

# BRIDGES NOT BARRIERS

A Collaborative Bridge Bundle Replacement Project

## PROJECT DESCRIPTION

Better Utilizing Investments to Leverage Development (BUILD) Grant Program

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The North Carolina Department of Transportation (NCDOT) Division 10 is requesting \$19,622,000 in financial assistance from the Better Utilizing Investments to Leverage Development (BUILD) Grant Program to replace 15 critical bridges across the Division, which includes Anson, Cabarrus, Mecklenburg, Stanly, and Union Counties.

**Table 1: Bridge Details**

County	Bridge #	Federal #	Road Name	Crossing	Year Constructed	Sufficiency Rating
Anson	030148	0070148	Mills Rd.	Little Brown Creek	1945	37.1%
Anson	030265	0070265	Robinson Rd.	S. Fork of Jones Creek	1961	53.4%
Anson	030161	0070161	Lockhart Rd.	Goulds Fork Creek	1956	72.8%
Cabarrus	120173	0250173	Peach Orchard Rd.	McKee Creek	1961	49.4%
Cabarrus	120050	0250050	Penninger Rd.	UT to Cold Water Creek	1983	73.0%
Mecklenburg	590060	1190060	Robinson Church Rd.	UT to Reedy Creek	1981	63.4%
Stanly	830200	1670200	Bridgeport Rd.	Bear Creek	1958	63.9%
Stanly	830106	1670106	Booger Hollar Rd.	Bear Creek	1962	59.7%
Stanly	830081	1670081	Bridge Rd.	Little Bear Creek	1949	60.3%
Stanly	830095	1670095	Old Aquadale Rd.	Little Creek	1959	49.8%
Union	890170	1790170	Potters Rd.	Cane Creek	1973	48.7%
Union	890144	1790144	Stack Rd.	Little Richardson Creek	1963	47.3%
Union	890074	1790074	Monroe-Ansonville Rd.	Meadow Branch	1963	51.9%
Union	890312	1790312	Shannon Rd.	E. Fork of Twelve Mile Creek	1962	57.0%



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County	Bridge #	Federal #	Road Name	Crossing	Year Constructed	Sufficiency Rating
Union	890067	1790067	Austin Grove Church Rd.	Salem Creek	1982	72.5%

As depicted in Table 1, the bridges in this bundle are located across the Division 10 jurisdiction in the counties of Anson, Cabarrus, Mecklenburg, Stanly, and Union. Bridges included in this bundle range from 42 to 80 years old and are all at or near the end of their useful service life, requiring frequent and expensive maintenance to extend the life of the bridge. Sufficiency ratings are between 37 and 72 percent. They are all located along rural yet key connections for Division 10's communities. All the bridges are currently load restricted. North Carolina is ranked 30<sup>th</sup> out of all states for structurally deficient bridges, according to the [2023 Annual Highway Report from the Reason Foundation](#). Supplemental Information about the project can be referenced at <https://connect.ncdot.gov/resources/BUILD2025-Div10/Pages/default.aspx>.

### Challenges Addressed by the Project

In addition to challenges and maintenance costs associated with aging and the rural nature of these bridges emphasizes their need for replacement. Nine of the fifteen bridges are known to have significant flooding issues, nine bridges have scour issues, five have significant drift issues, four are subject to low water, and two have only one travel lane. These bridges pose a multitude of safety, sustainability, and connectivity challenges to rural communities. There are few suitable alternate routes for communities to utilize if the bridge was closed. Replacing these bridges would maintain important connections for rural and disadvantaged communities.

The project seeks to:

- Replace fifteen deteriorating, load-restricted bridges in areas of NCDOT Division 10 across five counties that are key connections for rural communities.
- Reduce long-term maintenance costs for aging bridge upkeep for issues such as scour, drift, low water, and flooding.
- Promote safe and reliable bridges for residents of rural North Carolina that improve mobility.



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### Statement of Work

The replacement of these structures will address several design deficiencies and condition issues, bringing the bridges into compliance with NCDOT and federal design standards. Bridges with an average daily trip (ADT) count of 2,000 or greater will include 6-foot-wide shoulders on either side. In accordance with the [NC Roadway Design Manual](#), structures with between 400 and 2,000 ADT at the design year will include 3-foot-wide shoulders, and structures with less than 400 ADT will include 2-foot-wide shoulders on either side. Shoulder width can also be determined based on the spread of water. All old materials will be replaced, including replacing concrete structures with concrete or steel at the completion of construction. Railing will be added to bridges that do not have them currently. Two structures are one lane bridges and will be upgraded to one lane in each direction. Specific improvements by bridge are detailed in Figure 1.



Figure 1 | Improvements by Structure

### Project History

Many bridges in Division 10 are in rural and poverty-stricken areas and are at or near the end of their service life, creating a dire need for replacement and improvements. The bridges do not meet current standards, many with materials that would no longer be used in bridges currently constructed today. Many bridges have timber structures and experience decay and rot due to their frequent exposure to water and overtopping. In response to this, Division 10 identified its bridges with the greatest needs, considering wear and tear, recurring maintenance costs, and vulnerability in storm events. Priority was given to bridges within disadvantaged communities when making selections for the bridges included in this bridge bundle.

### Project Design Status

At present, four out of the fifteen structure replacements have been assigned project numbers and are being evaluated by the North Carolina State Environmental Policy Act (SEPA) process, as they are entirely state funded. These projects are currently on hold due to funding constraints



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and will be reinitiated in the event of a BUILD award. If federal funding becomes available, these projects would be evaluated in accordance with the NEPA process.

### Project Location

This project includes the replacement of fifteen structures throughout NCDOT Division 10. In this bundle, three are located in Anson County, two are in Cabarrus County, one is located in Mecklenburg County, four are in Stanly County, and five are located in Union County. Division 10 has a population of approximately 1,670,000 ([2020 Decennial Census](#))

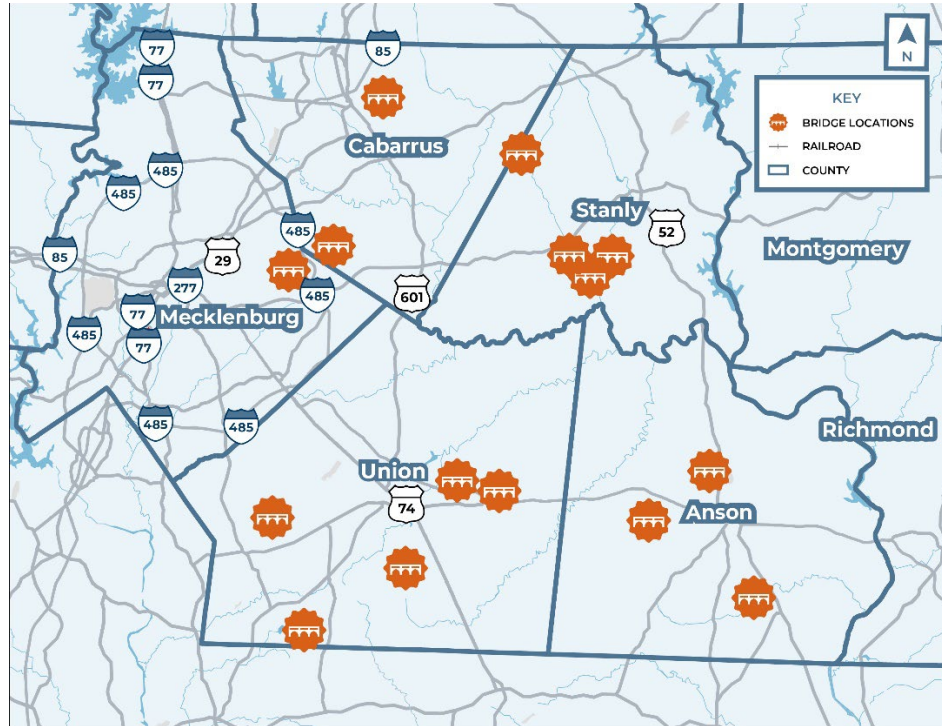


Figure 2 | Project Vicinity Map

and has a median household income of \$75,664 ([2023 ACS 1-Year Estimates](#)). Most notably, Division 10 is home to the Charlotte metropolitan area within Mecklenburg County which is the largest metropolitan area in North Carolina. The majority of the bridges included in this bundle are located away from the urbanized area in rural sections of Division 10, serving as key connections across to daily destinations and community assets including medical facilities, community services and parks, grocery stores and other retail, and schools. The bridges provide community connections to several key Interstates and Highways including I-485, I-85, US-29, US-52, US-74, US-601, NC-16, NC-27, NC-49, NC-84, and NC-75. More details about community accessibility and the impact bridge failure would have on community members accessing these daily destinations can be found in the **Merit Criteria Section**.



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### Area of Persistent Poverty

Many of the bridges in this bundle are located within Areas of Persistent Poverty Specifically, six of the bridges are located within Areas of Persistent Poverty (Census Tracts 207.01, 209.01, 209.02, 9307, and 9204) according to the [BUILD Grant Location Verification Tool](#).

### Urban and Rural

Thirteen of the bridges are located in rural areas as referenced in **Figure 3**. The other two are located in the Charlotte-Mecklenburg urbanized area.

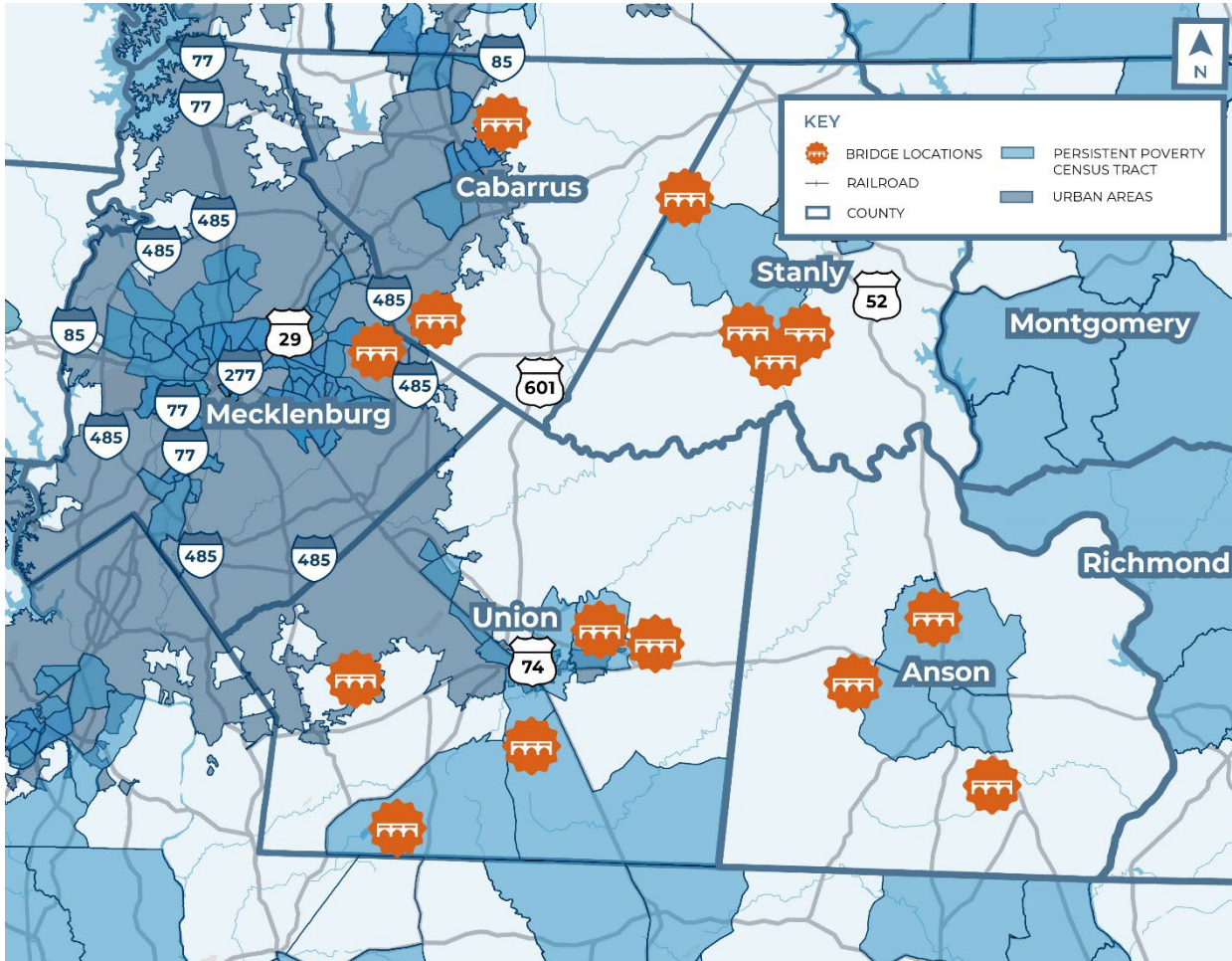


Figure 3 | Areas of Persistent Poverty and Urban Area

