

## Highlights from FHWA's 2023 National Bridge Inventory Data

- The state has identified needed repairs on 2,732 bridges.
- Over the life of the IJJA, Michigan will receive a total of \$608.2 million in bridge formula funds, which will help make needed repairs.
- Michigan currently has access to \$243.3 million of that total, and has committed \$53.6 million towards 67 projects as of June 2023.
- Of the 11,341 bridges in the state, 1,292, or 11.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is up from 1,217 bridges classified as structurally deficient in 2019.

## Bridge Inventory

Type of Bridge	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
<b>Rural Bridges</b>						
Interstate	405	362,866	8,148,774	25	16,790	307,230
Other principal arterial	645	405,302	5,745,684	39	22,673	383,842
Minor arterial	642	294,824	3,272,594	59	25,345	200,679
Major collector	2,101	683,741	4,460,521	256	63,689	537,296
Minor collector	550	139,026	1,083,720	58	9,669	33,366
Local	3,185	546,774	1,541,195	494	53,299	146,556
<b>Urban Bridges</b>						
Interstate	843	1,413,757	30,685,035	55	101,606	1,937,902
Freeway/expressway	319	332,874	8,349,229	28	20,119	693,913
Other principal arterial	733	889,315	15,801,919	67	85,099	1,325,578
Minor arterial	830	750,633	9,588,522	93	76,195	956,523
Collector	487	284,009	3,376,750	47	24,541	254,086
Local	601	298,267	2,448,228	71	19,362	142,257
<b>Total</b>	<b>11,341</b>	<b>6,401,389</b>	<b>94,502,168</b>	<b>1,292</b>	<b>518,387</b>	<b>6,919,228</b>

## Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	667	\$616.7	1,998,265	146,005
Widening & rehabilitation	75	\$126.0	1,338,561	43,772
Rehabilitation	1,067	\$1,260.1	5,620,853	438,361
Deck rehabilitation/replacement	763	\$2,151.2	9,482,251	747,697
Other work	160	\$210.7	611,763	73,325
<b>Total</b>	<b>2,732</b>	<b>\$4,364.8</b>	<b>19,051,693</b>	<b>1,449,160</b>

## Top Most Traveled Structurally Deficient Bridges in Michigan

County	Year Built	Daily Crossings	Type of Bridge	Location
Oakland	1971	209,200	Urban Interstate	I-696 over I-75 & 4 Ramps
Wayne	1971	98,506	Urban Interstate	I-94 over Ent to Ford Plant
Wayne	1963	92,920	Urban freeway/expressway	M-39 over Ecorse Creek
Wayne	1970	78,863	Urban Interstate	I-96 WB Main Rdwy over M-39 (Southfield Expr)
Wayne	1962	74,175	Urban Interstate	I-94 WB over Ecorse Rd
Monroe	1955	67,800	Urban Interstate	I-75 over Conrail ,Raisin R, Front
Wayne	1971	65,653	Urban Interstate	I-275 SB over Schoolcraft Rd
Genesee	1976	63,400	Urban Interstate	I-475 and Ramp B over Chavez Dr
Genesee	1976	63,400	Urban Interstate	I-475 over Davison - Broadway Aves
Genesee	1976	63,400	Urban Interstate	I-475 over Gilkey Creek

**About the data:** Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on February 1, 2023. Note that specific conditions on bridges may have changed because of recent work or updated inspections.

Effective January 1, 2018, FHWA changed the definition of structurally deficient as part of the final rule on highway and bridge performance measures, published May 20, 2017 pursuant to the 2012 surface transportation law Moving Ahead for Progress in the 21st Century Act (MAP-21). Two measures that were previously used to classify bridges as structurally deficient are no longer used. This includes bridges where the overall structural evaluation was rated in poor or worse condition, or where the adequacy of waterway openings was insufficient.

The new definition limits the classification to bridges where one of the key structural elements—the deck, superstructure, substructure or culverts, are rated in poor or worse condition. During inspection, the conditions of a variety of bridge elements are rated on a scale of 0 (failed condition) to 9 (excellent condition). A rating of 4 is considered “poor” condition.

Cost estimates have been derived by ARTBA, based on 2020 and average bridge replacement costs for structures on and off the National Highway System, [published by FHWA](#). Bridge rehabilitation costs are estimated to be 68 percent of replacement costs. A bridge is considered to need repair if the structure has identified repairs as part of the NBI, a repair cost estimate is supplied by the bridge owner or the bridge is classified as structurally deficient. Please note that for a few states, the number of bridges needing to be repaired can vary significantly from year to year, and reflects the data entered by the state.

Bridges are classified by FHWA into types based on the functional classification of the roadway on the bridge. Interstates comprise routes officially designated by the Secretary of Transportation. Other principal arterials serve major centers of urban areas or provide mobility through rural areas. Freeways and expressways have directional lanes generally separated by a physical barrier, and access/egress points generally limited to on- and off-ramps. Minor arterials serve smaller areas and are used for trips of moderate length. Collectors funnel traffic from local roads to the arterial network; major collectors have higher speed limits and traffic volumes and are longer in length and spaced at greater intervals, while minor collectors are shorter and provide service to smaller communities. Local roads do not carry through traffic and are intended for short distance travel.