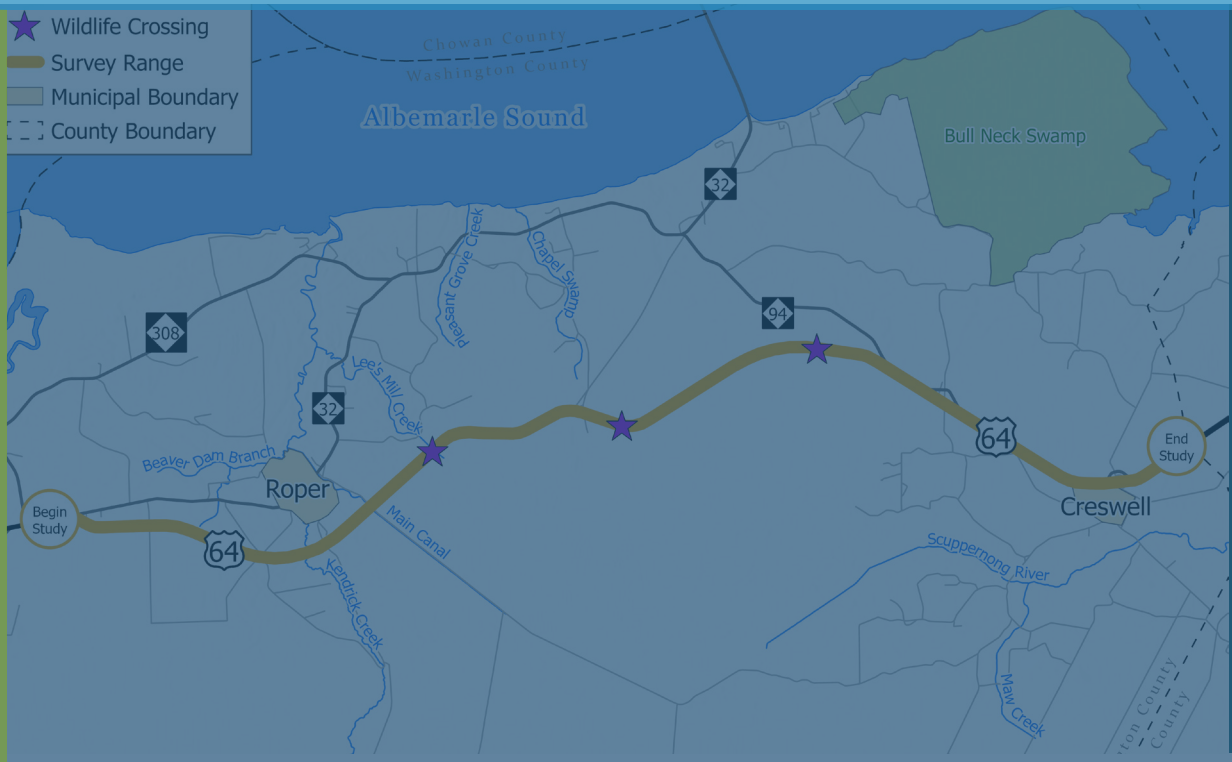
NORTH CAROLINA
WCPP APPLICATION

September 2024



BLACK BEAR

RED WOLF

Wildlife Fencing to Protect Wildlife & Vehicles Along US 64

US 64, WASHINGTON COUNTY (64 SAFETY)

ABSTRACT

The North Carolina Department of Transportation (NCDOT) seeks $1.35 million from the US Department of Transportation (USDOT) for US 64 Washington County: Wildlife Fencing to Reduce Wildlife Vehicle Collisions (64 SAFETY). 64 SAFETY proposes to upgrade the existing wildlife underpasses with appropriate wildlife fencing. The fencing will reduce Wildlife Vehicle Collisions (WVC) in an area with critically endangered red wolf, black bear, and white-tailed deer populations and improve habitat connectivity for all species within this corridor. NCDOT will provide the $340,000 non-federal matching funds.

US 64 is the main east-west corridor connecting northeastern North Carolina to I-95 and the rest of the state. North Carolina Wildlife Resources Commission (NCWRC) has worked with NCDOT to maintain connectivity of core black bear populations along the corridor. In addition, the corridor is within the designated Eastern North Carolina Red Wolf Population area, the only wild population of the endangered red wolf in the world. In 2005, during new location improvements to US 64, three large bridge underpasses were installed 10-foot chain-link fence to aid in channeling wildlife toward those underpasses. The project represented a first-of-its-kind habitat connectivity investment and wildlife connectivity research opportunity in North Carolina. However, the 20-year-old fencing does not include many of the important design details outlined in the NCWRC-NCDOT Wildlife Passage Guidance that are essential to effectively reduce WVC and improve connectivity by incorporating additional existing structures. Improving the existing fencing to current standards would be a cost-effective means of reducing WVC and improve connectivity Proposed improvements primarily consist of adding fence aprons and/or berms to restrict access under the fence and addressing several ditch crossings that wildlife utilize regularly to access the highway. The proposed project could be completed within 1 year.

Despite the existing fencing, WVC remain a regrettably frequent occurrence throughout the project corridor. This is in part due to the approximately 380 gaps in the existing 7 miles of fencing used to channel wildlife to the underpasses. NCWRC monitoring has shown wildlife frequently use these gaps to cross US 64. In the past 18 years, NCDOT records indicate there have been 442 reported WVCs within this corridor as well confirmed red wolf vehicle strike mortalities. Recent monitoring indicates the crossing of the highway multiple times by red wolves. However, most WVC are not reported, particularly those that do not result in vehicle property damage or human injury. Data from the Virginia Department of Transportation (VDOT) found that a correction factor as high as 8.5 was needed to correctly estimate WVCs in a given area (Donaldson, 2017). Using this factor, over 3,700 WVC are estimated to have taken place along the corridor during that timeframe. This project could reduce the number of WVC by more than 75 percent.

This project is a cost-effective use of federal funds to maximize safety and ecological value of existing wildlife crossing infrastructure. The on-going monitoring and research that will continue post project construction will be invaluable to future wildlife crossing projects in coastal regions throughout the US.

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BASIC PROJECT INFORMATION

Project Description

The North Carolina Department of Transportation (NCDOT), with support from North Carolina Wildlife Resources Commission (NCWRC), seeks USDOT funding under the Wildlife Crossings Pilot Program (WCPP) for US 64 Washington County: Wildlife Fencing to Reduce Wildlife Vehicle Collisions (SAFETY) in Washington County, NC.

This grant will fund improvements to approximately 7 miles of US 64. This section of US 64 includes 3 existing wildlife underpass bridges and approximately 7 miles of fencing. The fencing will be upgraded to wildlife fencing standards used in NC. Some of the techniques that will be used include installing a fence apron at the bottom of the fence to close gaps, earthen fill may be used in some areas where gaps are very small and designing the wildlife fence to properly incorporate multiple existing culvert inlet and outlets.

Closing the fence gaps along this stretch of US 64 will reduce WVC while increasing the effectiveness of the existing 3 underpass bridges. Furthermore, there are multiple hydraulic structures in the project area both dry and wet that function to convey streams, canals, ditches, and stormwater under US 64. By incorporating these structures into the wildlife fencing we will increase connectivity by adding multiple small underpass opportunities. Monitoring in eastern NC has shown extensive use of properly fenced smaller culverts on highways similar to US 64.

Project History

In 2005, US 64 was constructed on new location and included three underpasses that were installed within the project corridor along with fencing to help channel wildlife towards these crossing structures. The three wildlife underpasses and associated fencing was completed at an additional cost of approximately $3.6 million for the new roadway facility. These were the first large wildlife underpasses to be designed and

Bear Cub Using US 64 Underpass Crossing *(NCWRC)*

constructed in North Carolina and incorporate improved fencing for wildlife. As there were no wildlife fencing requirements, standard 10-foot chain link fencing was used where standard control of access fence would have been installed. The lack of design detail and understanding of the intent resulted in a fence that does not preclude wildlife from access the highway. Advances in our understanding of wildlife crossings has shown that improvements to the existing fence infrastructure would greatly reduce WVCs. Properly tying the wildlife fence to existing hydraulic structures will promote wildlife to use those structures increasing highway permeability and habitat connectivity. 64 SAFETY will retain existing fence infrastructure to the extent practicable while using berms, fence aprons, fence to culvert tie-ins, and other methods to reduce the ability of wildlife to access the highway and improve access to existing underpass structures This new fence will reduce wildlife vehicle collisions (WVCs) and provide increased habitat connectivity for species including the critically endangered red wolf, black bear, deer, and other, smaller animals.

Project Location

US 64 is a vital economic driver for northeastern North Carolina, serving as both a tourism and freight corridor. The facility is one of NCDOT's Strategic Transportation Corridors (STCs) and is the only designated expressway in the area. It is the primary east-west route connecting northeastern North Carolina and I-95 and serves as a designated hurricane evacuation route. The 64 SAFETY project is approximately 7 miles

PROJECT LOCATION MAP

along US 64 from just west of Roper to just east of Creswell in Washington County, NC. The corridor is within the designated Eastern North Carolina Red Wolf Population area, the only wild population of the endangered red wolf in the world and bisects a rural landscape utilized by white-tailed deer and black bear. Washington County is a rural county and is classified by USDOT as both an Area of Persistent Poverty (APP) and Historically Disadvantaged Community (HDC) for 2019 US Census Tract 9501 The area meets USDOT's stated Justice 40 goals.

Based on crash data from NCDOT, over 440 WVCs on US 64 were reported between 2005 and 2023. Of those, over 80 percent were night crashes. All reported crashes indicated property damage, which would correlate to large animal (e.g. bear, deer, red wolf, et al) collisions. Because collisions are under reported and those with smaller mammals often not reported, this is likely an undercount of totoal WVCs.

The US 64 Corridor within Washington, Tyrell, and Dare Counties has been extensively studied for decades by State agencies, universities, and other organizations. Most recently the NCWRC partnered with the University of North Carolina at Wilmington to use camera traps to monitor underpass usage as well as gaps in the fencing. This data has documented the extensive use of fence gaps by wildlife as well as usage of the underpasses. Additional data exists from both before and after installation of the fencing in 2005 and includes an in-depth assessment 15 years post installation. Furthermore, monitoring of the underpasses is ongoing and will allow a before and after comparison of wildlife usage once wildlife fencing is installed. This research is included in the Supplemental Materials.

The US 64 corridor is home to numerous species, including red wolf, black bear, white tailed deer, bobcat, coyote, and raccoon. A US 64 roadkill survey in adjacent Tyrrell County in 2011 found over 130 species. Wildlife fencing installation as part of 64 SAFETY will benefit not only larger mammals but many smaller animals as well.

TRIBAL LAND

This project is not located on land belonging to a federally recognized Indian Tribe.

RURAL OR URBAN DESIGNATION

This project is in a Rural area as designated by the U.S. Census Bureau.

COMMUNITY DEVELOPMENT ZONE

This project is not located in any of the four federally designated community Development zones.

LEAD APPLICANT

NCDOT is the Eligible Applicant and project lead. NCDOT has a long history of successful project delivery. NCDOT has provided detailed cost and schedule information in this

application and additional information on the basis for the cost and schedule is included in the supplemental materials. The financial plan is in place. NCDOT has successfully delivered many USDOT grant projects and is currently working on several grant-funded projects, including the I-85 FUTURES and STERLING projects, which were awarded MPDG funds in 2023. In addition, North Carolina has a strong reputation for prudent use of federal highway funding. The state formed its State Highway Commission (now NCDOT) in 1915. The commission and NCDOT have successfully managed projects receiving Federal-Aid Highway program since the passage of the Federal Aid Road Act of 1916, through many changes and reauthorizations.

NCDOT is guided by its agency Strategic Plan and the North Carolina Division Business Plan. Based on 2023 data, NCDOT manages approximately $1.4 billion per year in Federal-Aid Funds.

NCDOT will administer the grant. Contract development will occur through coordination by NCDOT's Federal Grants Manager in the Office of Strategic Initiatives & Program Support with the Programs Management Office, the Environmental Policy Unit, and the Division of Highways Chief Engineer's Office.

OTHER PARTIES

The NCDOT has coordinated with the NCWRC on this section of US 64 dating back to the 1990's. This coordination has included identifying the need and location of 3 underpass bridges, assisting with two academic research projects, and conducting multiyear monitoring of the wildlife underpasses and fencing. NCDOT will continue to coordinate with NCWRC to implement the US 64 project as well as continue monitoring to document affects the project has on WVCs and wildlife use of the underpasses.

BUDGET NARRATIVE

Total Project Costs

The total project cost is $1,690,000 with NCDOT requesting $1,350,000 from the WCPP and the NCDOT providing the $340,000 in matching non-federal funds. This project will have the following phases: final design plans, NEPA compliance and documentation, construction, research, and outreach. NCDOT has determined the following cost: design plans and NEPA documentation ($100,000), fencing materials and installation for 7 miles ($1,000,000), and monitoring and outreach ($200,000) for a total cost of $1,300,000. Adding 15% for both construction engineering and inspections as well as contingencies results in a total project cost of $1,690,000.

NON-FEDERAL SHARE

The NCDOT Executive Grants Committee has committed to providing the $340,000 matching funds for this project, if awarded, through NCDOT's General Maintenance Reserve Fund which is funded through the State Highway Fund. State Highway Fund

Revenues for the Highway Fund are generated from the state motor fuels tax and DMV fees. The Highway Fund primarily supports projects that maintain the state's existing transportation system. This includes general maintenance, roadside environmental activities, resurfacing highways, replacing bridges, paving unpaved secondary roads, and state aid to municipalities. Funds are distributed across North Carolina based on need.

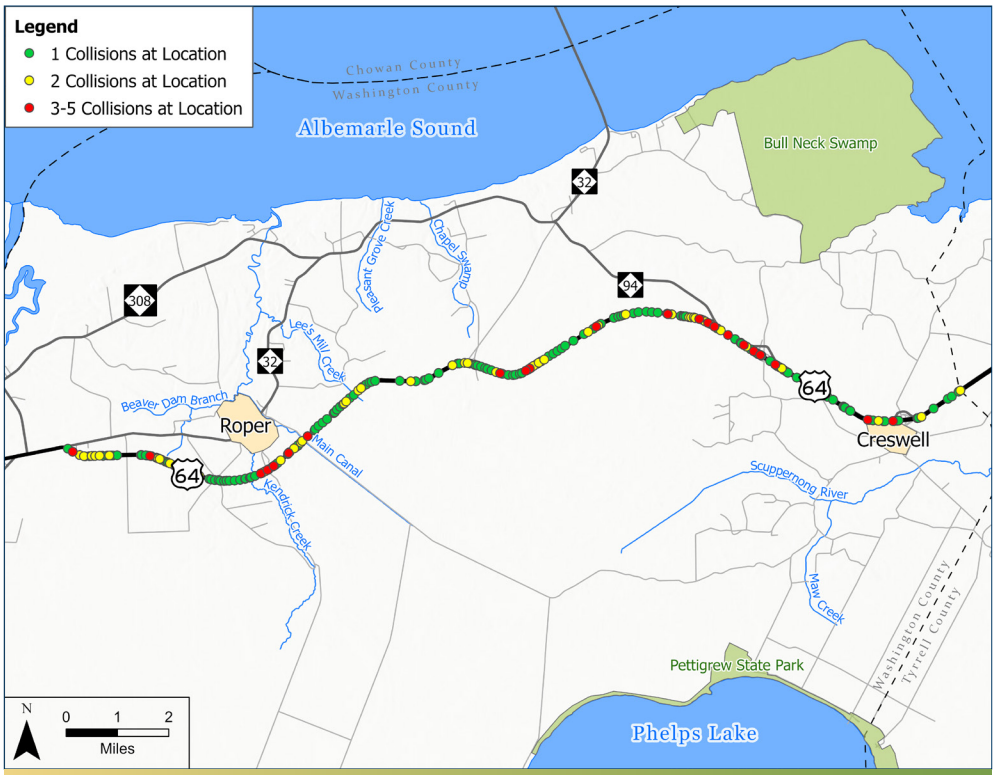
OTHER FEDERAL FUNDS

There are no additional federal funds currently allocated for this project.

PROJECT MERIT CRITERIA

Criterion 1.1: Wildlife Vehicle Collisions

The project contributes to the Wildlife Vehicle Collisions (WVCs) criterion by providing more effective wildlife exclusion fencing and wildlife crossing options along the US 64 corridor. As of May 2023, there have been 442 reported WVCs along US 64 in the past 18 years. Practices to channel wildlife to better crossing locations using fences have improved significantly since 2005. Wildlife fencing and underpasses installed along the I-140 corridor, west of Wilmington, NC, have been found to reduce the average WVC rate to 0.15 WVCs per year per mile. Data from the Virginia Department of Transportation (VDOT) found that a correction factor of up to 8.5 was needed to correctly estimate the



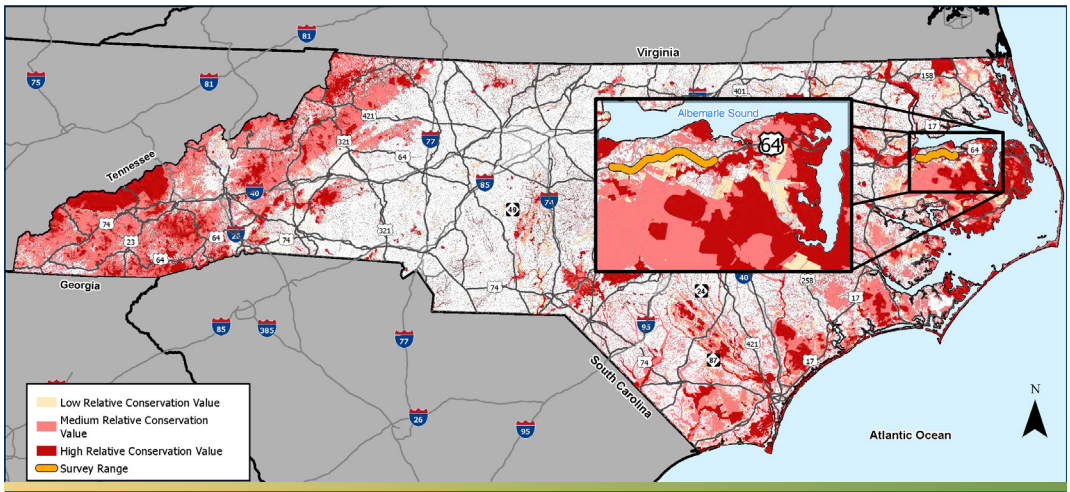
WILDLIFE VEHICLE COLLISIONS IN PROJECT AREA

number of WVCs in a given area (Donaldson, 2017). Revising the I-140 WVC rate using the VDOT factor, yields a WVC rate of 1.28. Based on the current Average Annual Daily Traffic (AADT) for US 64 in Washington County, the current crash rate is 0.91 WVCs per mile per year (projected as 7.74 using VDOT data). It is estimated that upgrading the fencing in this habitat would reduce WVCs to a rate similar to that found in Wilmington, NC.

Criterion 1.2: Terrestrial and Aquatic Habitat Connectivity

The project contributes to habitat connectivity by improving critical connections to relatively undisturbed habitat. The addition of properly designed wildlife fencing will improve two important aspects of connectivity.

1. Closing access points such as gaps will allow additional wildlife to travel to the wildlife underpass resulting in a safe crossing of the highway facility and connectivity to adjacent habitats.
2. Providing appropriate wildlife fencing to tie into existing culverts. This will promote the use of existing hydraulic structures for wildlife passage. There are multiple hydraulic structures in the project area both dry and wet that function to convey streams, canals, ditches, and stormwater under US 64. By incorporating these structures into the wildlife fencing we will increase connectivity by adding multiple small underpass opportunities. Monitoring in eastern NC has shown extensive use of properly fenced smaller culverts on highways similar to US 64. As the map below shows, the US 64 corridor to the North Carolina Outer Banks includes the largest area of medium and high conservation habitat in North Carolina. Highway 64 is also within the designated Eastern North Carolina Red Wolf Population area, the only wild population of this critically endangered species. Maintaining connectivity in this area is of critical importance to preserve species diversity.



AREAS OF RELATIVE CONSERVATION VALUE IN NORTH CAROLINA *(NCNHP)*

To the south of US 64 is Pettigrew State Park, wildlife preserves, the Scuppernong River and Phelps Lake in Washington and Tyrrell Counties. Pettigrew State Park covers almost 6,000 acres and includes an old-growth forest of sweet gum, bay trees, persimmon, cypress, and Atlantic white cedars. Much of the land surrounding the park is in agricultural use, but still provides habitat opportunities. North of US 64 land use has a similar pattern of largely agricultural use. However, in the northeastern corner of Washington County, adjacent to the Albemarle Sound, is the Bull Neck Swamp Research Forest. N. C. State University owns this 6,000-acre tract of coastal wetlands, which includes 7 miles of undisturbed shoreline. Maintenance of the Research Forest is funded through black bear and deer hunting licenses and periodic timber sales. The tract also includes 185 acres of Atlantic white cedar and almost 800 acres of wetland habitat. Maintaining the crossing of US 64 will allow species to access two largely undeveloped habitat areas, maintaining a strong gene pool for area species.

Criterion 2.1: Leveraging Investments

The project contributes to the Leveraging Investments criterion by building on current and previous work to reduce WVCs. As stated previously, the 2005 infrastructure currently in place can be upgraded with relatively little cost. Additional work is in progress to replace the Alligator River Bridge in Tyrrell and Dare Counties. NCDOT STIP HB-0001, the Alligator River bridge replacement, is currently scheduled to LET in late 2024 or early 2025.

DEER CROSSING UNDER FENCE *(NCWRC)*

NCDOT and NCWRC signed a Memorandum of Understanding (MOU) in April 2023 to cooperatively and collaboratively work together on project planning and coordination; public safety; maintenance and expansion of habitat connectivity and wildlife habitat conservation; inventory, monitoring, and biological studies; impacts to wildlife due to vehicles; and information and education.

Both agencies agreed to work together on several efforts including the following:

- to cooperatively seek to make highways less hazardous for wildlife and lessen the impact highways have on important habitats and ensure maximum benefit and consideration for mitigation efforts that promote wildlife habitat conservation and connectivity.
- to further develop methods for evaluating the success of wildlife mitigation measures, including monitoring crossing structures and fences to determine their effectiveness in facilitating wildlife passage.
- to create a wildlife vehicle collision data collection tool to be developed

and implemented that will be made jointly available for encouraged use and contribution by both Parties (and possibly others) for traffic safety and conservation project evaluations.

- to develop effective and efficient passage structures and associated barriers for various species of wildlife to make highways less hazardous for motorists and wildlife while minimizing effects of habitat fragmentation.
- to jointly develop a "Wildlife Passage Guidance" document that will aid in the familiarity and incorporation of standard prescriptions for highway projects.
- to work together to investigate avenues to minimize highway impacts to federally listed and other sensitive species, and their habitats.
- to cooperate during transportation long-range planning, project development, and operations for NCWRC to provide substantive wildlife resource recommendations to NCDOT.
- to utilize our mutual understanding of each other's missions, goals, and objectives to seek opportunities and funding for cooperative projects and activities dealing with highway/wildlife issues.

An intra-agency working group was established to accomplish these goals shortly after the MOU was signed. It recently released the NCWRC-NCDOT Wildlife Passage Guidance. The Guidance document will assist transportation planners and engineers, local and regional transportation planning organizations, other government and resource agencies, and non-profit organizations with wildlife passage planning and design based on the over twenty years of experience that NCDOT and NCWRC have in this field in NC.

64 SAFETY represents both agencies' commitment and investment in accomplishing several goals established by the MOU.

Criterion 2.2: Economic Development & Visitation Opportunities

The project contributes to the Economic Development and Visitation Opportunities criterion by improving the flow of goods through a Strategic Transportation Corridor while preserving and expanding critical wildlife corridors. According to NCDOT's Eastern NC Regional Freight Mobility Plan (NCDOT, 2020), 5,000 trucks per day access US 64 in eastern North Carolina. Of the more than 440 WVCs reported in this stretch of US 64, crashes involved one semi-trailer, one truck trailer, 27 vans, 66 pickups, and 9 light trucks. In addition to these crashes that have the potential for direct effects to wildlife and vehicles, all animal crashes tend to slow traffic. All WVC crashes on US 64 are shown below. As you can see, the absence of practicable detour routes leaves few options when crashes

block US 64.

Information on the project and the importance of preserving wildlife connections will be shared with Pettigrew State Park, which operates a visitor center and hosts approximately 70,000 visitors per year.

The black bear has a special place in eastern North Carolina communities. Just west of the 64 SAFETY corridor, Plymouth, North Carolina hosted its 9th annual NC Black Bear Festival. The Washington County Travel & Tourism Authority states that the mission of the festival is to "Celebrate the fact that Eastern North Carolina has the world's largest black bears and the highest black bear densities; and to educate people about these magnificent animals."

Criterion 2.3: Innovation

The project contributes to the Innovation criterion through the rare ability to track species movements through wildlife underpasses along a coastal lowland habitat over time and document how those movements are affected with alterations in mitigation strategy. UNC Wilmington and NCWRC collected extensive data on how wildlife interacts with these US 64 underpasses and existing fence conditions. With this project, real-time data will be generated documenting the degree to which the improvements are able to influence wildlife usage of the three underpasses.

Additionally, we are looking at various innovative approaches to address fencing over hydraulic conveyances that will allow stormwater flow but restrict wildlife movement. Implementation and distinct monitoring of those designs could identify other options to incorporate into future projects.

Criterion 2.4: Education & Outreach

The project contributes to the Education and Outreach criterion by providing both academic and public audiences the opportunity to learn about wildlife corridors and wildlife crossing infrastructure. In general, tourists who venture to the Outer Banks have a keen interest in the natural world. Visitors treasure the wild horses at Corolla and Shackleford Banks, traveling to the Nags Head Woods Preserve, which hosts more than 150 species of birds and numerous other wildlife species, and many of the other preserved areas that allow visitors to interact with the natural world more closely. In addition to these locations, information stations and kiosks may also be provided at rest areas and the Alligator River and Pea Island National Wildlife Refuge visitor centers. Additionally, the Red Wolf Center is located just to the east of the project area in Columbia, NC where visitors can learn about this critically engendered species and see a pair of red wolves in a viewing enclosure open to the public. As previously noted, a further opportunity for collaboration may also occur in conjunction with the NC Black Bear Festival.

BEAR CROSSING UNDER FENCE *(NCWRC)*

CANIS SP. CROSSING UNDER FENCE *(NCWRC)*

Criterion 2.5: Monitoring & Research

The project contributes to the Monitoring and Research criterion by continuing the long-standing research along the corridor. Multiple research papers, included in the Appendix, have been prepared both before and after construction of the initial fencing and crossings in 2005. With the proposed improvements, documentation gathered post-installation will provide critical data that will further the state of knowledge on how to manage coastal wildlife corridors. Data from the 64 SAFETY pilot project will allow a long-term monitoring project to capture crucial data showing the impacts of properly designed wildlife fencing versus poorly designed or poorly maintained fencing. Wildlife crossing structures are significant investments, yet the importance of sound wildlife fencing can be overlooked. Research showing the results of wildlife fencing integrity will aid in justifying the cost associated with good wildlife fence design and maintenance.

Criterion 2.6: Survival of Species

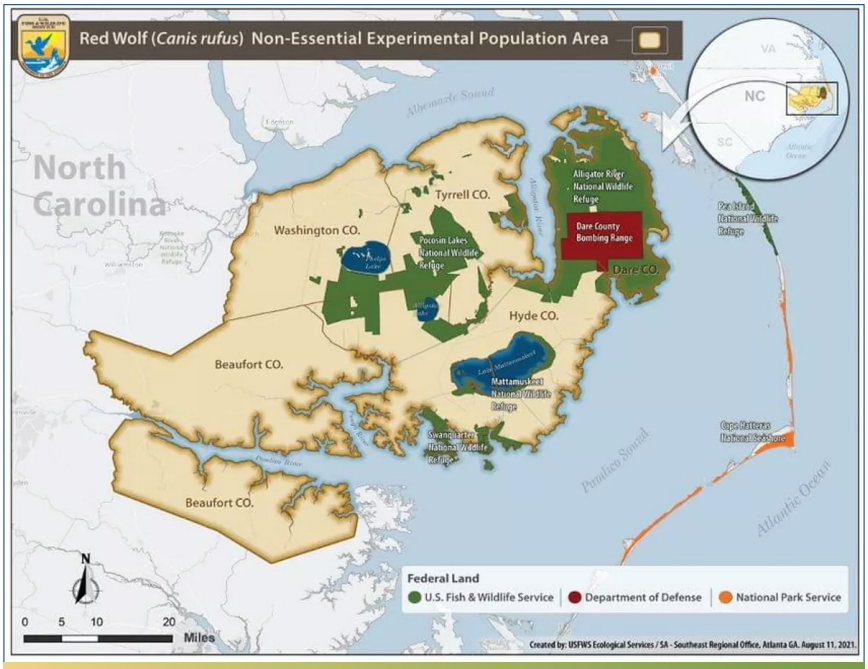
This project would contribute to the survival of the red wolf by improving safe highway crossing opportunities for the critically endangered red wolf within the area with the only wild population of red wolves in the world. Red wolves are the only wolf species endemic to the United States and were once common throughout the entire southeast.

The Red Wolf was first listed in 1967 as "threatened with extinction" under the Endangered Species Preservation Act of 1966 and is currently listed as an "endangered species" under the Act. It is a distinct canid species (National Academies of Sciences, Engineering, and Medicine 2019, p. 61) native to North America, and historically ranged throughout the southeastern US.

To prevent extinction of the species, the U.S. Fish and Wildlife Service (USFWS) established a formal recovery program in 1973 and began trapping individuals along the coastal region of the Texas-Louisiana border, their only remaining location at the time, to establish a red wolf captive breeding program, with the intention of returning the species to areas within its historic range (Service 1990, pp. 9-10). In 1980, red wolves were officially declared extinct in the wild.

Captive breeding is an essential component of red wolf recovery at great expense and effort by the 52 zoos and wildlife conservation centers that currently comprise the Red Wolf SAFE (Saving Animals From Extinction) program operating under the Association of Zoos and Aquariums. The Red Wolf SAFE program's goal is to support conservation efforts for this species by maintaining a viable population of red wolves under human care, growing education and awareness efforts, and aiding research vital to supporting recovery and management.

In the mid-1980's once there was a growing red wolf population in these facilities, it was decided that it was time to reintroduce red wolves to the wild. The Albemarle Peninsula region of northeastern North Carolina was chosen for many reasons, including the presence of the newly established Alligator River National Wildlife Refuge; rural nature of the area; somewhat limited road densities; the peninsula nature of the area that would potentially naturally limit migration in and out of the area; and lack of coyote presence



AREA INCLUDED IN THE ENC RWP POPULATION

at that time.

In 1987, four pairs of red wolves were released into the wild on Alligator River National Wildlife Refuge. As the population grew, the area now known as the Eastern North Carolina Red Wolf Population (ENC RWP) was expanded and includes public and private lands across five counties (Beaufort, Dare, Hyde, Tyrrell and Washington) for a total of approximately 1.7 million acres (Figure 2). Which includes the portion of US 64 in this proposal.

After a steady population decline between 2012 and 2019, management actions have stemmed the decline and the population has experienced a slight increase. However, the population is at risk of extirpation due to low resiliency associated with high mortality rates; risks due to demographic stochasticity characteristic of small population size; and low redundancy and representation associated with a single wild population. The

population is currently 16 known red wolves in the wild, which is the number of adult and subadult red wolves that are radio-collared and monitored on a regular basis and known to be alive out on the landscape. The estimated total population is approximately 17 to 19 red wolves in the ENC RWP. Annual release plans focus on pup fostering to increase the population numbers and genetic diversity by placing pups born in the SAFE population into a wild den when they are less than 2 weeks old and attempting to create additional breeding pairs in the wild by pairing unpaired wild red wolves with each other or pairing a wild red wolf with a red wolf from the SAFE population.

In September 2023, the U.S. Fish and Wildlife Service published a revised Red Wolf Recovery Plan which includes recovery actions to be taken in North Carolina to recover the species. Recovery Action 15 says to "Implement and monitor strategies to reduce vehicle strikes in the ENC RWP to achieve the target 50 percent reduction of mortality, as detailed in Miller et al. 2023 PVA, to facilitate an increase in the Red Wolf population." Parties listed to collaborate with to achieve this recovery action include NCDOT and NCWRC. The next step in the recovery planning process is the development of the Recovery Implementation Strategy which is currently underway and includes specific actions and activities for the ENC RWP, including activities related to reducing vehicle strike mortalities, such as pursuing opportunities for infrastructure changes.

In the 37 years since reintroduction, human caused mortality (primarily gunshot and vehicle strikes) has been the largest cause of mortality in the wild. Human caused mortality, particularly to one of the breeding pair of red wolves or from an established pack, is highly disruptive and can lead to a significant loss of reproduction success and the ability of a pack to maintain a territory. This is exacerbated at low population numbers, such as currently exist, because the availability of a suitable new red wolf mates is extremely limited.

Vehicle strike mortalities are the second leading cause of mortality since reintroduction. However, over the last 10 years, vehicle strike mortalities have increased and are the leading cause of mortality of red wolves. Within this stretch of US 64 there have been at least 2 confirmed red wolf vehicle strike mortalities and monitoring in recent years shows the crossing of US 64 in this area multiple times by multiple red wolves.

Additionally, there are state listed herpetofauna within the project area as well as multiple Species of Greatest Conservation Need as identified in North Carolina's Wildlife Action Plan. Design features incorporated into the new wildlife fence will include smaller mesh panels and culvert tie-in's that will add in restricting these smaller species from the roadway and promote use of existing structures.

PROJECT READINESS

Technical Feasibility

The project cost estimates are based on NCDOT regional expertise (Division 1) with current wildlife fencing costs for materials and installation, as well as from current final design work for the nearby, Alligator River Bridge replacement, which includes four wildlife crossings and associated wildlife fencing. The cost proposal also includes an

additional fifteen percent construction engineering and inspection cost as well as a fifteen percent contingency rate. If project costs begin to exceed estimates, adjustments will be made to stay within budget or NCDOT will investigate opportunities to provide additional funding to complete the project as proposed.

Project Schedule

Upon funding award for 64 SAFETY, NCDOT is prepared to move quickly toward implementation. No right of way acquisition is required for 64 SAFETY. NCDOT, in coordination with NCWRC, has already identified the locations and materials for fencing improvements. Design and NEPA documentation is expected to begin within 6 months of receiving funding. Construction is anticipated to begin within 1 year of receiving funding and would be complete within 2 years.

The NCDOT has designated liaisons within all necessary regulatory agencies who are assigned to work specifically on NCDOT projects. The project will take place entirely within existing NCDOT right of way. It is unlikely that there are utility conflicts in the project area, however, coordination can begin as soon as funding is announced if any are found to exist. Potential regulatory and permitting concerns have been addressed through early coordination in the site selection process and designated liaisons within the regulatory agencies will ensure streamlined coordination and timely issuance of permits.

State and Local Approvals

64 SAFETY is not programmed in the State Transportation Improvement Program, Albemarle Rural Planning Organization (ARPO) Long-Range Transportation Plan, or the State Long Range Transportation Plan. However, NCDOT has the ability to process a STIP amendment prior to obligation of funds.

Assessment of Project Risks and Mitigation Strategies

NCDOT does not anticipate any specific concerns from resource partners due to the partnership and ongoing coordination with the NCWRC regarding wildlife passage and transportation facilities.

NCDOT and NCWRC signed a Memorandum of Understanding (MOU) in April 2023 to cooperatively and collaboratively work together on project planning and coordination; public safety; maintenance and expansion of habitat connectivity and wildlife habitat

conservation; inventory, monitoring, and biological studies; impacts to wildlife due to vehicles; and information and education.

An intra-agency working group was established to accomplish these goals shortly after the MOU was signed. It recently released the NCWRC-NCDOT Wildlife Passage Guidance. The Guidance document will assist transportation planners and engineers, local and regional transportation planning organizations, other government and resource agencies, and non-profit organizations with wildlife passage planning and design based on the over twenty years of experience that NCDOT and NCWRC have in this field in NC.

Environmental Permits and Reviews

NATIONAL ENVIRONMENTAL POLICY ACT

NCDOT has already begun environmental review and regulatory coordination for 64 SAFETY as part of this application. The NEPA process for the project will begin within 1 month of receiving funding award and will be completed within 6 months. NCDOT anticipates that this project will be classified as a Categorical Exclusion (CE) based on its current Programmatic Agreement with FHWA for CEs.

64 SAFETY is not anticipated to have jurisdictional impacts and every effort will be made to continue to avoid and minimize impacts. If stream or wetland impacts are identified, NCDOT will acquire the necessary permits from the appropriate regulatory agencies. Further, the potential federal listing of tricolored bat (TCB) (*Perimyotis subflavus*) under the Endangered Species Act, which is anticipated to occur in late 2024, will not affect the project schedule. The US Fish and Wildlife Service has issued a programmatic conference opinion (PCO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the tricolored bat TCB in eastern North Carolina. The PCO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Once the TCB is officially listed, the PCO will become the programmatic biological opinion (PBO) by formal request from FHWA and USACE. The PBO will ensure compliance with Section 7 of the Endangered Species Act for approximately five years (effective through December 31, 2028) for all NCDOT projects with a federal nexus in Divisions 1-8.

PROJECT PUBLIC INVOLVEMENT

NCDOT acknowledges the importance of its obligation to provide robust public involvement throughout the decision-making process and project implementation across the state. These efforts, as directed by NCDOT, are critical to the success our projects. Following our Statewide Public Involvement Plan and in coordination with our Public Involvement Team and Communications Office, a comprehensive 64 SAFETY Public Involvement Plan (PIP) will be developed. The PIP will identify opportunities to educate the public on the purpose and need for the 64 SAFETY project as well as education on wildlife in the region and wildlife corridors and crossings. Public engagement opportunities may include meetings, stand-alone kiosks at rest areas and

visitor centers, and participation at area events.

SELECTION CONSIDERATIONS

Safety

Our proposed construction of wildlife fencing on US 64 is completely aligned with the National Roadway Safety Strategy, given the strong emphasis in our project for reducing the number of dangerous, potentially lethal crashes between vehicles and large-bodied wildlife. See Criteria 1.1 above. A properly designed system of wildlife fencing can be expected to reduce wildlife vehicle collisions by as much as 90 percent, making this one of the more effective and efficient highway safety interventions available.

Climate Change and Sustainability

The project would promote the climate resilience of the entire Coastal Plain Ecosystem. Improving habitat connectivity will increase the ability of species to seek shifting microclimates that are suitable as the climate changes. See Criteria 1.2 for more information on how the project reduces barriers between high quality habitat areas. Also, by reducing major crashes involving large mammals, the project will also serve to reduce WVC related traffic congestion and increased greenhouse gas emissions.

Equity

The proposed work on the US 64 corridor will promote urban-rural equity by marking a substantial investment in highway safety in rural Washington County NC. By reducing crashes, the proposed wildlife fencing will promote the livelihood and prosperity of rural residents who can least afford the property damage and health care implications of a high-speed collision with medium to large-bodied animals such as red wolves, bear, and deer.

The project's location within Washington County is classified by USDOT as both an Area of Persistent Poverty (APP) and Historically Disadvantaged Community (HDC), meeting Justice40 goals.

Workforce Development, Job Quality, and Wealth Creation

NCDOT has established a Disadvantaged Business Enterprise (DBE) program to address ongoing discrimination and the continuing effects of past discrimination in transportation markets nationwide. This program will be used in all aspects of project letting.

In accordance with 49 CFR Part 26 and the Special Provisions, NCDOT has established goals for participation of DBEs in USDOT-assisted contracts, as well as State-assisted

contracts. The Triennial Goals are set as follows:

- 2020 – 2022 Triennial DBE Goal for Federal Transit Administration - 1.9%
- 2021 – 2023 Triennial DBE Goal for Federal Aviation Administration - 8.9%
- 2021 – 2023 Triennial Combined Goal for NCDOT Division of Aviation (state funded projects) - 10.7%
- 2022 – 2024 Triennial DBE Goal for FHWA - 13.0%
- 2019 – 2021 Triennial Combined Goal for NCDOT (state funded projects) - 12.3% (revising soon).

On July 19, 2024, NCDOT reported that for a third straight year, the Department awarded a record amount of funding to small businesses. "NCDOT awarded nearly $65.4 million to small business enterprises (SBEs) through contracts under $1 million in the 2024 fiscal year, generating a 35 percent increase over the previous record of about $48.4 million in 2023 and double the target of $28 million."

NCDOT is also committed to improving the depth of the transportation talent pool. Through the NCDOT Office of Civil Rights (OCR), the Department offers an On-the-Job Training (OJT) program. As of 2021, the OJT program included:

- 103 participating contractors
- 33 contractors with an assigned trainee goal
- 5 contractors without an assigned trainee goal
- 111 trainees enrolled.

The Department operates Accelerated Boot Camps (ABCs), which are accelerated, two-week versions of the Highway Construction Trades Academy (HCTA), in NCDOT's 14 Divisions as well as full, six-week versions of the program. HCTAs and ABCs are customized to the local area and are designed to train participants and connect the talent pipeline to new employment. Currently, typical subjects may include:

- Construction math
- OSHA 10, CPR/First Aid
- Flagger certifications
- Introduction to Earthmoving and Heavy Equipment Training
- Introduction to Commercial Driver's License (CDL).

Participants in OJT or HCTAs can receive Advanced Highway Skills Training (AdT) in current/developing needs areas. This includes bridgework, disaster recovery, EV charging station installation, and CDL for women. The Department is actively examining expansion of these programs to include additional subjects, including broadband installation and maintenance.

NCDOT's OCR will explore the possibility of providing HCTA, ACTs, and/or AdTs in the Division during construction. The Department will encourage the use of DBE firms as part of the letting/administration process.