American Road & Transportation Builders Association

Maryland
State Bridge Profile

Highlights from FHWA's 2023 National Bridge Inventory Data

- The state has identified needed repairs on 1,595 bridges.
- Over the life of the IIJA, Maryland will receive a total of $440.7 million in bridge formula funds, which will help make needed repairs.
- Maryland currently has access to $176.3 million of that total, and has committed $18.2 million towards 6 projects as of June 2023.
- Of the 5,473 bridges in the state, 252, or 4.6 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 273 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
Rural Bridges						
Interstate	188	243,275	9,071,961	1	472	37,200
Other principal arterial	187	318,937	3,891,180	0	0	0
Minor arterial	238	136,225	1,759,779	8	743	11,620
Major collector	360	168,206	1,599,377	9	2,367	33,228
Minor collector	493	124,324	1,023,271	29	6,190	74,348
Local	1,032	195,536	1,074,592	94	12,270	66,163
Urban Bridges						
Interstate	694	1,843,638	53,284,140	8	17,584	556,890
Freeway/expressway	431	849,409	19,075,369	4	2,718	89,913
Other principal arterial	423	682,218	11,661,873	16	54,204	453,718
Minor arterial	377	348,638	5,316,822	5	2,628	65,800
Collector	318	172,674	2,440,244	12	3,179	120,943
Local	732	414,466	5,911,295	66	49,307	508,551
Total	**5,473**	**5,497,548**	**116,109,904**	**252**	**151,661**	**2,018,374**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	299	$1,819.4	7,457,774	319,426
Widening & rehabilitation	189	$769.1	2,703,277	202,140
Rehabilitation	614	$2,445.7	14,294,238	645,017
Deck rehabilitation/replacement	27	$697.3	572,733	175,815
Other work	466	$1,894.0	6,820,174	516,590
Total	**1,595**	**$7,625.6**	**31,848,196**	**1,858,989**

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Top Most Traveled Structurally Deficient Bridges in Maryland

County	Year Built	Daily Crossings	Type of Bridge	Location
Baltimore	1958	188,860	Urban Interstate	IS 695 over US 40
Baltimore	1965	72,000	Urban Interstate	Perring Pkwy Ramp over Herring Run
Baltimore	1951	70,700	Urban other principal arterial	Russell Street Via over Ostend Street and CSX
Washington	1966	62,680	Urban Interstate	IS 70 WB over MD 632
Washington	1965	62,680	Urban Interstate	IS 70 WB over US 11
Washington	1966	62,680	Urban Interstate	IS 70 EB over MD 632
Washington	1965	62,680	Urban Interstate	IS 70 EB over US 11
Baltimore	1921	58,858	Urban other principal arterial	Pulaski Highway over Herring Run
Baltimore	1961	55,154	Urban other principal arterial	Patapsco Avenue WB over Patapsco River
Prince George's	1959	46,652	Urban freeway/expressway	MD 4 WBr over MD 717

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.