



Interim Report Task 05
Existing Conditions of Bridges

April 2025

Prepared by:

HNTB



Mississippi Department of Transportation **MULTIPLAN 2050**

This Plan was prepared as a cooperative effort of the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Mississippi Department of Transportation (MDOT), and local governments in partial fulfillment of requirements in Title 23 USC 134 and 135, amended by the IIJA, Sections 11201 and 11525, October 1, 2021. The contents of this document do not necessarily reflect the official views or policies of the USDOT.

Table of Contents

1.0 Introduction	1
2.0 Agency Responsibilities.....	1
2.1 Role of MDOT.....	1
2.2 Funding	2
Bridge Investment Program.....	2
Bridge Formula Program.....	2
2.3 Planning	3
The Statewide Freight Plan, 2022	3
Statewide Transportation Improvement Program, 2025-2028.....	3
National Bridge Inspection Standards, 2022.....	4
2.4 Major Investments	4
3.0 Statewide Significance	6
4.0 Existing Conditions.....	7
4.1 Activity/Demand	10
4.2 Bridge Condition	13
4.3 Performance	19
5.0 References	21

List of Tables

Table 1. Mississippi Structures by Maintenance Responsibility, 2024.....	7
Table 2. Mississippi Structures by Functional Classification of Inventory Route.....	8
Table 3. Average Daily Traffic on Mississippi Structures by Functional Classification of Inventory Route (in Millions).....	11
Table 4. Bridge Condition Performance Measures.....	13
Table 5. Condition Rating of Mississippi Structures, 2024.....	15
Table 6. Condition Rating of Mississippi Structures by Agency Responsible for their Maintenance, 2024.....	16

Table 7. Deck Area of Mississippi Structures by Condition Rating and Agency Responsible for their Maintenance, 2024 (in Millions of Square Feet) 18

Table 8. Average Daily Traffic on Mississippi Structures by Condition Rating (in Millions of Vehicles) 19

Table 9. Bridge Performance Targets by Deck Area 20

List of Figures

Figure 1. MDOT Bridge Projects, Complete, Ongoing, and Planned 5

Figure 2. Distribution of Mississippi Structures by Age, 2024 9

Figure 3. Distribution of Mississippi Structures by Ownership & Age, 2024 10

Figure 4. Average Daily Traffic by Ownership (in Millions)..... 12

Figure 5. Average Daily Traffic on Mississippi Structures by Age, 2024 (in Millions) ... 12

Figure 6. Flow Chart of NBI Condition Classification Process..... 14

Figure 7. Location of Mississippi Structures in Poor Condition, 2024 16

1.0 Introduction

Bridges are vital components of Mississippi's multimodal transportation network, facilitating passage over waterways, railroads, highways, and other critical connections. They support various modes of transport, including cars, freight trucks, passenger and freight rail, pedestrians, and bicyclists, making their condition essential for ensuring safety, mobility, and economic activity across the state. Regular and thorough inspections of these bridges are necessary to maintain safe operations and prevent structural failures. It also provides essential data that enables bridge owners to make informed investment decisions within their asset management programs.

This interim report documents the existing conditions of Mississippi's structures by their age, condition rating, maintenance responsibility, average daily traffic, and other measures. This assessment of Mississippi's existing structures gathers information from the 2045 MULTIPLAN¹, National Bridge Inventory², and consultation with Mississippi Department of Transportation (MDOT) subject matter experts.

2.0 Agency Responsibilities

2.1 Role of MDOT

MDOT oversees the inspection of state-maintained bridges in Mississippi. Local governments are responsible for inspecting locally maintained bridges per the National Bridge Inspection Standards (NBIS)—23 CFR Part 650, Subpart C. Annually, MDOT submits both state and local data to the Federal Highway Administration (FHWA) as part of the National Bridge Inventory (NBI).

To support the development of a new Bridge Management System (BMS), MDOT has enhanced its inspection procedures to include detailed information on bridge elements. Under the NBIS, all inspected structures are evaluated at least every two years, with more frequent checks as necessary. Each year, MDOT's field inspection staff, including district bridge inspection engineers and the bridge inspection

¹ Mississippi Department of Transportation. (2020). MULTIPLAN 2045 Final Report. Retrieved October 2024, from <https://mdot.ms.gov/documents/Intermodal%20Planning/Reports/Multimodal/MBI%20Multimodal%20Final%20Report.pdf>

² Federal Highway Administration. (2024). Bridge & Structures. Retrieved October 2024, from U.S. Department of Transportation Federal Highway Administration: <https://www.fhwa.dot.gov/bridge/nbi/ascii2024.cfm>

program manager, meet to review the latest safety inspection developments. MDOT utilizes the collected bridge condition data to assess needs and inform project recommendations for all state-maintained bridges. It does not model treatments for locally owned National Highway System (NHS) bridges.

2.2 Funding

During Fiscal Year 2023, the Mississippi Department of Transportation (MDOT) invested a total of \$1.3 billion (B) towards the state's road and bridge infrastructure. Of this amount, \$103 million (M) was allocated for bridge maintenance, replacement, or repair projects, resulting in the awarding of 101 bridge repair and replacement contracts. Additionally, MDOT spent \$3.7 M on routine bridge maintenance and \$3.3 M on repairs stemming from accidental vehicle impacts. Throughout the year, a total of 3,238 bridge inspections were conducted to ensure the safety and integrity of the infrastructure³.

Bridge Investment Program

The Bridge Investment Program (BIP), established under the Bipartisan Infrastructure Law, provides funding for the replacement, rehabilitation, preservation, and protection of bridges in poor or bridges in fair condition that are at risk for declining into poor condition without intervention. Additionally, the state is projected to receive approximately \$3.6 B over five years⁴ for highways and bridges through investments from the Bipartisan Infrastructure Law. So far, \$135 M in formula funding has been allocated for bridge projects, focusing on repair and reconstruction with an emphasis on resilience, equity, and safety for all users, including cyclists and pedestrians.

Bridge Formula Program

Congress created the Bridge Formula Program (BFP) to allocate funding for replacing, rehabilitating, preserving, protecting, and constructing highway bridges on public roads. BFP funding is distributed according to a statutory formula that considers the relative costs of replacing all highway bridges classified as poor and rehabilitating those classified as fair within a state. This distribution approach underscores the significance of prioritizing funds to enhance the condition of these bridges.

³ Mississippi Department of Transportation. (2023). Annual Report 2023. Retrieved October 2024, from <https://mdot.ms.gov/documents/Administration/Reports/FY%202023/Annual%20Report%202023.pdf>

⁴ White House. (n.d.). State Fact Sheets. Retrieved October 2024, from <https://www.whitehouse.gov/wp-content/uploads/2023/10/Mississippi-Fact-Sheet.pdf> (document available upon request)

2.3 Planning

The Statewide Freight Plan, 2022

According to the Statewide Freight Plan, the inadequate vertical clearances of bridges is one of the key impediments to the movement of freight in the state of Mississippi. Minimum bridge clearance standards are also adopted for national defense purposes. According to Federal Highway Administration Safety guidelines, the clear height of interstate structures shall not be less than 16 feet over the entire roadway width, including the useable width of shoulder. Bridges with less than 16 feet of clearance for freeways passing beneath a structure over the entire roadway width represent the minimum vertical standard in the state, according to the 2020 MDOT Roadway Design Manual. The preferred standard for new and reconstructed bridges, however, is 17 feet, which would provide sufficient vertical clearance for most trucks.

According to a recent analysis of the 2024 NBI data, 261 of the 5,832 state-maintained bridges - or 4.5% of them - have a vertical clearance of less than 16 feet. This number includes bridges in the NBI database with minimum vertical under-clearances in both travel lanes (247) and shoulders that fail to meet this standard (14). Additionally, 7 county- and 7 city-maintained bridges failed to meet the minimum vertical clearance standard of 16 feet.

As stated in the Statewide Freight Plan, an optimal minimal bridge vertical clearance for the unencumbered movement of freight is 17 feet. According to the NBI database for Mississippi, there are an additional 491 bridges with a vertical clearance between 17 and 16 feet on MDOT's network. In total, there are 898 bridges with a vertical clearance of less than 17 feet across all jurisdictions, or a 5.4% of all bridges in the state. Bridges with vertical clearance issues present accessibility issues, potentially leading to delays and the escalation of shipping costs as freight is dispatched over longer alternative routes.

Statewide Transportation Improvement Program, 2025-2028

MDOT implements the Statewide Transportation Improvement Program (STIP) to prioritize projects and initiatives that improve the efficiency, safety, and cost-effectiveness of the state's transportation system over four years. Federal regulations govern the plan and require the prioritization of federally funded and regionally significant transportation projects. MDOT prioritizes projects in four critical areas: system preservation, bridge replacement, highway safety improvements, and highway capacity growth.

National Bridge Inspection Standards, 2022

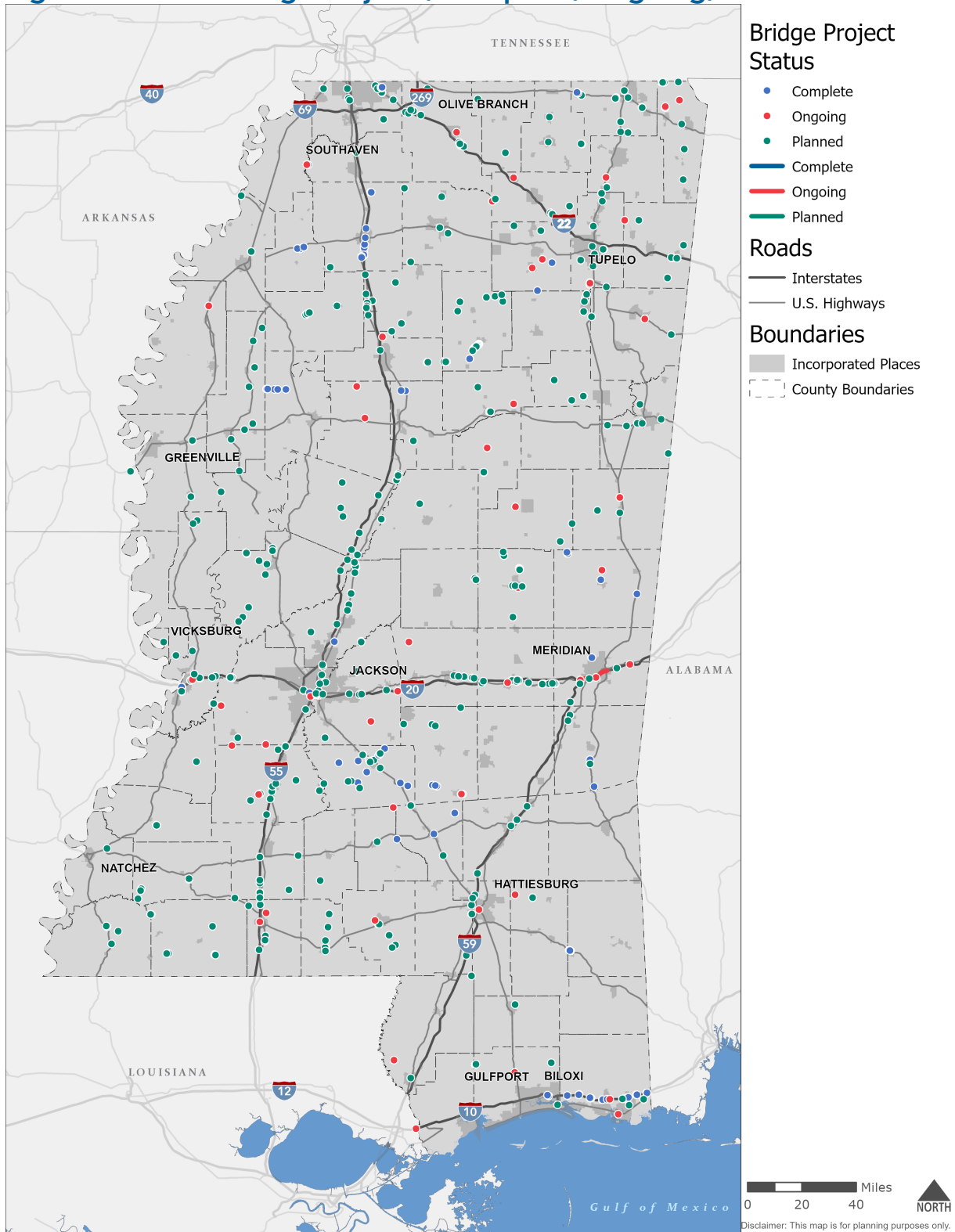
In 2022, the Federal Highway Administration (FHWA) updated the National Bridge Inspection Standards, reflecting program administrative experience and technological advancements. The NBIS outlines the two methods of inspecting bridges, which dictates the interval of bridge inspections. The new NBIS also sets the standards for using Unmanned Aerial Systems (UAS) or drones for inspections, a method that has become more widespread in recent years.

2.4 Major Investments

Figure 1 shows a map of MDOT's complete and ongoing bridge projects.⁵

⁵ Mississippi Department of Transportation. (n.d.). Projects. Retrieved October 2024, from <https://path.mdot.ms.gov/ProjMap>

Figure 1. MDOT Bridge Projects, Complete, Ongoing, and Planned



Source: MDOT PATH, 2024

3.0 Statewide Significance

Inadequate investment, due in part from a lack of adequate bridge infrastructure funding, in the state's bridges poses significant risks, including the potential for deficient bridges that can adversely affect land marketability for economic development. Bridge closures can also disrupt transportation networks and eliminate critical access for both people and goods. Deficient bridges may also result in higher transportation costs as traffic is diverted around compromised bridges. In addition, bridges with significant maintenance needs require more frequent repairs and inspections which can divert funding from other critical transportation projects or services. As critical connections between communities both within the state and between neighboring states, Mississippi's bridges are essential for ensuring safe travel, maintaining economic vitality, and supporting the state infrastructure's long-term sustainability and functionality.

Mississippi has a total of 16,739 structures in the NBI database. Of these, 3,978 (24%) are classified as box culverts, and 12,761 (76%) are bridges. According to MDOT's Standard Specifications (2017)⁶, box culverts are structures which have a clear distance between the inside face of the end supports and are measured greater than 20 feet in length along the centerline of the roadway; they are also known as "box bridges". These culverts are reported in the NBI separately from bridges, which are described in the Standard Specifications as structures "erected over a depression or an obstruction, as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads and having a length measured along the center of the roadway of more than 20 feet between undercroppings of abutments or extreme ends of openings for multiple boxes." As shown in Table 1, which outlines the agencies responsible for the maintenance of these structures, Mississippi is responsible for maintaining 5,832 (35%) of these structures.

⁶ Mississippi Department of Transportation. 2017 Mississippi Standard Specifications for Road and Bridge Construction.

Table 1. Mississippi Structures by Maintenance Responsibility, 2024

Maintenance Responsibility	Bridges	Share of Bridges	Box Bridges	Share of Box Bridges	Total Structures	Share of Total Structures
MDOT	4,349	34.1%	1,483	37.3%	5,832	34.8%
County	7,312	57.3%	2,095	52.7%	9,407	56.2%
City/Town/Village	716	5.6%	290	7.3%	1,006	6.0%
Federal Agencies	373	2.9%	109	2.7%	482	2.9%
Other	11	0.1%	1	<0.1%	12	<0.1%
Total	12,761	100%	3,978	100%	16,739	100%

Source: U.S. National Bridge Inventory Database, 2024

4.0 Existing Conditions

The National Bridge Inventory (NBI) is an annually updated database that contains information on all bridges and box culverts over 20 feet in length along public roads, including interstate, U.S., state, and county highways, as well as publicly accessible bridges on federal lands, with data submitted by state DOTs, federal agencies, and tribal governments. Data in the NBI serves several key functions for FHWA: ensuring highway bridge safety, overseeing the National Bridge Inspection Program (NBIP), reporting to Congress, supporting emergency response, administering a risk-based performance management program as mandated by Title 23 U.S.C. §150, and providing accessible, high-quality data.

As mentioned in the previous section, the state maintains 5,832 (~35%) of bridge structures in Mississippi, according to the 2024 NBI database (Table 1). These state-owned and maintained bridges include NHS and Non-NHS bridges. Counties maintain 9,407 bridge structures in the state (~56%), while municipalities, federal agencies, and other entities maintain the remaining 1,500 (~9%). These other agencies include state parks, forest, or reservation agencies, private entities, railroads, and federal agencies such as the Army Corps of Engineers (USACE), Bureau of Fish and Wildlife, Bureau of Indian Affairs, National Park Service, and National Aeronautics and Space Administration (NASA).

An analysis of the NBI database reveals additional patterns in bridge structure distribution across the state. According to the NBI database, the vast majority of bridge structures (14,582 or ~87%) are found in rural areas (Table 2). Additionally, 2,812(~17%) of bridge structures are on interstates and principal arterials, which are

Existing Conditions

the highest functional classification roadways. Structures on minor arterials and collectors account for 6,591 (~39%) bridges, while the remaining 7,336 (~44%) are on local roads.

Table 2. Mississippi Structures by Functional Classification of Inventory Route

Functional Classification	Bridges	Box Bridges	Total
Urban			
Principal Arterial - Interstate	388	60	448
Principal Arterial - Other Freeways or Expressways	78	16	94
Other Principal Arterial	391	161	552
Minor Arterial	206	82	288
Collector	261	73	334
Local	321	120	441
Urban Total	1,645	512	2,157
Rural			
Principal Arterial - Interstate	384	122	506
Principal Arterial - Other	947	265	1,212
Minor Arterial	867	448	1,315
Major Collector	2,874	920	3,794
Minor Collector	647	213	860
Local	5,397	1,498	6,895
Rural Total	11,116	3,466	14,582
Urban + Rural			
Total	12,761	3,978	16,739

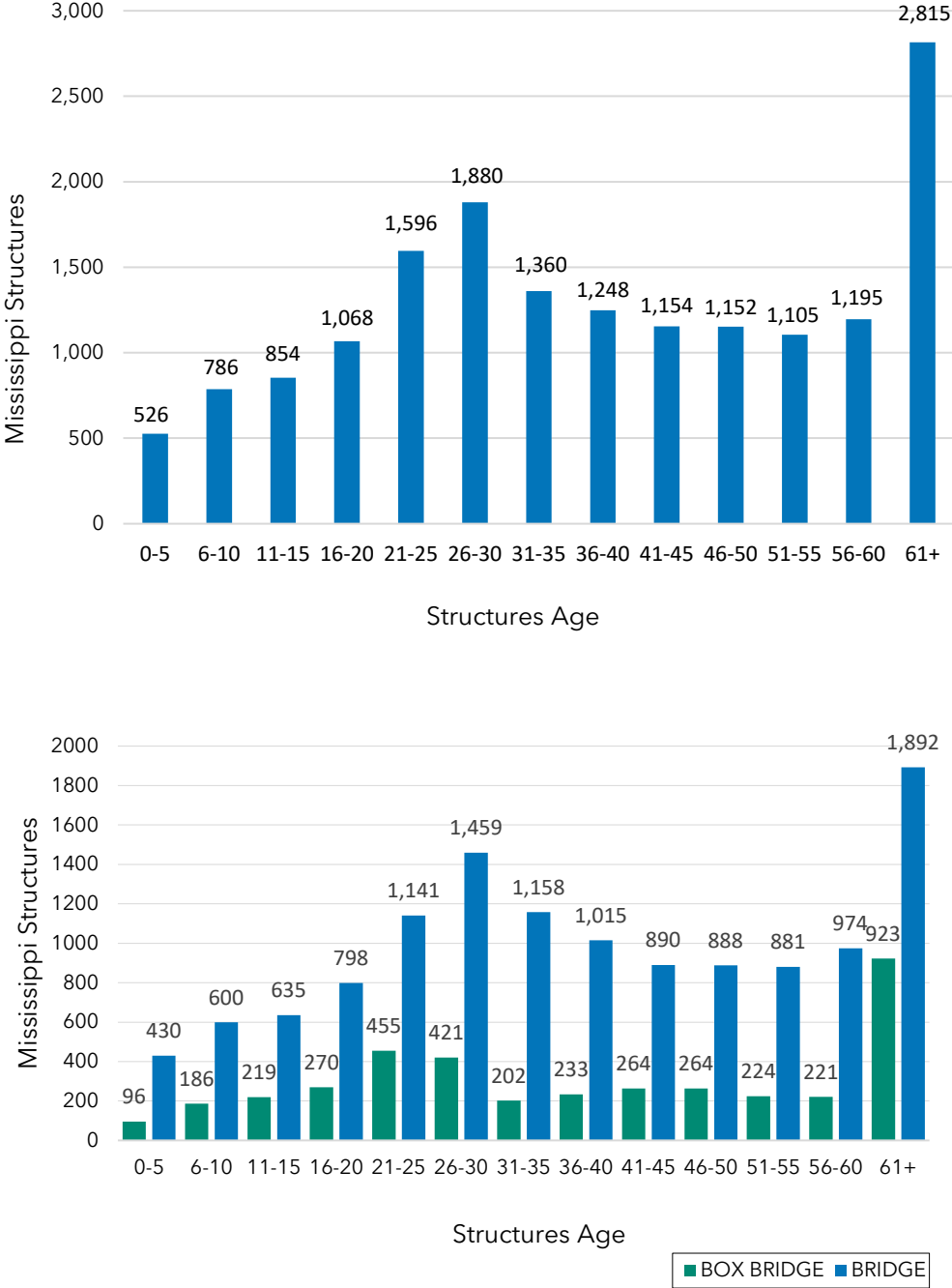
Source: U.S. National Bridge Inventory Database, 2024

Figure 2 illustrates the age distribution of all structures in Mississippi as recorded in the NBI database. As of 2024, the average age of these structures is 39 years. According to calculations using NBI data, as of 2024, 5,115 (~31%) existing bridges have surpassed their 50-year design lifespan. By 2050, this figure is projected to more

Existing Conditions

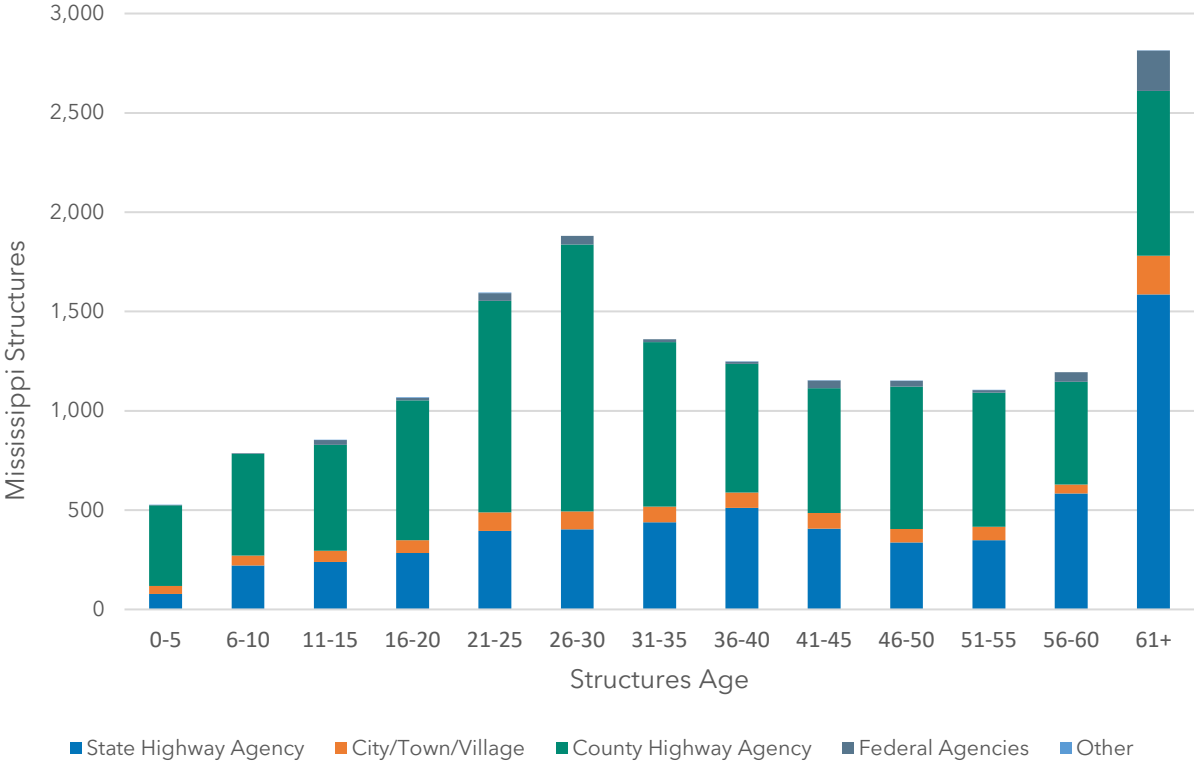
than double to nearly 12,000 bridges, or approximately 70% bridges in the state. Figure 3 presents the distribution of Mississippi’s structures by age and by ownership. According to the chart, most of the oldest structures, which are defined here as 61 years and older, are state-maintained bridges and culverts.

Figure 2. Distribution of Mississippi Structures by Age, 2024



Source: U.S. National Bridge Inventory Database, 2024

Figure 3. Distribution of Mississippi Structures by Ownership & Age, 2024



Source: U.S. National Bridge Inventory Database, 2024

4.1 Activity/Demand

Travel activity is a critical factor in bridge conditions. Table 3 displays the average daily traffic (ADT) on structures (bridges and box culverts) in Mississippi. Both the urban and rural road networks experience similar aggregated ADT, each averaging ~23 million daily vehicles. However, rural bridge structures experience a slightly higher volume at 23.5 million vehicles daily (50.4%), while urban structures handle approximately 23.1 million vehicles (49.6%). Among the various types of structures, those on interstate highways are the busiest, carrying 18.2 M vehicles per day, which represents nearly 39% of the total ADT.

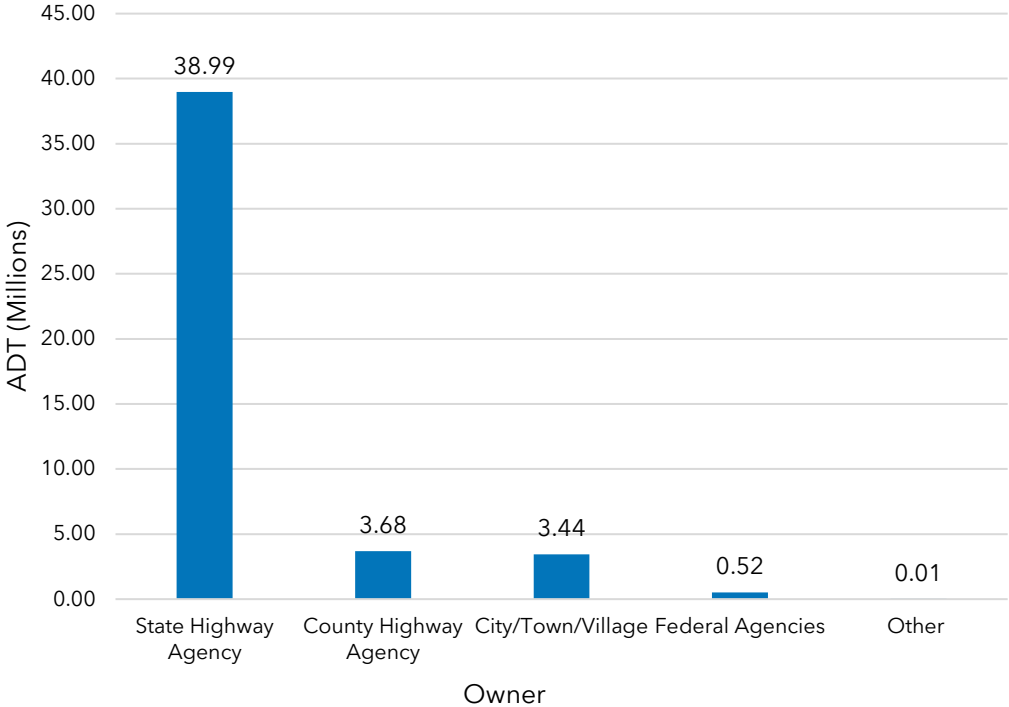
Table 3. Average Daily Traffic on Mississippi Structures by Functional Classification of Inventory Route (in Millions)

Functional Classification of Inventory Route	ADT	%
Urban		
Principal Arterial - Interstate	11.4	24.4%
Principal Arterial - Other Freeways or Expressways	1.2	2.6%
Other Principal Arterial	6.8	14.6%
Minor Arterial	2.0	4.2%
Collector	1.2	2.5%
Local	0.6	1.3%
Total Urban	23.1	49.6%
Rural		
Principal Arterial - Interstate	6.8	14.5%
Principal Arterial - Other	6.4	13.7%
Minor Arterial	3.8	8.2%
Major Collector	4.3	9.2%
Minor Collector	0.7	1.5%
Local	1.6	3.4%
Total Rural	23.5	50.4%
Urban + Rural		
Total	46.6	100%

Source: U.S. National Bridge Inventory Database, 2024

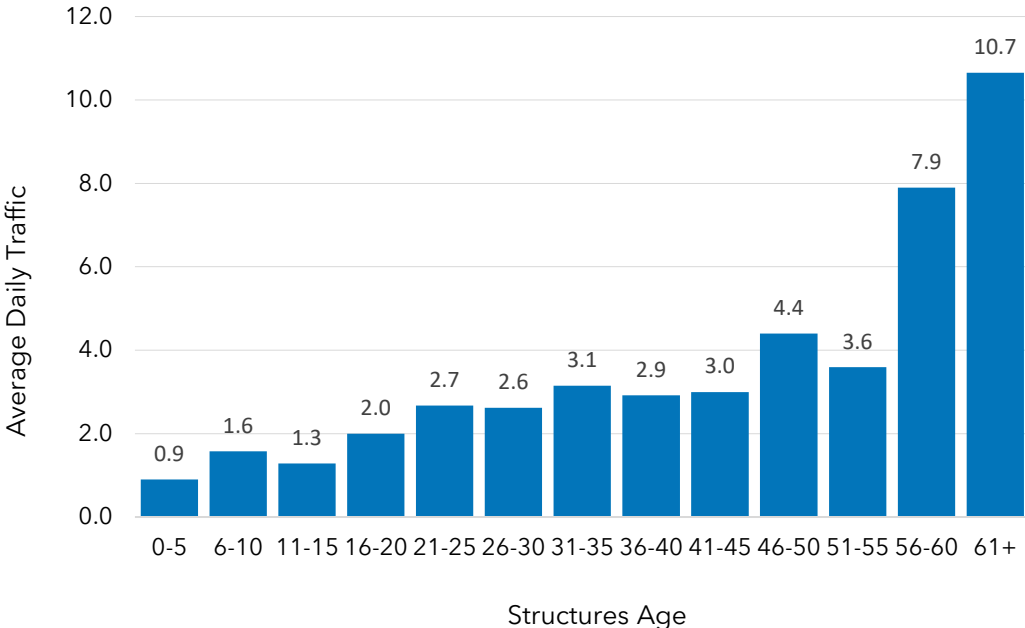
Figure 4 and Figure 5 show the ADT of the Mississippi network by ownership and ADT on Mississippi structures by age, in millions, respectively. The ADT on state-owned highways account for approximately 84% of overall ADT across the state. The remaining ADT in 2024 totals approximately 16%, which includes counties, cities/towns/villages, federal agencies, and other ownership, for example railroads.

Figure 4. Average Daily Traffic by Ownership (in Millions)



Source: U.S. National Bridge Inventory Database, 2024

Figure 5. Average Daily Traffic on Mississippi Structures by Age, 2024 (in Millions)



Source: U.S. National Bridge Inventory Database, 2024

4.2 Bridge Condition

Based on NBI data, Mississippi has over a thousand bridge structures in poor condition⁷. Per FHWA standards, structures are assigned a classification that indicates their overall condition, shown in Table 4. As defined by the Pavement and Bridge Condition Performance Measures Final Rule, published in January of 2017, these classifications are determined by the lowest rating of National Bridge Inventory (NBI) condition ratings for Item 58 (Deck), Item 59 (Superstructure), Item 60 (Substructure), or Item 62 (Culvert). The process by which the bridges are classified is shown in Figure 6.

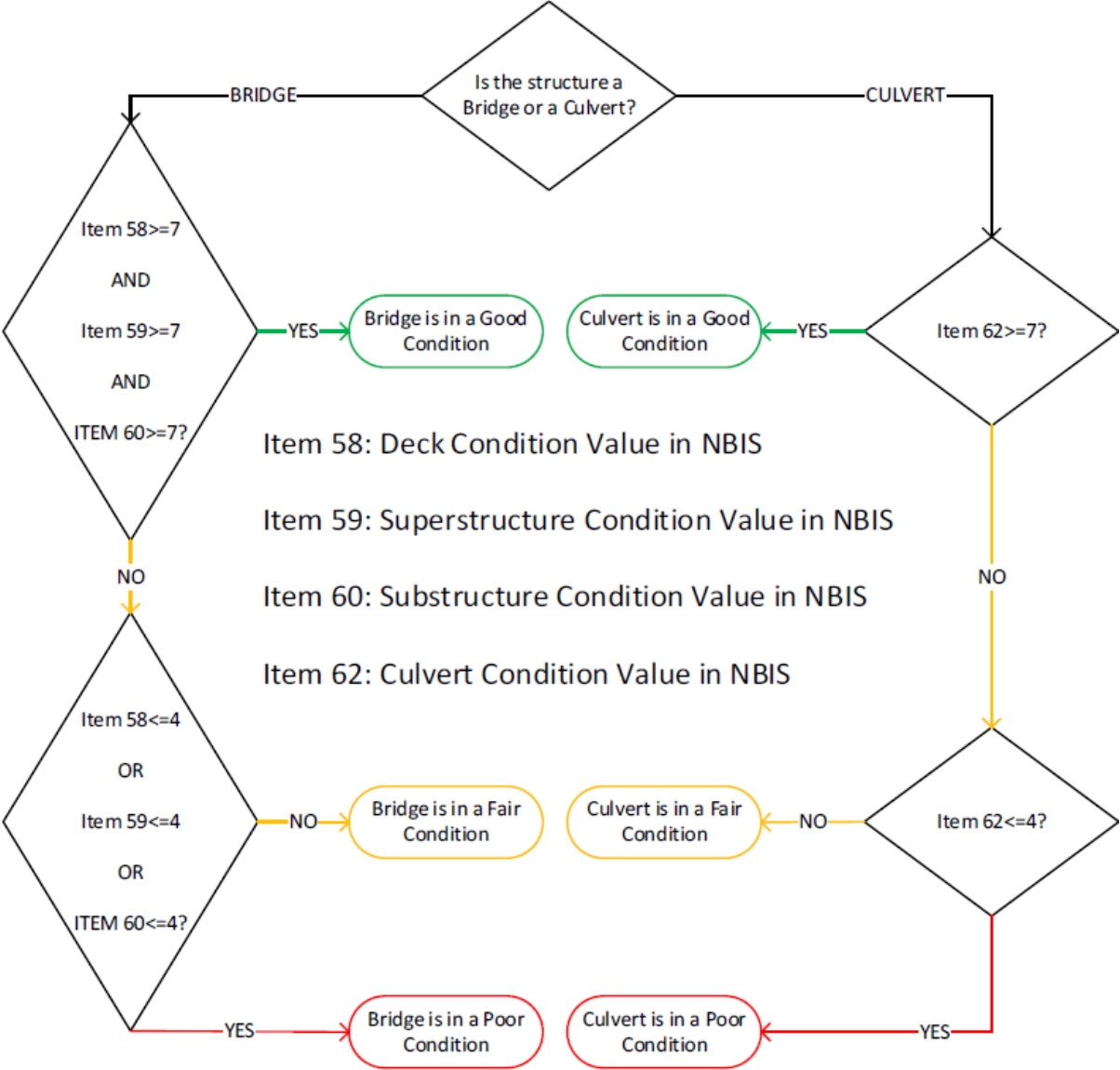
Table 4. Bridge Condition Performance Measures

Lowest Rating	Classification
>= 7	Good
5-6	Fair
<=4	Poor

Source: U.S. Department of Transportation, Federal Highway Administration Pavement and Bridge Condition Performance Measures, 2017

⁷ National Bridge Inventory Database, 2024

Figure 6. Flow Chart of NBI Condition Classification Process



Source: MDOT Transportation Asset Management Plan, May 2022

Table 5 displays the condition ratings of all bridge structures that carry traffic in Mississippi. Approximately 9,229 (55%) of these structures are in good condition, comprising of 6,213 bridges (or 49% of all bridges) and 3,016 box bridges (~76% of all box bridges). Structures classified as fair condition comprise 6,501 of bridge structures (~39%), with 5,593 bridges (~44% of all bridges) and the remaining 908 as box bridges (~23% of all box bridges). The remaining structures that are in poor condition comprise of 1,009 bridges and box bridges (~6%), with 955 bridges (~7.5% of all bridges) and box bridges accounting for 54 (~1.4% of all box bridges).

Table 5. Condition Rating of Mississippi Structures, 2024

NBI Rating	Structure Condition	Number of Bridges	Share of Bridges	Number of Box Bridges	Share of Box Bridges	Total Number of Structures	Share of Total Structures
≥7	Good	6,213	48.7%	3,016	75.8%	9,229	55.1%
5 or 6	Fair	5,593	43.8%	908	22.8%	6,501	38.8%
≤4	Poor	955	7.5%	54	1.4%	1,009	6.1%
Total		12,761	76.2%	3,978	23.8%	16,739	100%

Source: U.S. National Bridge Inventory Database, 2024

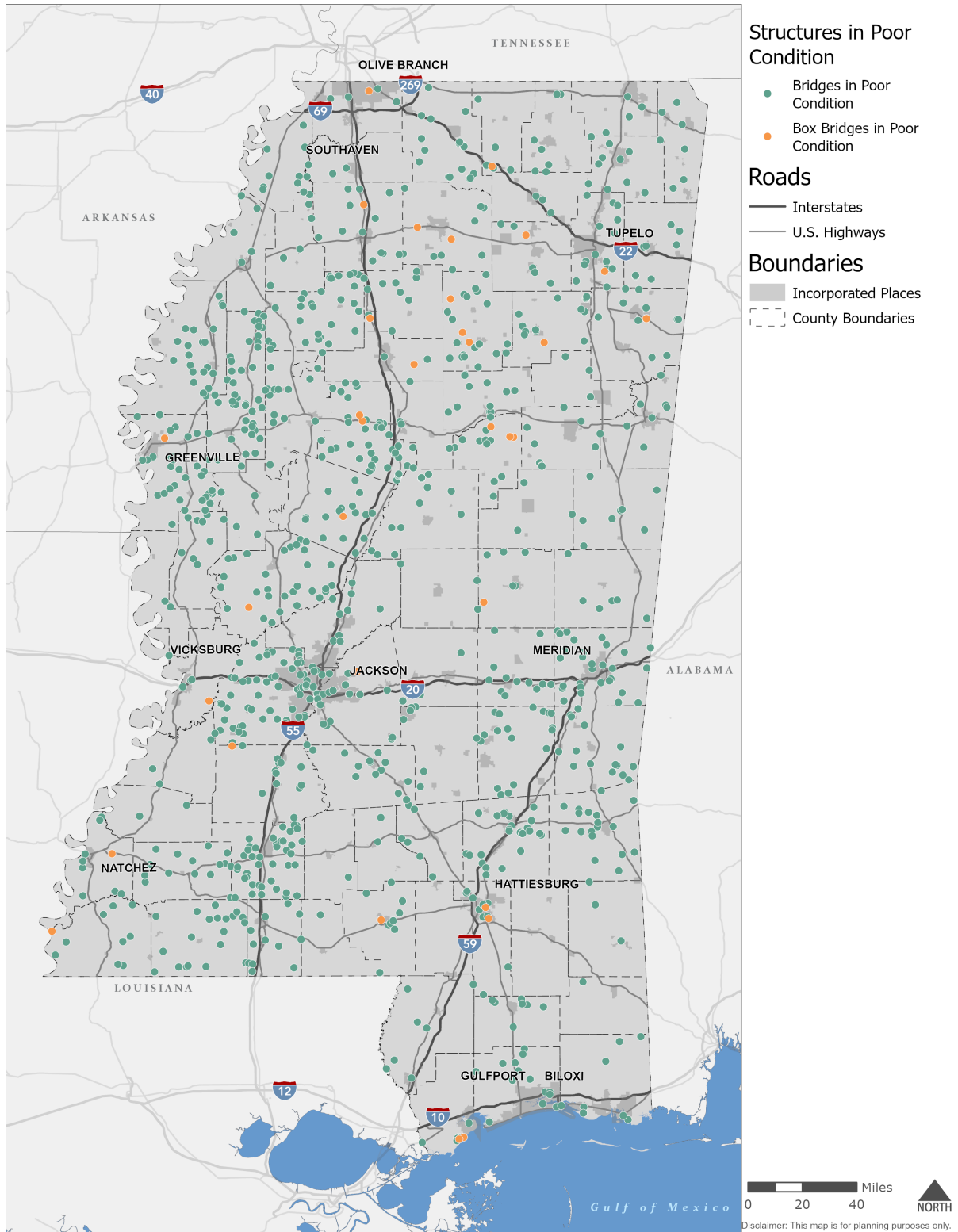
Table 6 shows the distribution of the condition ratings of bridges and box culverts by the agency or entity responsible for the maintenance of these structures. MDOT maintains nearly 3,696 (~63.4%) of all structures in good condition, which includes 2,550 bridges and 1,146 box bridges. Structures in fair condition under MDOT's maintenance account for 1,657 bridges and 323 box bridges, or about 34% of all structures MDOT maintains. Most of the structures in poor condition are county-maintained. A total of 771 structures in poor condition are maintained by the county, including 757 bridges (~5.9% of all bridges) and 14 box bridges (<1% of box bridges). The next largest cache of bridges in poor condition is maintained by the state, accounting for a total of 156 bridges and box bridges. Figure 7 shows bridges and box culverts in the state that are in poor condition, which includes both state and locally owned bridges and box bridges.

Table 6. Condition Rating of Mississippi Structures by Agency Responsible for their Maintenance, 2024

Maintenance Responsibility	Bridges						
	Good	%	Fair	%	Poor	%	Total
MDOT	2,550	20.0%	1,657	13.0%	142	1.1%	4,349
County	3,218	25.2%	3,337	26.1%	757	2.1%	7,312
City/Town/Village	304	2.4%	340	2.7%	72	0.3%	716
Federal Agencies	200	1.6%	169	1.3%	4	0.1%	373
Other	5	0.0%	5	0.0%	1	0.0%	11
Bridges Total	6,277	49.2%	5,508	43.2%	976	7.7%	12,761
Maintenance Responsibility	Box Bridges						
	Good	%	Fair	%	Poor	%	Total
MDOT	1,146	28.8%	323	8.1%	14	0.4%	1,483
County	1,611	40.5%	470	11.8%	14	0.4%	2,095
City/Town/Village	158	4.0%	128	3.2%	4	0.1%	290
Federal Agencies	35	0.9%	73	1.8%	1	0.0%	109
Other	1	0.0%	0	0.0%	0	0.0%	1
Box Bridges Total	2,951	74.2%	994	24.9%	33	1.4%	3,978
Bridges + Box Bridges							
Total Structures	9,228	55.1%	6,501	38.8%	1,009	6.0%	16,739

Source: U.S. National Bridge Inventory Database, 2024

Figure 7. Location of Mississippi Structures in Poor Condition, 2024



Source: National Bridge Inventory, 2024

Existing Conditions

Table 7 shows the distribution of the deck areas (in square feet) of Mississippi structures by condition rating and by agency or entity responsible for the maintenance of these structures. The deck area of bridges and box culverts in good condition accounts for nearly 58% of all MDOT owned structures (or 41.8 million square feet), the deck area of bridges and box culverts in fair condition accounts for 41% of all MDOT owned structures (or 29.3 million square feet), and the deck area of bridges and box culverts in poor condition accounts for the remaining 2% of all MDOT owned structures (or 1.3 million square feet). Table 8 presents ADT on Mississippi’s structures by condition rating. Approximately 54%, or largest share of ADT, of the state’s total ADT in 2024 was on fair condition structures.

Table 7. Deck Area of Mississippi Structures by Condition Rating and Agency Responsible for their Maintenance, 2024 (in Millions of Square Feet)

Bridges in Deck Area								
Maintenance Responsibility	Good	%	Fair	%	Poor	%	Total	%
MDOT	39.4	38.5%	28.8	28.1%	1.3	1.3%	69.5	67.9%
County	14.1	13.8%	10.9	10.6%	1.7	1.7%	26.7	26.1%
City/Town/Village	1.9	1.9%	2.0	2.0%	0.4	0.4%	4.3	4.2%
Federal Agencies	0.9	0.9%	0.9	0.9%	0	0.0%	1.8	1.8%
Other	0.03	0.0%	0.02	0.0%	0	0.0%	0.1	0.1%
Bridges Total	56.3	55.0%	42.6	41.6%	35.8	3.3%	102.4	100.0%
Box Bridges in Deck Area								
Maintenance Responsibility	Good	%	Fair	%	Poor	%	Total	%
MDOT	1.8	37.0%	0.5	10.3%	0.02	0.4%	2.3	47.7%
County	1.4	28.8%	0.6	12.3%	0.02	0.4%	2.0	41.6%
City/Town/Village	0.2	4.1%	0.2	4.1%	0	0.0%	0.4	8.2%
Federal Agencies	0.04	0.8%	0.08	1.6%	0	0.0%	0.1	2.5%
Other	0	0.0%	0	0.0%	0	0.0%	0.0	0.0%
Box Bridges Total	3.4	70.8%	1.4	28.4%	0.4	0.8%	4.9	100.0%
Bridges + Box Bridges								
Total	59.8	55.8%	44.0	41.0%	3.4	3.2%	107.1	100.0%

Source: U.S. National Bridge Inventory Database, 2024

Table 8. Average Daily Traffic on Mississippi Structures by Condition Rating (in Millions of Vehicles)

Average Daily Traffic on Mississippi Structures, by Condition Rating						
Structure Condition	Bridges	%	Box Bridges	%	Total ADT	%
Good	5.3	11.3%	9.6	20.56%	14.9	31.9%
Fair	21.5	46.0%	3.2	6.85%	24.7	52.9%
Poor	6.8	14.6%	0.3	0.64%	7.1	15.2%
Total	33.6	71.9%	13.1	28.1%	46.7	100%

Source: U.S. National Bridge Inventory Database, 2024

4.3 Performance

Regular maintenance on bridges can extend the bridge service life, reducing the life-cycle cost. MDOT reviews bridge performance targets every two years in line with the Mid Performance Period Progress Report and the Full Performance Period Progress Report. The targets are formally updated when needed and are documented in the Long-Range Transportation Plan (LRTP) and Transportation Asset Management Plan (TAMP). The following is the method MDOT follows to set its targets:

- **Trends** - historical bridge condition data are reviewed to understand the impacts of decisions, investments, and risks over time.
- **Tradeoff Analysis** - Looks at MDOT revenue projections, three different budget scenarios, and its investment strategies together to understand the impact of these investments on performance in the future.
- **BMS and Whole Life Costs** - The BMS includes updated costs aligned with the FHWA work types, and deterioration curves, and minimizes the whole life cost of its investments. The results of the model are used to understand the performance impacts of the three LRTP budget scenarios, refine bridge targets, and predict the condition of the bridges in 2- and 4-years, aligning with the target timeline.
- **Projected Revenue and inflation of construction costs** - MDOT developed a revenue projection that accounts for rising construction costs as well as exploring factors that would be the most disruptive to revenue to understand the uncertainty of MDOT’s future revenues.
- **Influence of risk** - While MDOT prioritizes meeting its Federally mandated minimum thresholds, it also anticipates risks like neighboring states not

Existing Conditions

maintaining border bridges, changes in funding, issues with rising project costs, extreme weather, and issues with staff retention and training which could cause MDOT to not meet its targets.

The federal targets adopted by MDOT are shown in Table 9 below.

Table 9. Bridge Performance Targets by Deck Area

Category	Federal Minimum Threshold	2-Year Target	4-Year Target
All NHS	<10% Poor	>45% Good <5% Poor	>45% Good <5% Poor

Source: Transportation Asset Management Plan, 2023

According to the State Biennial Performance Report for Performance Period 2022-2025 Mid Performance Progress Report⁸, 2.8% of NHS bridges are in poor condition and 55.8% are in good condition by deck area. According to the most recent TAMP,⁹ 3% of State-maintained non-NHS bridges are in poor condition and 65% are in good condition. MDOT modified the performance target for State-owned NHS bridges in a Good condition in 2022 from 60% to 50%, and in 2024 from 50% to 45%. If the performance target had remained the same from the 2022 standard, a funding gap would exist, but due to the modification of the bridge performance target, the 2024 ratings satisfy the performance targets, and there is currently no performance or funding gap.

⁸ Transportation Performance Management. (2024). State Biennial Performance Period 2022-2025 (PROGRESS) Mid Performance Period Progress Report.

⁹ Mississippi Department of Transportation. (2023). Transportation Asset Management Plan. Retrieved November 2024, from <https://mdot.ms.gov/documents/Planning/Transportation%20Asset%20Management%20//Transporati on%20Asset%20Management%20Plan%202023.pdf>

5.0 References¹⁰

- Mississippi Department of Transportation. (2020). *MULTIPLAN 2045 Final Report*. Retrieved October 2024, from <https://mdot.ms.gov/documents/Intermodal%20Planning/Reports/Multimodal/MBI%20Multimodal%20Final%20Report.pdf>
- Federal Highway Administration. (2024). *Bridge & Structures*. Retrieved October 2024, from U.S. Department of Transportation Federal Highway Administration: <https://www.fhwa.dot.gov/bridge/nbi/ascii2024.cfm>
- Federal Highway Administration. (n.d.). *23 CFR Part 650 Subpart C*. Retrieved from <https://www.ecfr.gov/current/title-23/part-650/subpart-C>
- Mississippi Department of Transportation. (2020). *MULTIPLAN 2045 Final Report*. Retrieved October 2024, from <https://mdot.ms.gov/documents/Intermodal%20Planning/Reports/Multimodal/MBI%20Multimodal%20Final%20Report.pdf>
- Mississippi Department of Transportation. (2023). *Annual Report 2023*. Retrieved October 2024, from <https://mdot.ms.gov/documents/Administration/Reports/FY%202023/Annual%20Report%202023.pdf>
- Mississippi Department of Transportation. (2023). *Transportation Asset Management Plan*. Retrieved November 2024, from <https://mdot.ms.gov/documents/Planning/Transportation%20Asset%20Management%20//Transportation%20Asset%20Management%20Plan%202023.pdf>
- Mississippi Department of Transportation. (n.d.). *Projects*. Retrieved October 2024, from <https://path.mdot.ms.gov/ProjMap>
- White House. (n.d.). *State Fact Sheets*. Retrieved October 2024, from <https://www.whitehouse.gov/wp-content/uploads/2023/10/Mississippi-Fact-Sheet.pdf>

¹⁰ All weblinks cited were accessible at the date of retrieval. Due to subsequent updates, certain webpages may no longer be available. All documents cited are available upon request.