



Highlights from FHWA's 2018 National Bridge Inventory Data

- Of the 2,325 bridges in the Commonwealth, 273, or 11.7 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 274 bridges classified as structurally deficient in 2014.
- 37 of the structurally deficient bridges are on the Interstate Highway System.
- 848 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The Commonwealth has identified needed repairs on 1,726 bridges at an estimated cost of \$2.2 billion.
- This compares to 1,716 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	200	274,952	5,003,850	19	27,555	474,429
Other principal arterial	76	206,457	1,285,259	8	18,672	217,974
Minor arterial	153	88,920	1,499,560	22	7,605	211,654
Major collector	193	72,435	898,763	28	10,992	125,545
Minor collector	142	34,659	430,100	25	3,985	79,860
Local	431	123,513	563,618	62	7,529	47,621
Urban Bridges						
Interstate	247	531,724	15,111,459	18	52,694	1,323,115
Freeway/expressway	112	253,638	5,078,638	7	17,440	347,217
Other principal arterial	207	292,126	6,425,404	17	19,975	560,172
Minor arterial	172	111,029	2,344,912	23	13,732	288,354
Collector	169	91,816	1,563,844	22	6,397	233,271
Local	223	99,424	716,637	22	9,212	72,028
Total	2,325	2,180,691	40,922,044	273	195,789	3,981,240

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	239	\$112,960	1,542,679	44,423
Widening & rehabilitation	253	\$47,892	2,407,251	64,012
Rehabilitation	1,195	\$1,890,030	26,272,129	1,178,176
Deck rehabilitation/replacement	25	\$144,505	561,214	73,306
Other work	14	\$3,448	101,060	2,679
Total	1,726	\$2,198,835	30,884,333	1,362,596



Top Most Traveled Structurally Deficient Bridges in Puerto Rico

County	Year Built	Daily Crossings	Type of Bridge	Location
San Juan	1967	246,900	Urban Interstate	Pr 18 over Pr 23 (Roosevelt Av.)
San Juan	1972	246,900	Urban Interstate	Pr 18 over Chardon Street
Guaynabo	1971	195,994	Urban Interstate	Pr 22 over Pr 28
Gurabo	1968	103,000	Urban freeway/expressway	Pr 30 Westbound over Pr 189
San Juan	1980	91,950	Urban Interstate	Pr 22 Southbound over Martin Pe¥A Channel
San Juan	1979	83,247	Urban Interstate	Pr 52 Southbound over Pr 177
San Juan	1976	79,000	Urban other principal arterial	Pr 1 over Pr 52
San Juan	1977	79,000	Urban other principal arterial	Pr 1 over Pr 18 (Las Americas Exp)
San Juan	1967	79,000	Urban other principal arterial	Pr 1 Northbound over San Roberto Street
San Juan	1967	79,000	Urban other principal arterial	Pr 1 Southbound over San Roberto Street

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.