start: Fall 2019
End: Fall 2023

Description

Reconstruct freeway pavement, interchanges and bridges of I-75 North of 13 Mile to North of 8 Mile Road, a new High Occupancy Vehicle lane in each direction, a 14.5-foot diameter, 4.5-mile stormwater detention tunnel and other improvements .

Traffic Management

Initial single southbound lane closure between 11 Mile and M-102 (8 Mile) with the two lanes in each direction open for project duration with intermittent ramp closures.

Contracting Method

Design-Build-Finance-Maintain (DBFM)

Approximate Investment

\$1.4 billion (\$629 million for design and construction and \$771 million to finance, maintain and renew the facility over the 25-year maintenance term)

Contact

Metro Region, I-75 Segment 3 at (586) 486-3626

I-94 Modernization

Wayne County

Start: Spring 2019
End: Fall 2034

Description

The modernization project will redesign and expand I-94 from I-96 to Connor Ave and replace 67 bridges along the corridor. *2019-2021*: Four bridges are currently under reconstruction, and three more are planned to start in 2020. Active Transportation and Demand System of the I-94 Freeway System, and I-94 Arterial on Gratiot Avenue (M-3) and Michigan Avenue (US-12).

Traffic Management

Traffic management of this project is complex and includes full and partial closures.

Contracting Method

Design-Bid-Build

Approximate Investment

\$3 Billion over the life of the project

Contact

Metro Region, Terry Stepanski at (517) 204-2656

I-75 Reconstruction

Saginaw County

Start: Summer 2020
End: Fall 2021

Description

Reconstruct and widen I-75 pavement from north of Hess Road to the south junction of I-675; reconstruct I-75/M-46 interchange including the removal and construction of one bridge and adding two roundabouts.

Traffic Management

Two lanes of traffic maintained in each direction on I-75. From Memorial Day to Thanksgiving Day, I-75 mainline will have 3 lanes of traffic open for the peak direction. M-46 interchange and I-675 ramps will be open at all times (with the exception of NB I-75 to NB I-675 for a 2 week closure).

Contracting Method

Design Build (DB)

Approximate Investment

\$62 million

Contact

Bay Region, Bay City TSC at (989) 671-1555

Rebuilding Michigan



[Interactive Map](#)



Rebuilding Michigan

Objective:

- Focused on rebuilding the state highways and bridges that are critical to the state's economy and carry the most traffic.
- Aimed at fixes that result in longer useful lives and improves the condition of the state's infrastructure.
- Addresses key corridors and rebuilds major segments of highly travelled interstate, as well as several other busy freeways and bridges
 - With a corridor approach, MDOT can coordinate bridge projects along with the road projects

Benefits of this strategy:

- These are present day needs that will continue to go unaddressed in the near term absent this strategy
- The public will receive the benefit of the long-term fixes sooner – like better condition, better ride, less wear and tear on their vehicles, and supporting the economy
- The ability to advance more long-term fixes will reduce the frequency and intensity of maintenance required over the next decade
- These fixes modernize our transportation system, rather than continuing to cover up old infrastructure with band-aids
- Interest rates are at historic lows

Rebuilding Michigan

Summary of Planned Road and Bridge Construction:

- Current 5-Year Road and Bridge Construction - \$3.857 Billion
- Total New 5-Year Road and Bridge Construction - \$7.300 Billion
 - Revised Revenue plan - \$3.78 Billion
 - Bond Financed plan - \$3.52 Billion
- Dedicated transportation revenue funding
 - Replaces/finances \$1.026 Billion of projects in the current 5 Year plan
 - Some of these projects were converted from rehabilitation to reconstruction projects and financed with bond proceeds
 - Allows the addition of \$954 Million for new projects which extend the useful life of the statewide road and bridge system
 - Added 73 new projects
- Retains \$2.83 Billion of current planned projects

Rebuilding Michigan

Construction Cost Savings

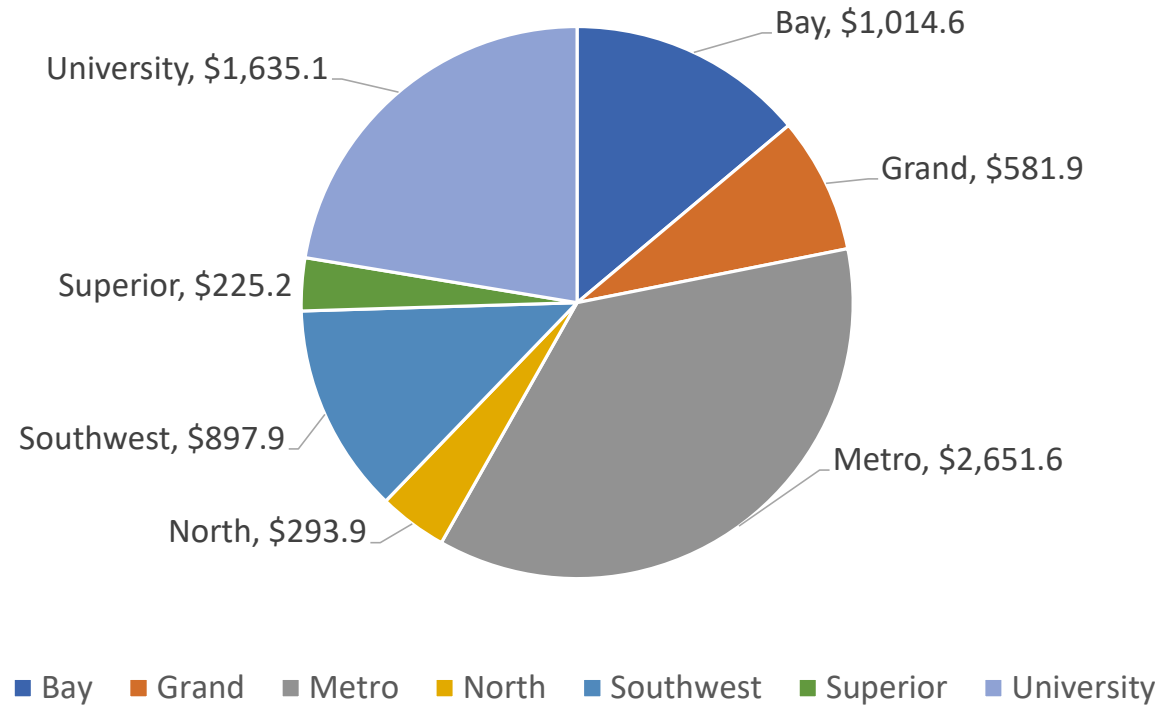
- Moving ahead with these projects by 4-6 years allows MDOT to save an estimated \$365.8 million in construction costs
 - Based on an assumption of 4% annual cost inflation in a delay
- Ability to advance more long-term fixes will reduce frequency and intensity of maintenance required over the next decade, leading to a more efficient use of maintenance funds
- Modernizes the transportation system, rather than continuing to perform short term fixes

By Fiscal Year



Rebuilding Michigan

Total Revised 5 Year Road and Bridge Construction Plan
\$7.300 Billion



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