

Highlights from FHWA’s 2023 National Bridge Inventory Data

- Of the 2,381 bridges in the counties of this district, 125, or 5.2 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 143 bridges classified as structurally deficient in 2019.
- Repairs are needed on 938 bridges in the district, which will cost an estimated \$590.2 million.
- This compares to 955 bridges that needed work in 2019.
- The state has committed \$3.0 million in IJA bridge formula funds to support 2 projects in the District.

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	126	129,079	4,809,793	4	2,982	145,950
Other principal arterial	45	30,243	444,900	0	0	0
Minor arterial	174	88,913	898,855	9	2,810	31,904
Major collector	196	65,635	401,988	17	5,759	32,867
Minor collector	289	73,738	260,016	15	4,270	15,303
Local	660	104,872	195,875	46	4,973	12,225
Urban Bridges						
Interstate	160	184,495	5,873,082	1	451	29,828
Freeway/expressway	22	16,934	438,866	0	0	0
Other principal arterial	206	224,718	4,154,067	9	10,813	194,064
Minor arterial	144	103,672	1,166,852	4	4,987	28,260
Collector	121	37,362	360,256	5	1,330	15,725
Local	238	53,609	249,885	15	3,152	15,470
Total	2,381	1,113,270	19,254,435	125	41,527	521,596

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	170	\$85.7	558,310	48,546
Widening & rehabilitation	378	\$180.0	1,742,767	136,163
Rehabilitation	304	\$288.8	4,151,480	193,407
Deck rehabilitation/replacement	13	\$7.3	138,345	5,469
Other work	73	\$28.3	290,826	22,939
Total	938	\$590.2	6,881,728	406,525

Top Most Traveled Structurally Deficient Bridges in this District

County	Year Built	Daily Crossings	Type of Bridge	Location
Hamblen	1970	45,697	Rural Interstate	I81 over Flat Creek
Greene	1968	44,318	Rural Interstate	I81 over SR 34
Cocke	1970	29,828	Urban Interstate	I40 over Golf Course Rd (A526)
Cocke	1970	29,058	Rural Interstate	I40 over Nfa 1242
Washington	1931	27,789	Urban other principal arterial	Fap 34 244038W over CSX Railroad
Hawkins	1962	27,414	Urban other principal arterial	Fap 1 over North Fork Holston River
Hawkins	1962	27,414	Urban other principal arterial	Fap 1 over North Fork Holston River
Cocke	1970	26,877	Rural Interstate	I40 over Green Corner Rd (1321)
Carter	1986	24,080	Urban other principal arterial	Fap 67 over Powder Branch
Greene	1965	23,958	Urban other principal arterial	Fap 34 731247X over FAU 1391 & Southern Rwy

Data includes information for the following area(s): Carter County, Cocke County, Greene County, Hamblen County, Hancock County, Hawkins County, Jefferson County, Johnson County, Sevier County, Sullivan County, Unicoi County, Washington County

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