

Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 23,982 bridges in the state, 4,571, or 19.1 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 4,671 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 10.0 percent of total deck area on all structures.
- 6 of the structurally deficient bridges are on the Interstate Highway System. A total of 99.5 percent of the structurally deficient bridges are not on the National Highway System, which includes the Interstate and other key roads linking major airports, ports, rail and truck terminals.
- 5,416 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 15,308 bridges at an estimated cost of \$3.1 billion.

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	373	333,168	4,900,460	1	648	13,250
Other principal arterial	1,261	1,067,030	5,595,175	9	4,500	43,330
Minor arterial	1,076	610,204	2,051,540	18	13,164	32,530
Major collector	3,447	1,266,262	2,591,408	590	189,383	397,590
Minor collector	3,882	995,049	552,265	724	137,037	85,295
Local	11,600	1,823,063	621,457	3,066	337,776	129,402
Urban Bridges						
Interstate	352	706,919	8,375,605	5	39,076	78,900
Freeway/expressway	0	0	0	0	0	0
Other principal arterial	628	1,105,636	5,641,410	4	23,327	60,400
Minor arterial	544	615,387	3,502,697	45	69,960	296,635
Collector	316	194,955	837,740	31	17,576	56,250
Local	503	179,727	459,216	78	42,292	42,501
Total	23,982	8,897,400	35,128,972	4,571	874,738	1,236,083

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	7,237	\$1,420,791.8	1,584,089	1,267,080
Widening & rehabilitation	67	\$27,815.2	119,429	36,553
Rehabilitation	1,236	\$341,673.5	927,467	443,700
Deck rehabilitation/replacement	45	\$17,051.1	50,895	22,191
Other work	6,723	\$1,326,458.7	2,778,033	1,740,695
Total	15,308	\$3,133,790.3	5,459,913	3,510,219

Top Most Traveled Structurally Deficient Bridges in Iowa

County	Year Built	Daily Crossings	Type of Bridge	Location
Scott	1940	30,400	Urban other principal arterial	Centennial Bridge
Scott	1970	25,100	Urban Interstate	I-280 over Mississippi River & Road
Scott	1963	20,000	Urban minor arterial	N Division St over Duck Creek
Polk	1936	18,600	Urban minor arterial	2nd Ave over Birdland Dr
Polk	1967	17,600	Urban minor arterial	Sw 9th St over Cherry, RR, Milk Pkwy
Scott	1900	16,700	Urban minor arterial	Eastern Ave over Duck Creek
Woodbury	1962	14,550	Urban Interstate	I-29 over Channel Floyd River
Johnson	1972	14,500	Urban minor arterial	Gilbert St over Ralston Creek
Woodbury	2017	13,450	Urban Interstate	I 29 NB over Perry Creek Conduit
Poweshiek	1963	13,250	Rural Interstate	I 80 WB over Iowa 21

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on March 11, 2021. 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 2019 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.

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