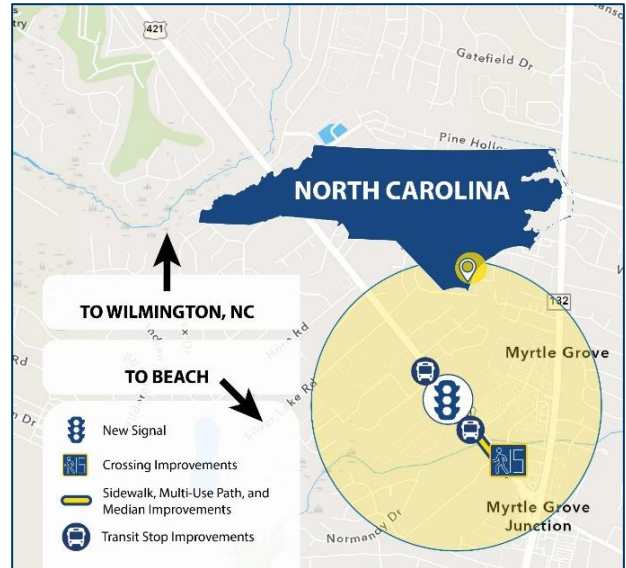




## Project Description

### Project Overview

[LINK NC](#)—which makes critical connections in a busy, mixed-use corridor on the outskirts of Wilmington, North Carolina known as “Monkey Junction”—will improve safety and access for residents and low-income communities to essential services like grocery stores, jobs, transit, schools, and healthcare. The Better Utilizing Investments to Leverage Development (BUILD) grant will allow the North Carolina Department of Transportation (NCDOT) to implement new sidewalks, a multi-use path (MUP), new signalized pedestrian crossings, lighting improvements, ADA improvements, and new transit shelters—all of which are much-needed safety improvements to Monkey Junction.



[LINK NC](#) uses proven safety solutions to maintain critical safety infrastructure, minimize project costs and impacts to the environment, and provide this important connection between residents and needs. The project includes:

- New sidewalk connecting two main intersections adjacent to a low-income residential neighborhood,
- A MUP connecting two commercial driveways adjacent to a discount retail shopping center and a gas station convenience store with high pedestrian and bicycle volumes,
- New signalized pedestrian crossings at both primary intersections, and
- New transit shelters along a priority local bus route.

The [LINK NC project](#) has faced financial hurdles since its inception, with construction costs escalating to the point that the project seemed infeasible – the BUILD grant will fund a project scope that balances critical needs with financial responsibility and efficiently stretches the impact of state safety funds to implement a much-needed project. At its core, [LINK NC](#) addresses a community need in a way that is fundable, implementable, and applies countermeasures with proven crash reduction for pedestrian fatalities.

*LINK NC is the result of years of thoughtful planning to address the critical safety issues that one resident called “the result of no planning”.*

## Project History

[LINK NC](#) covers a 0.29-mile stretch of Carolina Beach Road (US 421). After a fatal crash investigation in **2016**, NCDOT completed a pedestrian safety study and identified stark safety concerns for pedestrians along the Monkey Junction corridor. NCDOT began coordinating with residents, the Wilmington Metropolitan Planning Organization (WMPO), New Hanover County (NHC), and other partners to identify a collective vision for safety intervention in this corridor. This coordination included public engagement, meetings with stakeholders, and drafting design concepts. By **2019**, the partners agreed upon a vision for the corridor aligned with local and regional short- and long-range planning objectives. Then, 2020 and the COVID-19 pandemic shifted funding priorities nationally, which caused many projects to be delayed, postponed, or shifted to uncommitted. Following **2020**, economic conditions were uncertain, with rising construction costs and a decrease in vehicle miles traveled. Despite the shifts in economic and travel trends, Monkey Junction safety concerns for pedestrians and bicyclists persisted. Because of this, the LINK NC corridor remained a priority for NCDOT and local partners. NCDOT has worked diligently to find a solution that minimizes the cost burden of the project amidst continued cost escalations and still addresses the critical safety needs of this community. [LINK NC is that solution](#) – a project that is supported by the community, addresses the safety needs of the corridor, and uses thoughtful design to minimize cost burdens.

## Project Location

[LINK NC](#) is located in an area of unincorporated New Hanover County known as Monkey Junction. Monkey Junction centers on the intersection of US 421 and College Road, two high-volume corridors. The area is named Monkey Junction for a former service station and grocery store on US 421 popular for having monkeys that entertained customers. The LINK NC project is on US 421, just north of the intersection with College Road. The US 421 corridor is a major route for accessing beach tourism, the Port of Wilmington, thousands of homes, grocery and discount retail, and service centers.

The LINK NC corridor connects a manufactured home neighborhood on the south side of US 421 with critical commercial and transit infrastructure on the north. While the census data covering this area does not trigger an Area of Persistent Poverty, the Census-level poverty data for this neighborhood is muted by the surrounding suburban-style, single family home land use, and recent new developments. This neighborhood is made up of more than 100 manufactured homes and includes low-income residents, many youths, whose school bus picks up along the LINK NC corridor, and families and workers who cross the corridor to access transit and commerce. [The LINK NC improvements](#), including sidewalks, signalized crossings, lighting, and transit shelters, will greatly improve safety for this group of New Hanover County residents.

## Project Details

US 421 in this segment is a 45 MPH, 4-lane, divided facility. LINK NC proposes to add crossings, sidewalks, and a new signal to create a safer pedestrian environment and reduce crashes for all roadway users. These improvements were identified as the result of investigations

following a series of pedestrian fatalities. LINK NC improvements prioritize limiting the potential conflict between pedestrians and vehicles by separating them in time and space through signalized crossings and new sidewalks and transit facilities. LINK NC projects are detailed below and shown in Figure 4.

## Section 1. Intersection of Antoinette Dr & US 421

(See location “A” on Figure 4 Map on page 5)

The project corridor is bounded on the southern end at this signalized intersection. This intersection serves as a primary access for a large residential neighborhood nestled between US 421 and College Road. It’s also a key crossing point for pedestrians to access commercial services on either side of US 421 – including a convenience store, check cashing, bar and barber shop on the south, and grocery, retail, pharmacy, dollar store, and restaurants on the north. LINK NC improvements at this intersection include adding pedestrian signal heads and high-visibility crosswalks on all approaches, as well as paving ADA accessible curb cuts on all corners.

Additional improvements include overhead lighting enhancements for visibility. Improvements at this intersection include:

- a. New Pedestrian Countdown Signals
- b. New Crosswalks
- c. Enhanced Lighting
- d. Overhead Lighting



Figure 1. Overhead photo of LINK NC corridor showing worn paths in the grass where sidewalk and MUP will be built. (Src: Nearmap)

## Section 2. Intersection of northernmost shopping center driveway & US 421

(See location “B” in Figure 4 Map on page 5)

The project corridor is bounded on the northern end with a new traffic signal. This intersection is a direct connection between the manufactured home neighborhood and the shopping center. This

is the site of five pedestrian and bicyclist crashes since 2014, including one fatality and one serious injury. This is currently a Left-In Right-Out Reduced Conflict U-Turn (RCUT). LINK NC will add a pedestrian actuated traffic signal at this RCUT with lighting improvements and high visibility “z” crosswalks. This project will also move the southbound/ eastbound transit stop to within 100 ft of the new signal, and add a new transit stop in the northbound/westbound direction within 100 ft of the crosswalk. Both transit stops will be upgraded with shelters, lighting, landing pads, and ADA accessibility. Improvements at this intersection include:

- e. New Signal
- f. New Crosswalks
- g. Enhanced Lighting
- h. New Transit Shelters



Figure 2. Pedestrian crossing at the shopping center driveway with bicyclist in the background (Src: Google, Jan 2024)

### Section 3. Linear improvements

(see location “C” on Figure 4 Map on page 5)

The two intersections detailed above are the primary connection points for residents to cross US 421 and access essential services on both sides of US 421. To improve connectivity and safety between the intersections, LINK NC will add approximately 1,900 linear ft of sidewalk between Antoinette Drive and Archmil Way, a residential access road just north of the new signal, along the southern/western frontage of US 421. LINK NC will add approximately 800 ft of MUP between the two primary shopping center driveways along the northern frontage of US 421. This is a critical stretch of pedestrian and bicyclist travel in this corridor, and one that is identified in the region’s long-range plans for greater MUP connectivity. This improvement will include a connection to a new transit stop just north of the shopping center driveway. Lastly, LINK NC will add approximately 3,800 linear ft of median fencing. This median fencing will extend beyond the primary extents of the corridor, from College Road to 220 feet north of Willoughby Park Road. This enhancement will further emphasize the safety of all road users by minimizing the opportunity for pedestrians and bicyclists to cross US 421 outside of the new, safer crossings, and by minimizing the chance of head-on, frontal impact collisions of vehicles in the corridor.

Since 2014, there have been 9 pedestrian and bicyclist crashes in the stretch of corridor between the two intersections, including three fatalities and three serious injuries. The linear improvements in LINK NC will provide safe facilities along this stretch of the corridor and will direct crossings to the improved intersections. The linear improvements include:

- i. 5-Foot-Wide Sidewalk (1,900 ft)
- j. 10-Foot-Wide MUP (800 ft)
- k. Fencing (3,800 ft)



Figure 3 Antoinette Drive intersection, looking east across US 421 (Src: Google Streetview)

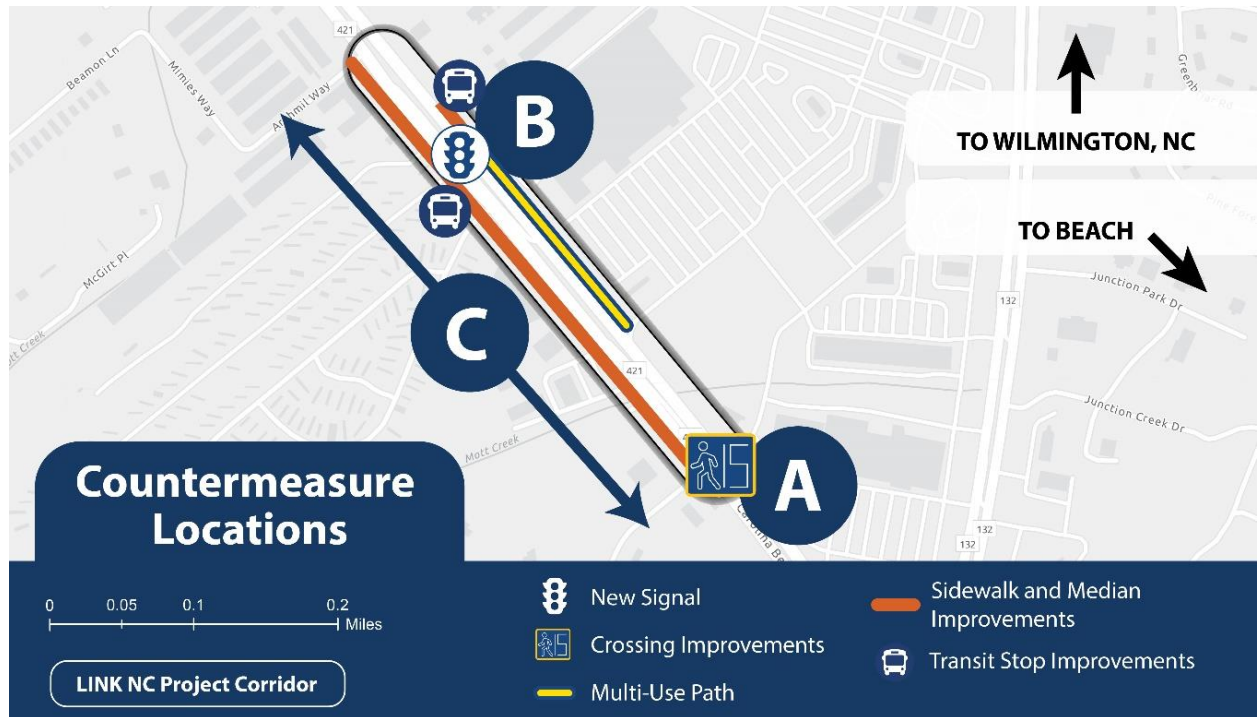


Figure 4. LINK NC Project Countermeasure Locations