

Highlights from FHWA’s 2022 National Bridge Inventory Data

- Of the 8,388 bridges in the state, 423, or 5.0 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is up from 382 bridges classified as structurally deficient in 2018.
- 52 of the structurally deficient bridges are on the Interstate Highway System. A total of 66.7 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.
- 776 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 7,030 bridges at an estimated cost of \$15.7 billion.

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	284	347,771	5,273,117	36	47,489	603,656
Other principal arterial	536	498,306	3,403,990	39	59,355	209,694
Minor arterial	330	225,923	1,386,673	28	22,862	98,042
Major collector	1,324	534,539	2,277,033	81	30,617	110,343
Minor collector	766	200,220	457,389	24	4,940	16,509
Local	2,334	421,209	499,258	101	15,125	15,429
Urban Bridges						
Interstate	664	1,774,016	29,402,589	16	117,198	516,268
Freeway/expressway	506	1,305,970	14,230,157	15	73,195	416,260
Other principal arterial	502	892,866	9,543,975	30	130,626	529,471
Minor arterial	555	624,879	5,440,133	27	35,145	199,618
Collector	294	212,122	1,412,316	14	10,393	61,500
Local	293	121,212	450,862	12	2,730	11,682
Total	8,388	7,159,033	73,777,496	423	549,675	2,788,472

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	2,358	\$2,980.5	6,342,957	979,825
Widening & rehabilitation	190	\$289.4	947,522	136,412
Rehabilitation	3,540	\$11,502.0	63,329,688	5,289,104
Deck rehabilitation/replacement	253	\$347.8	898,350	169,640
Other work	689	\$539.6	1,226,992	263,533
Total	7,030	\$15,659.4	72,745,509	6,838,513

Top Most Traveled Structurally Deficient Bridges in Washington

County	Year Built	Daily Crossings	Type of Bridge	Location
King	1983	108,179	Urban freeway/expressway	Sw Spokane St over Duwamish River W Waterwy
King	1940	83,051	Urban Interstate	I-90 over Mercer Slough
King	1970	83,051	Urban Interstate	I-90 over Mercer Sl
King	1989	73,775	Urban Interstate	Homer M. Hadley Memorial Bridge
King	1967	60,643	Urban freeway/expressway	SR 167 over Cmstpp RR
King	1996	49,293	Urban freeway/expressway	SR 99 over Duwamish River
Spokane	1958	45,696	Urban other principal arterial	Maple Street over Spokane River
Spokane	1963	43,937	Urban Interstate	I-90 over Hangman Creek
Spokane	1963	43,937	Urban Interstate	I-90 over Hangman Creek
Lewis	1953	43,712	Rural Interstate	I-5 over Lacamas Cr, Drews Pr Rd

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on February 1, 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.