



Highlights from FHWA's 2018 National Bridge Inventory Data

- Of the 20,177 bridges in the state, 871, or 4.3 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 1,002 bridges classified as structurally deficient in 2014.
- 38 of the structurally deficient bridges are on the Interstate Highway System.
- 1,606 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 7,343 bridges at an estimated cost of \$1.9 billion.
- This compares to 7,387 bridges that needed work in 2014.

Bridge Inventory

Type of Bridge ⁴	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	823	944,247	29,073,939	21	38,730	837,080
Other principal arterial	1,110	1,020,786	10,812,445	17	29,927	136,040
Minor arterial	1,598	999,402	7,807,542	55	41,810	276,050
Major collector	1,943	732,535	3,600,398	64	29,656	110,390
Minor collector	3,203	809,903	2,619,016	151	33,086	95,330
Local	6,888	1,084,232	1,959,595	388	47,680	97,615
Urban Bridges						
Interstate	787	1,431,777	59,220,680	17	30,956	1,446,670
Freeway/expressway	275	478,118	10,387,652	6	9,644	259,580
Other principal arterial	1,085	1,381,283	22,586,370	41	73,676	1,012,320
Minor arterial	906	836,275	11,295,178	36	45,469	400,480
Collector	573	256,425	2,671,085	25	9,451	127,130
Local	986	300,928	1,985,140	50	17,210	104,490
Total	20,177	10,275,911	164,019,040	871	407,294	4,903,175

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	1,015	\$352,879	3,982,375	353,516
Widening & rehabilitation	3,473	\$445,069	19,734,856	1,376,081
Rehabilitation	2,471	\$819,152	39,256,458	1,503,430
Deck rehabilitation/replacement	117	\$189,735	918,539	287,467
Other work	267	\$43,512	1,608,876	133,464
Total	7,343	\$1,850,347	65,501,104	3,653,958



Top Most Traveled Structurally Deficient Bridges in Tennessee

County	Year Built	Daily Crossings	Type of Bridge	Location
Davidson	1958	175,270	Urban Interstate	I24 over Mill Creek
Hamilton	1960	134,740	Urban Interstate	I24 EBL & WBL over Branch
Davidson	1961	131,900	Urban Interstate	I24 350182D over I24 / CSX RR & Oldham St
Davidson	1961	113,710	Urban Interstate	I24 over I24 / Spring Street
Hamilton	1965	112,410	Urban Interstate	I24 over Germantown Rd (FAU 3577)
Davidson	1962	106,860	Urban Interstate	I40 over I40 / Westboro Road
Davidson	1967	102,580	Urban Interstate	I65 343316H over Cumberland Rv & Cowan St
Williamson	1963	97,660	Rural Interstate	I65 over Branch
Hamilton	1958	75,960	Urban Interstate	I124 SBL over W. 4th St (SR 389)
Hamilton	1958	73,550	Urban Interstate	I124 SBL over W. 9th St. (FAU 3551)

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), released March 15, 2019. 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 2017 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.