

Highlights from FHWA's 2019 National Bridge Inventory Data

- Of the 779 bridges in the state, 174, or 22.3 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 176 bridges classified as structurally deficient in 2015.
- The deck area of structurally deficient bridges accounts for 23.1 percent of total deck area on all structures.
- 25 of the structurally deficient bridges are on the Interstate Highway System.
- 117 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 719 bridges at an estimated cost of \$2.3 billion.
- This compares to 719 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	13	6,840	362,215	1	788	43,029
Other principal arterial	16	6,260	137,635	1	1,988	9,088
Minor arterial	9	2,284	38,281	1	63	5,199
Major collector	22	6,323	65,461	8	2,087	24,515
Minor collector	23	6,998	22,411	2	315	1,800
Local	31	3,257	17,460	12	1,049	4,700
Urban Bridges						
Interstate	130	217,491	7,530,374	24	53,276	1,373,007
Freeway/expressway	121	242,225	3,480,537	31	45,185	1,147,575
Other principal arterial	127	125,469	1,898,815	27	22,107	428,186
Minor arterial	144	113,925	1,648,194	32	43,993	379,436
Collector	87	41,069	420,240	21	8,904	73,552
Local	56	18,400	313,810	14	2,634	36,010
Total	779	790,540	15,935,433	174	182,389	3,526,097

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	5	\$16	19,209	3,527
Widening & rehabilitation	0	\$0	0	0
Rehabilitation	712	\$2,271	14,729,797	685,400
Deck rehabilitation/replacement	0	\$0	0	0
Other work	2	\$11	3,050	3,633
Total	719	\$2,298	14,752,056	692,560

Top Most Traveled Structurally Deficient Bridges in Rhode Island

County	Year Built	Daily Crossings	Type of Bridge	Location
Providence	1964	171,707	Urban Interstate	I-95 NB & SB over US 6, Woon Rvr, Amtrak
Providence	1964	157,769	Urban Interstate	I-95 NB & SB over Amtrak
Providence	1965	157,769	Urban Interstate	I-95 NB & SB over US 1 Elmwood Av
Providence	1964	157,769	Urban Interstate	I-95 NB & SB over Wellington Av
Providence	1964	156,790	Urban Interstate	I-95 NB & SB over Narr Elec Co Siding
Providence	1969	76,700	Urban Interstate	I-195 WB over Seekonk River
Providence	1953	70,690	Urban freeway/expressway	US 6 Olneyville Exp over Plainfield St
Providence	1957	69,109	Urban freeway/expressway	RI 146 Ed Dowl Hwy over RI 15 Mineral Spring Av
Providence	1957	67,584	Urban freeway/expressway	RI 146 Ed Dowl Hwy over Branch Av
Providence	1984	67,300	Urban Interstate	RI 114 Lane F over I-195 EB & WB

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.