

# National Bridge Inventory: West Virginia



## 2021 Bridge Profile

### Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 7,295 bridges in the state, 1,545, or 21.2 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is up from 1,222 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 15.2 percent of total deck area on all structures.
- 86 of the structurally deficient bridges are on the Interstate Highway System. A total of 88.0 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.
- 912 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 3,656 bridges at an estimated cost of \$2.9 billion.

### Bridge Inventory

Type of Bridge <sup>4</sup>	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
<b>Rural Bridges</b>						
Interstate	400	475,802	5,697,664	41	44,925	644,330
Other principal arterial	425	702,384	2,651,358	65	73,290	355,376
Minor arterial	353	204,053	1,154,307	98	33,849	303,317
Major collector	1,475	440,177	2,162,891	347	78,979	482,950
Minor collector	500	91,631	334,165	100	14,350	52,530
Local	3,026	422,660	719,192	675	68,438	141,652
<b>Urban Bridges</b>						
Interstate	253	593,614	7,101,824	45	107,490	1,141,480
Freeway/expressway	78	193,135	849,104	11	24,966	128,052
Other principal arterial	150	302,753	2,164,556	26	56,703	406,112
Minor arterial	207	220,713	1,963,639	53	41,274	480,712
Collector	144	79,753	557,939	23	18,914	119,055
Local	284	98,144	371,856	61	11,576	55,406
<b>Total</b>	<b>7,295</b>	<b>3,824,817</b>	<b>25,728,494</b>	<b>1,545</b>	<b>574,754</b>	<b>4,310,972</b>

### Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	2,096	\$950,102.4	3,491,481	417,719
Widening & rehabilitation	236	\$92,894.2	462,647	62,065
Rehabilitation	674	\$811,158.6	4,532,709	579,619
Deck rehabilitation/replacement	553	\$969,034.7	4,511,285	700,806
Other work	97	\$115,457.1	328,104	84,845
<b>Total</b>	<b>3,656</b>	<b>\$2,938,647.1</b>	<b>13,326,226</b>	<b>1,845,055</b>

### Top Most Traveled Structurally Deficient Bridges in West Virginia

County	Year Built	Daily Crossings	Type of Bridge	Location
Kanawha	1974	86,494	Urban Interstate	I-64 WBL & EBL over Cr 61/12
Putnam	1959	64,400	Urban Interstate	I-64 EB over Cr 33/5
Kanawha	1974	58,441	Urban Interstate	I-77 NB & SB over Cora Street
Ohio	1968	49,381	Urban Interstate	Interstate 70 over Middle Creek & Cr 39
Harrison	1974	45,550	Urban other principal arterial	US Route 50 over Interstate 79
Harrison	1955	44,200	Urban other principal arterial	US Route 50 over Elk Creek, City Streets
Ohio	1958	38,855	Urban Interstate	Interstate 70 EB over Mt. Dechantal Road
Kanawha	1981	36,375	Rural Interstate	I-77 over Route 94 and Lens Creek
Ohio	1970	34,243	Urban Interstate	Interstate 70 West over US 40
Brooke	1984	33,960	Urban freeway/expressway	US Route 22 over Ramp D, Railroad

**About the data:** Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on March 11, 2021. Note that specific conditions on bridges may have changed as a result 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 federal aid highway bill 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 2019 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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