

# **District Bridge Profile**

### Highlights from FHWA's 2023 National Bridge Inventory Data

- Of the 4,664 bridges in the counties of this district, 188, or 4.0 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition.
- This is down from 216 bridges classified as structurally deficient in 2019.
- Repairs are needed on 1,554 bridges in the district, which will cost an estimated \$1.5 billion.
- This compares to 1,610 bridges that needed work in 2019.
- The state has committed \$24.0 thousand in IIJA bridge formula funds to support 1 project in the District.

	All Bridges			Structurally Deficient Bridges		
Type of Bridge	Total	Area	Daily	Total	Area	Daily
	Number	(sq. meters)	Crossings	Number	(sq. meters)	Crossings
Rural Bridges						
Interstate	91	152,837	2,100,147	0	0	0
Other principal arterial	320	311,166	2,731,875	3	11,024	42,200
Minor arterial	224	165,994	856,846	4	2,026	17,117
Major collector	647	235,454	915,916	16	10,486	25,549
Minor collector	631	149,795	418,421	30	5,324	28,235
Local	1,257	192,457	248,376	77	12,342	16,768
Urban Bridges						
Interstate	200	457,455	16,449,468	2	3,218	158,592
Freeway/expressway	89	155,845	3,813,966	2	1,924	90,638
Other principal arterial	335	429,425	7,628,515	10	36,856	324,532
Minor arterial	322	313,791	4,356,874	23	21,570	479,289
Collector	203	76,729	884,039	6	2,402	14,115
Local	345	111,751	519,144	15	8,335	26,914
Total	4,664	2,752,700	40,923,587	188	115,506	1,223,949

#### **Bridge Inventory**

#### **Proposed Bridge Work**

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	199	\$186.9	1,064,053	92,381
Widening & rehabilitation	585	\$411.7	4,983,527	309,176
Rehabilitation	701	\$770.6	10,884,091	519,432
Deck rehabilitation/replacement	15	\$158.1	221,057	103,490
Other work	54	\$13.1	170,854	10,578
Total	1,554	\$1,540.4	17,323,582	1,035,057

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## **District Bridge Profile**

#### **Top Most Traveled Structurally Deficient Bridges in this District**

County	Year Built	Daily Crossings	Type of Bridge	Location
Shelby	1966	105,381	Urban Interstate	I-240SB 348605B over I-240 EB / Agnes PI & RR
Shelby	1958	59,405	Urban other principal arterial	Fas 177 over Wolf River
Shelby	1968	53,975	Urban freeway/expressway	Fau 4032 over Waring Rd
Shelby	1973	53,211	Urban Interstate	I40-LI-Exit-Ramp over I40-WB-Ex Rp / N 3rd St.
Shelby	1929	48,162	Urban other principal arterial	Fap 14 297767K over IC RR & Nonconnah Creek
Shelby	1969	47,158	Urban minor arterial	Fau 4032 over N. Highland St.
Shelby	1969	47,158	Urban minor arterial	Fau 4032 over N Highland St
Shelby	1968	47,158	Urban minor arterial	Fau 4032 over Holmes St
Shelby	1968	47,158	Urban minor arterial	Fau 4032 over Holmes St
Shelby	1958	44,832	Urban minor arterial	Fau 2825 over Cherry Creek

Data includes information for the following area(s): Benton County, Carroll County, Crockett County, Dyer County, Fayette County, Gibson County, Haywood County, Henry County, Lake County, Lauderdale County, Madison County, Obion County, Shelby County, Tipton County, Weakley County

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, <u>published</u> <u>by FHWA</u>. 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.

About the data: Data is from the Federal Highway Administration (FHWA) National Bridge Inventory (NBI), downloaded on July 3, 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.