House Appropriations Subcommittee on Transportation

Tony Kratofil, P.E. Chief Engineer & Chief Operating Officer

Patrick McCarthy
Bureau Director
Finance and Administration

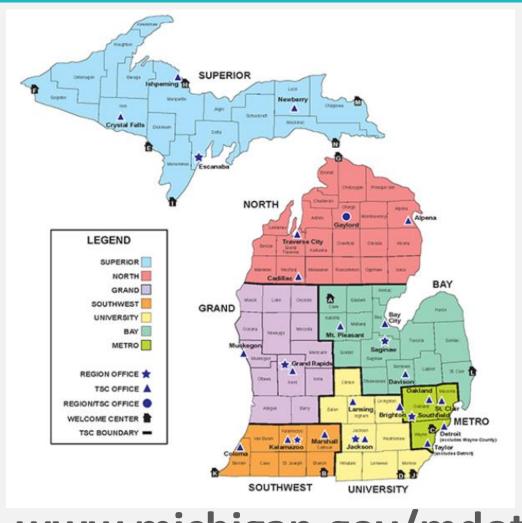
February 10, 2021

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



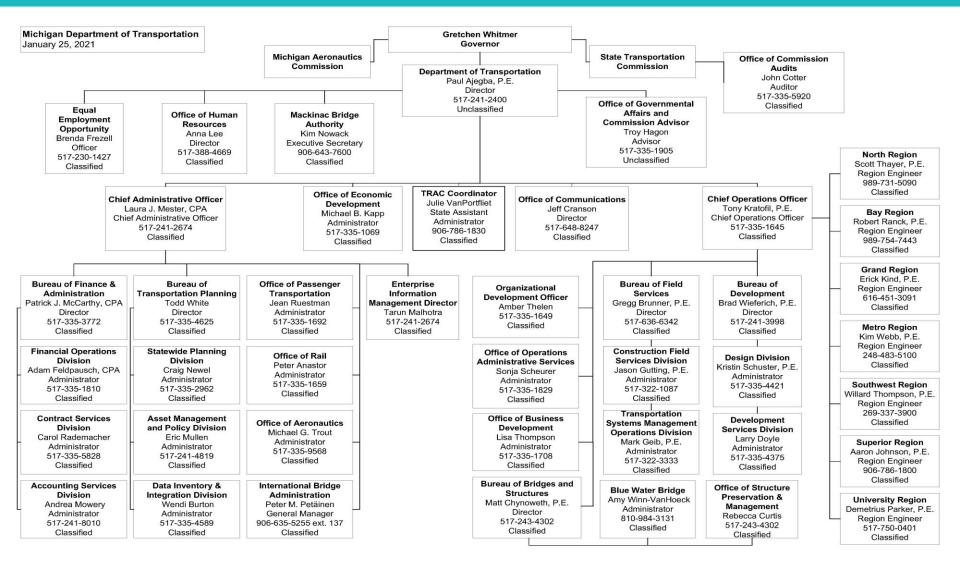


We're Positioned to Serve...



www.michigan.gov/mdot

We're Positioned to Serve...



A Healthy Economy Relies on Good Transportation

- 38% of US/Canada trade value flows through Michigan
- \$861.5 billion in freight is moved each year on Michigan's highways, rail, air, and water ports
- Trucking accounts for 65% of all freight tonnage moved in Michigan
- 80% of Michigan tourism is auto-based





All Transportation Supports the Economy

 Operation of bus transit systems contribute an estimated \$900 million to the economy each year

Aviation contributes more than \$22 billion/year

 Bicycling provides an estimated \$668 million/year in economic benefit



Michigan's Multi-Modal Transportation System

Roads & Bridges ♦ Transit ♦ Non-Motorized ♦ Air ♦ Marine ♦ Rail













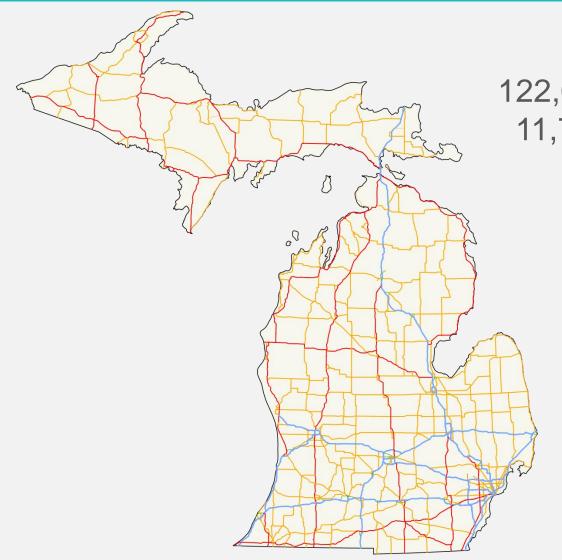


Michigan's Multi-Modal Transportation System



- 9,664 route miles of "I," "M," and "U.S." routes
- 4,806 bridges on state routes
- 665 miles of rail
- 4 state owned airports
- 82 roadside parks
- 77 rest areas
- 135 miles of passenger rail
- 57.7 miles of bike lanes
- 3,175 miles paved shoulders
- 3 U.S. Bike Routes

Roads & Bridges



122,000 road miles 11,700 bridges

1 MDOT83 County Road Agencies531 Municipal Jurisdictions

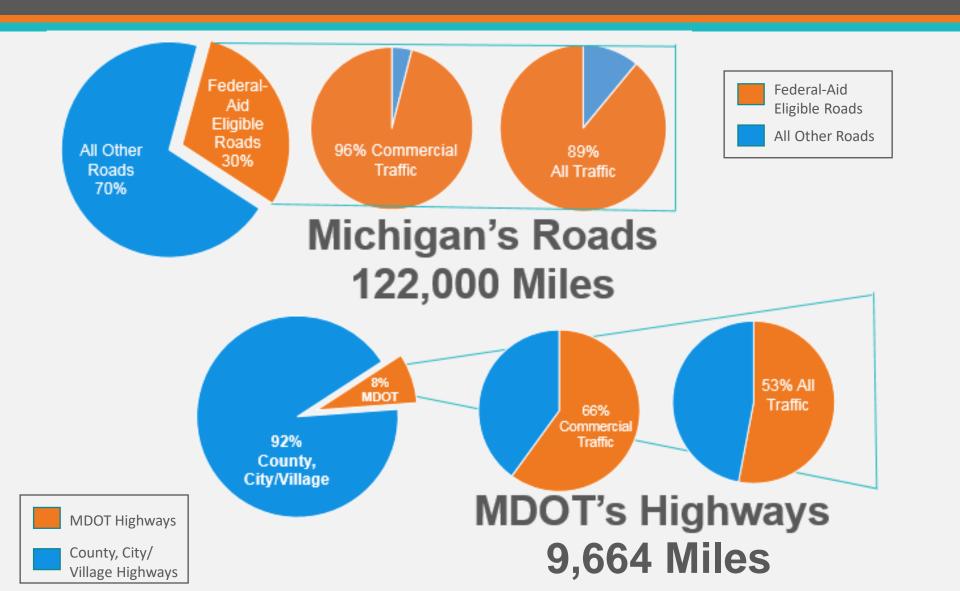
Transportation Asset

Management Council

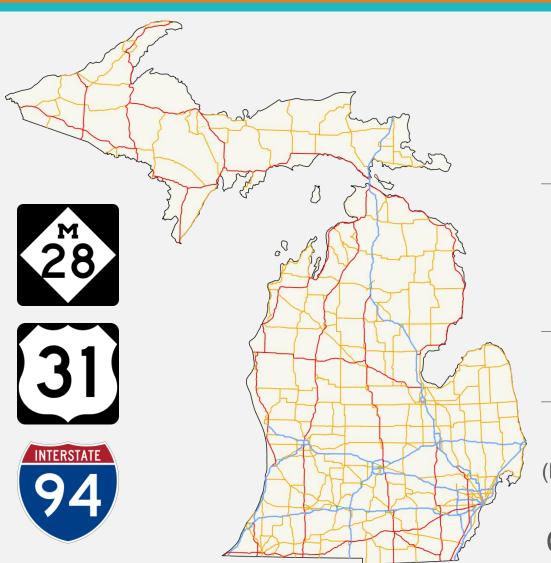
www.michigan.gov/tamc

Federal Aid Oversight

Michigan's Road Network



State Trunkline Roads & Bridges



9,664 miles4,811 bridges82 roadside parks77 rest areas

Planning ◆ Design
Construction ◆ Operation
Maintenance ◆ Permitting

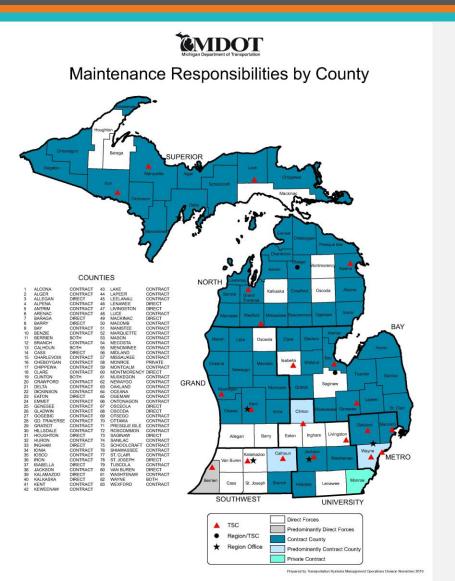
Construction by Low Bid

Consultant Services
(By \$ for projects completed in FY 2020)

Design — 61%

Const. Engineering — 56%

State Trunkline Roads & Bridges - Maintenance



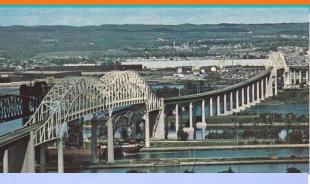
Snow & ice, road surface, bridge, culverts, drains, pump stations, signals, signs, roadside features

29 MDOT maintenance garages63 County road agency contracts170 Municipal contracts

Private contracts for maintenance:

- City of Pontiac, Monroe County
- Metro Detroit Freeway Lighting P3
- I-75 P3 (8 Mile to 13 Mile)
- Special Services like ITS devices (cameras, digital signs), fencing, guardrail, & "heavy maintenance"

Big Bridges & Border Crossings



International Bridge
Independent International Authority
MDOT HR & Budget Mgt

Ambassador Bridge Privately Owned & Operated

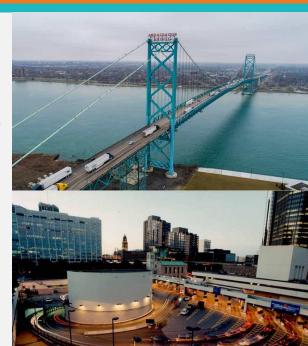


Mackinac Bridge Independent Authority MDOT HR & Budget Mgt

Detroit-Windsor Tunnel Municipality Owned, Privately Operated

Blue Water Bridge
US Half Owned by MDOT
MDOT HR & Budget Mgt

Gordie Howe International Bridge Independent International Authority Canadian HR & Budget Mgt





Non-Motorized Transportation





Independent paths - varies

57 miles of bike lanes 3,168 miles paved shoulders 3 U.S. Bike Routes







Transit & Intercity Passenger Transportation



- 78 transit agencies
- 83 million passenger trips/year
- 6 intercity bus routes
- 4 operators
- MDOT's role:
 - Act 51 Operating Assistance
 - Grant Administration
 - Safety & Regulatory Oversight
 - Supplementing market driven intercity carrier service to improve access & frequency

Aviation



Airport System:

- 234 Public Use airports
 - 18 Commercial Service airports
- 4 state owned airports
- 42 million passengers/year (2019)

MDOT's role:

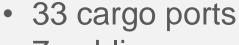
- Grant Administration
- Regulatory Oversight
- Safety Education

Emerging Issues:

- UAS Integration
- PFAS

Marine Transportation





- 7 public passenger ferries
- Soo Locks



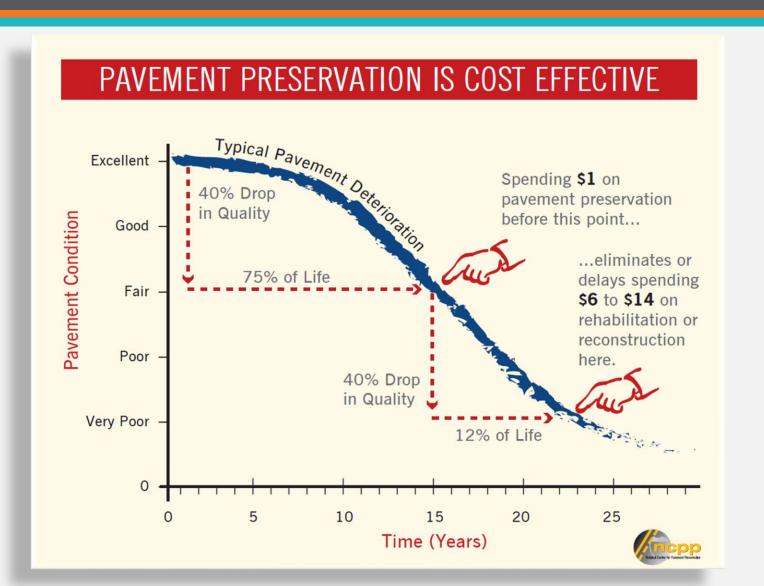
- Act 51 Operating Assistance
- Grant Administration
- Safety & Regulatory Oversight

Rail Transport



- 4 Class 1 railroads
- 22 Shortline railroads
- 665 miles of state-owned rail
- 3 intercity Amtrak routes
- 780,549 passengers/year
- MDOT's role:
 - Crossing Safety
 - Coordination of services

Michigan is a Pioneer in Asset Management



Michigan is a Pioneer in Asset Management



Leaner & Smarter

Leveraging Partnerships

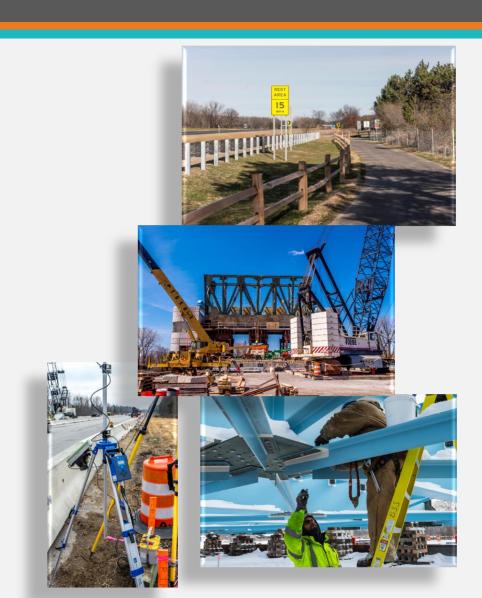
- Contractors/Consultants
- University Research
- Local Agencies
- Other State Agencies
- Other States/Provinces



Michigan is a Transportation Leader

Nationally recognized

- Asset management
- Context-sensitive solutions process
- Performance measurement
- Received 91 national awards since 2011



Michigan is a Transportation Innovator

- Automotive Mobility Innovation
 - Connected & Automated Vehicles Testing
 - M-City
 - American Center for Mobility
 - CAVnue
 - Council on Future Mobility & Electrification
- Advanced technology in design & construction
 - e-Construction
 - 3D models for plans
- Carbon Fiber Reinforcement
- Diverging Diamond Interchanges
- Unmanned Aerial Vehicles (Drones)
- Michigan State Transportation Innovation Council





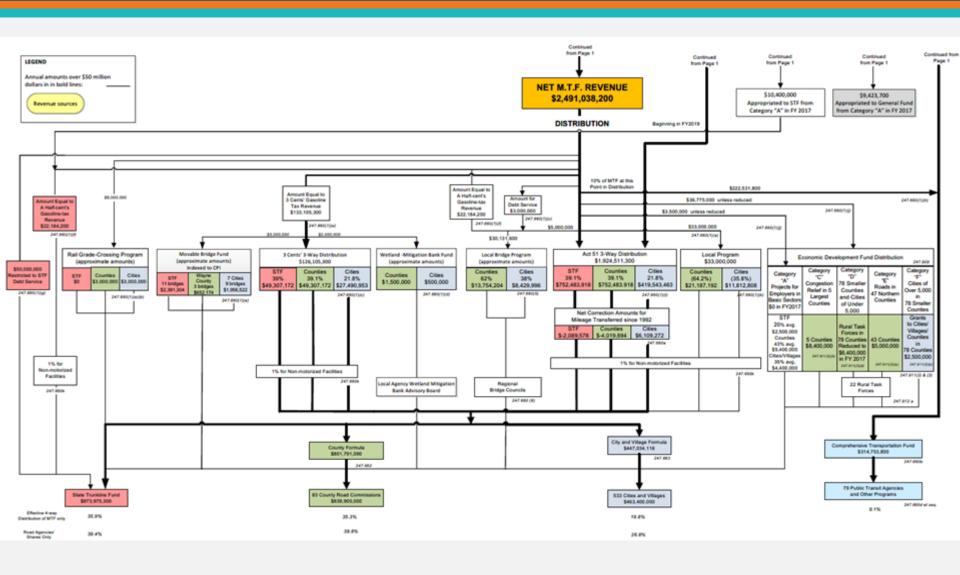
COVID-19 Impacts



Michigan Traffic Crash Deaths								
	Urban	Rural	Total	Commercial Vehicle	Motorcycle	Pedestrian	Bicycle	
2019	581	404	985	106	122	149	21	
2020	595	409	1004	73	140	160	39	
Change	2.4%	1.2%	1.9%	-31.1%	14.8%	7.4%	85.7%	

Source: Michigan Department of Transportation, Transportation Data Management System

Transportation Funding



Transportation Funding

Estimated Transportation Revenue Fiscal 2021

State Road-user Fees						
Vehicle registration and title tax	\$1,408 M					
Gasoline tax	\$1,157 M					
Diesel fuel tax	\$238 M					
Total of User Fees	\$2,803 M					
Income, marijuana taxes; other	\$627 M					
Total State MTF Revenue \$3,4						
Federal Aid for Roads	\$1,470 M					

Transportation Funding

Expected Fund Distributions Fiscal 2021

State Restricted Funds	
State highways	\$1,256 M
Local roads	\$1,879 M
Public transportation	\$250 M
Federal Aid for Roads	
State highways (75%)	\$1,102 M
Local roads (25%)	\$367 M

2015 Revenue Package



Beginning in January, 2017:

- Fuel taxes rose to 26 cents/gallon
- \$400 million/year in additional fuel-tax revenues
- 20% increase in vehicle fees yielding \$197 million/year

Beginning in Fiscal 2019: Income-tax revenue is distributed to road agencies (60.9% to local agencies & 39.1% to MDOT):

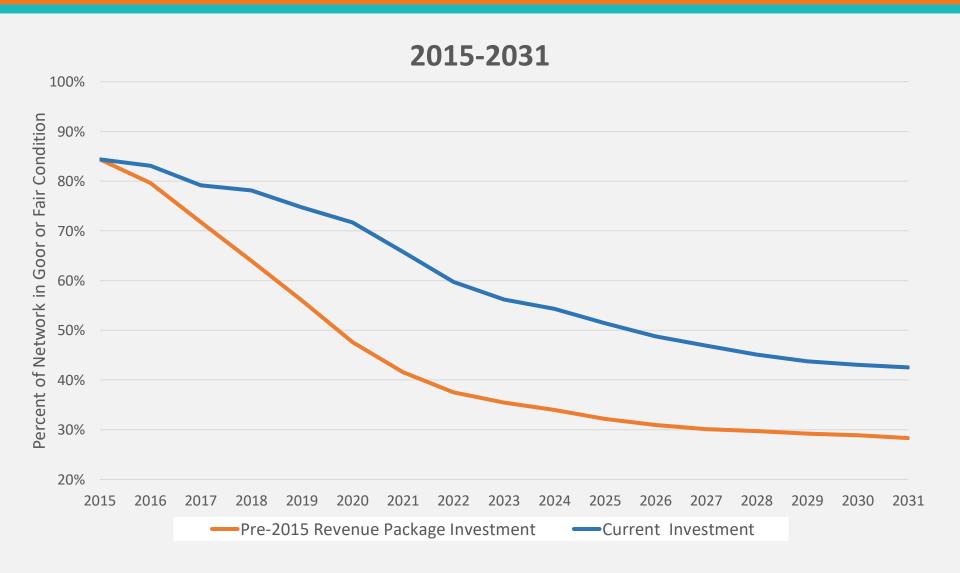
• FY 2019: \$150 M

• FY 2020: \$325 M

FY 2021 and after: \$600 M

Beginning in 2022, the fuel tax will be indexed to the Consumer Price Index

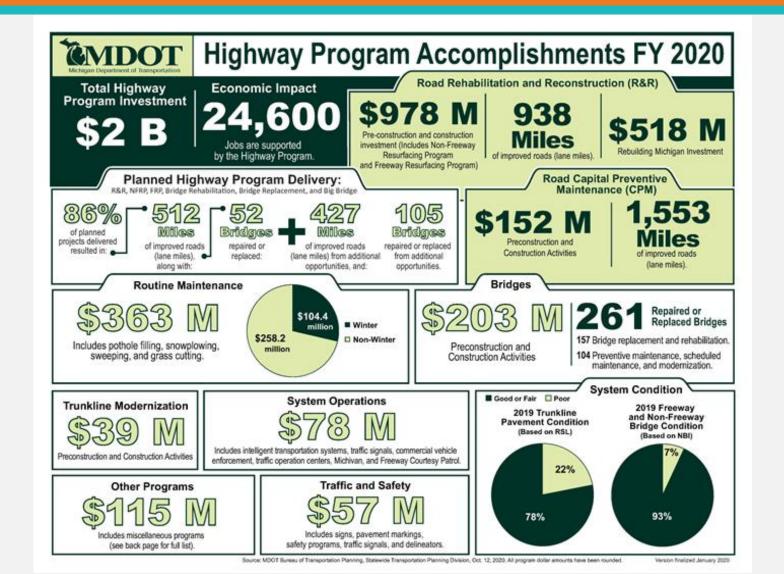
MDOT State Highway Projected Pavement Condition; Current Investment (Including New Revenue)



State Revenue Package Non-Monetary Provisions

- MDOT administrative expenses limited to 8% of budget
- Pavement Warranties for projects over \$2 million
- Competitive Bidding: All agencies required to competitively bid projects over \$100,000
- MDOT reported on constructing longer-lived pavements; completed report can be found at: https://www.michigan.gov/documents/mdot/RoadsInnovationTaskForceReport_515824_7.pdf

Highway Program Accomplishments



Construction Expenditures:

Previous 5 Year Plan \$3.857 Billion

New 5 Year Plan \$7.300 Billion

(Revised Revenue \$3.78 Billion + Bond Financed \$3.52 Billion)



- Some projects were converted from rehabilitation to reconstruction
- Average fix life for these projects is 27.17
- Additional projects will be funded with regular program dollars freed up by bond financing.
 - These projects extend the useful life of the statewide road and bridge system





- 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

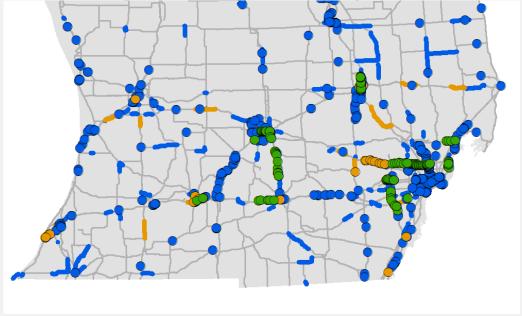
Benefits of this strategy:

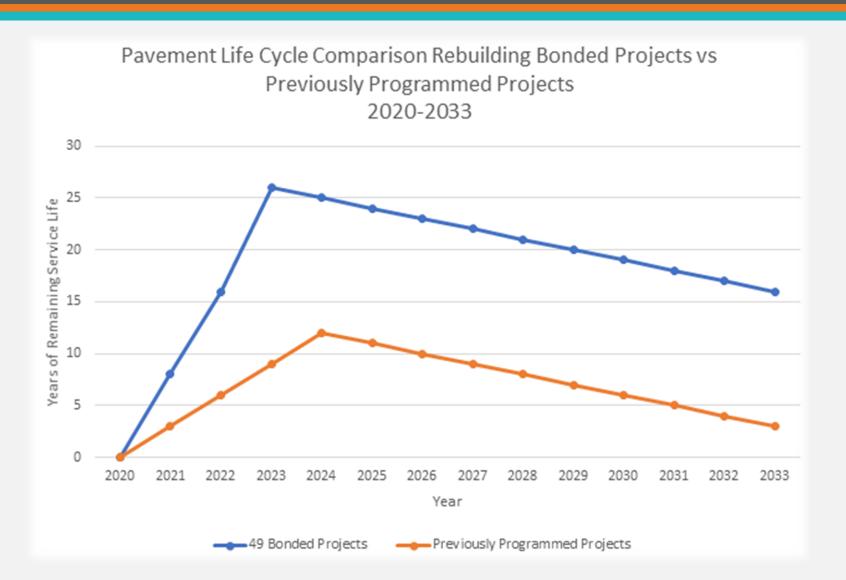
- These are present day needs that will continue to go unaddressed in the near term absent this strategy
- The public will receive the benefit of the long-term fixes sooner – like better condition, better ride, less wear and tear on their vehicles, and supporting the economy
- The ability to advance 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





- With bonding, MDOT will rebuild 569 more lane miles than currently planned.
- Benefits on average over 62,000 vehicles per day per project or approximately 3 million vehicles/day (the state trunkline average is 14,400 vehicles/day).







What the Rebuilding Michigan does **NOT** do:

- It does not fix everything nor completely address state trunkline condition needs.
- It does not generate any new revenue to address the chronic underinvestment in transportation in Michigan.
- It does not address the needs of other transportation modes or the local road and bridge systems.







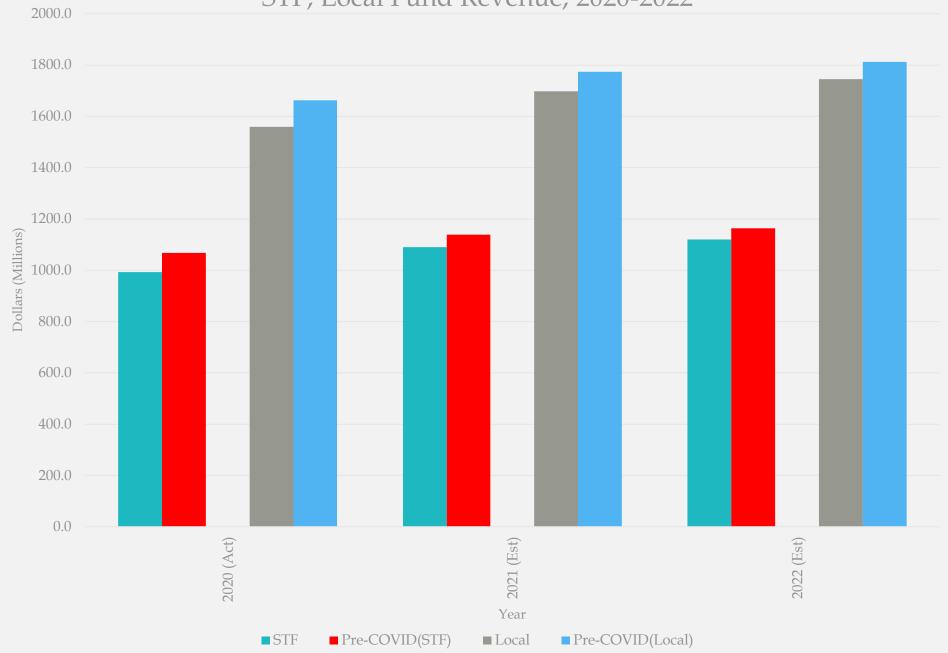
State Aeronautics Fund & Qualified Airport Fund Revenue, 2020-2022



CTF Fund Revenue, 2020-2022







MDOT Bond Issuance - Authority

- Michigan Constitution Article 9 Section 9
 - Restricts motor fuel and vehicle registration revenues for transportation purposes
 - Debt can be secured by constitutionally restricted transportation revenues
 - Transportation notes and bonds are not general obligations of the State of Michigan
- Public Act 51 of 1951
 - Establishes Michigan Transportation Fund as collector fund for all dedicated transportation revenue.
 - Distributes dedicated revenues consistent with Constitution and discretionary revenue per formula or per specific dollar allocations to programs
 - Sets standing appropriations and priority for payments of debt service and other expenditures
 - Requires minimum debt service coverage at two times annual debt service in any fiscal year
 - Commission debt policy increases minimum debt coverage to four times

Bond Resolutions

- MDOT requests new money bonding via resolution
 - Must be sent to the Legislature 30 days before closing on the bonds
 - Includes list of projects to be funded with the bond proceeds
- MDOT requests refunding bond sale via resolution
 - Sent to the Legislature 30 days before closing on the bonds
 - Take advantage of lower interest rates
- MDOT requests project list changes via two resolutions
 - Intent resolution must be sent to the Legislature 30 days before STC can adopt project list changes
 - After intent resolution is sent to Legislature, STC is asked to adopt the Final Resolution amending the project list

Process

- State Transportation Commission Resolution
 - \$3.5B
 - 49 Projects
 - 4 Year timeframe to issue debt
- 30-day Notification to Legislature
- Documentation Development (Preliminary Official Statement, Rating Presentations)
- Pricing issuance
 - Priced August 26th
 - Closed September 10th

Team

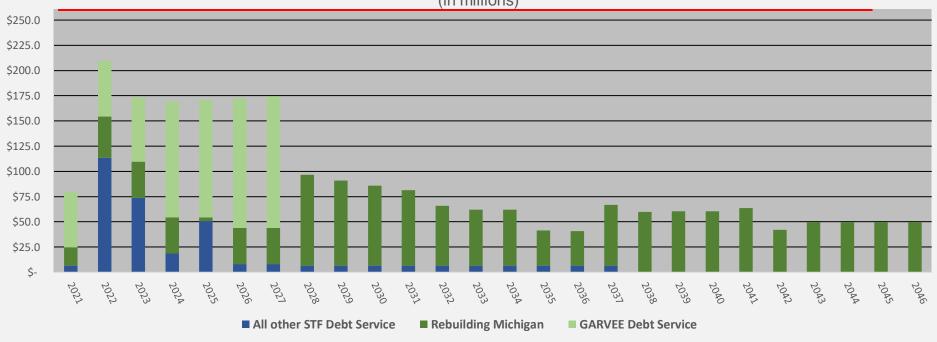
- MDOT (Planning, Finance)
- Financial Management Firm
- Legal (Bond Council, AG, Underwriter's Council)
- Treasury
- Underwriters (Senior Manager, Co-Managers)
- Rating Agencies (Moody's and S&P)

MDOT New Money Bonds by Administration

	nd Bonds									
Amount Issued	Bond Series	Date of Issuance	Administration	Program						
\$135,000,000.00	1983 STF Bonds	July 1983	Governor James J. Blanchard							
\$50,000,000.00	1984 STF Bonds	May 1984	Governor James J. Blanchard	Governor's Public Work Program						
\$83,730,386.00	1989A STF Bonds	December 1989	Governor James J. Blanchard	Transportation Economic Development Fund Projects & State Trunk Line Fund Pro						
\$369,050,603.00	1992A STF Bonds	July 1992	Governor John M. Engler	Build Michigan I						
\$108,750,000.00	1994A STF Bonds	March 1994	Governor John M. Engler	Build Michigan I						
\$308,200,000.00	2001A STF Bonds	July 2001	Governor John M. Engler	Build Michigan III						
\$185,710,000.00	2004 STF Bonds	August 2004	Governor Jennifer M. Granholm	Preserve First						
\$244,525,000.00	2006 STF Bonds	July 2006	Governor Jennifer M. Granholm	Preserve First						
\$146,190,000.00	2009 STF New and Refunding Bonds	October 2009	Governor Jennifer M. Granholm	Federal Match and Build Michigan I						
\$90,980,000.00	2011 STF Bonds	December 2011	Governor Rick Snyder	Blue Water Bridge Projects and Federal Match						
\$800,000,000.00	2020B STF Bonds	September 2020	Governor Gretchen Whitmer	Rebulding Michigan Program						
nt Anticipation (G	GARVEE) Bonds									
Amount Issued	Bond Series	Date of Issuance		Program						
	Bond Series 2001 Short-term GARVEE notes	Date of Issuance July 2001	Governor John M. Engler	Program Build Michigan II						
400,000,000.00			Governor John M. Engler Governor John M. Engler	•						
400,000,000.00 200,000,000.00	2001 Short-term GARVEE notes	July 2001		Build Michigan II Build Michigan II						
400,000,000.00 200,000,000.00 485,100,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes	July 2001 September 2002	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds	July 2001 September 2002 August 2007	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds	July 2001 September 2002 August 2007	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds	July 2001 September 2002 August 2007	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds	July 2001 September 2002 August 2007	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00 nprehensive Tran	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds nsportation Fund Bonds	July 2001 September 2002 August 2007 June 2009	Governor John M. Engler Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today Jobs Today / Economic Stimulus						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00 nprehensive Tran Amount Issued 60,000,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds nsportation Fund Bonds Bond Series	July 2001 September 2002 August 2007 June 2009 Date of Issuance	Governor John M. Engler Governor Jennifer M. Granholm Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today Jobs Today / Economic Stimulus						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00 nprehensive Tran Amount Issued 60,000,000.00 34,530,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds nsportation Fund Bonds Bond Series 1984 CTF Bonds	July 2001 September 2002 August 2007 June 2009 Date of Issuance January 1984	Governor John M. Engler Governor Jennifer M. Granholm Governor Jennifer M. Granholm Governor Jennifer M. Granholm	Build Michigan II Build Michigan II Jobs Today Jobs Today / Economic Stimulus						
400,000,000.00 200,000,000.00 485,100,000.00 281,900,000.00 nprehensive Tran Amount Issued 60,000,000.00 34,530,000.00 82,310,000.00	2001 Short-term GARVEE notes 2002 Short-term GARVEE notes 2007 Grant Anticipation (GARVEE) Bonds 2009 Build America Bonds nsportation Fund Bonds Bond Series 1984 CTF Bonds 1992A CTF Bonds	July 2001 September 2002 August 2007 June 2009 Date of Issuance January 1984 July 1992	Governor John M. Engler Governor Jennifer M. Granholm Governor Jennifer M. Granholm Governor Jennifer M. Granholm Governor James J. Blanchard Governor John M. Engler Governor John M. Engler	Build Michigan II Build Michigan II Jobs Today Jobs Today / Economic Stimulus Program						

Debt Service Schedule for State Trunk Line Fund and GARVEE (in millions)





STF Maximum Future Annual Debt Service on the Bonds plus Additional Bonds \$260.8 M

Draft FY2020 STF Coverage Ratio 6.1x

Draft FY2020 GARVEE Coverage Ratio 8.0x

Note: FY 2021 debt is as of 2/4/2021

State Trunk Line Profile

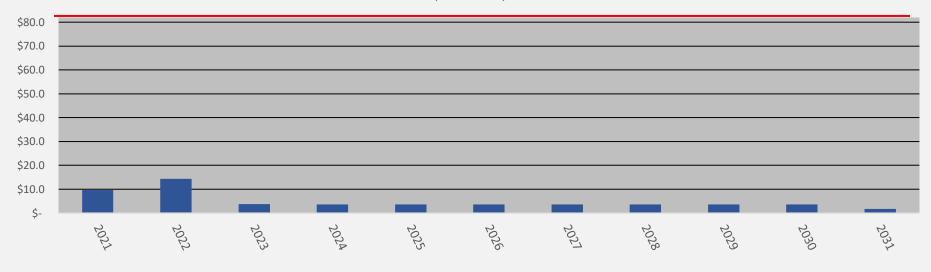
Michigan Department of Transportation

Summary of State Trunk Line Fund Bonds (Current as of 9/2020)

Initial Par	\$103,450,	,000	\$223,020,000		\$90,080,000				\$49,305,000		\$265,085,000				\$54,055,000				\$103,48	5,000	\$800,000,000				
Issue	State Trunk Line Fund Refunding Bonds, Series 2004 4/21/2004 November 1		State Trunk Line Fund Refunding Bonds, Series 2005 4/21/2005 November 1		State Trunk Line Fund New Money Bonds Series 2011				State Trunk Line Fund Refunding Bonds Series 2012 7/25/2012 November 15		State Trunk Line Fund Refunding Bonds Series 2014 8/27/2014 November 15				State Trunk Line Fund Refunding Bonds Series 2015 9/27/2015 November 15				State Trunk	Line Fund	State Trunk Line Fund				
																			Refunding	Bonds		New Money Bonds Series 2020B 9/10/2020			
																			Series 2	020A					
Dated Date					12/20/2011 November 15			4/14/2											020						
Principal Date								Novem											ber 15	November 15					
Maturity	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Caupan (%)	Amount (\$000)	Coupen (%)	Amount (\$000)	Caupar (%)	
	,		,		4.1.7	(11)			••••	```		,			(*)		,		*****		(4111)	(11)	4,		
2021	12,235 (5)	5.25%	24,555	5.50%	3,000	5.00%	£ .		7,415	5.00%	21,205	5.00%							34,610	5.00%	5,000	5.00%			
2022			64,480	5.50%	3,155	5.007									51,115	5.00%	2,940	2.000%	10,515			5.00%			
2023					3,315	5.007													11,060			5.00%			
2024					2,800	5.007		3.000%	1										11,620			5.00%			
2025 2026					3,650	5.007													1,555			5.00% 5.00%			
					3,835	5.007													1,635	5.00%	FF F40	5.00%			
2027 2028					4,035 4,240	5.002															55,540 52,725	5.00%			
2020				_	4,455	5.002			-												50,280	5.00%			
2020					4,685	5.002								_				_			48,270	5.00%			
2031					4,925	5.007															34,950	5.00%			
2032					5,150	4.007															32,585	4.00%			
2033					5,390	5.007															34,480	5.00%			
2034					5,665 (6)	5.002	£														15,000	5.00%			
2035					5,955 (6)																15,000	5.00%			
2036					6,260 (6)	5.007	4														42,335	5.00%			
2037																					43,965	4.00%			
2038																					46,125	4.00%			
2039																					48,390	4.00%			
2040																					53,485	4.00%	0.505	5.0	
2041 2042							-														25,265 33,335 (6)	4.00% 4.00%	8,535 (6) 8,960 (6)		
2042				-			+														35,355 (6)	4.00%	3,410 (6)		
2043				-			+														36,770 (6)	4.00%	9,880 (6)		
2045																					38,255 (6)	4.00%	10,385 (6)		
Total Issue											_										_				
Outstanding	\$23,845,000 \$47,790,000		\$74,050,000			\$14,4	70,000	\$41,405,000				\$54,055,000				\$103,48	5,000	\$800,000,000							
	No Optional Call		Bonds Maturing		Bonds Maturing			No Optional Call feature		No Optional Call feature			No Optional Call feature				No Optional	Call feature		Bonds N	Naturing				
Call	Call Feature		•		after 11/15/2021 Callable 11/15/2021 @ 100%														after 11/15/2030						
Provisions																				Callable 11/15/2030 @ 100%					
Notes:	Refundi	ina	Refund	lina	New M	oneu and	Refunding		Befu	ındina	Refunding				Refunding				ding		New N	Aoneu			

Debt Service for Comprehensive Transportation Fund

Repayment Schedule of Comprehensive Transportation Fund Debt Service (in millions)



CTF Maximum Future Annual Debt Service on the Outstanding Bonds plus Additional Bonds \$81.2 M

Draft FY2020 CTF Coverage Ratio 23.4x

Other Resources

- www.michigan.gov/mdot
- Facebook: www.facebook.com/MichiganDOT
- Twitter: Statewide www.twitter.com/MichiganDOT
- YouTube: www.youtube.com/MichiganDOT







Questions?



Better.Faster.Cheaper.Safer.Smarter

