



Highlights from FHWA’s 2017 National Bridge Inventory Data

- Of the 11,180 bridges in the state, 1,175, or 10.5 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.¹
- 63 structurally deficient bridges in the state are on the Interstate Highway System.
- 1,086 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- Over the last five years, bridge investment has accounted for 22.4 percent of highway and bridge contract awards in the state, compared to an average of 28.9 percent nationwide.²
- Over the last 10 years, 952 new bridges have been constructed in the state; 548 have undergone major reconstruction.
- The state has identified needed repairs on 1,736 bridges; which the state estimates will cost \$9.2 billion.³

Bridge Inventory

Type of Bridge ⁴	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	401	365,719	7,908,816	12	6,797	247,014
Other principal arterial	637	410,305	5,642,667	22	8,419	114,182
Minor arterial	610	292,575	3,143,955	39	19,436	165,666
Major collector	2,089	671,731	4,420,563	279	61,602	537,350
Minor collector	544	131,154	1,099,448	64	10,347	33,121
Local	3,162	544,269	1,556,108	489	51,035	127,827
Urban Bridges						
Interstate	829	1,391,264	29,855,289	51	198,430	1,805,107
Freeway/expressway	319	334,778	8,367,754	10	11,042	308,278
Other principal arterial	712	875,460	15,648,018	48	104,552	1,004,606
Minor arterial	811	739,387	9,717,303	73	40,843	900,386
Collector	475	287,454	3,417,785	34	18,910	156,111
Local	591	324,510	2,949,852	54	20,215	194,425
Total	11,180	6,368,612	93,727,558	1,175	551,633	5,594,073

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	678	\$5,755.1	1,985,960	141,019
Widening & rehabilitation	76	\$34.5	1,306,239	43,688
Rehabilitation	169	\$1,844.1	691,490	78,166
Deck rehabilitation/replacement	774	\$1,644.3	9,712,315	750,527
Other work	39	\$0.3	3,935	3,396

Top Most Traveled Structurally Deficient Bridges in Michigan

County	Year Built	Daily Crossings	Type of Bridge	Location
Wayne	1954	146,000	Urban minor arterial	Second Blvd over I-94
Wayne	1963	114,656	Urban freeway/expressway	M-39 over Rouge River
Wayne	1967	100,492	Urban Interstate	I-75 over Rouge R, Dearborn St & RR
Wayne	1967	100,492	Urban Interstate	I-75 over Fort St
Kalamazoo	1956	69,260	Urban Interstate	I-94 over Portage Road
Wayne	1969	68,056	Urban other principal arterial	M-102 8 mile Rd over I-75
Oakland	1964	65,985	Urban Interstate	I-75 SB over M-150 (Rochester Rd.)
Wayne	1962	65,737	Urban Interstate	I-94 WB over Ecorse Rd
Jackson	1949	64,800	Urban Interstate	I-94 over Conrail & Grand River
Wayne	1967	63,820	Urban other principal arterial	US-24 Telegraph Rd over Rouge River

Sources: Bridge data is from the 2017 National Bridge Inventory ASCII files, released by the Federal Highway Administration in January 2018.

Note that specific conditions on bridges may have changed as a result of recent work.

¹ According to the Federal Highway Administration (FHWA), a bridge is classified as structurally deficient if the condition rating for the deck, superstructure, substructure or culvert and retaining walls is rated 4 or below or if the bridge receives an appraisal rating of 2 or less for structural condition or waterway adequacy. 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 and the individual element displays signs of advanced section loss, deterioration, spalling or scour. ARTBA follows the methodology of the FHWA and evaluates bridge status without applying the 10-year rule.

² ARTBA analysis of Dodge Data Analytics data.

³ States report the cost of proposed bridge work for each bridge to the Federal Highway Administration as part of the bridge inventory data each year. Each highway agency is encouraged to use its best available information and established procedures to determine bridge improvement costs.

⁴ 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, and the Dwight D. Eisenhower National System of Interstate and Defense Highways. Other principal arterials serve major centers of urban areas or provide mobility through rural areas. Freeways and expressways are similar to interstates, with directional lanes generally separated by a physical barrier, and access/egress points generally limited to on- and off-ramps. Minor arterials are used for trips of moderate length, serve smaller geographic areas and connect to the higher arterial system. 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.