American Road & Transportation Builders Association

State Bridge Profile

Highlights from FHWA's 2023 National Bridge Inventory Data

- The state has identified needed repairs on 3,550 bridges.
- Over the life of the IIJA, West Virginia will receive a total of $548.1 million in bridge formula funds, which will help make needed repairs.
- West Virginia currently has access to $219.2 million of that total, and has committed $15.3 million towards 50 projects as of June 2023.
- Of the 7,323 bridges in the state, 1,442, or 19.7 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 1,531 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	393	480,692	5,736,210	50	59,296	624,713
Other principal arterial	432	731,411	2,544,045	60	93,905	281,062
Minor arterial	358	206,273	1,102,223	82	28,861	256,970
Major collector	1,481	447,861	1,999,391	326	73,880	443,794
Minor collector	499	92,805	288,487	81	12,592	37,152
Local	3,041	435,420	635,531	628	63,102	121,341
Urban Bridges						
Interstate	253	605,878	6,620,110	35	82,541	731,582
Freeway/expressway	77	181,361	783,911	14	32,023	154,883
Other principal arterial	154	306,939	2,047,040	26	70,007	361,592
Minor arterial	208	221,497	1,643,547	47	42,309	414,358
Collector	145	79,396	559,961	27	18,008	135,216
Local	282	97,846	357,311	66	16,212	56,501
Total	**7,323**	**3,887,378**	**24,317,768**	**1,442**	**592,736**	**3,619,164**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	2,070	$1,271.8	3,435,290	421,340
Widening & rehabilitation	198	$124.5	394,603	58,940
Rehabilitation	684	$1,449.0	3,979,507	652,447
Deck rehabilitation/replacement	512	$1,431.3	3,573,704	642,535
Other work	86	$183.6	319,011	81,294
Total	**3,550**	**$4,460.2**	**11,702,115**	**1,856,555**

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Top Most Traveled Structurally Deficient Bridges in West Virginia

County	Year Built	Daily Crossings	Type of Bridge	Location
Putnam	1959	64,400	Urban Interstate	I-64 EB over Cr 33/5
Kanawha	1975	47,700	Urban Interstate	I-77 NB & SB over US 60
Harrison	1955	47,600	Urban other principal arterial	US Route 50 over Elk Creek, City Streets
Cabell	1959	33,900	Urban Interstate	I 64 EB over Guyandotte R, Cr60/52&26
Cabell	1959	33,900	Urban Interstate	I 64 WB over Guyandotte R, Cr60/52&26
Ohio	1968	30,400	Urban Interstate	I-70 EB & WB over Ohio River/City Streets
Kanawha	1965	28,000	Urban Interstate	I-64 Ramp B over Wv25
Wood	1935	27,421	Urban other principal arterial	West Virginia 14 over Little Kanawha River
Ohio	1966	27,010	Urban Interstate	Interstate 70 EB over Wheeling Creek & City St
Putnam	1959	26,150	Urban Interstate	I 64 WB over Cr 29 & Rocky Step Run

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.