American Road & Transportation Builders Association

Wisconsin
2022 Bridge Profile

Highlights from FHWA's 2021 National Bridge Inventory Data

- Of the 14,307 bridges in the state, 987, or 6.9 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 1,112 bridges classified as structurally deficient in 2017.
- 20 of the structurally deficient bridges are on the Interstate Highway System. A total of 92.5 percent of the structurally deficient bridges are not on the National Highway System, which includes the Interstate and other key roads linking major airports, ports, rail and truck terminals.
- 595 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 1,815 bridges at an estimated cost of $1.7 billion.

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	635	493,521	12,402,901	9	4,601	164,700
Other principal arterial	1,131	844,881	8,939,816	19	7,023	85,845
Minor arterial	1,134	530,069	4,024,781	38	23,915	104,411
Major collector	1,806	563,081	2,900,722	210	55,824	241,723
Minor collector	723	172,331	634,217	89	16,965	55,008
Local	5,891	974,956	2,054,080	491	55,560	109,692
Urban Bridges						
Interstate	656	1,179,437	24,656,759	11	14,845	478,180
Freeway/expressway	214	356,646	4,826,273	1	460	15,000
Other principal arterial	777	959,740	12,429,108	30	27,383	492,493
Minor arterial	571	623,926	5,352,378	32	35,914	242,761
Collector	198	123,597	1,011,678	19	6,030	79,629
Local	571	276,640	2,142,227	38	12,584	83,537
Total	**14,307**	**7,098,826**	**81,374,936**	**987**	**261,105**	**2,152,979**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1,790	$1,696.0	11,989,260	1,081,707
Widening & rehabilitation				
Rehabilitation	4	$0.4	364	389
Deck rehabilitation/replacement	15	$2.9	13,830	2,995
Other work	6	$0.7	1,382	704
Total	**1,815**	**$1,699.9**	**12,004,836**	**1,085,795**

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Top Most Traveled Structurally Deficient Bridges in Wisconsin

County	Year Built	Daily Crossings	Type of Bridge	Location
Milwaukee	1960	132,000	Urban Interstate	IH 43-N-S Freeway over Lrd Glendale Ave
Milwaukee	1959	107,000	Urban Interstate	IH 43-N-S Freeway over Lrd W Hampton Ave
Milwaukee	1967	62,000	Urban Interstate	IH 41/Ush 45/Sth 1 over Cth W Mill Rd (Cth S)
Milwaukee	1967	62,000	Urban Interstate	IH 41/Ush 45/Sth 1 over Cth W Mill Rd (Cth S)
Dane	1956	36,178	Urban other principal arterial	Cth M Century Ave over Pheasant Branch Creek
Dunn	1959	33,200	Rural Interstate	IH 94 over E Br Wilson Creek
Milwaukee	1966	31,300	Urban other principal arterial	Sth 36-Loomis Rd over IH 41/43/894
Columbia	1961	26,100	Rural Interstate	IH 39/90/94 NB over Sth 60
Milwaukee	1969	26,100	Urban other principal arterial	Cth Pp W Good Hop over Br Milwaukee River
Waukesha	1966	25,350	Urban other principal arterial	Cth F NB (Redford over Lrd Green Rd

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on January 3, 2022. 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.

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