Michigan – Congressional District 11

American Road & Transportation Builders Association

District Bridge Profile

Highlights from FHWA's 2023 National Bridge Inventory Data

- Of the 1,534 bridges in the counties of this district, 159, or 10.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 182 bridges classified as structurally deficient in 2019.
- Repairs are needed on 324 bridges in the district, which will cost an estimated $1.0 billion.
- This compares to 346 bridges that needed work in 2019.
- There currently are now projects in the District that use IIJA formula bridge funds.

Bridge Inventory

Type of Bridge	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	9	12,063	540,608	0	0	0
Other principal arterial	2	1,511	48,257	0	0	0
Minor arterial	8	4,875	88,820	1	101	8,000
Major collector	23	12,122	112,452	4	836	19,784
Minor collector	5	1,198	13,680	0	0	0
Local	58	8,693	68,205	15	1,355	14,987
Urban Bridges						
Interstate	320	555,043	16,202,453	13	34,709	778,357
Freeway/expressway	74	85,606	2,695,675	4	2,988	169,874
Other principal arterial	335	391,667	7,971,035	33	43,358	773,767
Minor arterial	303	300,449	4,247,236	44	42,227	568,796
Collector	128	90,154	1,291,900	14	9,294	69,324
Local	269	178,215	1,365,595	31	8,168	49,700
Total	**1,534**	**1,641,598**	**34,645,916**	**159**	**143,035**	**2,452,589**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	33	$84.3	557,560	19,935
Widening & rehabilitation	11	$37.8	398,200	13,132
Rehabilitation	163	$349.0	2,102,289	121,349
Deck rehabilitation/replacement	105	$483.4	2,965,751	167,932
Other work	12	$58.4	132,150	20,351
Total	**324**	$1,012.9	**6,155,950**	**342,700**

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Top Most Traveled Structurally Deficient Bridges in this District

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
Wayne	1971	65,653	Urban Interstate	I-275 SB over Schoolcraft Rd
Wayne	1953	63,154	Urban freeway/expressway	M-10 WB over I-94 Ramp from M-10
Oakland	1967	61,150	Urban Interstate	Ramp P to M-10 over I-696
Wayne	1969	60,400	Urban other principal arterial	M-102 8 mile Rd over I-75
Wayne	1962	60,077	Urban Interstate	I-94 EB over Beech-Daly Rd

Data includes information for the following area(s): Oakland County, Wayne County

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About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on July 3, 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.