SOUTH CAROLINA

American Road & Transportation Builders Association

2020 Bridge Profile

Highlights from FHWA's 2019 National Bridge Inventory Data

- Of the 9,419 bridges in the state, 795, or 8.4 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 856 bridges classified as structurally deficient in 2015.
- The deck area of structurally deficient bridges accounts for 6.7 percent of total deck area on all structures.
- 27 of the structurally deficient bridges are on the Interstate Highway System.
- 688 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 1,654 bridges at an estimated cost of $1.2 billion.
- This compares to 1,654 bridges that needed work in 2015.

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	349	455,574	8,323,385	14	23,162	270,850
Other principal arterial	495	782,012	3,392,179	44	75,690	275,100
Minor arterial	744	780,687	3,171,799	96	87,012	375,775
Major collector	2,124	837,006	2,674,128	185	64,501	236,842
Minor collector	445	116,735	149,905	25	5,032	8,252
Local	2,612	577,698	734,527	225	39,038	54,028
Urban Bridges						
Interstate	393	1,161,141	14,307,070	13	27,162	798,250
Freeway/expressway	107	291,804	1,884,239	5	6,750	154,650
Other principal arterial	378	883,396	7,438,147	23	54,063	486,500
Minor arterial	548	674,866	6,197,483	58	51,362	605,700
Collector	595	277,598	2,588,755	53	24,737	236,492
Local	629	171,023	639,921	54	10,954	36,255
Total	**9,419**	**7,009,540**	**51,501,540**	**795**	**469,463**	**3,538,694**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	730	$415	1,915,394	287,014
Widening & rehabilitation	655	$517	5,485,208	522,217
Rehabilitation	251	$190	1,744,073	192,111
Deck rehabilitation/replacement	2	$20	16,060	20,511
Other work	16	$62	152,305	62,760
Total	**1,654**	**$1,204**	**9,313,040**	**1,084,612**

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Top Most Traveled Structurally Deficient Bridges in South Carolina

County	Year Built	Daily Crossings	Type of Bridge	Location
Richland	1958	124,800	Urban Interstate	I-26 over C.N. and L. Railroad
Greenville	1960	109,700	Urban Interstate	I-85 over Trib Laurel Crk
Charleston	1963	100,100	Urban Interstate	I-26 EB over S.C.L. RR & Southern Rwy
Lexington	1958	97,500	Urban Interstate	I-26 over Southern Rwy (No. 1)
Lexington	1959	97,500	Urban Interstate	I-26 over SC 302
Lexington	1959	92,700	Urban Interstate	I-26 over US 1
Richland	1977	51,300	Urban freeway/expressway	SC 277 NB over I-77
Richland	1961	50,200	Urban Interstate	I-126 over S.C.L. Railroad
Spartanburg	1953	41,100	Urban freeway/expressway	SC 85 over S-2
Spartanburg	1953	38,300	Urban freeway/expressway	SC 85 over Southern RR & S-42-995

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), released April 2, 2020. 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 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 2018 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.