

GRAHAM

Greater Rural Access and Highways to Accelerate Mobility



BICYCLE & PEDESTRIAN



CLIMBING LANES



UPGRADES



ITS COMPONENTS



SAFETY

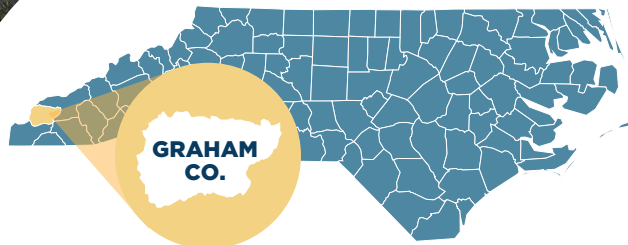
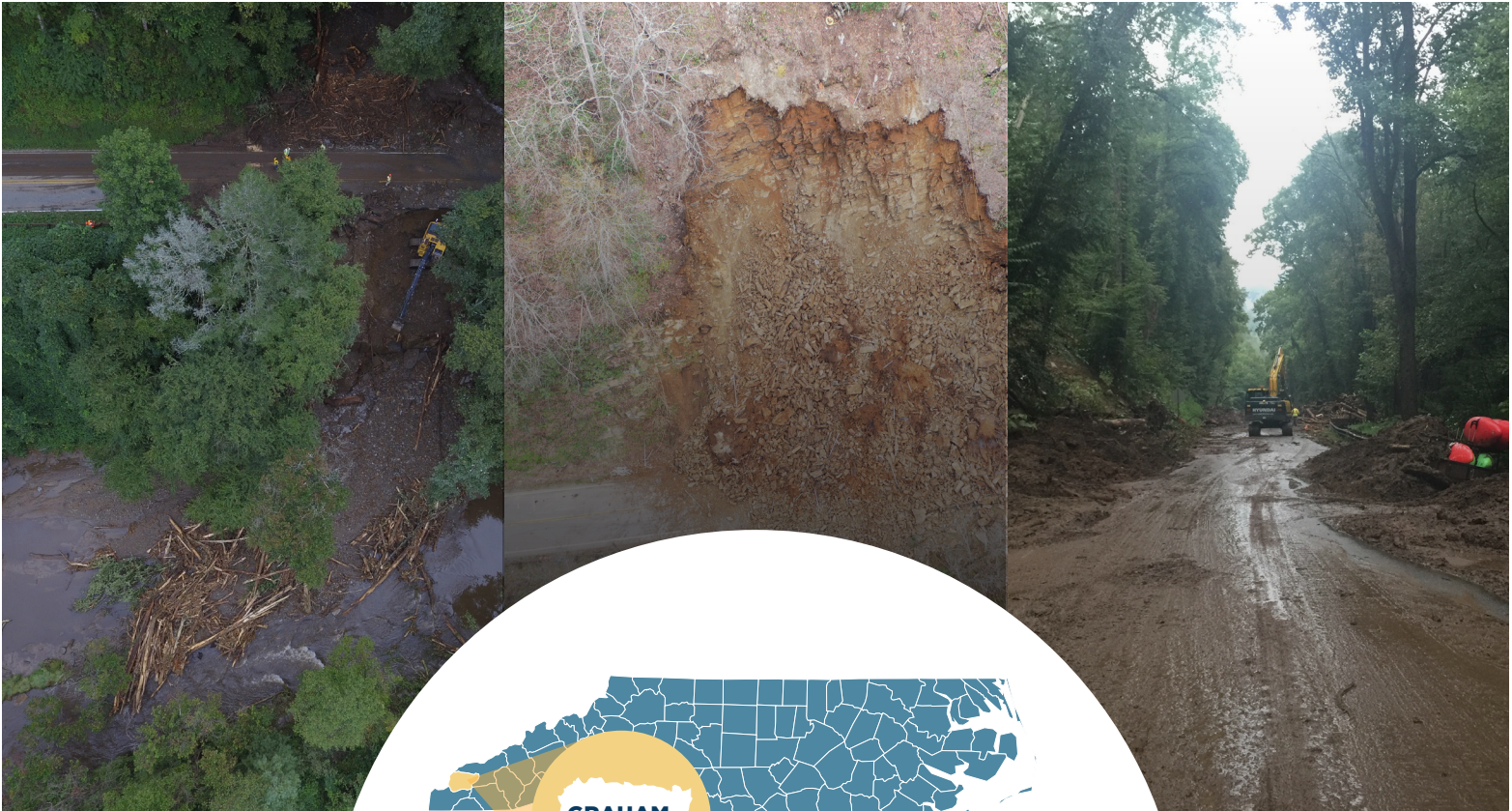


STATE OF GOOD REPAIR



WILDLIFE CROSSING

Project Requirements



**MPDG FFY 2023 and 2024
GRANT APPLICATION
AUGUST 2023**



Project Requirements

The table on the following page provides a summary of the five determinations that a Project must meet to be awarded funding under 23 U.S. C. Section 173(g) and how the Project aligns with those requirements. In addition, the NOFO identifies additional considerations. The Project aligns with many of these including:

1. The Project will improve the state of good repair of an existing highway and tunnel along the Appalachian Development Highway System, one of the last segments needing such an investment.
2. The Project will improve mobility in rural Graham County by improving travel times and the reliability of travel. This corridor is used by rural transit for medical services and other purposes. In addition, the crossover improves the connectivity of hiking and wildlife habitat by providing a grade separated crossing.
3. The Project improves travel and access to the region's major tourism assets, supporting this anchor industry. This is important for the County as it has lost its manufacturing base in the past decade.
4. The Project enhances recreational and tourism opportunities by providing access to Federal lands, national forests, and the historic Appalachian Trail.
5. The Project improves access to emergency care, essential services and health care in two ways. First, it improves the response time of EMS providers, a key concern for the local community. Second, the improved corridor is used by rural transit providers who provide trips for medical services.



Requirement	Project Alignment
<p>Rural Project Requirement #1: The project will generate regional economic, mobility, or safety benefits.</p>	<p>SAFETY: The Project will reduce crashes by a projected 36 percent. Addressing EMS deficiencies in rural areas also aligns with the goals of the USDOT’s Rural Opportunities to Use Transportation for Economic Success (ROUTES) initiative. The Project’s 2+1 design, shoulders improvements, and signal coordination in Robbinsville will save an estimated seven minutes per vehicle in emergency response time for trips in Graham and Swain Counties. The Graham County EMS Director estimates that the Project corridor is used to serve around 2,000 emergency trips a year. The design and condition of the Project roads, including the lack of safe passing opportunities and inadequate and nonexistent shoulders current can lead to congestion and delays.</p> <p>MOBILITY: The Project will improve system-wide connectivity and access to transit by modernizing a roadway that serves as a critical route for Graham County’s public transportation. Graham County Transit operates a demand response and subscription service for residents to reach medical appointments, continuing education programs, shopping, nutrition, and other key services and goods located in and out of the county. Approximately 19 percent of households in Robbinsville and 7 percent of Graham county households do not have access to a personal vehicle. Graham County’s transit service is crucial to support these residents (See Demographic Snapshot Tool on Supplemental Materials website).</p> <p>According to the Graham County Transit Director, the service operates 24 days a month and provides transportation to an average of 1,505 riders during this time. Nearly all of these trips use the Project corridor, but congestion and delays resulting from the current roadway conditions can create service delays and challenges. GRAHAM will improve transit access by increasing the corridor’s capacity and efficiency through a 2+1 design as well as by adding and widening paved shoulders. The Project will also strengthen the corridor’s resilience to climate change by repairing and improving drainage features, slopes, retaining walls and embankments to ensure this route is safe and reliable for Graham County’s transit services.</p> <p>REGIONAL ECONOMIC: Two-thirds of the County is owned by the Federal government—largely national forest land. With the closure of all large manufacturers, this economy relies on tourism and access to the region’s abundant natural features. Graham County’s economy is strongly tied to recreational tourism; Graham County’s Outdoor Recreation Economic-Building Strategy & Report found that visitor expenditures reached \$29.4 million in 2018. A 2015 report by the American Hiking Society found that this revenue generates economic activity twenty times its original value. Western NC’s \$206 million craft-based economy is also highly dependent on tourism, as visitors drive 62 percent of art gallery sales in the region. The Project includes several improvements that will draw tourists to the county’s preeminent attractions. An additional two parking spaces at the ANST trailhead along NC 143 gap will allow more tourists and hikers to access this nationally significant attraction within Graham County. An increase in ANST through-hikers would boost the county’s economy; a 2019 report by the NC Department of Commerce found that overnight visitors spend three times as much as single-day trip visitors in western NC. As an accessible means to observe wildlife and a unique landscape feature, the ANST land bridge will likely become an attraction in its own right, a precedent set by other transportation infrastructure in Appalachia like the New River Gorge Bridge in West Virginia and the Lynn Cove Viaduct in North Carolina.</p>

<p>Rural Project Requirement #2: The project will be cost-effective.</p>	<p>The Project is cost effective. The benefit cost ratio for this Project is 1.23. In addition, through the Merger NEPA process, the Project Partners “right sized” the road to meet local needs, consistent with USDOT’s ROUTES initiative. The Project meets the needs of the local community, making good on the promise of the ADHS, while minimizing the impact on the sensitive environmental resources in the area. It delivers more benefits than it costs.</p>
<p>Rural Project Requirement #3: The Project will contribute to 1 or more of the national goals described under Section 150.</p>	<p>The Project will contribute to Safety, Infrastructure Condition, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reduced Project Delivery Delays. Of particular note, the Project will reduce road departures in a state with a higher-than-average rate of road departures. It will also reduce EMS response times; this is a recurring concern for the community as response delays in the past have contributed to deaths. The Project will complete a long-planned segment of the Appalachian Development Highway System.</p>
<p>Rural Project Requirement #4: The project is based on the results of preliminary engineering.</p>	<p>The Project is based on the results of preliminary engineering and has completed final design as well. The following have been completed for the Project: Environmental Assessments, Geotechnical Investigations, Hydrologic Analysis, Traffic Studies, Cost estimates, Value Engineering and Final Design. Several sections of the Project have already moved into Construction—no funding has been requested for these sections.</p>
<p>Rural Project Requirement #5: The project is reasonably expected to begin construction not later than 18 months after the date of obligation of funds for the project.</p>	<p>The Project is ready to move to letting upon successful negotiation of a signed grant agreement. All engineering is complete. All permits and approvals have been obtained.</p>



Safety



The Project will reduce roadway fatalities and crashes and improve response times for emergency vehicles by introducing climbing and passing lanes and widening shoulders. In Robbinsville, where there is a disproportionate number of zero-vehicle households, new sidewalks will improve safety for non-motorized travelers.

State of Good Repair



The Project will restore and modernize the corridor while creating new multimodal infrastructure in a remote community. The Project will also mitigate system vulnerabilities by improving the reliability of this critical infrastructure asset in an underserved area.

Economic Impacts, Freight Movement and Job Creation



The Project will improve travel time reliability and freight mobility by modernizing the roadway and introducing signal coordination and other ITS components. The new land bridge and expanded parking at Stecoah Gap will draw more visitors to the Appalachian National Scenic Trail (ANST), increasing revenue for local businesses reliant on tourism and fostering the region's long-term economic growth.

Climate Change, Resiliency, and the Environment



The Project will replace retaining walls and improve embankments to make the corridor more resilient to natural disasters and extreme weather events. The Project also improves the region's resiliency by modernizing the corridor to serve as a reliable alternative to US 19/74 during flooding, landslides, and other emergency events. The Project will reduce travel time throughout the corridor, which will lead to reduced greenhouse gas (GHG) emissions. New bicycle and pedestrian facilities will promote a modal shift to active transportation. The Corridor K project won the National Association of Environmental Professionals Environmental Excellence Award in Environmental Management, Stewardship, Conservation, and Protection in 2021.

Equity, Multimodal Options, and Quality of Life



The Project expands active transportation in Graham County, thereby improving public health outcomes and increasing access to healthcare, education, employment, and other essential services. Additionally, the Project's travel time savings and congestion reductions will decrease vehicle fuel and maintenance costs, lessening transportation cost burdens on local residents.

Improves Mobility and Community Connectivity



The Project's multimodal components increase accessibility for non-motorized travelers in Historically Disadvantaged Communities. Moreover, realignments to the ANST, including a new land bridge, will improve mobility for local residents and visitors to the region.

Innovation Areas: Technology, Project Delivery and Financing



During planning and design for the Project, several innovative technologies were used such as Quantm 3D, an alignment optimization program; Ground Penetrating Radar to avoid areas of potential archaeological and ecological importance; and innovative methods to determine travel time reliability using a 365-day simulation model.

Permits

All of the Permits can be found on the [Supplemental Materials website](#) with a live link to

<https://connect.ncdot.gov/resources/MPDG2023-GRAHAM/Pages/default.aspx>

Date	Document Name/Purpose
3/2/2023	US Dept. of Interior, Bureau of Indian Affairs, Timber Cutting Permit
12/14/2021	401 Water Quality Certification Grant with Special Condition from EBCI
12/14/2021	EBCI 404 Permit Comments
6/22/2023	EBCI Agreement for Entry
11/18/2022	USFS Federal Land Transfer Letter of Consent
2/22/2022	USFWS Conference Opinion Commitment
8/2/2022	Request for Modification to Individual Section 404 Permit
4/6/2021	Final Programmatic Agreement
3/19/2021	Finding of No Significant Impact
8/8/2022	Department of the Army Permit number SAW-2009-01346, STIP A-0009C
	Stormwater Management Plan
	Set of project plans
	401 Water Quality Certification
	A-0009 Historic Architecture Effects
	Eastern Band of Cherokee Indian treatment Guidelines for Human Remains and Funerary Objects
2/22/2022	401 Water Quality Certification
4/25/2022	NC Department of Environmental Quality Division of Water Resources approval
10/2019	Design Study Report
8/26/2020	Final Environmental Assessment
4/2020	STIP A-0009C Graham County COMMUNITY IMPACT ASSESSMENT

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