

Highlights from FHWA's 2020 National Bridge Inventory Data

- Of the 17,552 bridges in the state, 1,702, or 9.7 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 1,884 bridges classified as structurally deficient in 2016.
- The deck area of structurally deficient bridges accounts for 9.6 percent of total deck area on all structures.
- 137 of the structurally deficient bridges are on the Interstate Highway System. A total of 80.3 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.
- 1,016 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- The state has identified needed repairs on 17,548 bridges at an estimated cost of \$41.7 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	599	516,942	6,506,244	36	27,072	530,942
Other principal arterial	675	503,163	3,865,025	49	16,735	221,444
Minor arterial	703	299,544	2,437,967	65	31,285	214,901
Major collector	1,402	482,174	2,650,592	123	39,616	227,719
Minor collector	1,767	376,347	1,327,107	174	38,052	134,723
Local	4,164	667,198	1,155,052	617	76,445	145,949
Urban Bridges						
Interstate	1,699	4,109,781	66,507,667	101	506,497	4,081,232
Freeway/expressway	1,171	1,976,235	46,362,420	53	211,956	2,878,504
Other principal arterial	1,196	1,794,096	22,424,180	78	94,334	1,340,575
Minor arterial	1,534	1,332,674	15,138,171	122	111,452	1,058,783
Collector	1,230	613,852	5,173,999	117	68,260	461,860
Local	1,412	609,864	2,494,898	167	53,165	204,387
Total	17,552	13,281,869	176,043,328	1,702	1,274,870	11,501,019

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	8	\$6,555.5	2,576	1,647
Widening & rehabilitation	15,632	\$37,478,230.8	159,278,838	11,932,918
Rehabilitation	15	\$72,188.9	23,806	22,280
Deck rehabilitation/replacement	1,865	\$4,089,663.3	16,734,047	1,314,051
Other work	28	\$18,471.5	2,299	6,823
Total	17,548	\$41,665,110.1	176,041,566	13,277,719

Top Most Traveled Structurally Deficient Bridges in New York

County	Year Built	Daily Crossings	Type of Bridge	Location
Kings	1963	190,572	Urban Interstate	Rte I278 over Third Avenue SB, 18th St
Kings	1962	190,572	Urban Interstate	Rte I278 over Hamilton Avenue E/B, W.
Kings	1942	163,762	Urban freeway/expressway	Rte 907C over Sheepshead Bay Rd
Kings	1942	163,762	Urban freeway/expressway	Rte 907C over Ocean Avenue
Bronx	1960	150,527	Urban Interstate	Rte I278 over Bruckner Blvd, 138th Str
Kings	1954	146,107	Urban Interstate	Rte I278 over Flushing Avenue
Bronx	1951	138,800	Urban Interstate	Rte I95 over Bronx River Ave., Rte I8
New York	1985	135,276	Urban freeway/expressway	Rte 907 over East River Shore
Kings	1948	134,789	Urban Interstate	Rte I278 over Rte I278, Cadman Plaza E
Queens	1963	133,885	Urban Interstate	Rte I678 over Flushing Creek, Meadow L

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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