

MORE I-74

Maximizing our Rural Economy



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





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Outcome Criteria

Safety

Motorist Safety

Safety is an important part of the transportation challenge addressed by the MORE I-74 Project, and there are multiple safety benefits expected from the project. First, the proposed upgrades would reduce the number of crashes along the corridor resulting in less fatalities, injuries, and property damage.

Shown in **Table 1**, the MORE I-74 Project area exceeds both the total and fatal crash rates for similar facility types in North Carolina.¹ There are also some indications of a higher number of crashes during dark conditions. **Chart 1** shows the top five predominant types of crashes, especially in the more rural areas of Richmond and Scotland Counties. The predominate types of crashes were hitting “fixed objects,” “rear-end” crashes likely due to stop and go conditions, “sideswipe” of vehicles traveling in the same direction likely due to lane departures or attempting to pass too closely, collisions with “animals” along the corridor, and “angle crashes” which often occur at leftovers along a non-access-controlled corridor. The improvements proposed for the MORE I-74 Project in many ways can address these high crash rates. Upgrading to four-foot inside and 12-foot outside paved shoulders can reduce crashes and crash severity for errant vehicles that leave the travel lanes. These improved paved recovery areas are coupled with improved barriers / guardrails, and rumble strips will further enhance safety by reducing crash severity. Upgrading to an access-controlled facility should remove all angle crashes that are often of high severity.

The predominant types of crashes along the corridor are hitting a fixed object, rear end crashes, sideswipe of vehicles, collisions with animals, and angle crashes at leftovers.

Table 1 – MORE I-74 Crash Rates

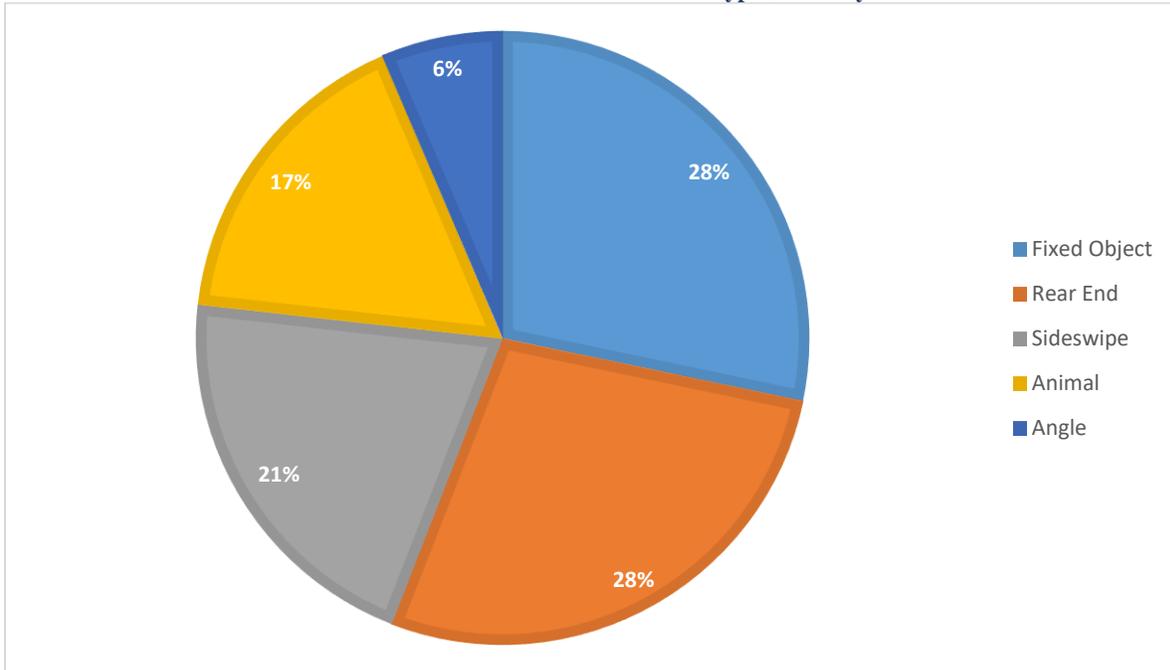
compared to statewide 2018-2022 crash rates for rural interstates and rural, 4-lane, median divided us routes with partial control

Category	Crashes (#)	Crash Rate (per 100 MVMT)	Statewide Average Crash Rate for US Routes	Statewide Average Crash Rate for Interstate Routes
Total	349	92.87	78.87	69.58
Fatal	5	1.33	0.97	0.54
Non-Fatal Injury	109	29.01	19.10	14.39
Night Crashes	108	28.74	28.42	22.85
Wet Crashes	54	14.37	16.64	15.81

of access

¹ NCDOT Transportation Mobility and Safety Division 2018-2022 Five Year Crash Rates [2022 Crash Rates.pdf \(ncdot.gov\)](#)

Chart 1 – MORE I-74 Accident Type Summary



Collectively, these upgrades take substantial, comprehensive action to significantly reduce the frequency and severity of crashes as well as injuries, fatalities, and property damage in pursuit of the goal of achieving zero roadway deaths through USDOT’s Safe System Approach².

Safety Benefits

Safety is an important part of the transportation challenge addressed by the MORE I-74 Project and there are multiple safety benefits expected from the Project both along the corridor and in the wider transportation network it serves. The proposed upgrades would reduce the number of crashes resulting in fatalities, injuries, and property damage, which have grown in both number and severity.

The Benefit-Cost Analysis (BCA) indicates the greatest benefits of the project are the reductions in accidents and fatalities due to the widening of rural highway shoulders. Reduction in reduced highway crashes has a projected return on investment of \$166.8 million. Combined safety and economic benefits of the project total \$172.5 million. The calculated BCA measuring costs and benefits (discounted at 7 percent) displays a positive return on investment ratio of 1.02, showing that the MORE I-74 project is both cost-effective and a tangible benefit to area communities.

Combined safety and economic benefits of the MORE I-74 Project total of \$172.5 million.

² USDOT’s Safe System Approach [What Is a Safe System Approach? | US Department of Transportation](#)

State of Good Repair

Pavement treatments help maintain the longevity and functionality of roadways, thus helping agencies reduce the need for time consuming rehabilitation and reconstruction projects. Upgrading the MORE I-74 corridor by utilizing the value engineering process of milling the current pavement (removing the top few inches of the existing pavement surface), and filling (paving new asphalt layer on top of the base), can provide an economically sound approach to provide safe highway conditions. The current pavement along this corridor is in good condition and is about 7 years old³.



US 74, traveling southwest toward Laurinburg

These upgrades will maintain the good pavement condition of the current four-lane divided highway while also modernizing core infrastructure assets. Overall, this helps the Future I-74 system as a whole maintain a state of good repair and will benefit long-term life-cycle costs.

Economic Impacts, Freight Movement, and Job Creation

NCDOT recognizes the importance of growing rural economies by improving highway corridors to strengthen the movement of freight goods and services. The MORE I-74 Project will support the region's long-term economy by providing the workforce and residents of southeastern North Carolina with improved highway facilities, improving safety, providing access to opportunities for rural communities, and shoring up critical transportation routes to improve the movement of people and goods.

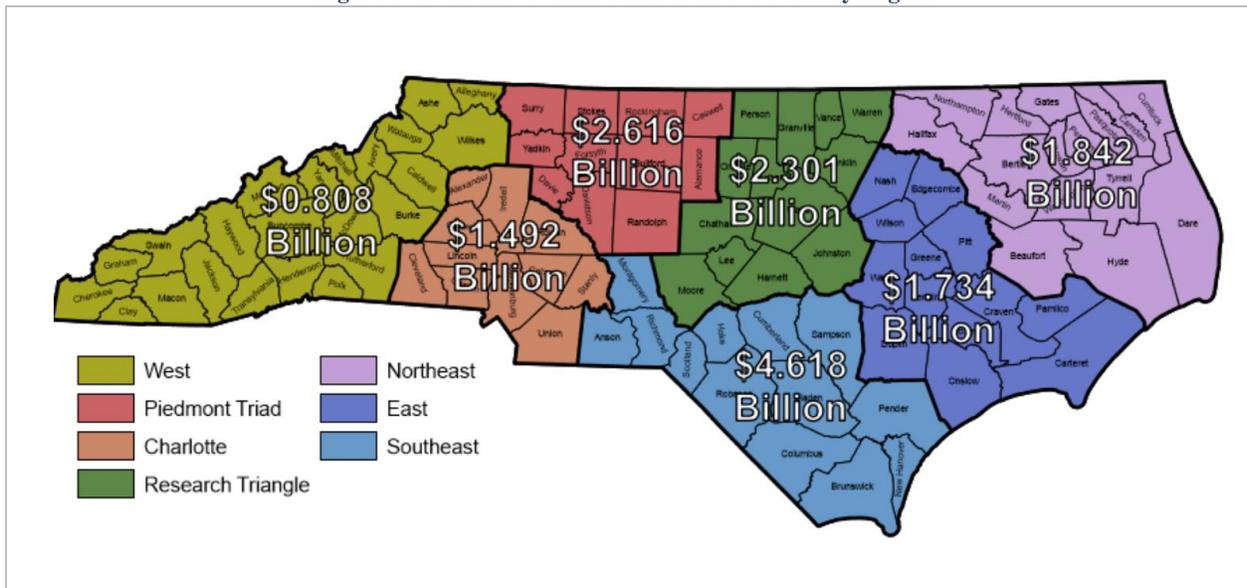
³ [NCDOT Pavement Condition Map \(arcgis.com\)](#)

The North Carolina Port’s 2018 Economic Contribution Study states that approximately \$12.9 billion is attributed annually to the State’s economy by the Port of Wilmington along with directly and indirectly supporting more than 87,000 jobs across North Carolina⁴. I-74 / US 74, which includes MORE I-74, connects Charlotte with Wilmington via the rural southeastern part of the state, which is an important corridor for the Port of Wilmington. The accessibility of the Port of Wilmington plays an important role in the supply chain decisions of companies which currently have operations in North Carolina and those considering locating manufacturing and distribution operations in North Carolina and beyond.

A 2022 technical report ranked the Port of Wilmington 44th out of 348 other container ports, making it 1st overall in the United States and Canada based on the Container Port Performance Index (CPPI)⁵. With consistent, best-in-class productivity and service levels, more industry sectors are taking advantage of the Port of Wilmington’s role in their supply chain and having direct, efficient, and reliable access to the port is more valuable than ever.

Through the provision of goods’ movement services at the deepwater ports, the ports supported over \$15.4 billion in gross revenues for North Carolina businesses in 2018, shown in **Figure 1**, with the MORE I-74 southeast region supporting the most in the State at \$4.618 billion.

Figure 1: Economic Contributions from NC Ports by Region



Communities in eastern North Carolina are experiencing mixed growth rates. Some communities are experiencing double digit population growth (Wake and Franklin Counties) due to economic growth within the Raleigh Metro area, while other more rural communities are experiencing

⁴ North Carolina Port’s 2018 Economic Contribution Study [2018-NC-Ports-Economic-Contribution-Study.pdf](https://www.ncports.com/2018-NC-Ports-Economic-Contribution-Study.pdf) ([ncports.com](https://www.ncports.com/))

⁵ [Global report recognizes Port of Wilmington's operations | WilmingtonBiz](#)

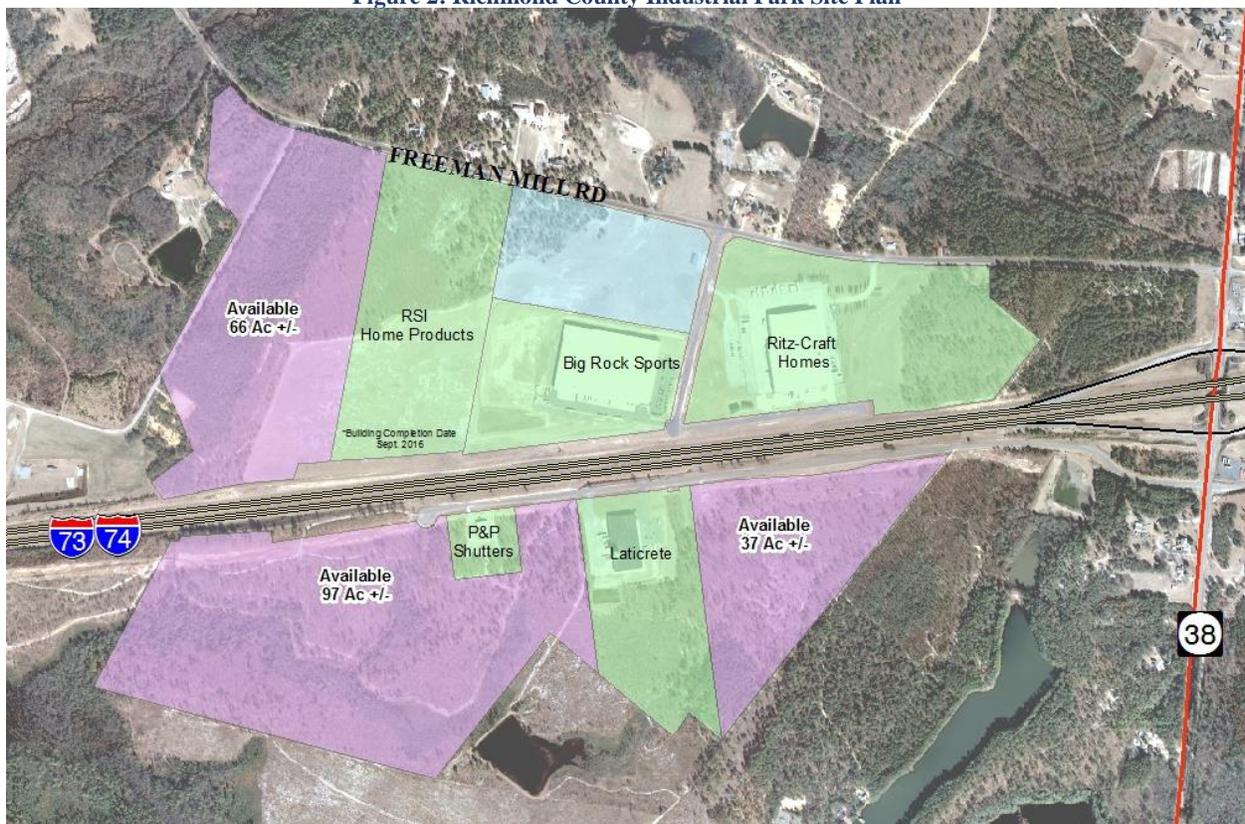
population decline (Scotland and Richmond Counties), because of lack of economic opportunity⁶. The MORE I-74 Project aims to reduce this disparity through transportation improvements that improve highway connections for businesses desiring to get goods to market, creating a more attractive environment for economic opportunities and job creation.

Richmond County Industrial Park, located just west of the MORE I-74 Project area in southern Richmond County, shown in **Figure 2**, is bisected by I-73 and I-74, offering incredible access and visibility to the numerous businesses located within the park⁷.

These businesses include companies such as Big Rock Sports, Ritz-Craft Homes, RSI, Home Products, and Laticrete, RCIP.

The park still has more than 200 acres available, which are shaded purple in **Figure 2**, and is a good example of how upgrading the MORE I-74 corridor can attract even more economic developments to foster economic growth and development while creating long-term high-quality jobs and help the US compete in a global economy by encouraging the location of important industries and future innovations and technology in the US.

Figure 2: Richmond County Industrial Park Site Plan



⁶NC Office of State Budget and Management Population Estimates [Population Overview | NC OSBM](#)
⁷ [Richmond County Industrial Park - Richmond County Economic Development \(richmondnced.com\)](#)

There are numerous available properties within Scotland County that would benefit from direct interstate access along the MORE I-74 corridor⁸ including the:

- Scotland County Spec Building
 - o 50,000 square foot building with direct access to the Laurinburg-Maxton Airport
- Scotland Incubator Park
 - o 42-acre industrial park with loading docks and drive-in bays as well as the potential for rail service
- Scotland County Smart Site
 - o 105-acre industrial park with an active solar farm
- Laurinburg Scotland Industrial Park
 - o 82-acre industrial park with potential for direct rail spur access

These turn-key industrial sites, along with upgraded interstate access that the MORE I-74 Project provides, will attract businesses looking to start up or expand reach out of state. Overall, this will promote integrated land use, economic development and transportation planning that facilitates greater public and private investments in land-use productivity, especially in areas with opportunities for intermodal and/or multimodal freight facilities. This will improve local, regional, and national economic performance.

Climate Change, Resiliency, and the Environment

Resilient Investments

The *U.S. 74 Resiliency Study*⁹ (January 2023) was conducted along a 190-mile stretch of US 74 from Wilmington to the Charlotte, NC (including the MORE I-74 Project limits) over a 40-year planning period to simulate corridor growth and urbanization as well as future climate change influenced events including storms, sea level rise, and extreme heat. The study presents a list of objectives that were considered when developing the goals of the study, two of which the MORE I-74 Project satisfies, which are preserving continuity along corridors and fostering equity.

The eastern portions of US 74 especially experience flooding during major storm events. Upgrading the MORE I-74 corridor to interstate standards will allow travelers to have a consistent route inland when fleeing those areas that are vulnerable to floods.

In addition, disadvantaged populations, particularly in rural areas, are already facing low accessibility to sustenance facilities like gas stations, emergency care, shops, and emergency shelters. The MORE I-74 project addresses the low availability of redundant routes that reduces options for these populations during hurricanes and large storm events.

Future I-74 route is a vital corridor for hurricane evacuations, allowing residents of the low-lying areas near the coast to safely shelter further inland during natural disasters. The MORE I-74 Project

⁸ [Available Properties | Scotland County, NC](#)

⁹ *U.S. 74 Resiliency Study*, NCDOT, January 2023

will improve the connection between the rural coastal areas and inland destinations in North Carolina. As part of the National Highway System, US 74 / I-74 is an important evacuation route from the coast. NCDOT has identified US 74 as a Strategic Transportation Corridor, along with its status as an evacuation route, this highway must be properly maintained for the safety of residents and visitors to Wrightsville Beach and other assets and attractions along the North Carolina Coast.

Severe storms and rain events affecting North Carolina are expected to grow in intensity and frequency. Across all tropical storms/hurricanes that have impacted the southeastern US, North Carolina is the second most frequently affected state, second only to Florida (which has two coasts). Over the past 160 years, North Carolina has averaged more than two major devastating storms per year, according to data from the State’s Climate Office¹⁰.



Vehicles traveling through a flooded section of US 74 Business, just west of the intersection with NC 177, in Hamlet.

The MORE I-74 Project will improve the resiliency of the roadway during routine flooding events by providing additional width in the typical section to accommodate for errant vehicles and freshly milled and filled pavement that will provide increased surface friction to maintain adequate skid resistance.

The increasing number of hurricanes and extreme weather events leads to repeated flooding in low-lying and flood-prone areas of the coastal plain. As recent as July 2023, a section of US 74 experienced major flooding due to thunderstorms in the area¹¹.

Figure 3 highlights the “hot spots” in North Carolina that experienced major rainfall and flooding at key locations during Hurricane Florence¹². The MORE I-74 Project area is one of the inland locations that still experienced major rainfall and floods despite not being located directly along the coast, impacting the ability for communities to evacuate, and creating unsafe driving conditions.

In addition, the costs to repeatedly rebuild communities after storms and flooding events falls disproportionately on low-income and minority communities who live along the MORE I-74

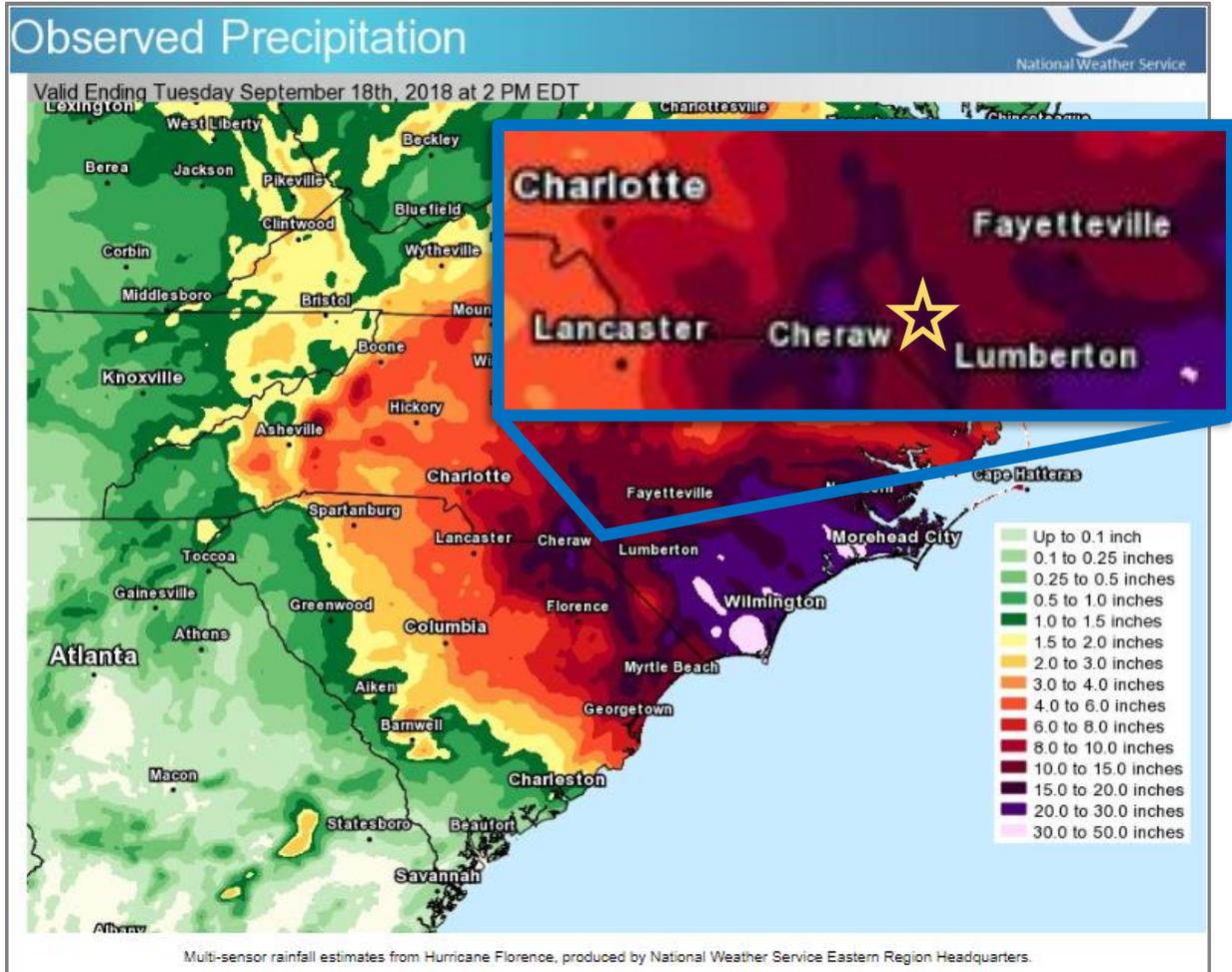
¹⁰ [North Carolina Climate Science Report \(ncics.org\)](https://ncics.org)

¹¹ [Flash flood warning extended in Richmond County - The Richmond Observer](https://www.richmondobserver.com)

¹² [Hurricane Florence: September 14, 2018 \(weather.gov\)](https://www.weather.gov)

Project corridor. By improving the roadway standards in this area, the Project will allow for residents and visitors to evacuate safely during extreme weather events caused by climate change.

Figure 3: Hurricane Florence Observed Precipitation by the National Weather Service



Equity, Multimodal Options, and Quality of Life

The MORE I-74 Project will reduce the barriers faced by minority and low-income communities along the Future I-74 corridor, while redressing past inequities to strengthen opportunities for underserved populations and contribute to a more equitable North Carolina.

Communities Along the MORE I-74 Corridor

The MORE I-74 Project is located in rural portions of North Carolina in the Piedmont and Coastal Plains regions of the state. The project extends throughout the unincorporated portions of Richmond and Scotland Counties such as Old Hundred Census Designated Place (CDP) and Laurel Hill CDP and is flanked by incorporated municipalities of the City of Hamlet and the City of Laurinburg.

According to the US Census Bureau 2020 Urbanized Areas¹³, the project does not traverse any urbanized areas. **Table 2** indicates the population change across the municipalities, unincorporated territories, and counties in the Project vicinity from 2010 to 2020¹⁴.

As shown below, both Richmond and Scotland Counties as well as the City of Hamlet and Laurel Hill CDP have experienced a population decrease from 2010 to 2020, while the remaining City of Laurinburg and Old Hundred CDP have experienced a population increase.

Table 2: Population Change in MORE I-74 Project Vicinity (2010 to 2020)

Municipalities in Project Area	U.S. Census Bureau Population (2010)	U.S. Census Bureau Population (2020)	Percent Change
City of Hamlet	6,495	6,025	-7.2%
City of Laurinburg	14,978	15,962	+6.6%
Old Hundred CDP	287	545	+89.9%
Laurel Hill CDP	1,424	1,117	-21.6
Richmond County	46,639	42,946	-7.9%
Scotland County	36,157	34,174	-5.5

Investing in Underserved Communities

The MORE I-74 Project will provide roadway safety improvements, thus benefitting residents in many rural communities and underserved populations across eastern North Carolina, including minority, low-income, and historically disadvantaged populations in the project area.

The Project area is located within Census Tracts (CT) 9711, 105.02, and 106.1, shown in **Figure 4**, all of which are considered historically disadvantaged communities¹⁵, particularly for climate change, energy, and health, and areas of persistent poverty¹⁶.

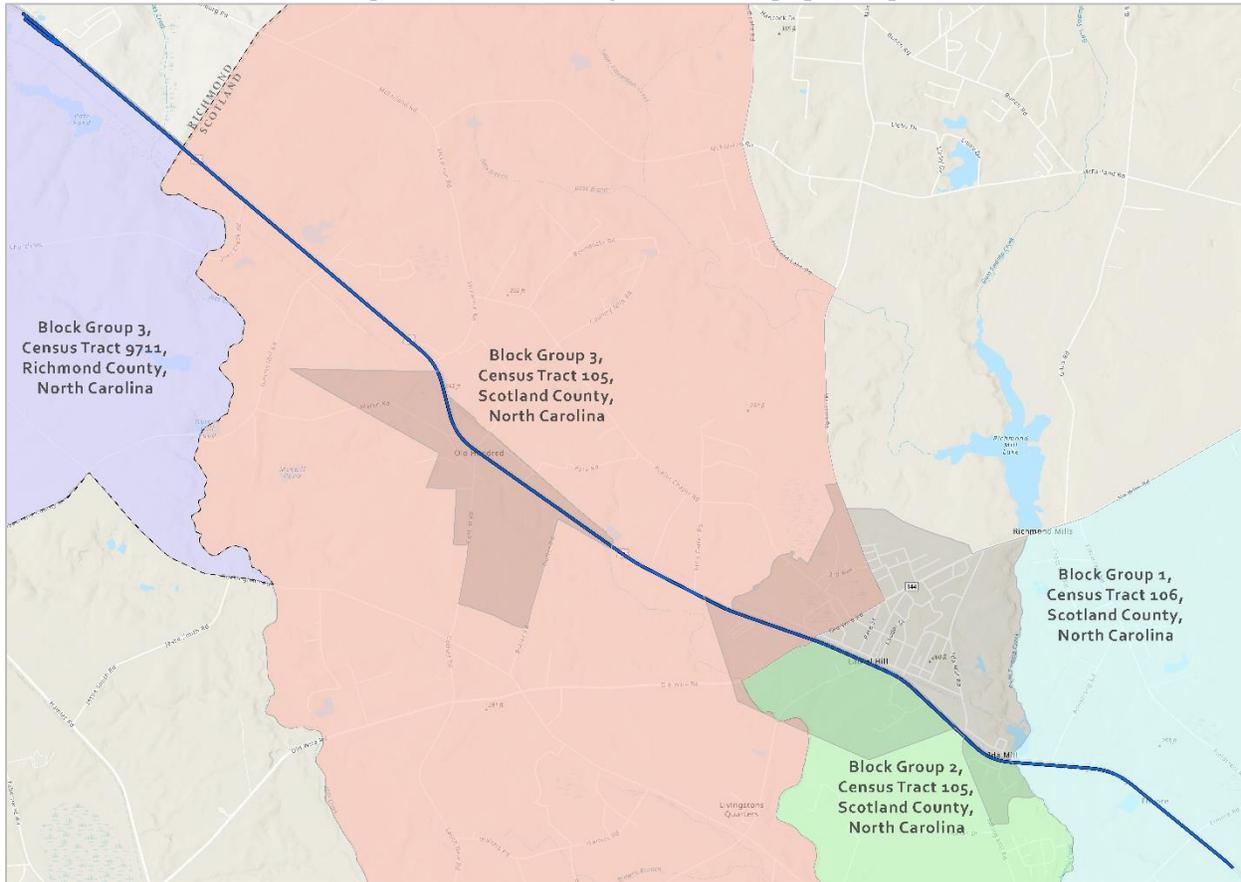
¹³ US Census Bureau 2020 Urbanized Areas [Urban and Rural \(census.gov\)](https://www.census.gov/urbanized-areas/)

¹⁴ [U.S. Census Bureau QuickFacts: North Carolina](https://www.census.gov/quickfacts/north-carolina)

¹⁵ [Explore the map - Climate & Economic Justice Screening Tool \(geoplatform.gov\)](https://www.geoplatform.gov/)

¹⁶ [Areas of Persistent Poverty & Historically Disadvantaged Communities | US Department of Transportation](https://www.transportation.gov/areas-of-persistent-poverty)

Figure 4: MORE I-74 Project Area Demographic Map



As seen in **Table 3**, multiple underserved populations – minority and low-income– are present within the MORE I-74 Project area. The Project will provide significant investments into these underserved communities especially with the roadway improvements, which will increase access to economic opportunities along the corridor and attract future economic opportunities and other enhancements.

Table 3: Underserved Populations by Census Tract

Census Tracts in Project Area	Non-white Populations	Poverty Rate	Median Household Income
Census Tract 9711	46%	25.7%	\$32,224
Census Tract 105.02	46%	65.3%	\$16,249
Census Tract 106.01	63%	22.6%	\$25,741

Sources: <https://data.census.gov/> (1) 2020 ACS Demographic and Housing 5-Year Estimates, (2) 2020 ACS Poverty Status in Past 12 Months 5-Year Estimates, (3) 2020 ACS Median Income in Past 12 Months 5-Year Estimates

Within the study area, Block Group 3, Census Tract 9711 is federally designated as an Opportunity Zone¹⁷. Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America’s governors, and certified by the US Secretary of the Treasury. Under certain conditions, new investments in Opportunity Zones may be eligible for preferential tax treatment to spur private and public investment in America’s underserved communities.

These communities have been involved in the project planning process and have shown strong support for converting US 74 to interstate standards. NCDOT will continue to involve these communities as the project development progresses.

Community Engagement

The MORE I-74 Project aims to continue to meaningfully engage and incorporate feedback from communities in the vicinity of the project and plans to provide accommodations to make participation accessible regardless of race, national origin, disability, age, or gender. These equity considerations will be integrated into the project development process and will especially be important during the public involvement portion.

NCDOT is planning to host one open-house public meeting and one public hearing with a formal presentation at an accessible point along the Project corridor. Local residents will be notified via postcard and other notices will be advertised online. If deemed necessary, translated materials and/or a translator can be available at these meetings. In addition, small group community-based meetings can be held in addition to the public meetings to solicit feedback from key groups, particularly within vulnerable populations and disadvantaged communities.

Innovation Areas

Innovative and Secure-by-Design Technology

Bolstering ITS Components

The MORE I-74 Project will enhance work that is underway and currently funded by the 2020 INFRA Grant for the US 74 Corridor Opportunities for Rural Efficiency and Safety Improvement Project. The project includes both a broadband and ITS component (HO-0002B) and a resiliency component (HO-0002D) along this corridor. The broadband and ITS component include connections to signal systems, DMS, and CCTV design, construction, and maintenance, operations, and commercialization (OMC) and will be connected to NCDOT's Traffic Management Center. This broadband connection will support a future Integrated Corridor Management (ICM) System that will alert travelers to traffic congestion, as well dangerous wind, and flooding conditions in vulnerable areas. The resiliency component includes a vulnerability assessment, stress testing, gauge installation, and continued work on the Flood Inundation Mapping Alert Network for Transportation (FIMANT). The MORE I-74 Project will boost these

¹⁷ [Opportunity Zones \(arcgis.com\)](https://arcgis.com)

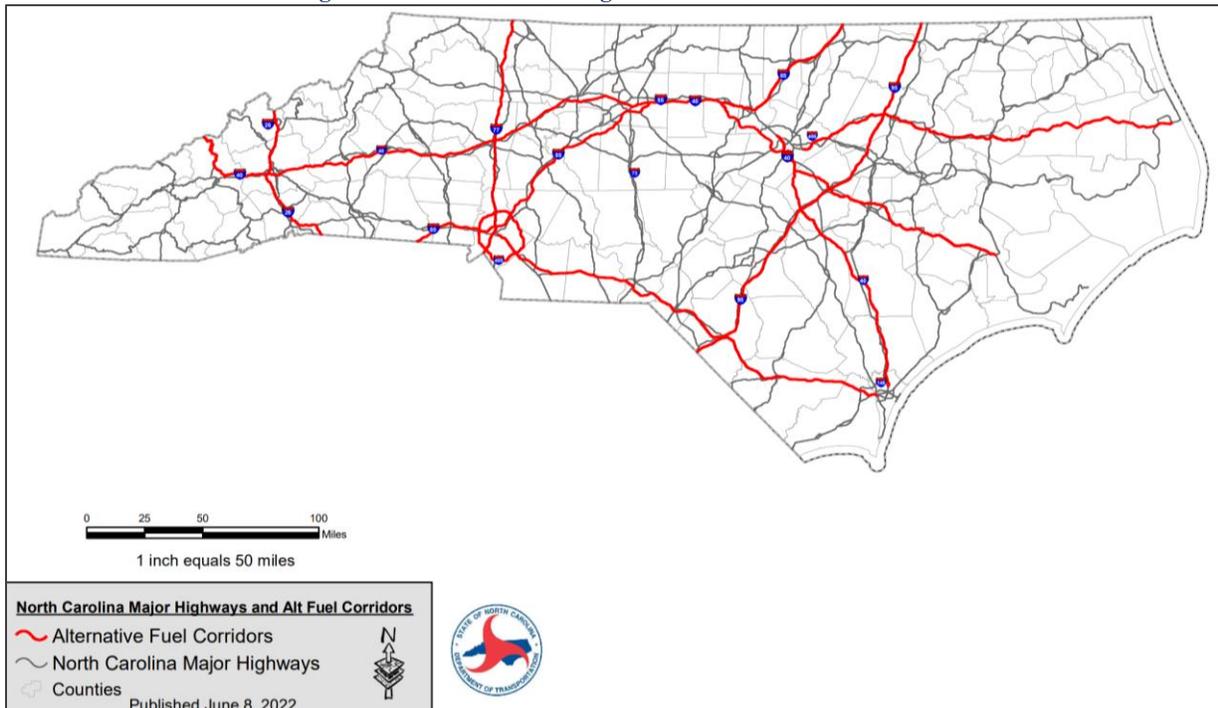
improvements and leverage information provided by this previously funded project to continue to enhance this corridor through technology and resiliency.

Leveraging Transportation Infrastructure to Attract Future Funding

The MORE I-74 Project is also along a corridor that has been identified as an Alternative Fuel Corridor¹⁸. The Federal Highway Administration’s (FHWA) Alternative Fuel Corridors program recognizes highway segments that have infrastructure (or plans for infrastructure) that support alternative fuel options. **Figure 5** illustrates FHWA designated Alternative Fuel Corridors in North Carolina.

Established by the Bipartisan Infrastructure Law, the National Electric Vehicle Infrastructure (NEVI) Program will provide nearly \$5 billion from July 2022 – June 2027 to help states create a network of 500,000 electric vehicle charging stations along designated Alternative Fuel Corridors. North Carolina expects to receive up to \$109 million to build out electric vehicle infrastructure along its approved corridors. NCDOT is currently working on establishing the proposed station locations along the Alternative Fuel Corridors to aid in the NEVI procurement process. Improving US 74 to interstate standards will make it a more attractive location for these electric vehicle charging stations.

Figure 5: North Carolina designated Alternative Fuel Corridors



The connections are both physical and digital for safety, capacity, and resiliency of not only the MORE I-74 project corridor but the multi-modal transportation network that it’s a part of as a

¹⁸ North Carolina Alternative Fuel Corridors [NCDOT: National Electric Vehicle Infrastructure \(NEVI\) Program](#)

whole. By improving the connectivity to other major corridors, reliability to connect people and goods, and resiliency during major storm events, the MORE I-74 Project removes barriers to economic growth in this part of the State.

Innovative Permitting, Contracting, and other Project Delivery Practices

Integrated Project Delivery

NCDOT announced the Integrated Project Delivery (IPD) initiative in 2018 to establish a culture where “we promise what we are going to do and deliver what we promise.” The purpose of IPD is to improve project delivery with transparent, repeatable, and accountable processes that are effective and efficient, in order to meet the NCDOT Secretary’s “12-24-36” mandate. “12-24-36” refers to the number of months to complete environmental documentation and preliminary engineering – 12 months for a Categorical Exclusion (CE), 24 months for an Environmental Assessment (EA), and 36 months for an Environmental Impact Statement (EIS).

In response, NCDOT undertook the task of reviewing all its policies and procedures and challenged staff to come up with more efficient ways of delivering projects. Recommendations are now being implemented and new policies and procedures drafted for a new model focused on tailoring project development to the individual characteristics of a project. The key elements of the model are continuity in staff using a “project custodian” that stays with the project, more robust environmental and engineering screening earlier in the process to identify issues and allow for right-sizing of the project development process, and fewer re-do loops by integrating project planning, environmental analysis, and design into a coordinated process.

Section 404/ NEPA Merger Process

Since 1997, NCDOT has used the Section 404/NEPA Merger Process to develop projects. This environmental streamlining strategy was developed cooperatively by the Federal Highway Administration and USACE and was called “merger” because it “merges” decision-making for two federal regulations, the National Environmental Policy Act (NEPA) and Section 404 of the Clean Water Act (CWA). In the Merger Process, a team of agency representatives meet at seven strategic decision (concurrence) points in the NEPA/SEPA project development and permitting process to discuss and concur on major project decisions.

This process ensures that NCDOT will receive all permits necessary to implement a project in a timely manner. As part of the IPD initiative, NCDOT, in coordination with other Merger signatory agencies, is currently updating the process to allow for more flexibility in how it is applied to individual projects in order to streamline the decision-making process, including the early identification of permitting strategies.

Project ATLAS

NCDOT released Project ATLAS (Advancing Transportation through Linkages, Automation, and Screening) in 2019. ATLAS is a web-based platform that provides a data access and storage framework to support informed project development. ATLAS consolidates statewide spatial data



from a variety of sources into a single source with GIS based tools for screening and mapping environmental features and identifying potential constraints and impacts. In addition, the ATLAS Workbench provides a forum for managing projects and storing key project documents. The Workbench steps teams through all facets of the project life cycle and tracks the progression of a project based on reporting from multiple NCDOT Units. Since its initial release in June 2019, more than 1,100 NCDOT and private engineering consultant staff have been trained to use ATLAS, and it is being incorporated into all aspects of project delivery.

Innovative Financing

Use of Procurement Methods

This project will use a mix of alternative delivery methods to include design build or progressive design build. These procurement methods promote innovation, accelerated schedules, and appropriate risk assessment and mitigation. The use of these best value procurement methods will ensure the project is delivered on or before the established completion dates.

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