

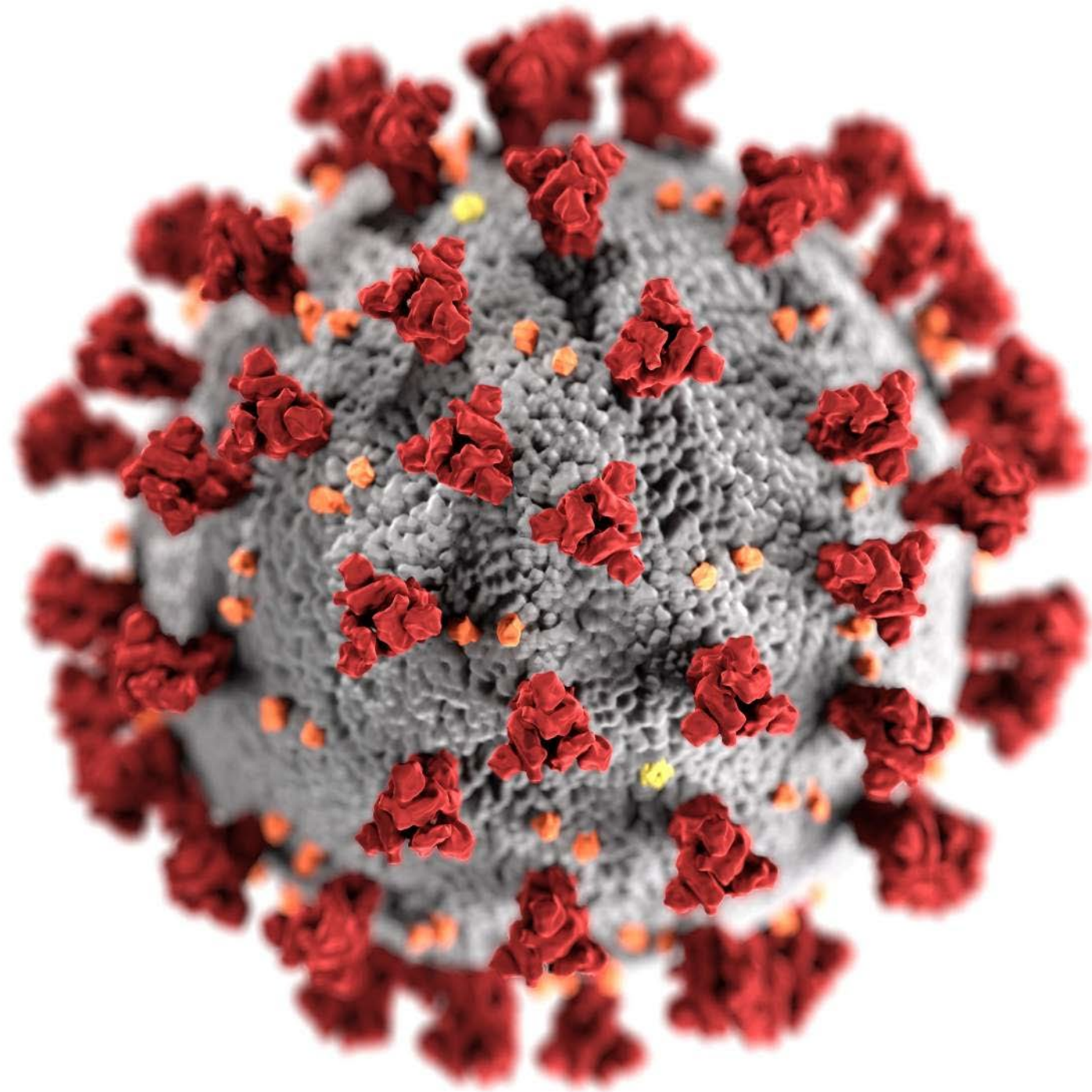
MDOT Update

ASPHALT PAVING ASSOCIATION OF MICHIGAN

FEBRUARY 22, 2022

TONY KRATOFIL, PE

CHIEF OPERATING OFFICER & CHIEF ENGINEER





MDOT
Highway Capital
Improvement Program

Including
Rebuilding Michigan
and the Infrastructure
Investment & Jobs Act

2022 Projected Lettings

(Trunkline Only)

Report Date 06-JAN-2022

Letting Month	Projects*	Construction Costs (\$ Millions)*
July, 2021	9	\$9.77
August, 2021	19	\$52.19
September, 2021	21	\$109.33
October, 2021	38	\$123.49
November, 2021	48	\$144.02
December, 2021	47	\$439.55
January, 2022	35	\$109.18
February, 2022	40	\$323.70
March, 2022	44	\$140.02
April, 2022	25	\$62.17
May, 2022	19	\$69.70
June, 2022	20	\$241.97
Total	365	\$1,825.10

** This information represents the total number of projects and dollars scheduled to be let in a given month. Therefore the sum of values will not directly correlate to program year budgets, and this information is always subject to change.*

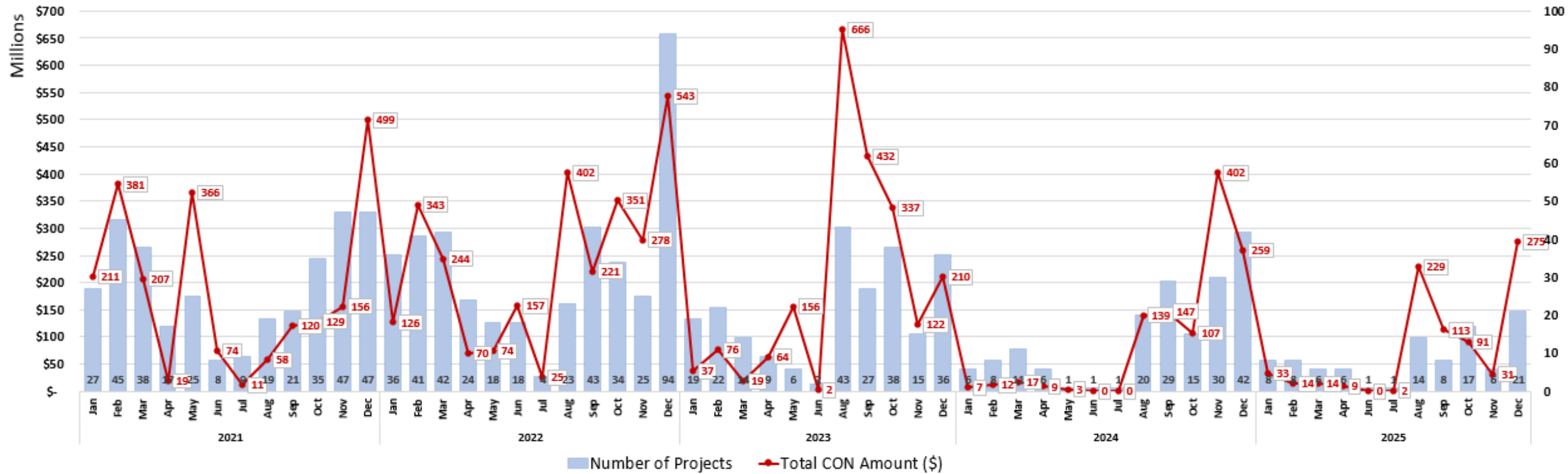
Quantity Values

Item	2022	2023
HMA (Tons)	4,595,181	2,862,217
Concrete (SYDs)	3,005,479	2,275,034
\$ of Bridge Work (Millions)	\$245.79	\$360.84
Aggregate (Tons)	179,079	144,742
Aggregate (SYDs)	6,040,070	3,247,746
Aggregate (CYDs)	4,142	363,881
Subbase (CYDs)	1,618,867	1,401,234

This information is draft and may change as the program is developed.

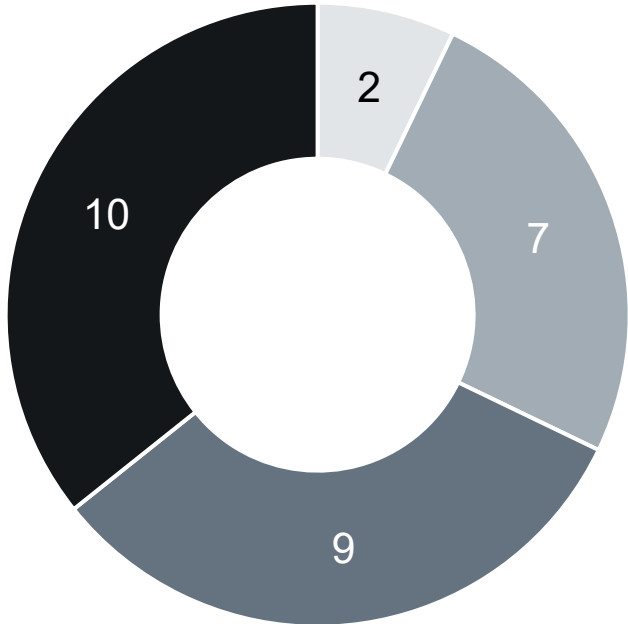
Rebalanced Letting Schedule

PROJECTS BY LETTING DATE



Pavement Type By LCCA Result

(Feb 2020 - Jan 2022)



- CONCRETE (NON-APB)
- CONCRETE (APB)
- HMA (APB)
- HMA (NON-APB)

On Deck:
Feb 2022 – Feb 2023

1 Concrete
7 HMA
5 APB

Life Cycle Cost Analysis (LCCA) Process Improvement Timeline 2022-2023

Step	Date(s)
Develop Issue Statements (unlimited)	December 2021 - March 2022
MDOT/Industry Meetings	April 2022 - September 2022
Choose Impasse Issues (5 max each)	October 2022
Other 2 parties Responses to Each Impasse Issue	December 2022
Impasse Panel meetings*	January 2023 - April 2023
Distribution of Impasse Panel Final Decisions	May 2023
Set Implementation Schedule	June 2023
Update LCCA Manual	Fall / Winter 2023**
LCCA Update Presentations	Winter 2023 / Spring 2024**

* Impasse Panel consists of 3 MDOT Leadership members.

** Timeline for these steps depend on the number and complexity of issues for implementation.

Michigan Main Streets Strategy

Safety and Access for All Users

Dig Once Approach

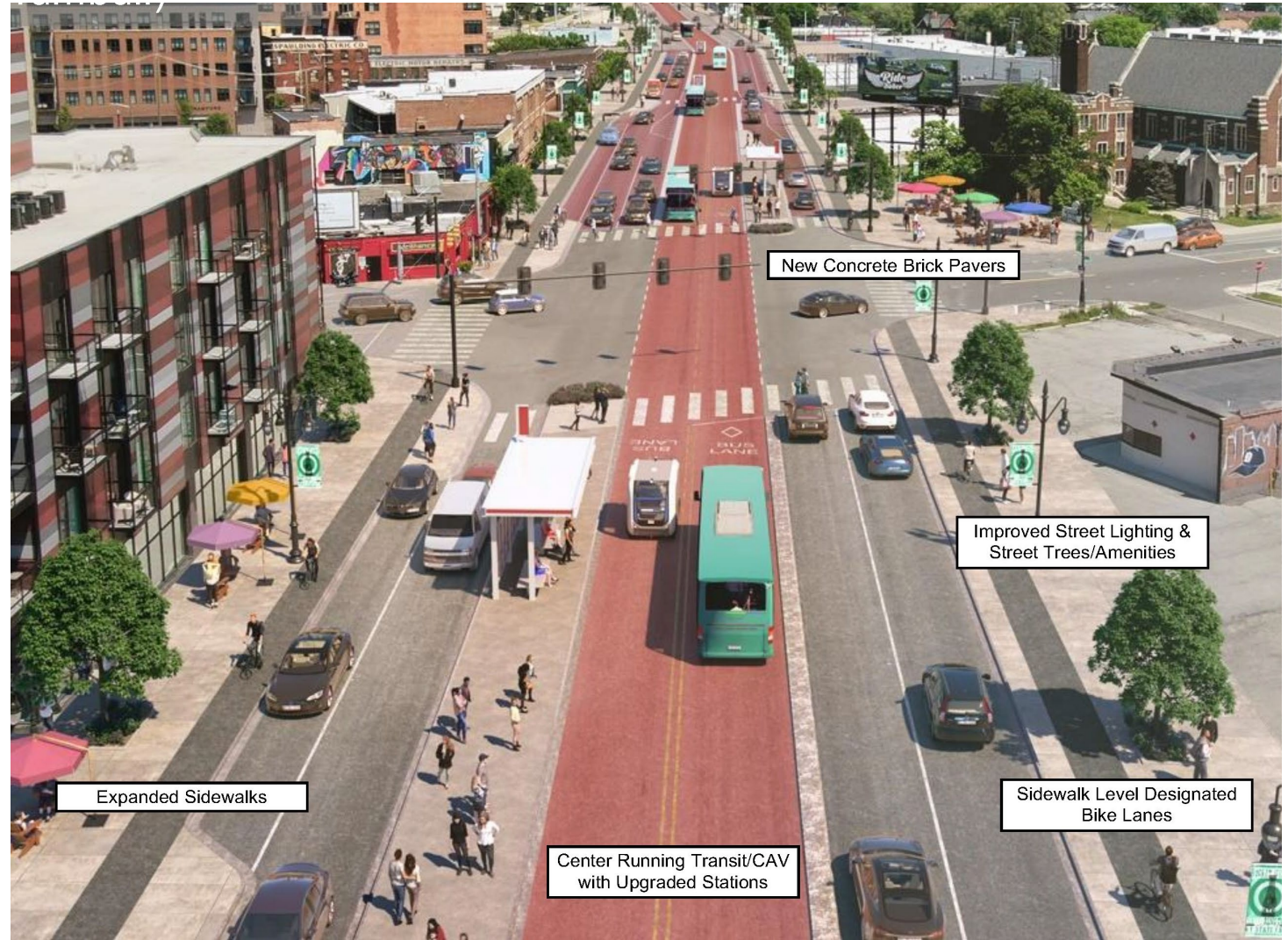
Drinking Water Systems

Storm Water/Climate Change
Resiliency

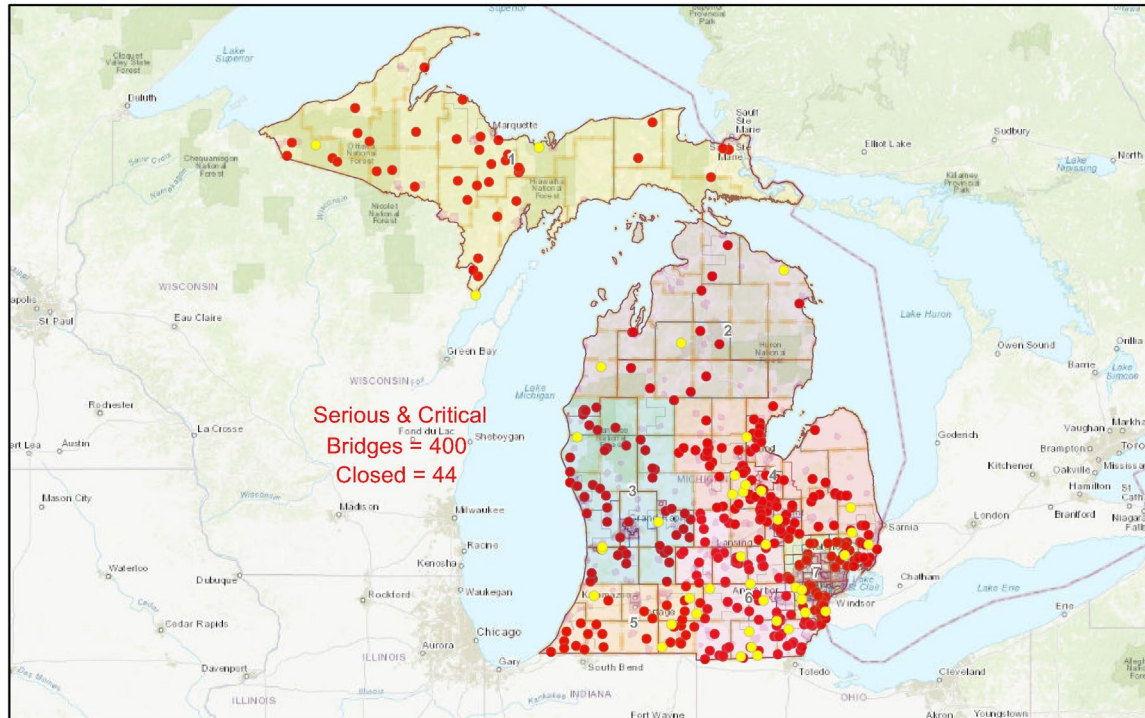
Broadband

Electrification

Leverage IIJA Discretionary
Grants & Other Infrastructure
Funding Categories



Michigan Local Closed Bridges in Serious & Critical Condition



Local Bridge Bundling



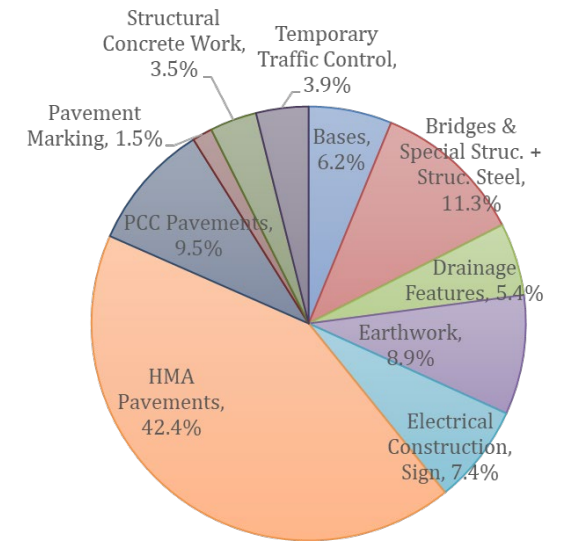
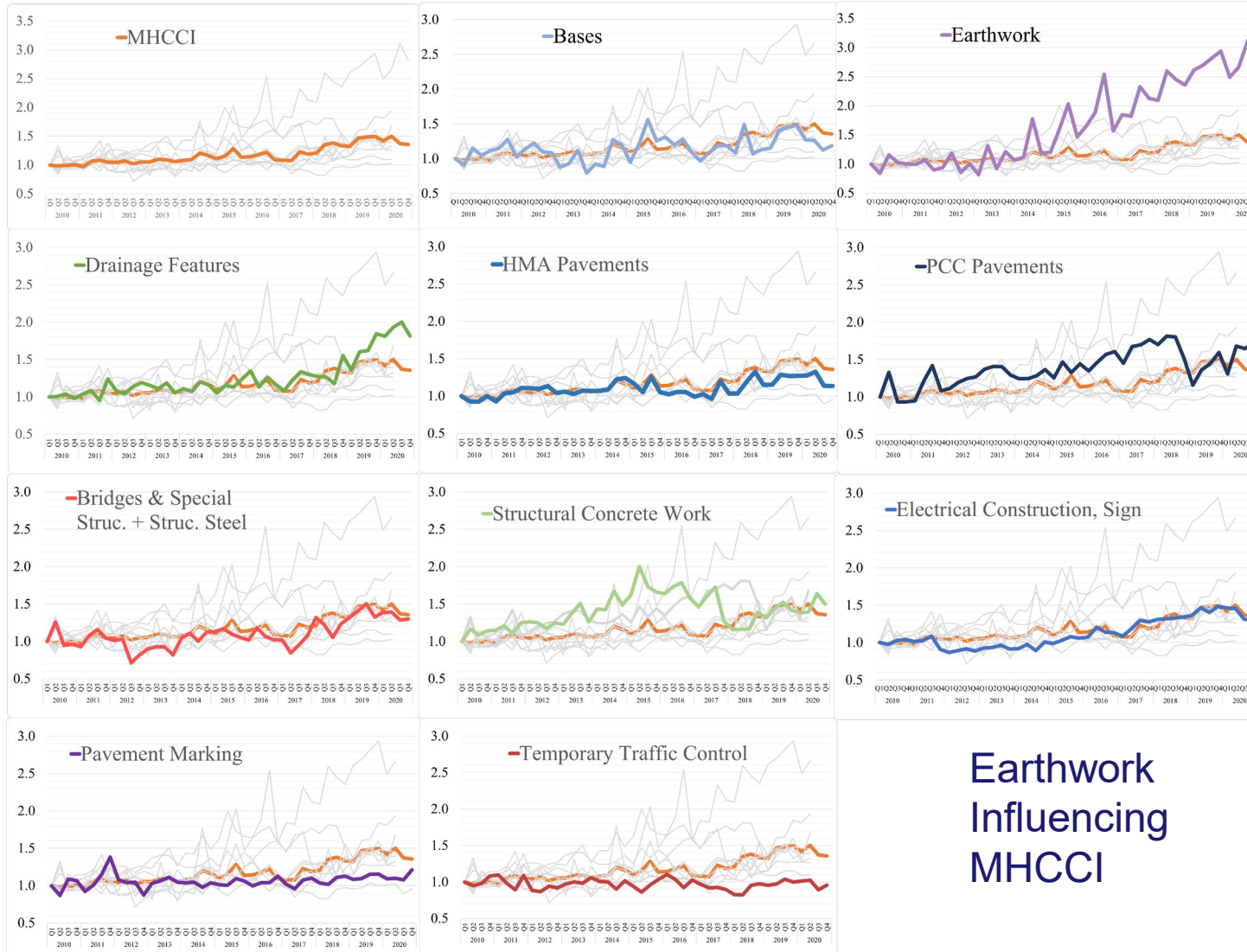
Rebuilding Michigan Lettings to Date

Region	Major Route (Report)	Location (Report)	Letting	Engineer Estimate	Low Bid	Savings	Percentage
University	I-496	I-96 to Lansing Road	2/21/2020	\$52,232,908	\$47,817,642	\$4,415,266	-8.45%
SW & Univ	I-69	I-69 Corridor	7/24/2020	\$214,129,045	\$210,180,170	\$3,948,875	-1.84%
Southwest	I-94 & US-31	Berrien County	6/19/2020	\$133,130,299	\$121,483,900	\$11,646,399	-8.75%
University	I-94	I-94 Near Jackson	10/30/2020	\$97,350,894	\$117,137,913	(\$19,787,019)	20.33%
Bay	I-69 E	Cox Doty Drain to M-19	1/8/2021	\$46,759,164	\$37,806,490	\$8,952,674	-19.15%
Grand	I-196 S	From 130th Avenue north to US-31	2/5/2021	\$35,209,173	\$31,520,523	\$3,688,650	-10.48%
Metro	M-59 W	Romeo Plank to I-94	2/5/2021	\$61,343,655	\$60,974,226	\$369,428	-0.60%
Bay	I-69	Fenton Road to M-54	3/5/2021	\$80,685,546	\$100,196,391	(\$19,510,845)	24.18%
Metro	I-275	Northline Road to 5 Mile Road	5/7/2021	\$279,325,745	\$256,892,162	\$22,433,582	-8.03%
University	I-69	I-96 to Airport Road	6/30/2021	\$67,536,732	\$64,539,405	\$2,997,327	-4.44%
University	I-496E	Lansing Road to Grand River	9/17/2021	\$73,958,761	\$81,890,000	(\$7,931,239)	10.72%
Bay	I-69E	M-24 to Lake George Rd	10/1/2021	\$56,239,747	\$54,558,624	\$1,681,123	-2.99%
University	US-127	Jackson Co Line to North of M-36	11/5/2021	\$60,314,606	\$67,249,837	(\$6,935,232)	11.50%
Grand	I-196	Byron Road East to 32nd Ave	12/3/2021	\$61,656,217	\$66,571,922	(\$4,915,704)	7.97%
Grand	US-31	I-196 North to Central Ave	12/15/2021	\$22,770,639	\$24,543,131	(\$1,772,492)	7.78%
Metro	I-96	Kent Lake Road to Novi Road	12/15/2021	\$239,773,275	\$269,300,694	(\$29,527,419)	12.31%
				\$1,582,416,406	\$1,612,663,032	(\$30,246,626)	1.91%



Category-Level MHCCI: Quarterly Trend

❖ Category-level Quarterly Index: Trend Comparison



Earthwork
Influencing
MHCCI

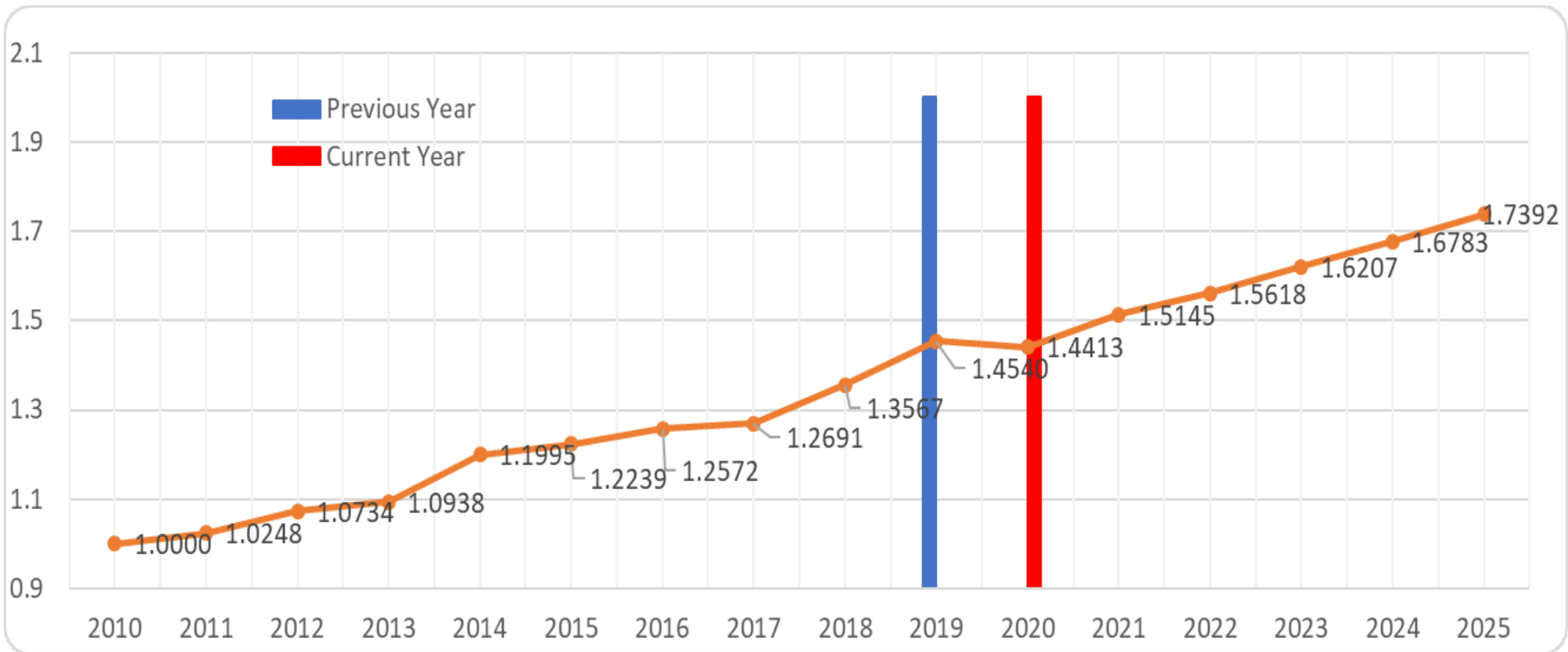
Peaks in the Michigan HCCI is **partially** caused by Hot Mix Asphalt (HMA) and **controlled** by HMA



Statewide MHCCI FORECASTS

❖ MHCCI Forecast

Annual Index



Integrated Program Support Contracts

Construction Contract Time Determination

Assist with project construction time duration for work to be complete

Project Manager Support

Assist MDOT with programmatic development process analysis and improvement

Integrated Program Management

Assist MDOT with target mitigation strategies to optimize program opportunities while decreasing disruption

Reduction of HMA Mixes

Reduced the number of mixes in the 2020 spec book

New mix designations.

Adjusted gyration levels to be consistent with national standards.

Gap-Graded Superpave re-named to Stone Matrix Asphalt (SMA)

Estimated Traffic (million ESAL)		Mix Type	
2012	2020	2012	2020
0.0-0.3	0.0-0.3	LVSP	EL
0.0-0.3		E03	
0.3-1.0	0.3-3.0	E1	EML
1.0-3.0		E3	
3.0-10	3.0-30	E10	EMH
10-30		E30	
30-100	30-100	E50	EH

Fine Texture Pavement Milling

Fine texture pavement milling FUSP

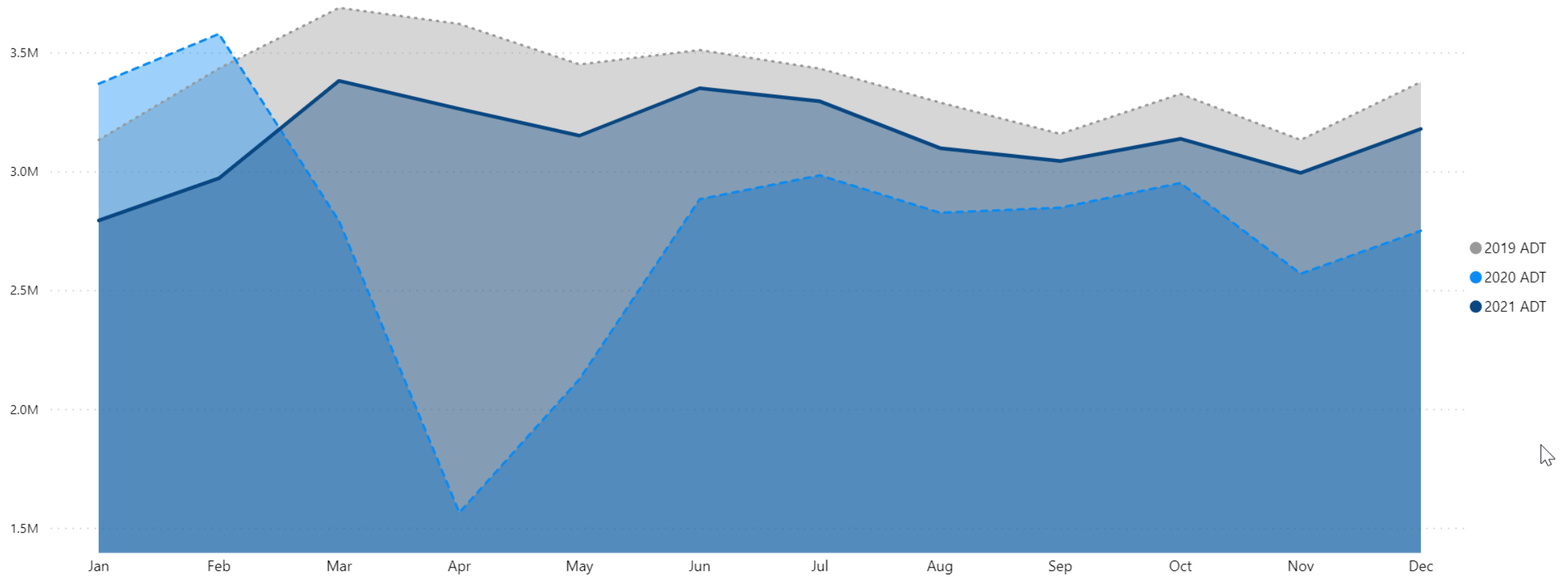
- Trunkline, one course, non-freeway mill and resurface projects
- Existing pavement condition allows for traffic to be maintained on the milled surface for up to 72 hours.

Increase in production paving and expedited project schedules

Improve safety

- Shorter paving trains and fewer trucks entering and exiting the work zone
- Fewer workers in the work zone

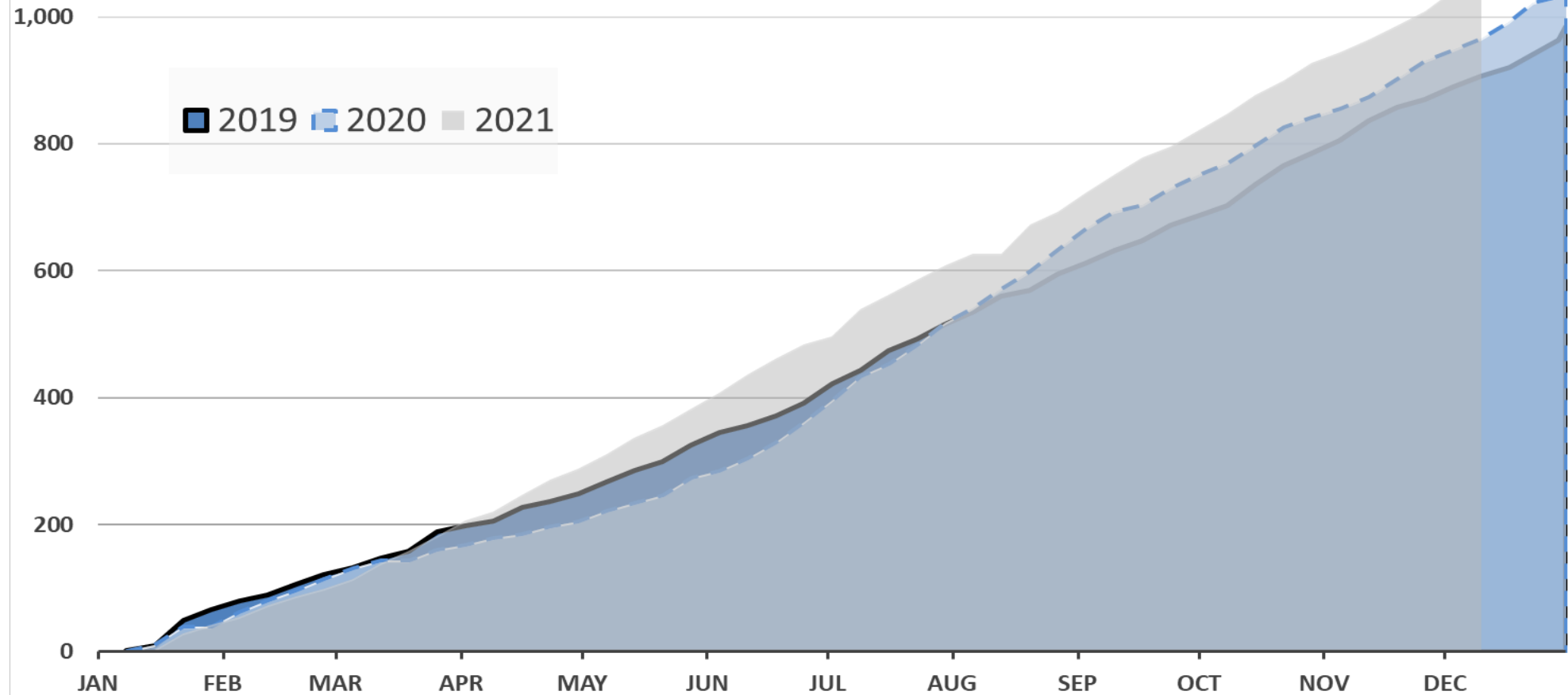
Michigan Monthly Average Daily Traffic (ADT) Year Over Year 2019-2021



Michigan Monthly Traffic Fatalities

Year Over Year 2019 - 2021

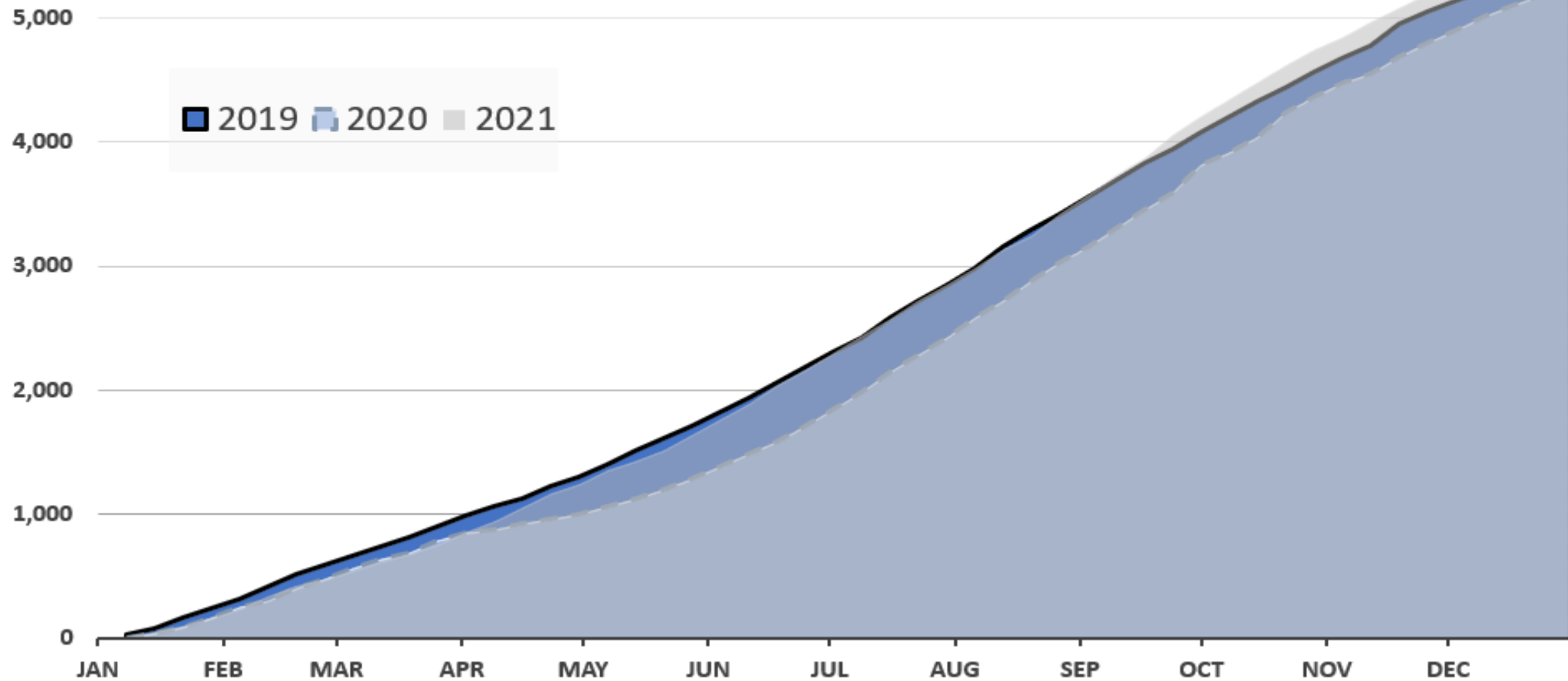
Source: Weekly MDOT Fatal Message



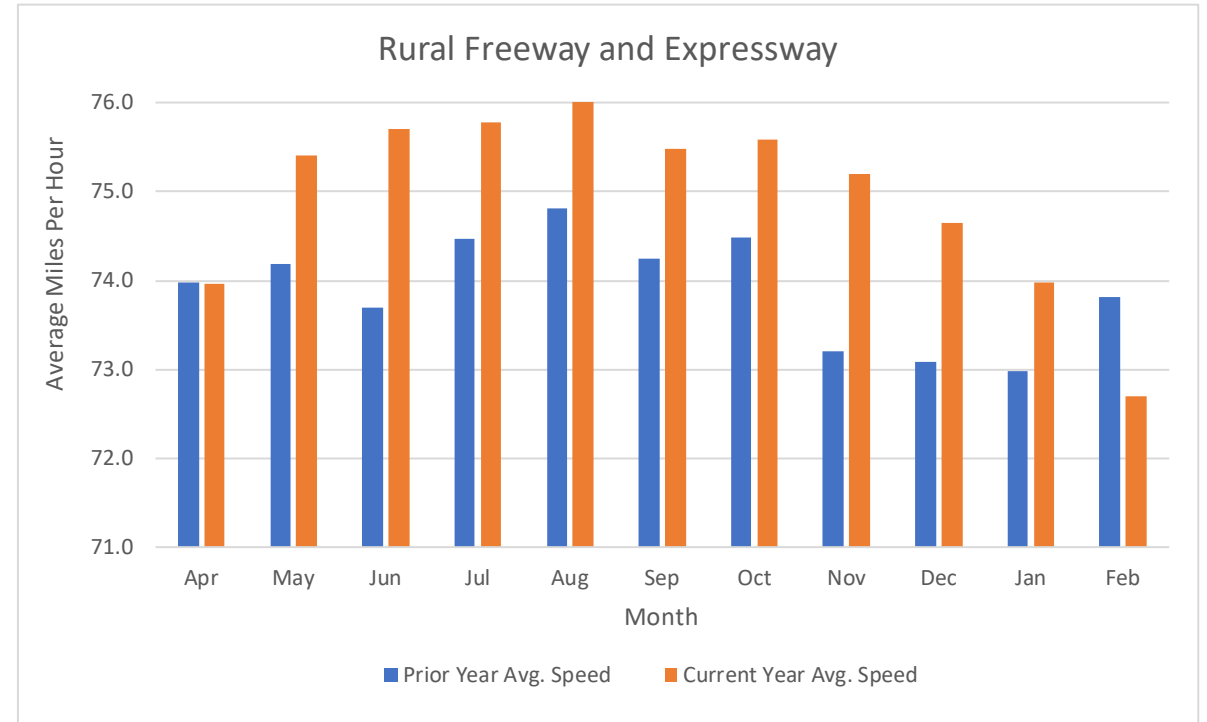
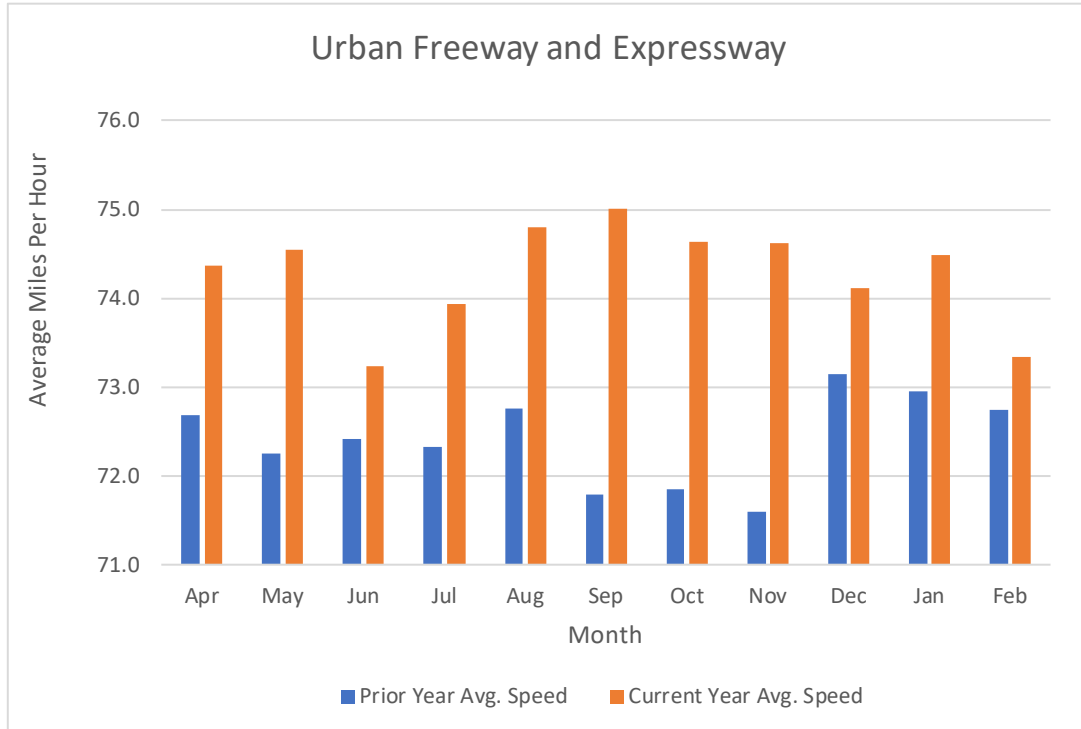
Michigan Monthly Traffic Serious Injuries

Year Over Year 2019 - 2021

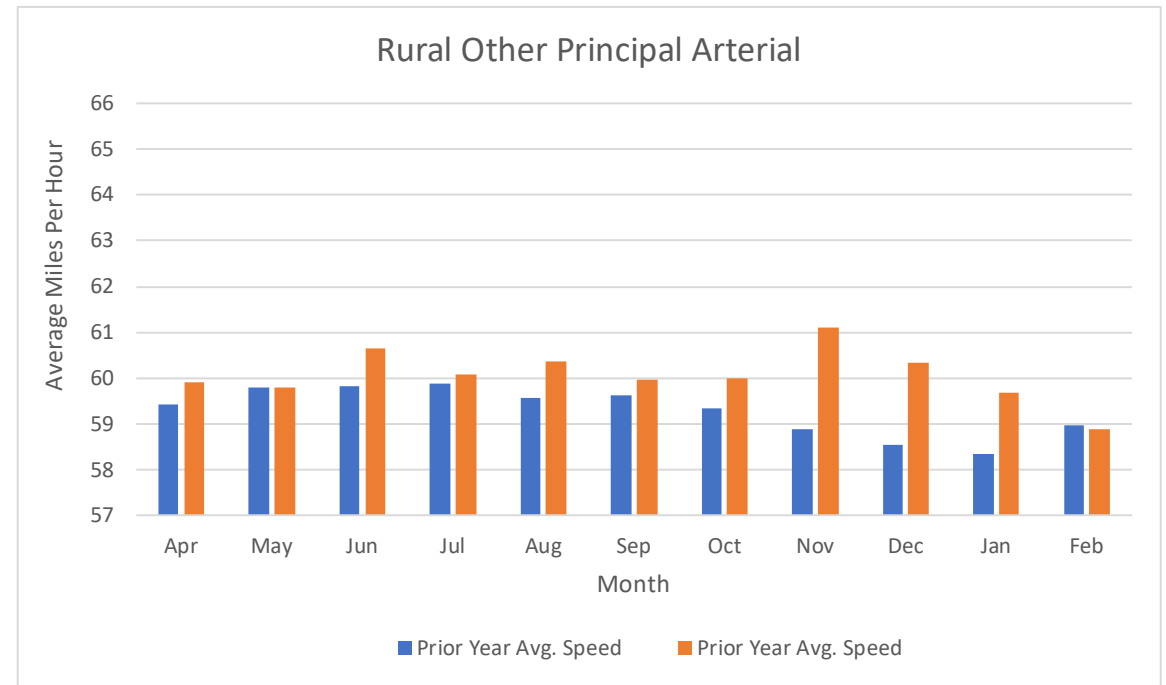
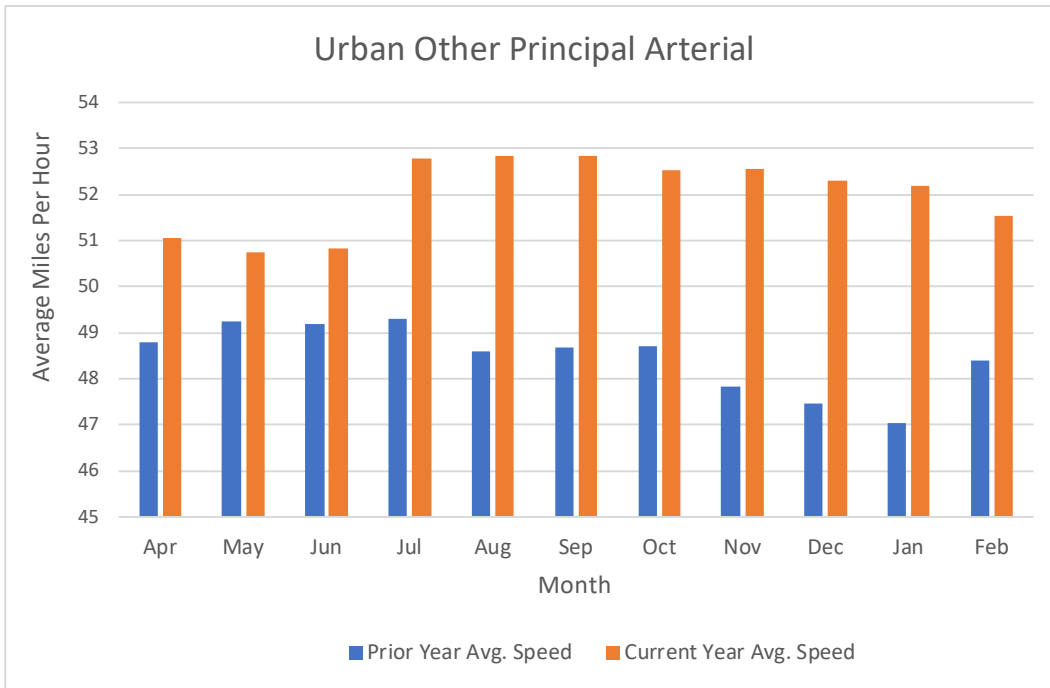
Source: Weekly MDOT Fatal Message



Speed is a Factor in Michigan Traffic Crashes



Speed is a Factor in Michigan Traffic Crashes



Higher Urgency on Key Themes



Positive Protection



Night Work



High Risk Operations
(e.g. Set-ups & Stage Changes)



Enforcement



Temporary Rumble Strips



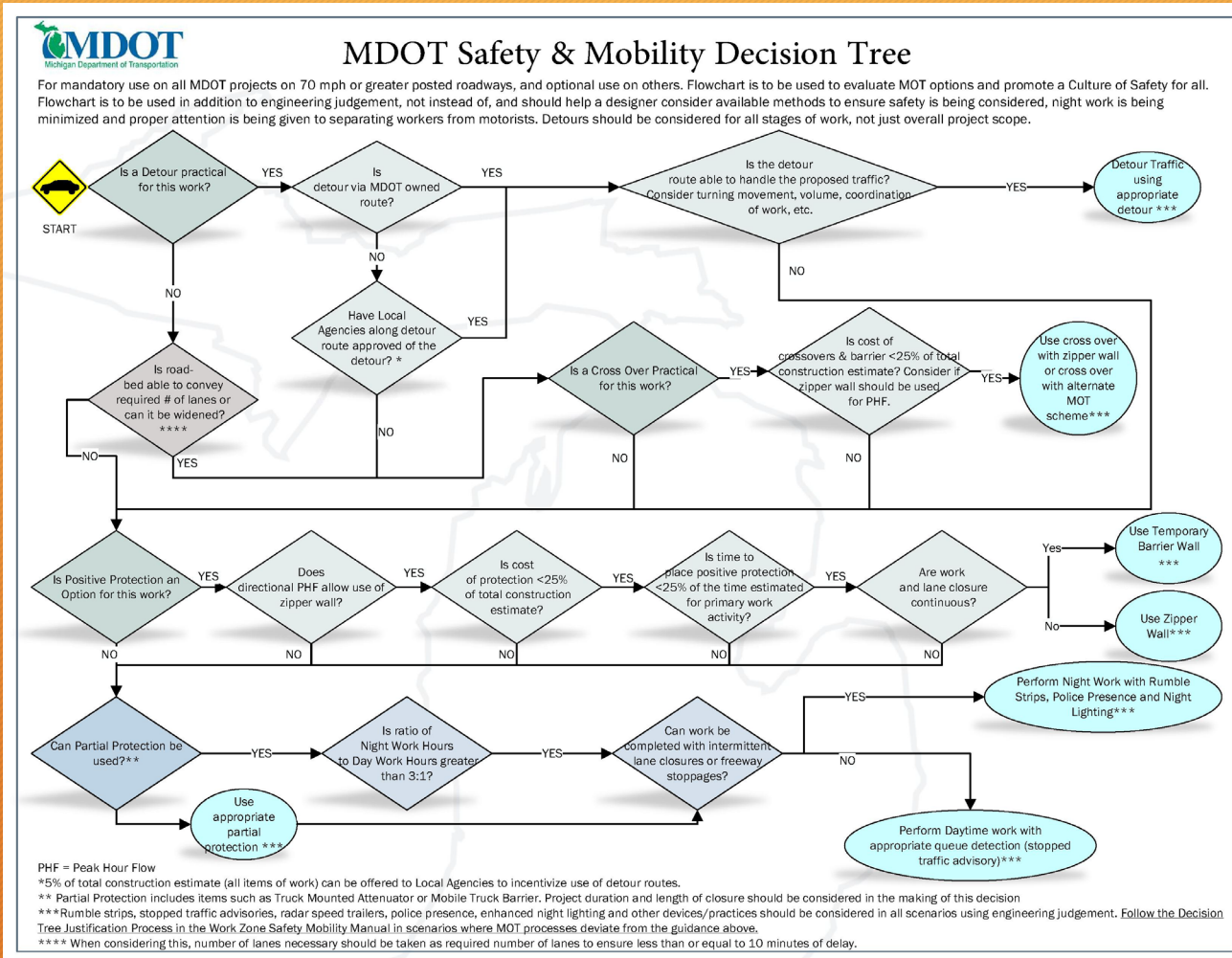
Truck Mounted Attenuators



Worker Training

Work Zone Safety & Mobility Policy

Policy & Manual Changes

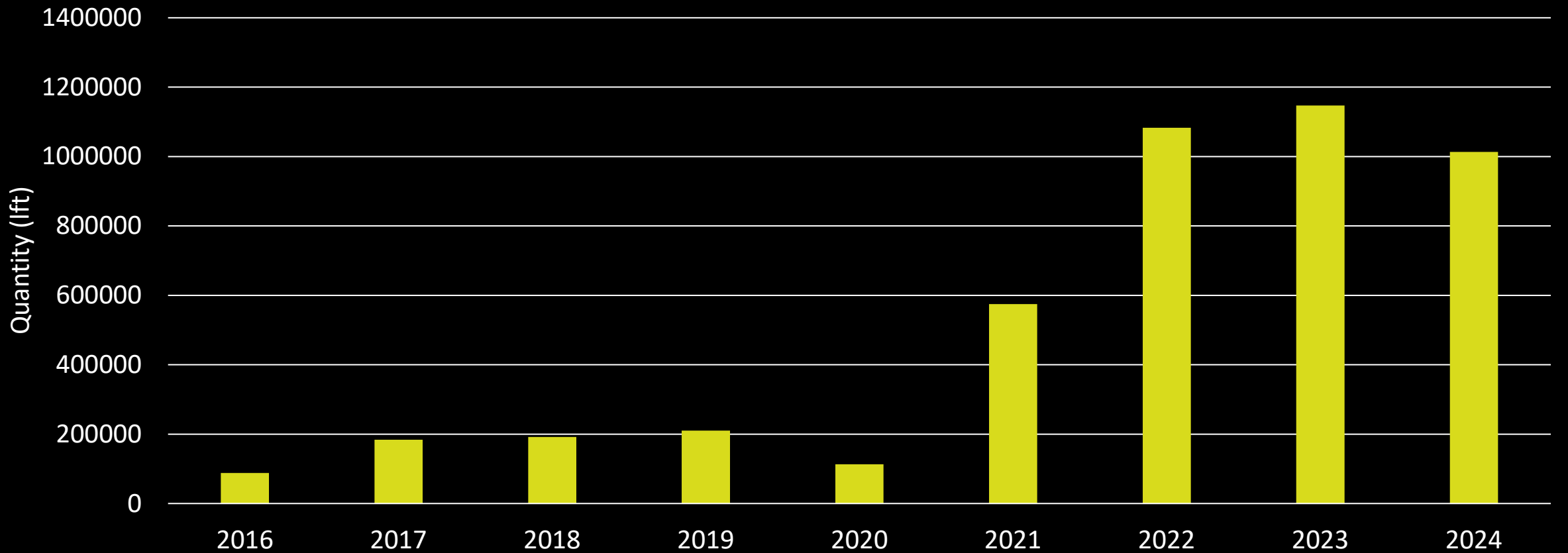


- High Speed Routes
- Positive Protection First
 - Closure & Detours
 - Barrier Separation
- Minimizing Night Work without Positive Protection
- Menu of Best Practices



Work Zone Safety & Mobility Policy & Manual Changes

Temporary Concrete Barrier Usage



Work Zone Safety & Mobility Policy & Manual Changes

Example:

I-96 Monroe Ave to Leonard St (Grand Rapids)
5.0 miles Mill & Resurfacing w/detail 7s & 8s

WAS:

45-50 night-time lane closures

NOW:

Complete weekend closures for Detail 7s & 8s
Friday 7 pm to Monday 5 am

Full directional closure (9 ½ days) for Resurfacing

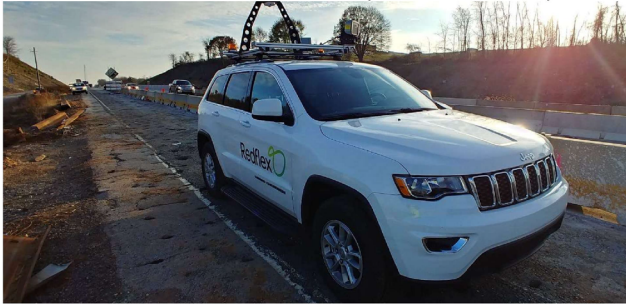
- ✓ Positive separation with full closure
- ✓ Reduce poor visibility exposure
- ✓ Reduce days of exposure



Automated WZ Speed Enforcement



Automated Work Zone Speed Enforcement (AWZSE)



Field Deployment Guide

Pub. 824
04/20

- ✓ Peer Exchanges with Pennsylvania DOT, Illinois DOT & Maryland DOT to learn about their successful pilot and the challenges they overcame to get there.
- ✓ Engagement with Legislators to gain their appreciation for work zone safety and commitment to help.



Pilot Initiatives - 2021



Early industry review on constructability & safety



WZ Safety Collaboration



WZ Safety Contingency Fund



Pilot Initiatives - 2022



WZ Safety Collaboration



WZ Safety Contingency Fund



**BOTH WZ Safety Contingency &
WZ Safety Collaboration**



Work Zone Safety Technology



“Where Workers Present”
Variable Speed Display



Automated Flagger
Assistance Devices (AFAD)



Mobile Barrier Trailers



SMALL PROJECT WINNER

Concrete pavement repairs in Kent County

Contractor: C&D Hughes, Inc.

Location: I-96 between Lansing and Grand Rapids

Scope: Full-depth concrete pavement repairs with shoulder and ramp resurfacing

Cost: \$3.26 million



Work Zone Safety Task Force **Positive Project Safety Collaboration**

MEDIUM PROJECT WINNER

I-675 bridge rehabilitation in Saginaw County

Contractor: CA Hull

Location: Saginaw

Scope: 8.74 miles of concrete joint repairs, crack sealing, high-friction surface treatment, and rehabilitation of several structures on I-675

Cost: \$10.44 million



Work Zone Safety Task Force **Positive Project Safety Collaboration**

LARGE PROJECT WINNER

I-275 reconstruction in Wayne and Monroe counties

Contractor: Dan's Excavating, Inc.

Location: Livonia, Plymouth, Romulus; Canton, Huron, Van Buren, and Ash townships.

Scope: 23.23 mi of road reconstruction and concrete pavement repairs; bridge rehabilitation on 65 structures on I-275

Cost: \$256.89 million



Work Zone Safety Task Force **Positive Project Safety Collaboration**

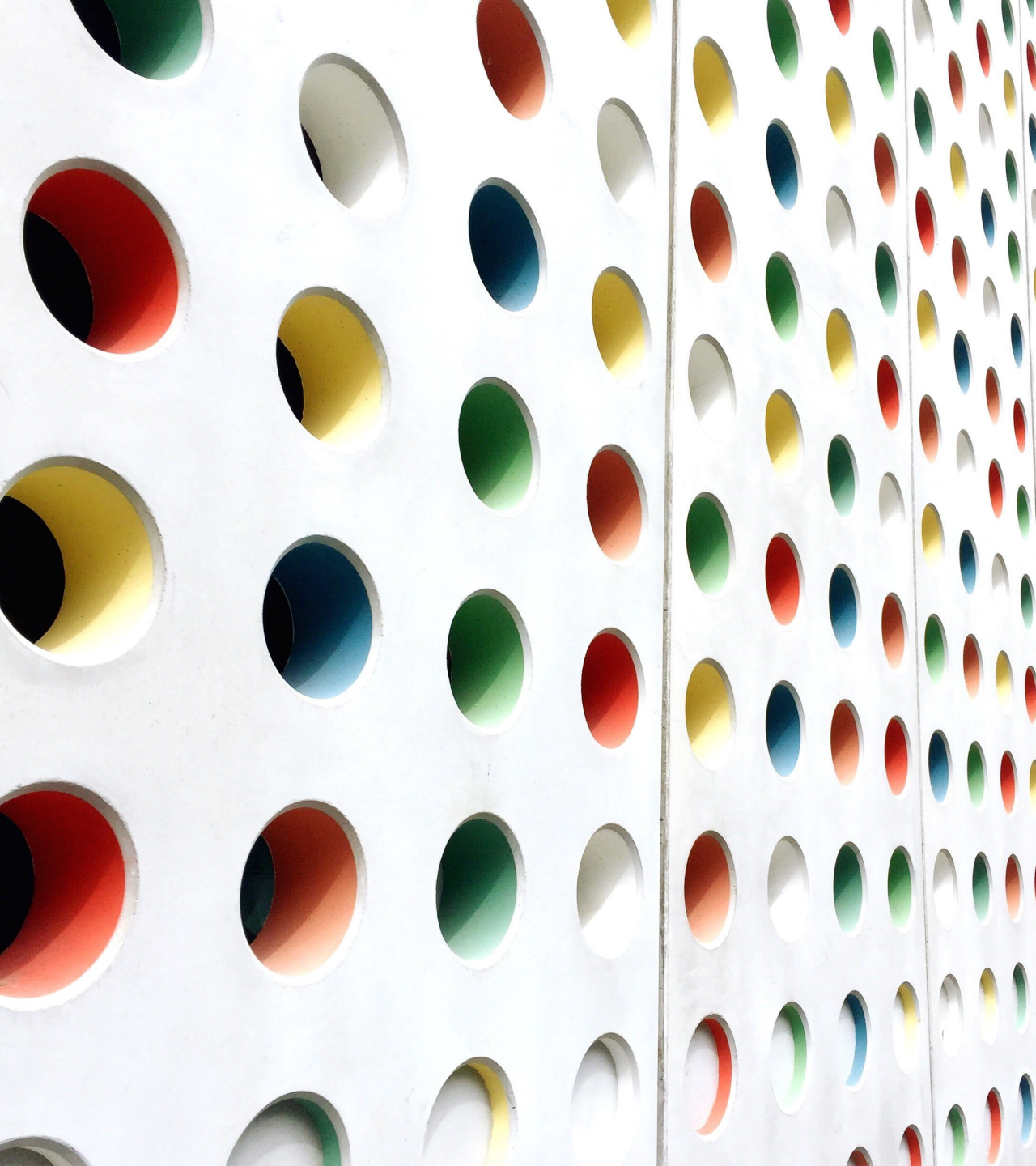


— PROTECT —
MI WORK
ZONES

TAKE THE PLEDGE



PROTECT**MI**WORKZONES.**COM**



MDOT Update

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FEBRUARY 22, 2022

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