

Highlights from FHWA's 2023 National Bridge Inventory Data

- The state has identified needed repairs on 6,346 bridges.
- Over the life of the IJJA, Virginia will receive a total of \$578.0 million in bridge formula funds, which will help make needed repairs.
- Virginia currently has access to \$231.2 million of that total, and has committed \$67.3 million towards 45 projects as of June 2023.
- Of the 14,068 bridges in the state, 498, or 3.5 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 607 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	518	453,203	11,347,645	6	7,023	91,084
Other principal arterial	701	1,086,858	5,388,346	17	68,238	68,825
Minor arterial	853	569,323	3,820,992	23	12,982	111,544
Major collector	1,563	514,348	2,420,204	55	14,115	90,884
Minor collector	1,109	250,839	711,337	44	7,816	19,025
Local	3,955	608,506	1,103,659	200	22,071	37,603
Urban Bridges						
Interstate	1,269	2,670,387	54,241,319	12	58,622	516,337
Freeway/expressway	594	870,198	13,380,704	5	6,842	131,353
Other principal arterial	761	1,612,452	16,536,798	32	51,264	664,143
Minor arterial	974	953,719	12,917,054	32	42,751	265,842
Collector	957	524,034	4,996,818	40	23,762	165,643
Local	814	315,155	1,763,791	32	5,626	40,151
Total	14,068	10,429,022	128,628,664	498	321,115	2,202,434

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1,593	\$5,990.6	8,934,113	1,149,421
Widening & rehabilitation	483	\$2,446.0	5,142,158	679,362
Rehabilitation	3,028	\$6,968.8	39,568,531	1,985,790
Deck rehabilitation/replacement	69	\$311.5	1,254,849	88,848
Other work	1,173	\$2,615.4	9,486,800	757,299
Total	6,346	\$18,332.3	64,386,451	4,660,720

Top Most Traveled Structurally Deficient Bridges in Virginia

County	Year Built	Daily Crossings	Type of Bridge	Location
Chesterfield	1958	111,499	Urban Interstate	I-95 over Rte 608 (Reymet Rd)
Prince William	1963	74,422	Urban Interstate	Interstate Rt.95SB over Neabsco Creek
Henrico	1974	68,401	Urban Interstate	Route 0195 over Rte 197 & CSX Transp. RR
Henrico	1968	62,613	Urban Interstate	Route 64 over Stony Run
Prince William	1980	62,187	Urban other principal arterial	Centreville Road over Bull Run
Fairfax	1962	53,000	Urban Interstate	EB G.W.Mem.Pkwy over Route I-495
Alexandria	1969	47,382	Urban other principal arterial	Duke Street over Route I-395
Richmond	1975	45,287	Urban other principal arterial	Cary Street over Rt 195 & CSX Transp
York	1957	41,665	Urban Interstate	IS 64 WBL S Appr over Hampton Roads
Charlottesville	1954	38,886	Urban freeway/expressway	Route 250 Bypass over Norfolk Southern Railway

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.