



Harnett County Greenway Feasibility Studies

Draft Report

October 2025



Harnett
COUNTY
NORTH CAROLINA

alta

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Table of Contents

- 1**
Project Overview.....3
- 2**
Opportunities and Barriers.....9
- 3**
Preferred Alignment and Alternatives.....15
- 4**
Action Plan.....25

1

Project Overview



Study Area and Process Overview

Harnett County is studying the feasibility of greenway trail connections for walking and bicycling between Lillington, Campbell University, Coats, and the Dunn-Erwin Rail Trail.

Project Purpose

The purpose of this study is to assess the feasibility of alternative routes within these corridors, identify preferred routes, and define specific next steps for project phasing.

Process Overview

February 2025
Base Map Development
and Committee Meeting #1

February-April 2025
Opportunities and
Barriers Analysis

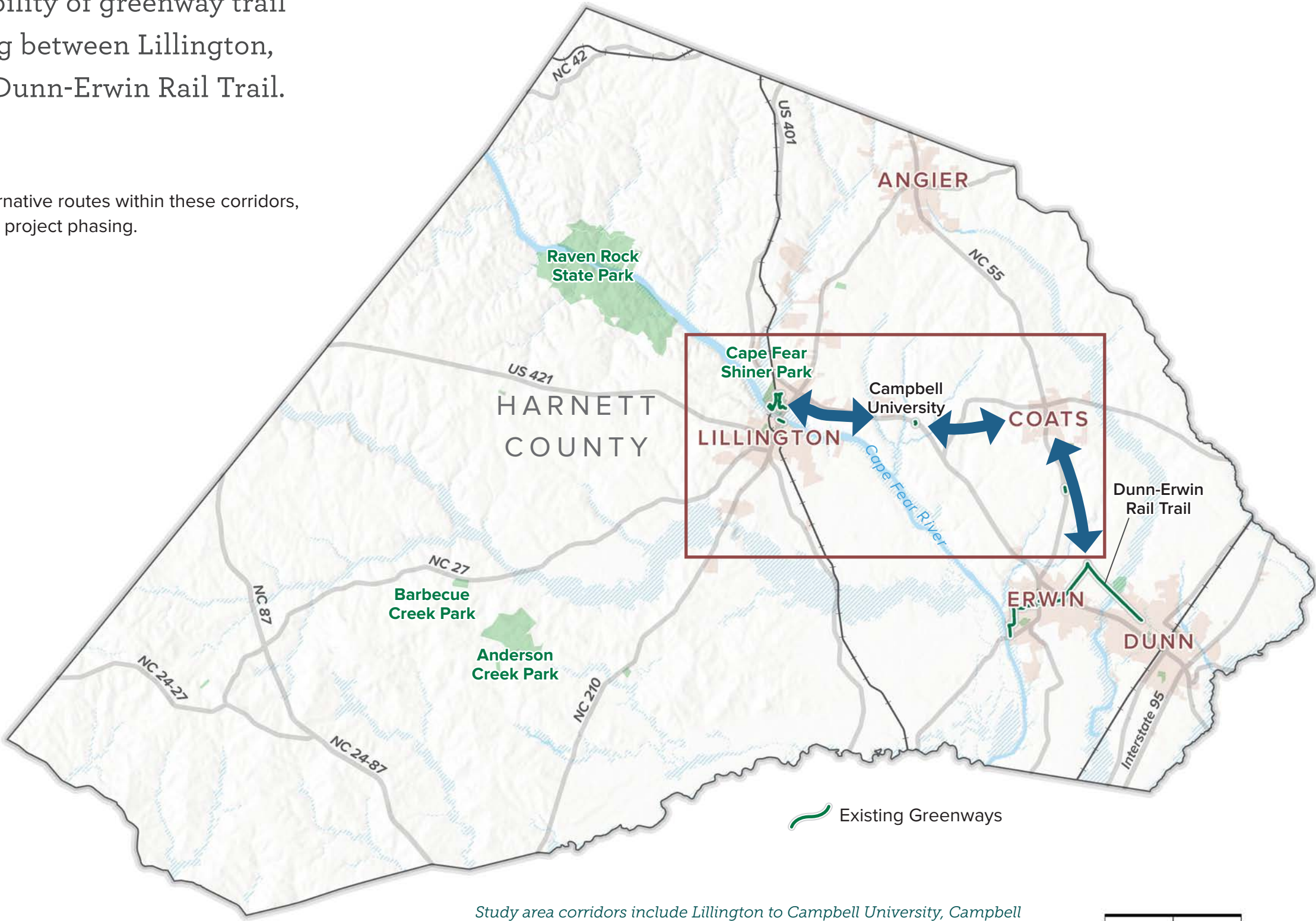
April-June 2025
Preferred Alignments and
Committee Meeting #2

June-August 2025
Action Plan and
Draft Document

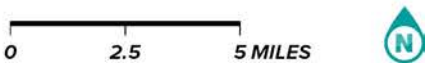
August-October 2025
Final Study and
Committee Meeting #3

2026 Onward
Funding, Permitting, Design,
and Construction

Public Survey and Partner Engagement



Study area corridors include Lillington to Campbell University, Campbell University to Coats, and Coats to the Dunn-Erwin Rail Trail.



Project Background

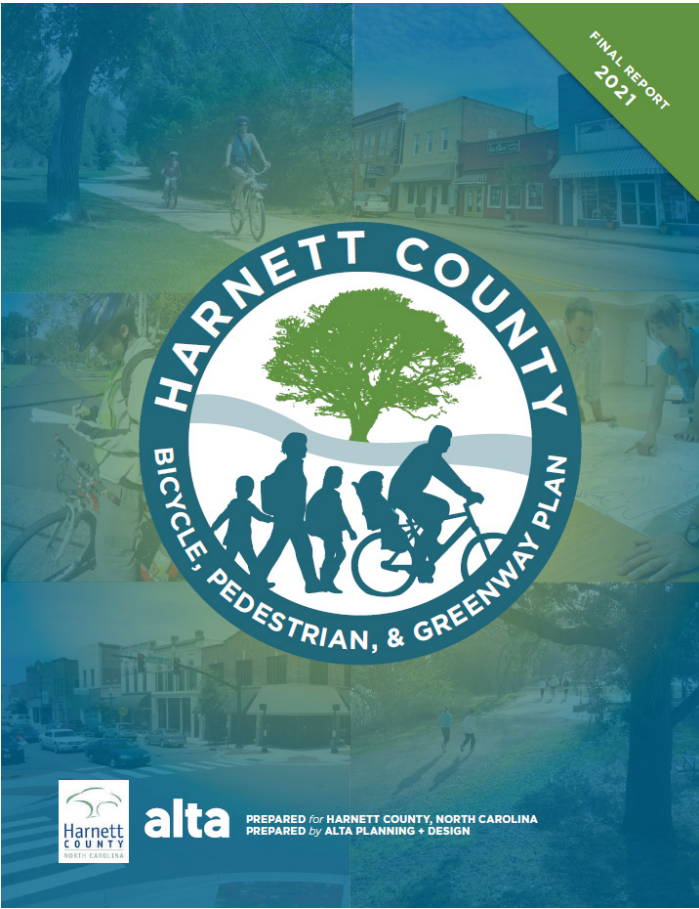
Harnett County leadership, staff, and residents identified the proposed trail segments in this study as priorities within adopted plans.

The Harnett County Bicycle, Pedestrian, and Greenway Plan (2021)

This plan focuses on bicycle, pedestrian, and greenway routes and trails, detailing a countywide system. The walking and biking trail network will link parks, schools, municipalities, cultural points of interest, and residential areas within Harnett County, and will be designed to connect to surrounding counties. This is a community supported plan that included broad public input.

The proposed network is a result of a collaborative planning process that involved a review of recent and past planning efforts, public engagement, data collection, and technical analysis. Specifically, the basis of recommendations in the plan included:

- Committee and Public Input
- Connecting Destinations
- Mapping Analysis
- Previous Planning
- Project Prioritization



Top priority trail project segments from the 2021 plan include:

1. Raven Rock State Park to Lillington River Park (design underway to S River Rd Trailhead)
2. Lillington to Campbell University (featured in this 2025 feasibility study)
3. Campbell University to Coats (featured in this 2025 feasibility study)
4. Coats to Dunn-Erwin Rail Trail (featured in this 2025 feasibility study)



Other Previous Plans That Support the Trail Corridors in This Study

Most of these and other past plans are summarized in Chapter 1 of the 2021 *Harnett County Bicycle, Pedestrian, and Greenway Plan*. Some highlights relevant to this 2025 study include:

- *Harnett Horizons 2040 Comprehensive Plan* (2025): The updated Comprehensive Plan supports investment in greenways and highlights the corridors detailed in this feasibility study as top priorities.
- *Lillington Pedestrian Plan* (2020): The plan features proposed routing for trail connections through downtown, including connections over the Cape Fear River to the Harnett County Government Complex.
- *The Great Trails State Plan* (2020): This plan identifies a proposed network of shared use paths connecting to every county in North Carolina, including connecting Lillington to Raven Rock State Park and connections to the East Coast Greenway Corridor heading north and south from the eastern side of Harnett County.

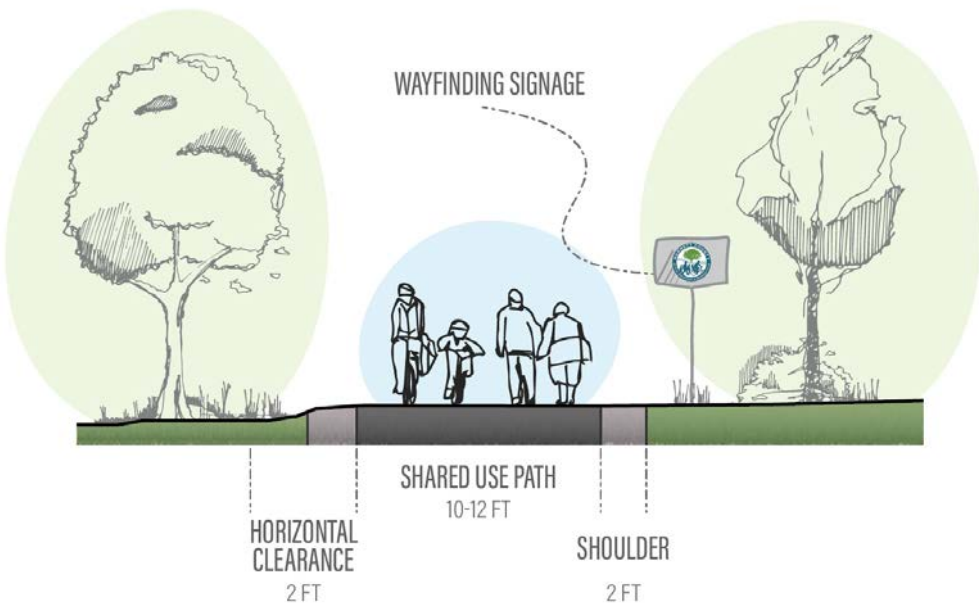
- *Campbell University Pollinator Meadows & River Park* (2020): This plan called for a series of pollinator meadows and hiking trails on the University's 325-acre abandoned "back-nine" golf course along the Cape Fear River. The plan is now outdated, but it demonstrates the original vision for trails in this area.
- *Sandhills Regional Bicycle Plan* (2019): The plan identifies the potential connection between Raven Rock State Park and downtown Lillington, as well as the connection to Campbell University from Lillington via a shared use path.
- *Northwest Harnett Small Area Plan* (2019): This plan recommends multi-use paths connecting Lillington and Campbell University, among other regional destinations.
- *Harnett County Comprehensive Parks, Recreation, Greenway, and Blueways Master Plan* (2017): This plan outlines greenway and blueway connections with countywide strategies to enhance the effectiveness of recreational services.
- *Grow Harnett County Comprehensive Growth Plan* (2015): The plan recognizes the need to develop a countywide greenway system, providing multimodal transportation options.

Greenway Trail Types

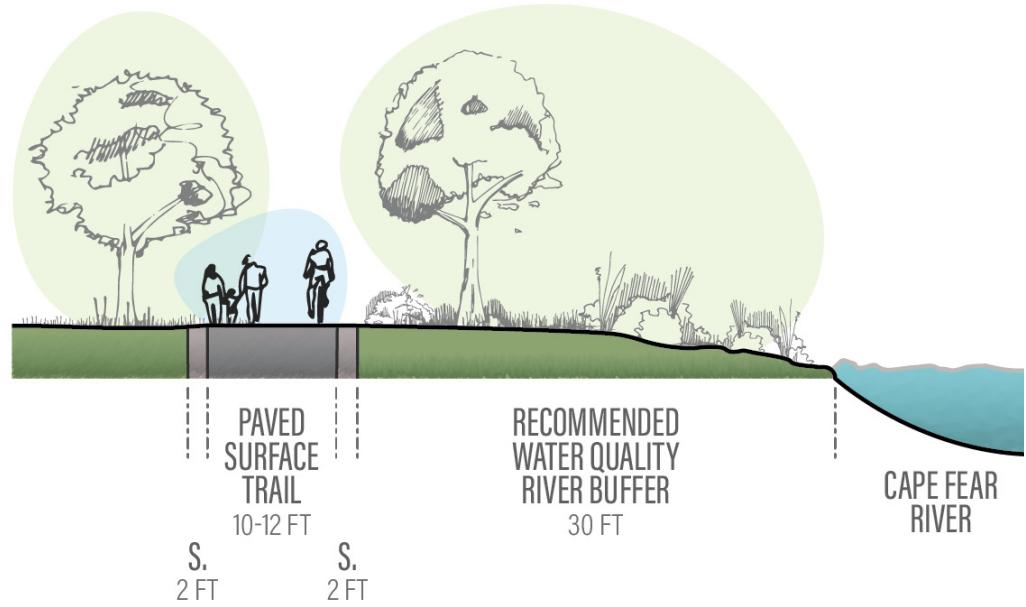
There are multiple unique trail cross-sections that will be required to complete the trail segments in this study, depending on the context of each specific segment.

Most of these cross-sections fall under the umbrella of shared use paths. A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Please refer to Chapter 3 and Appendix A of the 2021 *Harnett County Bicycle, Pedestrian, and Greenway Plan* for further design guidance.

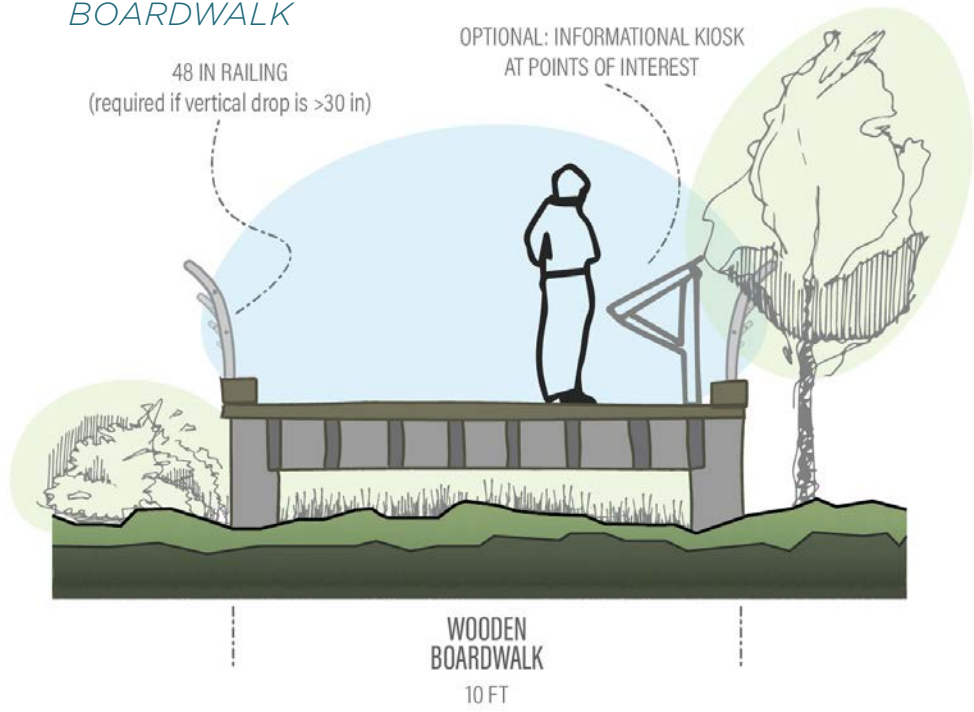
SHARED USE PATH



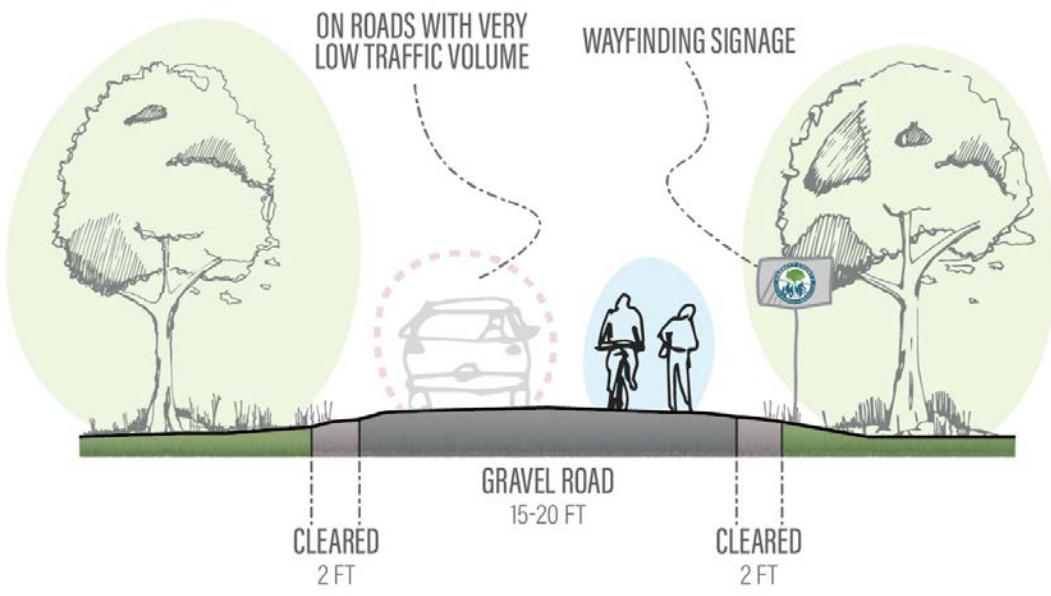
RIVER ADJACENT TRAIL



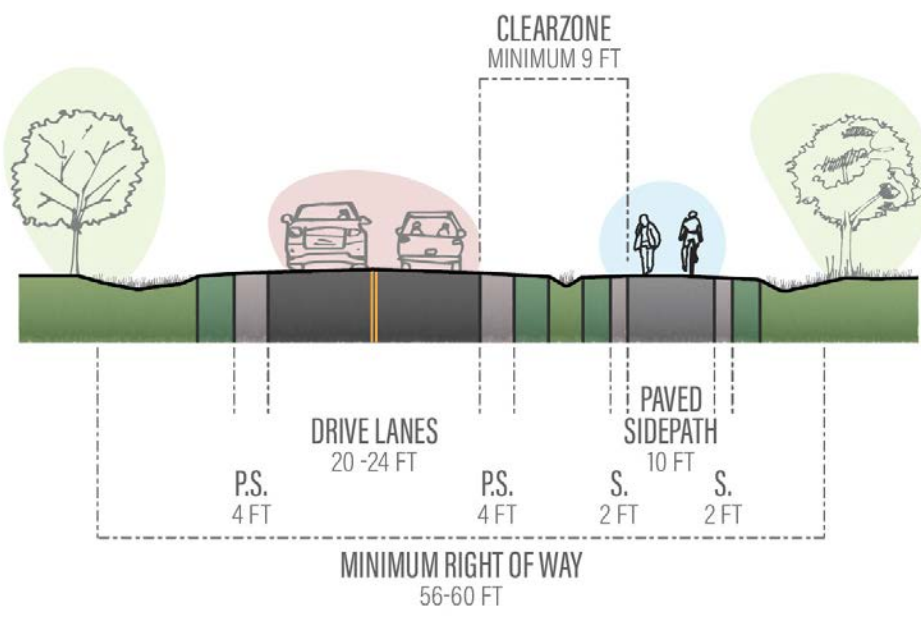
BOARDWALK



GRAVEL ROAD



MINOR HIGHWAY SIDEPATH



NCDOT's typical cross-sections include guidance for sidepaths along numerous highway cross-section types (from two-lane to six-lane). Please see the overview of NCDOT's typical cross-sections in the 2021 *Harnett County Bicycle, Pedestrian, and Greenway Plan* (p. 38).

Stakeholder and Public Engagement Approach

The goals of engagement were to understand the public’s priorities and concerns about the trail corridors generally, and to request specific feedback on trail design features and amenities.

This page and the following page highlight the process and key feedback, including some highlights from the original countywide plan.



STEERING COMMITTEE

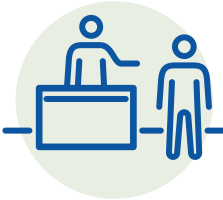
The steering committee was made up of representatives from Harnett County, the Parks and Recreation Advisory Committee, Town of Lillington, Town of Coats, Campbell University, North Carolina Department of Transportation (NCDOT), Capital Area Metropolitan Planning Organization (CAMPO), and the Fayetteville Area Metropolitan Planning Organization (FAMPO).



STAKEHOLDER INTERVIEWS

The project team conducted small group interviews with the following groups.

- ▶ **Campbell University:** Discussed constraints to be aware of, such as proximity to dorms; addressed crime and safety questions; discussed likely trail users (families, students, neighbors using the trail for exercise and getting outdoors); identified some pinch points for trail routing and potential solutions.
- ▶ **Town of Coats and Coats Area Chamber of Commerce:** Discussed the idea of a featured trail segment through downtown Coats, and some of the likely routing options and constraints; also discussed some aspects of potential next steps.
- ▶ **NCDOT Division 6, Town of Lillington, Greenfield Communities:** Discussed opportunities and constraints related to private property, NCDOT rights-of-way (ROWs), rail crossings, Capeton development connectivity, the N Main Street bridge, and routes for connectivity.
- ▶ **Harnett County Solid Waste:** Discussed opportunities and constraints for trail routing near the solid waste facility.
- ▶ **Rail Owner/Operator:** Discussed potential options for crossing under the rail line through Cape Fear Shiner Park.



PUBLIC OPEN HOUSE EVENTS

The project team promoted and hosted two public open house events, providing opportunities to answer questions and share information about the project. The open houses were held in May 2025 and [TBD] 2025, at the Harnett County Library and Resource Center. .



PROJECT WEBPAGE

The Harnett County website hosted a webpage dedicated to the project, with background information and links to project resources and participation opportunities.



PUBLIC SURVEY

The survey was available as a hard copy and online from May to July 2025. In all, 61 people completed the survey.



Public Engagement Summary

KEY THEME: GREENWAY OPPORTUNITIES AND QUALITY OF LIFE

Many responses to the open-ended survey question, *"What else would you like to share about this study? Do you support the idea of these greenway trail connections?"*, highlighted the importance of creating and protecting space for greenways as growth into northern Harnett County continues at a rapid pace. Respondents cited greenways as a key element of a high quality of life through active living.

“Yes, I fully support trail connectivity. With the massive number of new homes in the county, expanded running trails are a great way to promote health and foster community activities (running/walking clubs, sponsored running events). Likewise, trails serve a significantly wide range of ages from the county population.” —Public survey respondent

“I believe it would have a profound impact on the mental and physical health of the community and make the area a more desirable place to live and play.” —Public survey respondent

“I have been eagerly awaiting the development of these greenways since I first heard of them. I believe that we have neglected our opportunities to develop trails along the Cape Fear River, a wonderful natural resource.” —Public survey respondent



“What greenway trail features are most important to you?”

Respondents could select multiple answers; top four results shown.

- ▶ **81%** Parking at trailheads
- ▶ **69%** Separation from roadways
- ▶ **65%** Shade along the trail
- ▶ **60%** Water fountains/restrooms at trailheads



“What are the most important benefits of greenway trails?”

Respondents could select multiple answers.

- ▶ **93%** Recreation/health/fitness
- ▶ **82%** Access to nature and the outdoors
- ▶ **57%** Economic development/quality of life
- ▶ **51%** Wildlife habitat/water quality
- ▶ **41%** Transportation/connectivity to destinations

87%

of respondents said the development of greenway trails in Harnett County is **“very important”** to them.

“This connection is very much needed, especially with the students at Campbell University and these trails connecting them to businesses in Lillington or Coats. I see a lot of individuals running along road shoulders on Leslie Campbell Ave and Hwy 27. It's not currently very safe to do this once you are outside of the sidewalk paths at Campbell, and it would be nice to be able to walk adjacent to Hwy 421 towards Lillington and Hwy 27 towards Coats without worrying about getting hit by vehicles.” —Public survey respondent

2

Opportunities and Barriers



Opportunities and Barriers Overview

These project corridors offer incredible opportunities for connectivity and partnerships, while still presenting some common trail development challenges that require careful coordination and design work to overcome.

Key Opportunities

POTENTIAL TRAIL UNDERPASSES

Both the active railroad and the N Main Street bridge have potential for grade-separated crossings along the Cape Fear River. The trail under-crossings would have to be carefully coordinated through design, permitting, and construction with railroad and highway owners and operators.



Existing conditions along the Cape Fear River underneath the railroad and the N Main Street bridge.

POTENTIAL PARTNERSHIPS FOR TRAIL ROUTING AND DEVELOPMENT

Key partners along these corridors include Harnett County, Lillington, Coats, Campbell University, the developers of Capeton (Greenfield Communities), and NCDOT. Each of these groups has expressed interest in the potential for trails in the study area, and in the many benefits of trails and greenways.

POTENTIAL FOR TRAILS AS ECONOMIC DEVELOPMENT

A key trail benefit, especially in the Town of Coats, could be the potential for economic development. Downtown Coats has a unique opportunity to use their existing trail ROW to partner with nearby landowners and businesses to create a cultural and historic trail through the heart of downtown Coats.



Existing conditions in downtown Coats near the former railroad corridor.

Key Barriers

ENVIRONMENTAL CONSTRAINTS

Examples include the Cape Fear River's wide floodway, at least 15 creek crossings, and topographic challenges in the vicinity of larger creeks, such as Buies Creek.



Existing conditions along US 421, looking west toward W Buies Creek.

EASEMENTS NEEDED FOR TRAIL RIGHT-OF-WAY (ROW)

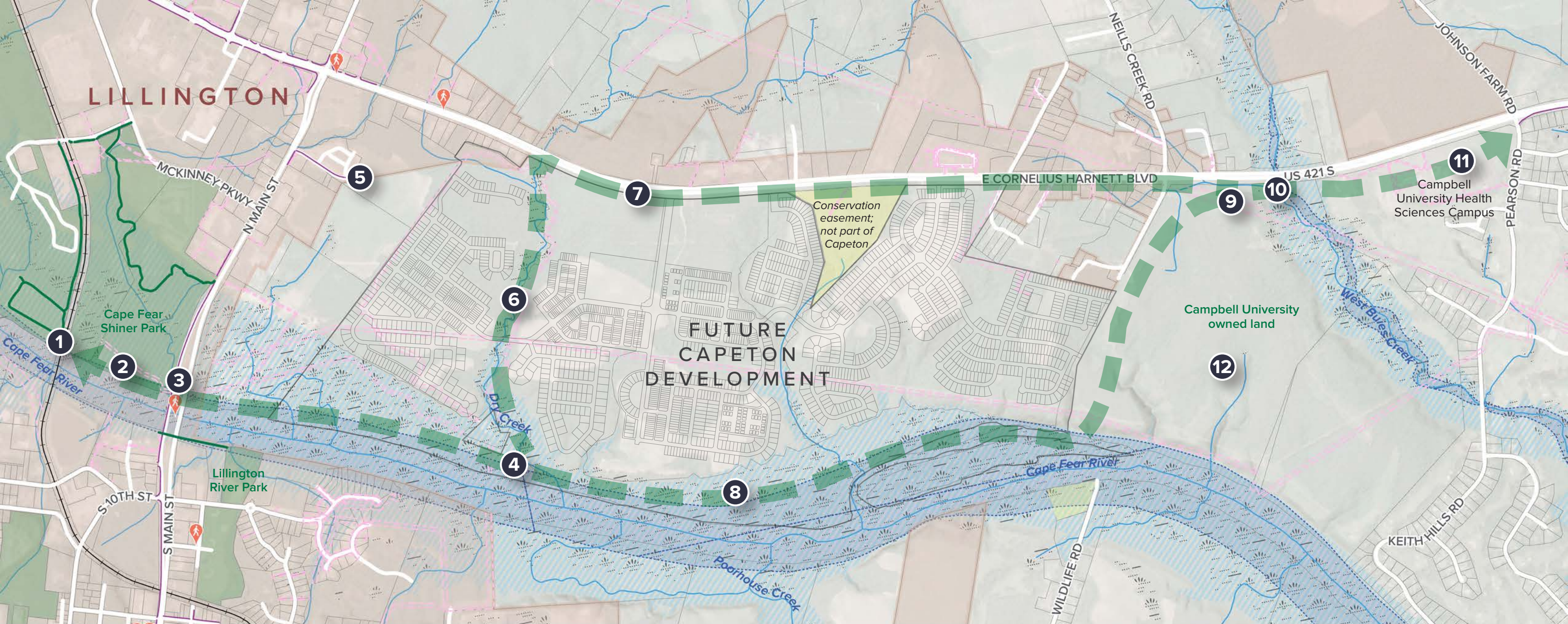
Like any trail project, these corridors will require landowner negotiations (with willing and interested landowners) for connectivity to be achieved in key sections of trail. There may be alternate routes or trail types that could be used in some cases where a trail easement is not possible.

DRAINAGE AND UTILITIES ALONG PROPOSED SIDEPATHS

The section from Campbell University to Coats, in particular, includes long sections of proposed sidepath trail that are somewhat constrained by existing ROW, drainage, and utilities. These constraints will make it challenging to design and develop a trail that still provides a high-quality user experience (e.g., comfortable separation from motor vehicles with a landscape buffer).



Existing conditions along NC 27 near Thorntons Creek, looking east toward Coats.



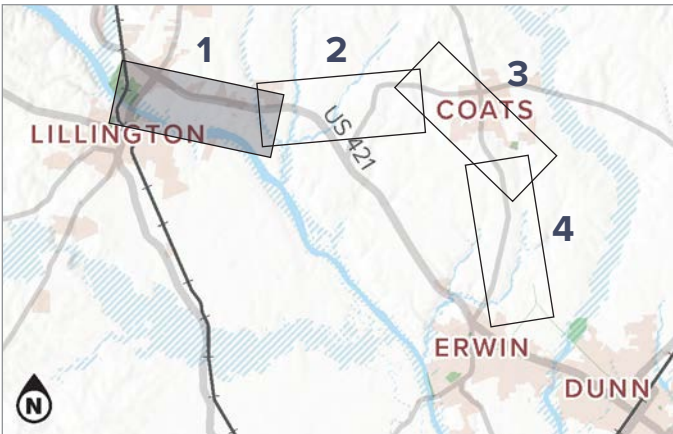
Opportunities and Barriers: Map 1

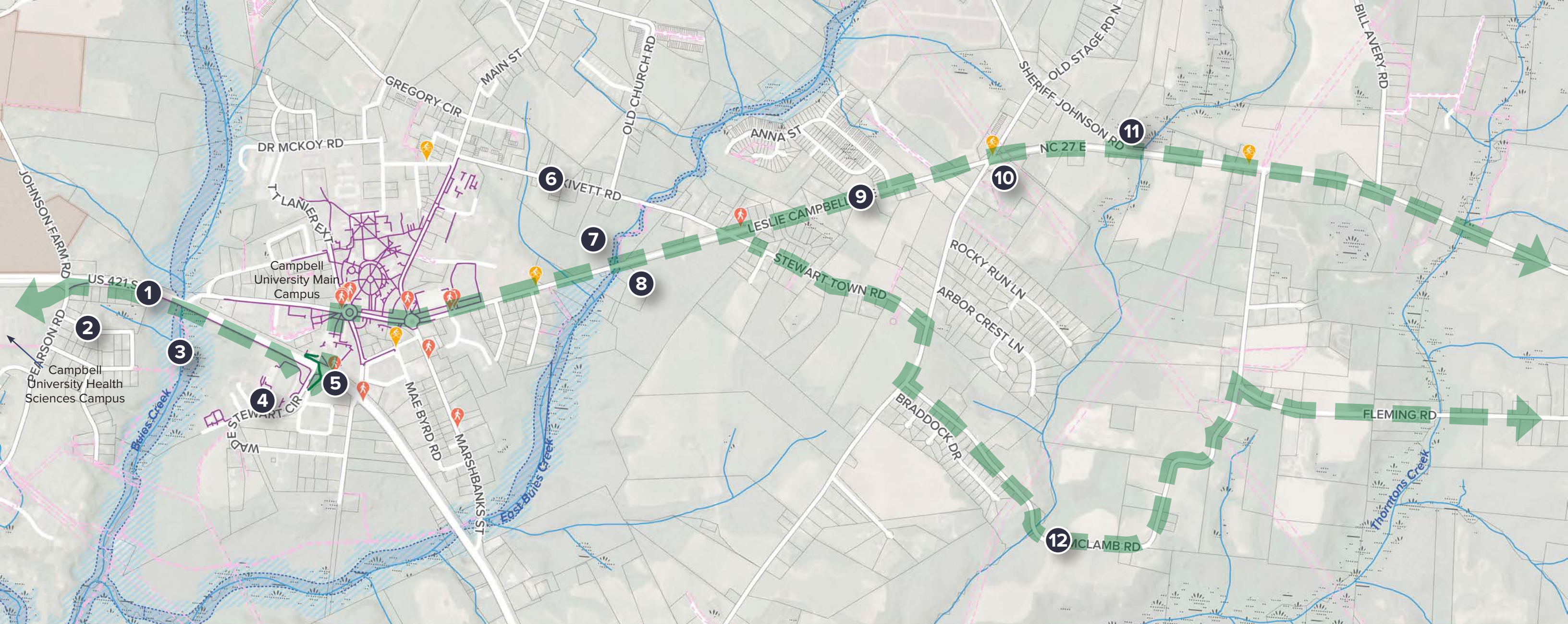
- 1** Elevated railroad has sufficient space for a greenway to cross under in several locations.
- 2** Routing will depend on wetland delineation.
- 3** Sufficient space for a greenway to cross under the bridge within NCDOT ROW; an encroachment agreement would be needed.
- 4** Boardwalk may be needed through wetlands.
- 5** Long-term opportunity for sidepaths on future roadways connecting to Capeton.
- 6** Opportunity for greenway along Dry Creek as part of development.
- 7** Sidepath required to be built as part of Capeton development.
- 8** Town of Lillington and Capeton development plans include greenway along Cape Fear River.
- 9** Duke Energy power lines.
- 10** Large crossing of W Buies Creek needed.
- 11** Flat area along Health Sciences Campus buildings could accommodate greenway with connections to buildings.
- 12** Old golf course site with existing trails and pollinator gardens (Campbell University).

LEGEND

- Municipal Boundaries
- Parcels
- Parks
- Conservation Easements
- Easements
- Streams
- Wetlands
- 100-Year Floodplain
- Floodway
- Existing Shared Use Path
- Existing Sidewalk
- Pedestrian Crashes
- Bike Crashes
- Route from 2021 Harnett County Greenway Plan

CORRIDOR SECTION MAPS





Opportunities and Barriers: Map 2

- 1

Widening the existing sidewalk into a greenway would require significant expenses (re-grading, potential ROW acquisition, and bridging Buies Creek).
- 2

An alternative connection could be explored, partly using low-traffic neighborhood streets.
- 3

A greenway route somewhat parallel and south of US 421 could be an opportunity, but trail easement ROW and a bridge over Buies Creek would still be needed.
- 4

An alternative connection could also be explored near Barker-Lane Stadium.
- 5

Existing greenway tunnel under US 421.
- 6

Sidepath on Kivett Rd would be challenging due to narrow ROW and number of property owners.
- 7

Existing Campbell University cross country trails.
- 8

Wide ROW on both sides of Leslie Campbell Ave.
- 9

East of Stewart Town Rd, ROW varies from 60 to 100 feet.
- 10

Future roundabout.
- 11

Future reconfiguration: Sheriff Johnson Rd will dead-end instead of intersecting Leslie Campbell Ave.
- 12

Stewart Town Rd, McLamb Rd, and Fleming Rd are low-traffic routes used by Campbell cross country runners; NC 27 has higher traffic volumes and speeds.

LEGEND

- Municipal Boundaries

Parcels

Easements

Streams

Wetlands

100-Year Floodplain

Floodway
- Existing Shared Use Path

Existing Sidewalk

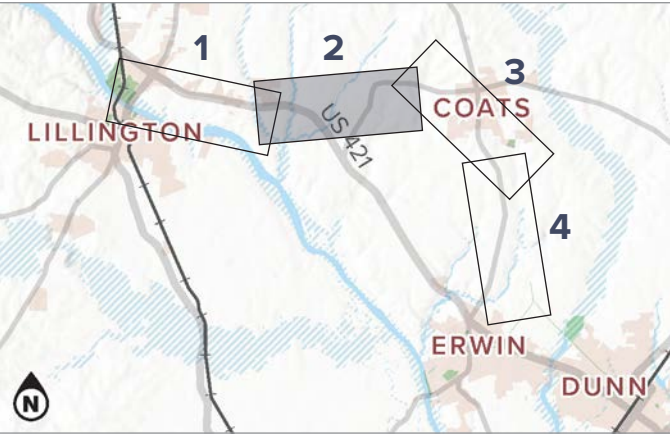
Pedestrian Crashes

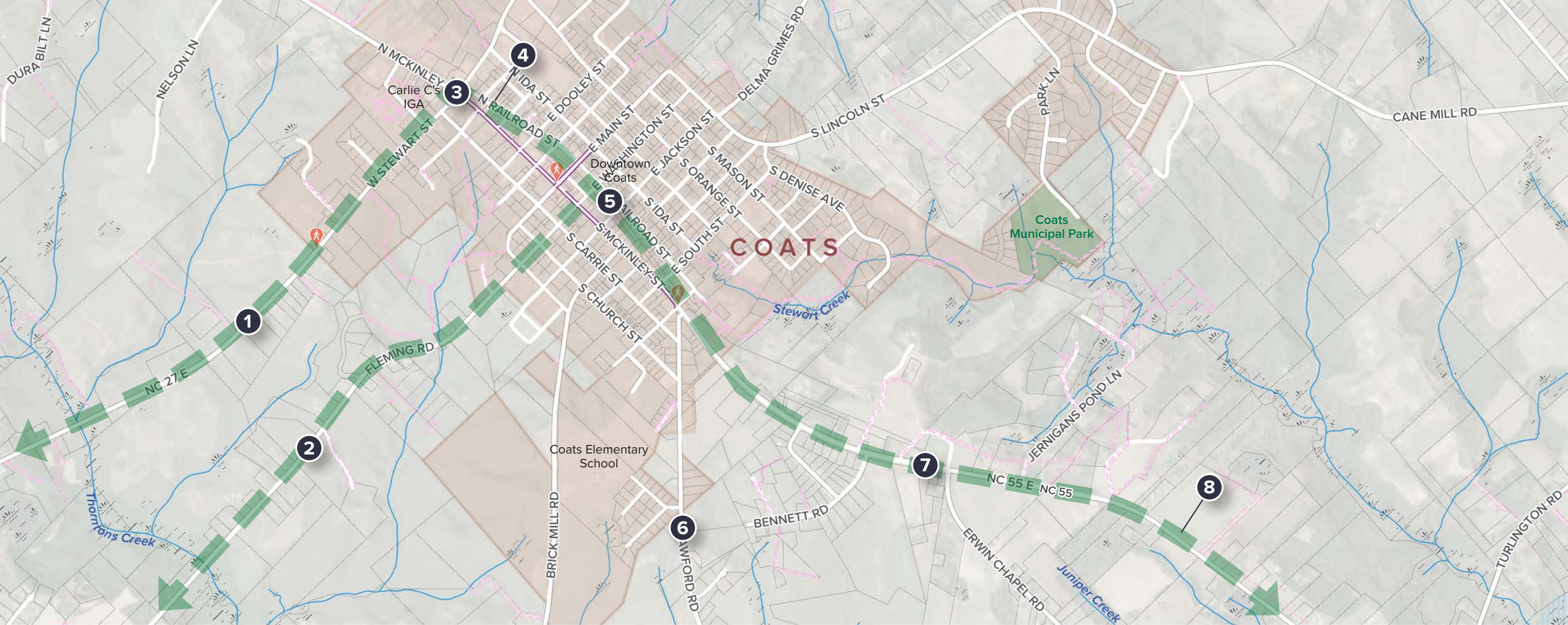
Bike Crashes

Route from 2021 Harnett County Greenway Plan



CORRIDOR SECTION MAPS





Opportunities and Barriers: Map 3

- 1

ROW approx. 60 feet.
- 2

Fleming is an opportunity for on-road back roads connection between Campbell University and Coats
- 3

Stewart St/McKinley St intersection lacks pedestrian signals and high-visibility crosswalks.
- 4

Town-owned parcels.
- 5

Rail corridor in downtown Coats is owned by Town and several private property owners; opportunity for linear park.
- 6

Lower traffic volume road that makes a back roads connection toward Erwin.
- 7

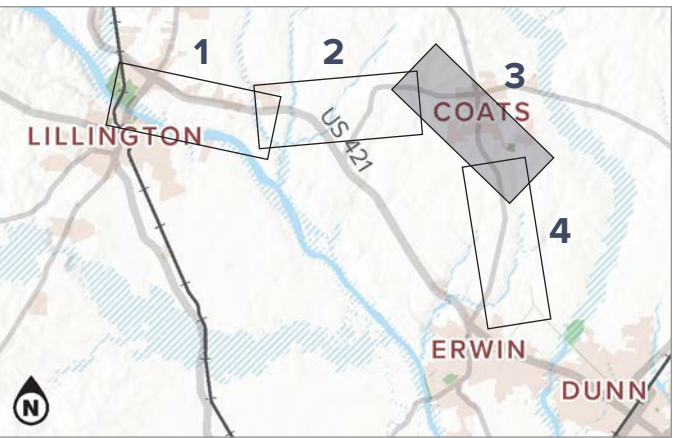
NC 55 was proposed to be widened from two lanes to three in NCDOT's State Transportation Improvement Program (STIP), but is currently unfunded. If funded, there may be an opportunity to include the rail trail/sidepath in the roadway design.
- 8

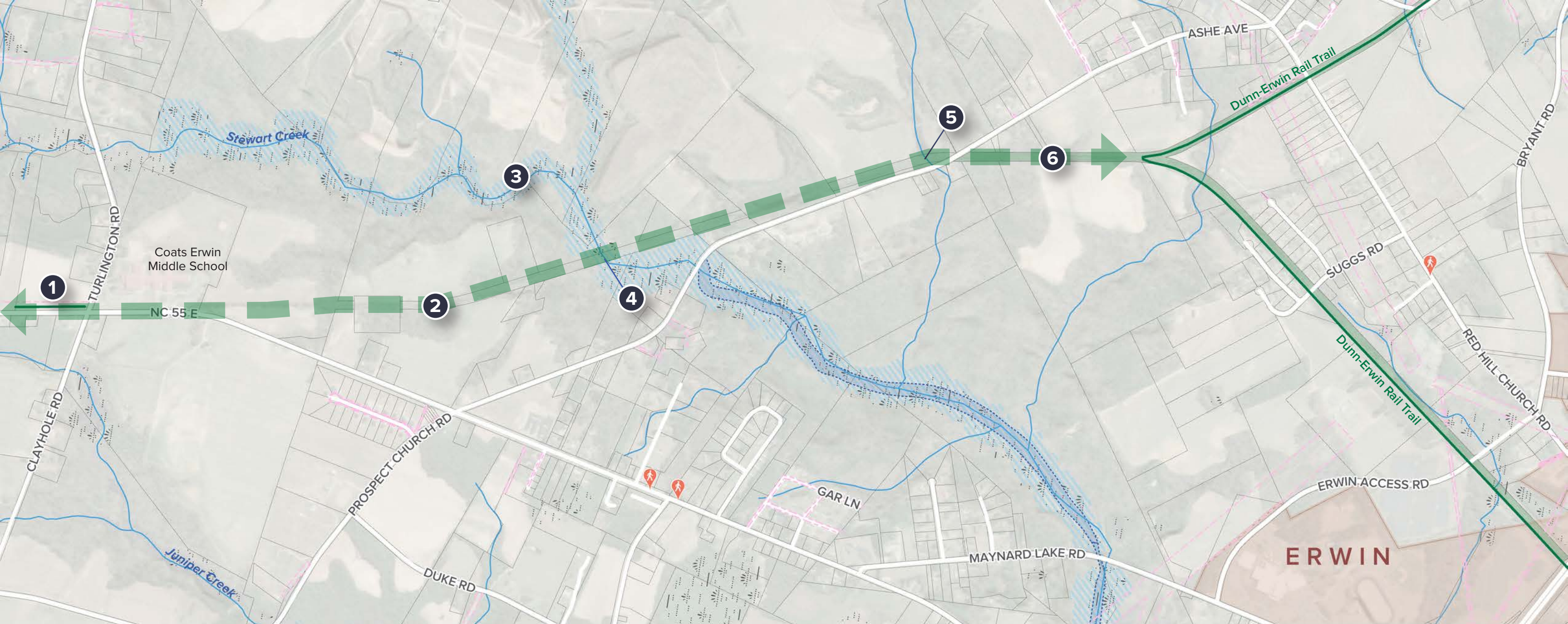
Abandoned railroad corridor parallels NC 55; more than 20 different landowners own property along this section.

LEGEND

- Municipal Boundaries
- Parcels
- Parks
- Easements
- Streams
- Wetlands
- 100-Year Floodplain
- Floodway
- Existing Shared Use Path
- Existing Sidewalk
- Pedestrian Crashes
- Bike Crashes
- Route from 2021 Harnett County Greenway Plan

CORRIDOR SECTION MAPS





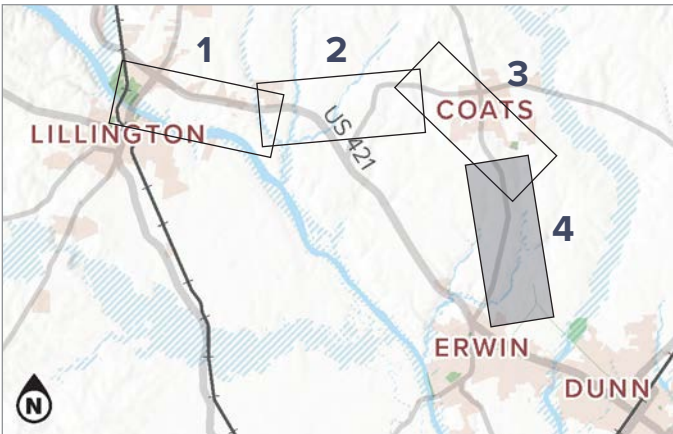
Opportunities and Barriers: Map 4

- 1** Existing sidepath (recently constructed as part of new development).
- 2** Rail corridor owned by Harnett County and private property owners; easement agreements would be needed for greenway.
- 3** Harnett County owns land north of rail bed; potential alternate greenway route.
- 4** Greenway bridge would be needed.
- 5** Greenway bridge would be needed.
- 6** County-owned rail corridor section from Ashe Ave to the existing Dunn-Erwin Rail Trail could be a near-term opportunity.

LEGEND

- Municipal Boundaries
- Parcels
- Parks
- Easements
- Streams
- Wetlands
- 100-Year Floodplain
- Floodway
- Existing Shared Use Path
- Pedestrian Crashes
- Bike Crashes
- Route from 2021 Harnett County Greenway Plan

CORRIDOR SECTION MAPS



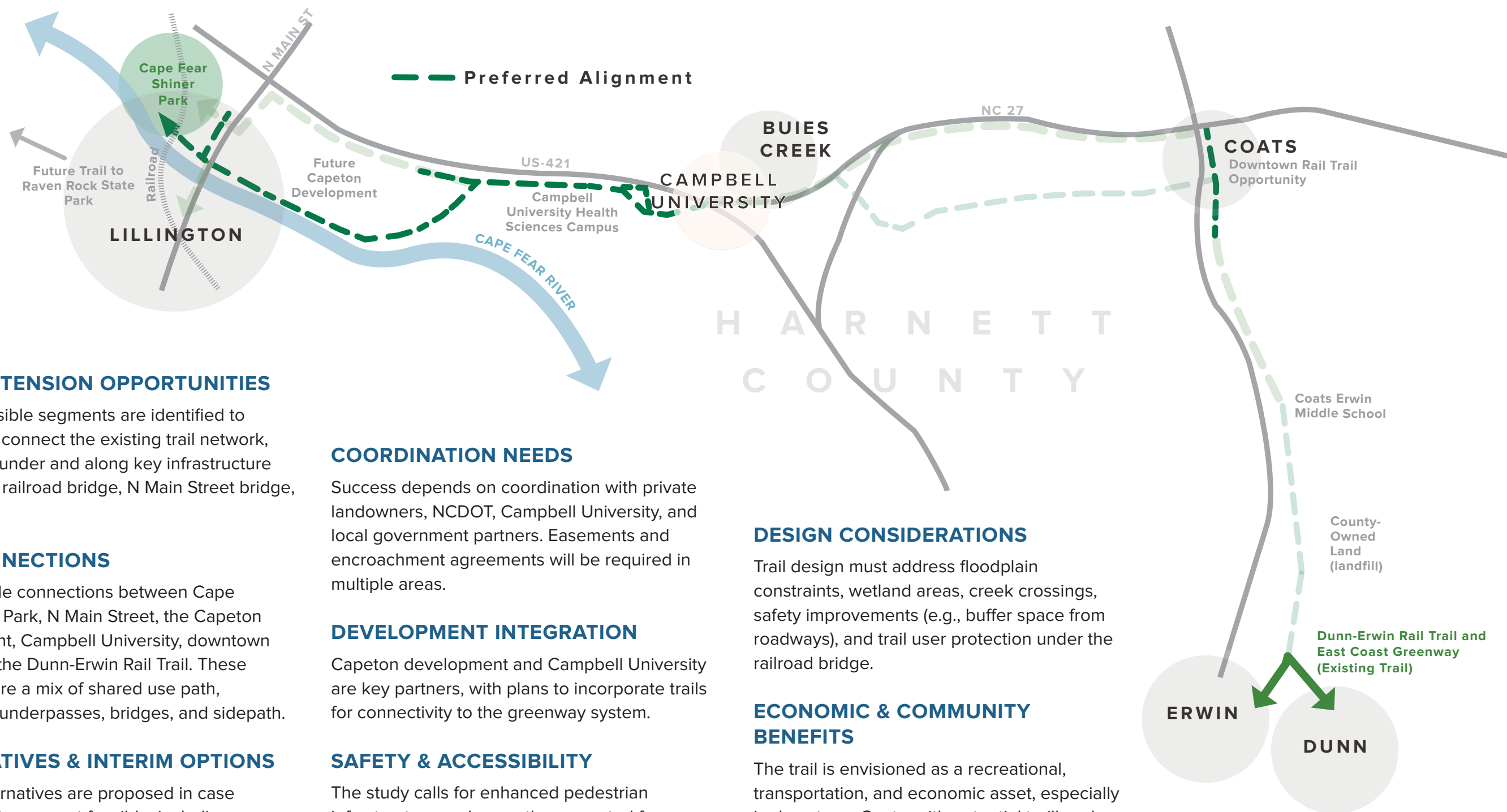
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Preferred Alignment and Alternatives



Preferred Alignments and Alternatives Overview

The proposed trail project seeks to extend and connect greenway trail segments from Lillington to Campbell University, Coats, and the Dunn-Erwin Rail Trail. Key features of the preferred alignments and alternatives are summarized below and detailed on the pages that follow.



TRAIL EXTENSION OPPORTUNITIES

Several feasible segments are identified to extend and connect the existing trail network, particularly under and along key infrastructure such as the railroad bridge, N Main Street bridge, and US 421.

KEY CONNECTIONS

Plans include connections between Cape Fear Shiner Park, N Main Street, the Capeton development, Campbell University, downtown Coats, and the Dunn-Erwin Rail Trail. These would require a mix of shared use path, boardwalk, underpasses, bridges, and sidepath.

ALTERNATIVES & INTERIM OPTIONS

Various alternatives are proposed in case primary routes are not feasible, including neighborhood streets, back roads, and existing utility easements.

COORDINATION NEEDS

Success depends on coordination with private landowners, NCDOT, Campbell University, and local government partners. Easements and encroachment agreements will be required in multiple areas.

DEVELOPMENT INTEGRATION

Capeton development and Campbell University are key partners, with plans to incorporate trails for connectivity to the greenway system.

SAFETY & ACCESSIBILITY

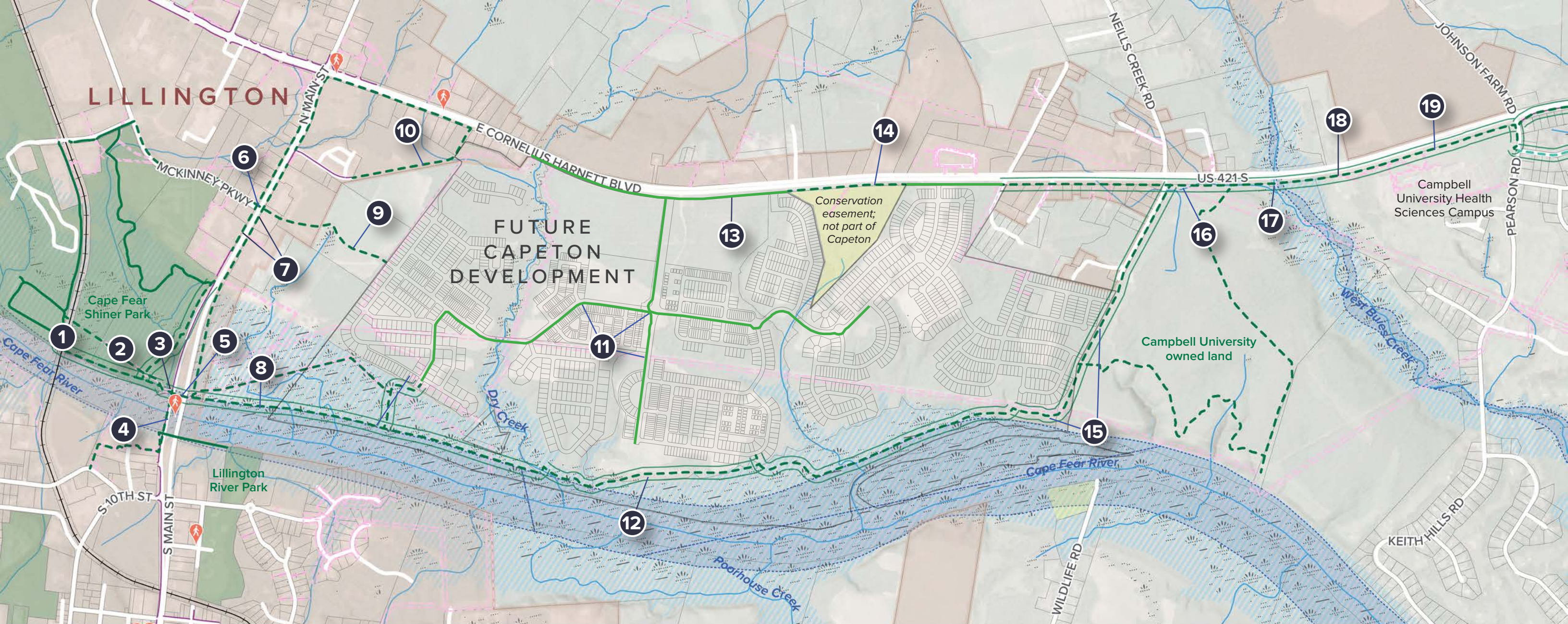
The study calls for enhanced pedestrian infrastructure such as paths separated from roadways, advisory shoulders, traffic calming, and visible crosswalks.

DESIGN CONSIDERATIONS

Trail design must address floodplain constraints, wetland areas, creek crossings, safety improvements (e.g., buffer space from roadways), and trail user protection under the railroad bridge.

ECONOMIC & COMMUNITY BENEFITS

The trail is envisioned as a recreational, transportation, and economic asset, especially in downtown Coats, with potential trailheads and heritage features near local landmarks.



*Numbers correspond to map notes on the following page.

Recommended Alignments: Map 1

PREFERRED ROUTE

The preferred route, based on direction from the steering committee, stakeholders, and the project team, is as follows, from west to east:

- From Cape Fear Shiner Park to the Capeton development, on the north side of the Cape Fear River.
- North to US 421, between the future Capeton Development and Campbell University property.
- East along the south side of US 421, to Pearson Rd at Campbell University's Health Sciences Campus.

TRAIL CONNECTORS AND ALTERNATIVES

These routes should also be pursued for development to form a complete trail network, and could be considered if sections of the preferred route become infeasible or longer term than expected.

- Proposed sidepaths along N Main St (both sides, from Cape Fear River Bridge to US 421), McKinney Pkwy (north side, from Alexander Dr to the future Capeton development), and US 421 (from N Main St to W Buies Creek).

LEGEND

	Municipal Boundaries		Existing Shared Use Path
	Parcels		Proposed Shared Use Path (Preferred Alignment)
	Parks		Other Shared Use Path Alternative
	Conservation Easements		Proposed Shared Lane Alternative (On-Road)
	Easements		Existing Sidewalk
	Streams		Pedestrian Crashes
	Wetlands		Bike Crashes
	100-Year Floodplain		
	Floodway		

CORRIDOR SECTION MAPS

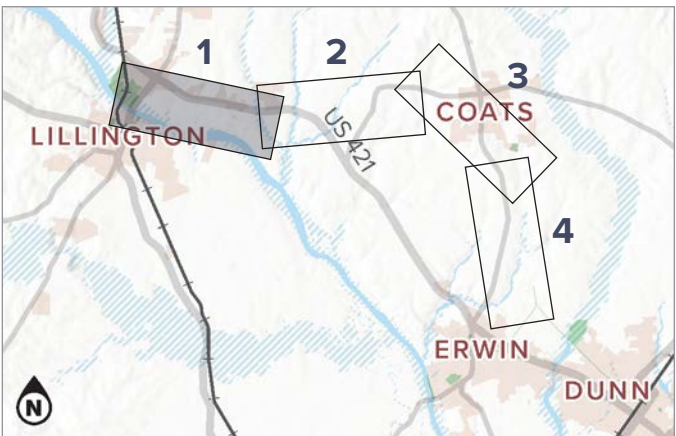
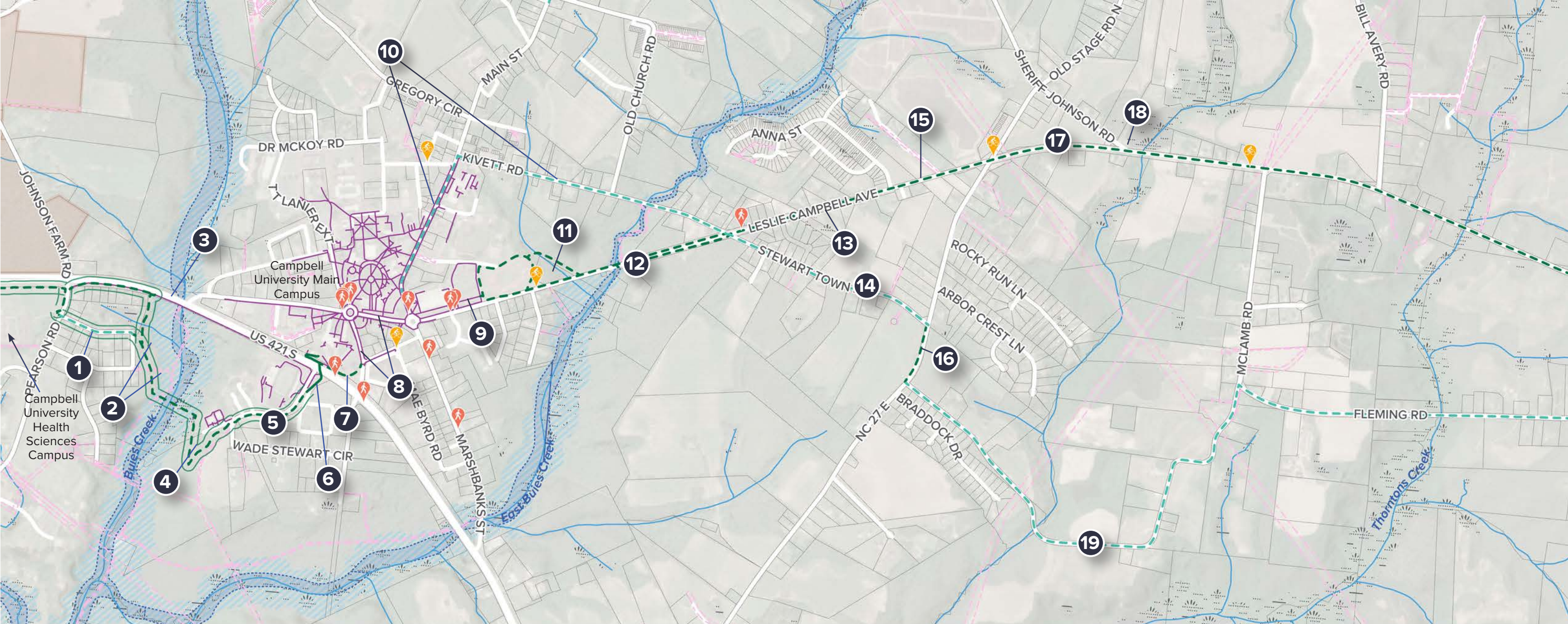


Table 1. *Map 1 Notes and Recommendations*

MAP NOTE #	NOTES / RECOMMENDATIONS
1	Potential railroad under-crossing: Space exists underneath the RJ Corman railroad bridge to extend the existing Cape Fear Shiner Park trail to the east—potentially cross under at the river's edge or further north under railroad trestle support.
2	Cape Fear Shiner Park to N Main Street bridge: Routing from here to the N Main Street bridge will depend on wetland delineation/boardwalk needed.
3	N Main Street bridge/greenway connection: If the greenway is constructed underneath the N Main Street bridge along the Cape Fear River front, a switchback connection should also be constructed to the N Main Street bridge sidewalk at the river to enhance cross-river connectivity.
4	N Main Street bridge - Lillington spur: The <i>Lillington Bicycle and Pedestrian Plan</i> (pg 66) recommends creating an interim option that shifts some of the existing shoulder space to the sidewalk edge, allowing space for a vertical barrier such as a concrete jersey barrier to provide additional protected space for bicyclists and pedestrians—the Town of Lillington should continue to explore this option with NCDOT Div 6 to better link greenways and destinations on both sides of the Cape Fear River.
5	N Main Street bridge under-crossing: Space exists between the bridge support and the Cape Fear River for the proposed greenway and would avoid having to cross N Main St at grade.
6	A full traffic signal with a variety of bicycle and pedestrian safety treatments would be needed at the McKinney Pkwy/N Main St intersection to create a safe sidepath crossing here.
7	Consider adding spurs to the proposed riverfront greenway along both sides of N Main St.
8	One private landowner between the N Main Street bridge and the Capeton development (floodplain).
9	Proposed McKinney Pkwy sidepath: Longer term, a road is proposed to continue McKinney Pkwy to the Capeton development. This road should include a sidepath with a landscaped buffer, linking to Capeton's internal greenway/walking/biking system and N Main St—this could also serve as an alternative if the greenway cannot be constructed along the Cape Fear River.
10	Proposed Parker Ln sidepath: Longer term, Parker Ln is proposed to connect to US 421—a sidepath with a landscaped buffer to Capeton's walking/biking/greenway system should be considered.
11	Future shared use paths as part of the Capeton development.
12	Plans for the Capeton development include the reservation or construction of a greenway along the Cape Fear River along the south side of the development with several connection points into the development (this section could also serve as the southern segment of a greenway loop around Capeton). The Town of Lillington will build and maintain the greenway—this trail is currently in design.

MAP NOTE #	NOTES / RECOMMENDATIONS
13	US 421 sidepath: a sidepath along the south side of US 421 is required to be constructed as part of the Capeton development, and could be the northern part of a greenway loop around Capeton. The Capeton development is only required to construct the section along their property.
14	This property is not owned by the Capeton developers (and therefore no sidepath construction is required here by the Capeton development).
15	Work with Campbell University and the Capeton development to create a greenway connection between the two properties in this vicinity; steep topography here, will be a challenging link. The existing trails in the old golf course property could serve as a starting point.
16	The trail would need to cross under the Duke Energy power lines—coordination with Duke Energy needed for implementation.

17	Crossing W Buies Creek will require the construction of a bike/ped bridge and may need switchbacks due to the grade.
18	For this section of the greenway, routing along the north side of the Campbell University property (around north side of the hole #5 green) may need to utilize some NCDOT ROW and would require an encroachment agreement.
19	The large, flat open space in front of the Health Science campus along the south side of US 421 would be an ideal route for the greenway, and could be connected to the Health Sciences Campus.



*Numbers correspond to map notes on the following page.

Recommended Alignments: Map 2

PREFERRED ROUTE

The preferred route, based on direction from the steering committee, stakeholders, and the project team, is as follows, from west to east:

- From the Campbell University Health Sciences Campus at Pearson Rd, across Buies Creek to Barker-Lane Stadium at Wade Stewart Cir, connecting to the US 421 tunnel.
- Connectivity through Campbell University Main Campus and to the east of Campbell University will not be pursued at this time. Connectivity from Cape Fear Shiner Park, Lillington, Capeton,

and to the west side of Campbell University campus are the highest priorities at this time. To the east, the Coats Downtown Rail is also identified as a high priority.

- Several alternatives have been identified connecting east through Campbell University, but no preferred option has been identified due to Campbell University concerns over non-Campbell University trail users coming through campus, cost, and other priorities at this time. Additionally, Campbell University will be conducting a campus master plan over the next two years,

LEGEND

- | | |
|----------------------|--|
| Municipal Boundaries | Existing Shared Use Path |
| Parcels | Proposed Shared Use Path (Preferred Alignment) |
| Easements | Other Shared Use Path Alternative |
| Streams | Proposed Shared Lane Alternative (On-Road) |
| Wetlands | Existing Sidewalk |
| 100-Year Floodplain | Pedestrian Crashes |
| Floodway | Bike Crashes |

CORRIDOR SECTION MAPS

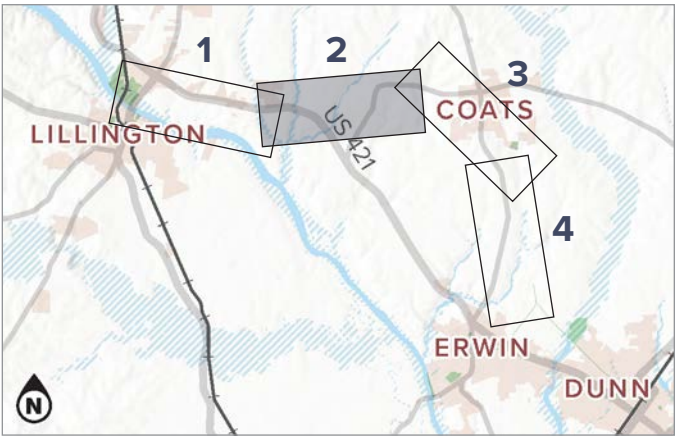
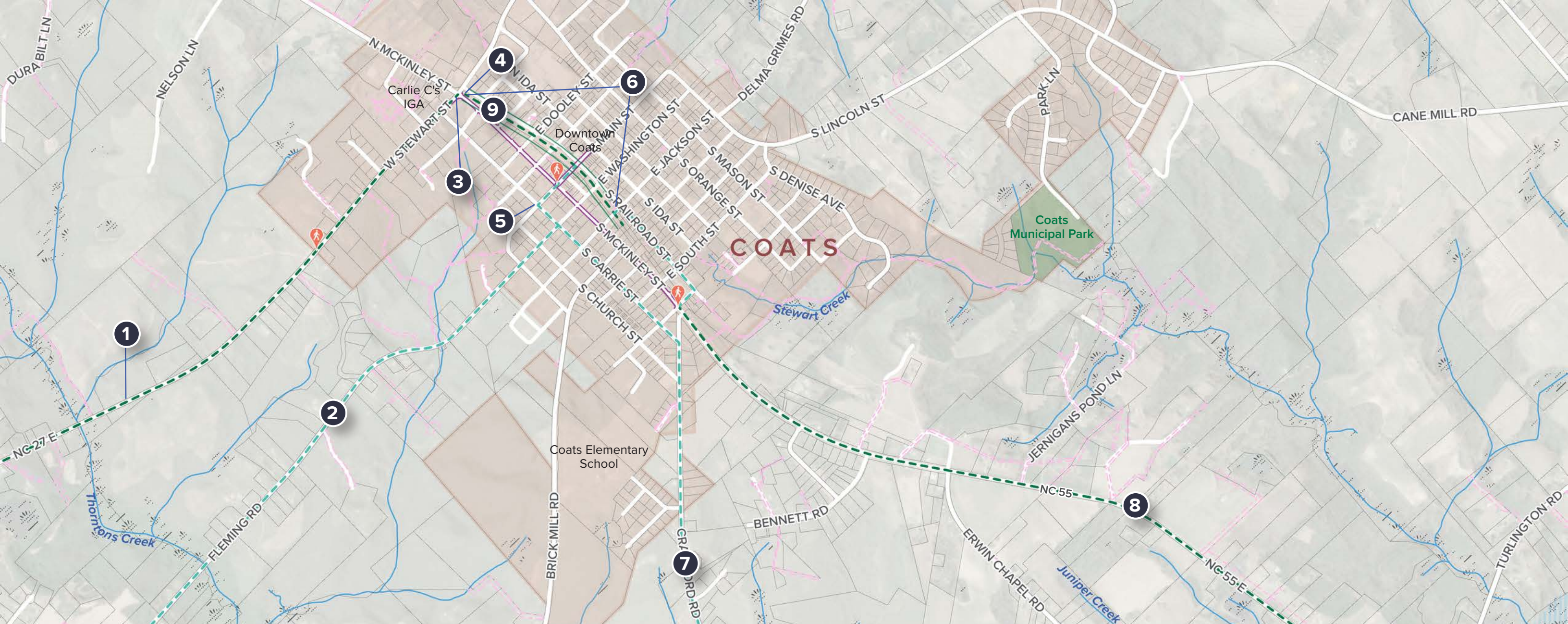


Table 2. *Map 2 Notes and Recommendations*

MAP NOTE #	NOTES / RECOMMENDATIONS
1	Powell Ave is a private neighborhood street that could serve as a greenway connection.
2	Potential alternatives to create a greenway connection between the Health Sciences Campus and the southern part of Main Campus. This would require a greenway bridge over Buies Creek and an easement with one private landowner.
3	The existing sidewalk along US 421, while better than nothing, is too narrow for a standard greenway and has a very small buffer with the roadway, leaving pedestrians limited space with US 421 motorist traffic (the westernmost section has a slightly wider ROW). Expansion of this sidewalk or buffer creation with the roadway would require significant expense in grading (steep drop-off on south side of sidewalk) and building a bridge over Buies Creek.
4	Wade Stewart Cir could be a potential connection point for the greenway.
5	Consider utilizing Wade Stewart Cir to connect to the tunnel.
6	The bike/ped tunnel under US 421 connects both sides of Campbell University and is a key link for the trail.
7	On the north side of US 421 - consider utilizing the space east of McCall Hall or other campus pathways.
8	Several different campus pathways make the connection from the US 421 tunnel to Main Campus - consider utilizing the pathways along Harmon Rd and Leslie Campbell Ave rather than going west of McCall Hall.
9	Potential options to consider in the long-term - the existing path along Leslie Campbell Ave could be extended along the southern edge of the parking lot/northern edge of Leslie Campbell Ave; the existing path along the southern edge of the Convocation Center is wider (12') and could serve as another option; additionally, the sidewalk through the parking lot to the track has extra width and could be considered as a routing option.
10	Main St through campus and Kivett Rd could be potential alternatives - Main St has just enough width to stripe minimal bike lanes. Kivett Rd, however, has a narrow ROW and eight different property owners making sidepath construction challenging (on-street routing would be more feasible than a sidepath, but would require traffic calming/lowering of the speed limit and would not be the ideal facility for all ages and abilities).
11	Campbell University owns this forested area that includes existing cross country trails. Routing alternatives around both sides of the track and both sides of the private parcel east of the track should be considered - north side would be safest, keeping trail away from roadway.

MAP NOTE #	NOTES / RECOMMENDATIONS
12	East of the Buies Creek crossing, Campbell University property ends, but the roadway ROW remains very wide - both sides of the road should be explored for finishing the connection to Kivett Rd (one private landowner on either side of the road if additional easements are needed beyond the existing wide roadway ROW). Crossing the road here would require a crosswalk with a Rectangular Rapid Flashing Beacon (RRFB). Staying on the north side and crossing at Stewart Town Rd would work best operationally.
13	75' roadway ROW with widest section along the south side of Leslie Campbell Ave from Stewart Town Rd to Anna St.
14	Stewart Town Rd is a lower volume roadway - while a sidepath along NC 27 would be ideal in the long term (as part of a roadway project or development), Stewart Town Rd offers a quieter back roads option.
15	Roadway ROW shrinks to 60' from Anna St to Old Stage Rd intersection (roundabout recently installed at the NC 27/Old Stage Rd intersection).
16	A sidepath along NC 27 would be ideal since traffic volumes/speeds are higher; makes a needed connection between Stewart Town Rd and McLamb Rd.
17	Roadway ROW widens to 85-100' from Old Stage Rd to McLamb Rd.
18	Sheriff Johnson Rd intersection will be closed in the future.
19	McLamb Rd is unpaved and scenic, excellent option for the back roads connection.



*Numbers correspond to map notes on the following page.

Recommended Alignments: Map 3

PREFERRED ROUTE

The preferred route, based on direction from the steering committee, stakeholders, and the project team, is as follows, from west to southeast:

- The preferred route follows the old railroad bed in downtown Coats from the Stewart St/Mckinley St intersection, through downtown, and finishing at the Coats Museum.
- From downtown Coats to the Coats Erwin Middle School, further exploration of alternatives and

consensus on a preferred alignment would require additional public/stakeholder involvement, and further study.

TRAIL CONNECTORS AND ALTERNATIVES

- NC 27 and NC 55: Sidepaths should be developed along these corridors in the longer term (with roadway widening/future development).
- Back Road Routes: Several low-volume, low-speed roadways are shown south and west of the main route that could be signed and striped as on-road connectors.

LEGEND

	Municipal Boundaries		Existing Shared Use Path
	Parcels		Proposed Shared Use Path (Preferred Alignment)
	Parks		Other Shared Use Path Alternative
	Easements		Proposed Shared Lane Alternative (On-Road)
	Streams		Existing Sidewalk
	Wetlands		Pedestrian Crashes
	100-Year Floodplain		Bike Crashes

CORRIDOR SECTION MAPS

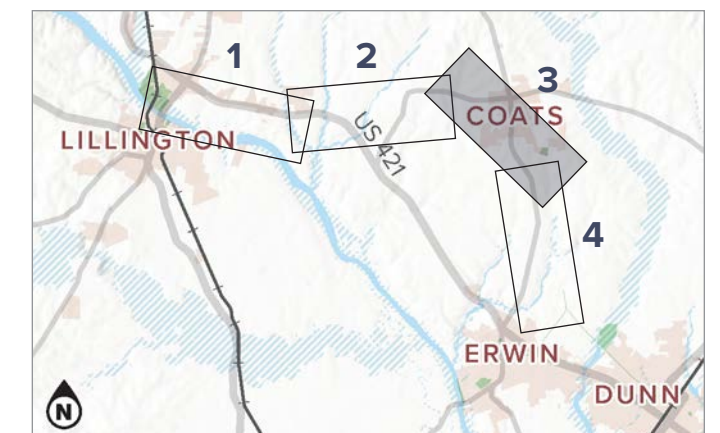
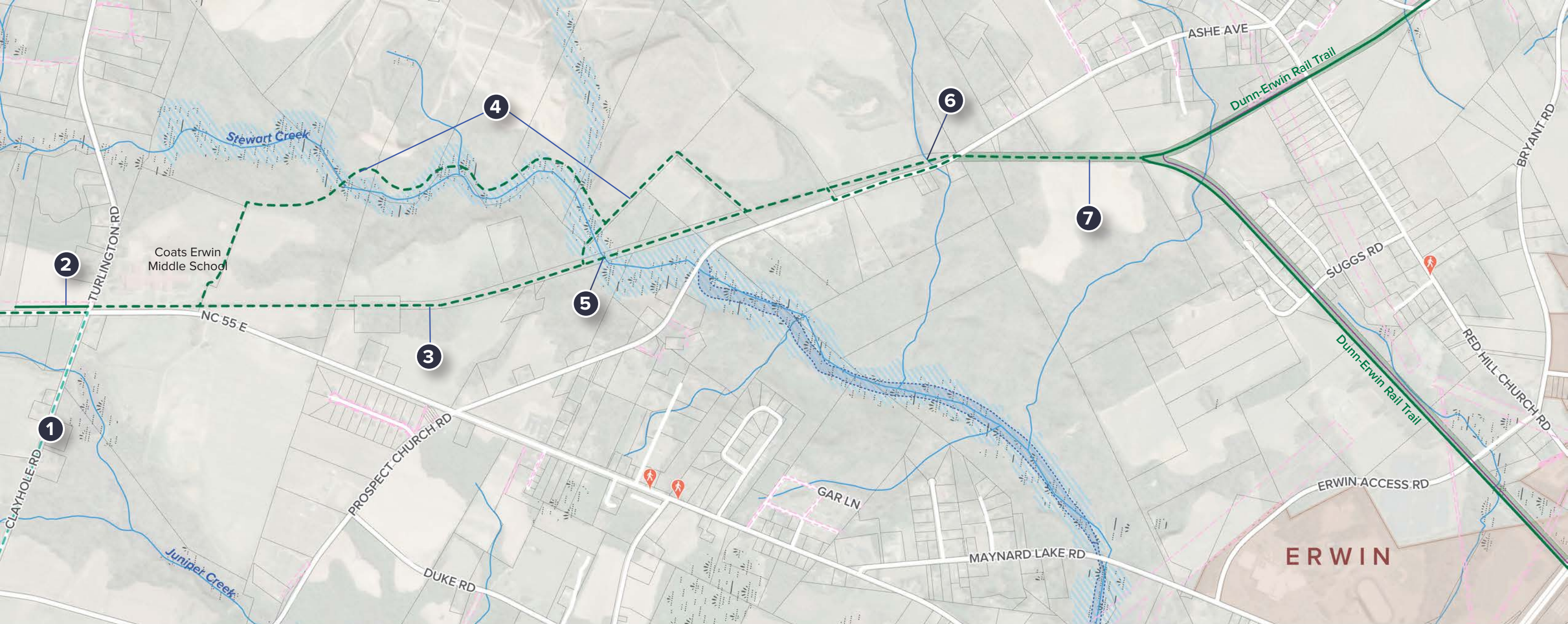


Table 3. *Map 3 Notes and Recommendations*

MAP NOTE #	NOTES / RECOMMENDATIONS
1	From McLamb Rd to Coats, ROW shrinks to ~60'.
2	Fleming Rd is a lower volume roadway, excellent option for the back roads connection along with McLamb Rd and Stewart Town Rd between Coats and Campbell University.
3	No pedestrian signals and only two-bar crosswalks across two of the four legs of the NC 55/27 intersection - need pedestrian signals and high visibility crosswalks on all four legs of the intersection.
4	The northern several parcels of the old rail bed is owned by the Town of Coats and could serve as a first segment constructed.
5	Utilize Carrie St and Main St to connect from Fleming Rd to the proposed downtown rail trail.
6	Seven private property owners own different sections of the old railroad bed from the NC 55/27 intersection to the Coats Museum. The Town of Coats owns a section of the northern end, and the Coats Museum owns a section of the southern end.
7	A signed back roads bike route along Crawford Rd and Clayhole Rd could serve as an interim connection between downtown Coats and Coats Erwin Middle School.
8	The abandoned railroad corridor runs adjacent to the NC 55 ROW for much of the section between Coats Erwin Middle School and downtown Coats. Over 20 different landowners own property along this section. This section has previously been proposed for widening from two to three lanes in the STIP, but this project is currently unfunded. If it were funded, it could be an opportunity to include a sidepath with a landscaped buffer into the roadway design.

Right - Vacant Town of Coats property along the former rail bed through downtown.





*Numbers correspond to map notes on the following page.

Recommended Alignments: Map 4

ALTERNATIVES CONSIDERED

Based on direction from the steering committee, stakeholders, and the project team, no preferred route was identified, and this section is not considered a top priority at this time.

- While the former rail bed between Coats Middle School to the Dunn-Erwin Rail Trail would provide the safest and best user experience due to its directness, relatively flat grade, and separation from the roadway, much of this section is privately owned, and there is no local landowner interest in exploring this option, or any of the options at the time of this writing. Further exploration of alternatives and consensus on a preferred alignment would require additional public/stakeholder involvement, and further study.

LEGEND

	Municipal Boundaries		Existing Shared Use Path
	Parcels		Proposed Shared Use Path (Preferred Alignment)
	Parks		Other Shared Use Path Alternative
	Easements		Proposed Shared Lane Alternative (On-Road)
	Streams		Existing Sidewalk
	Wetlands		Pedestrian Crashes
	100-Year Floodplain		Bike Crashes
	Floodway		

CORRIDOR SECTION MAPS

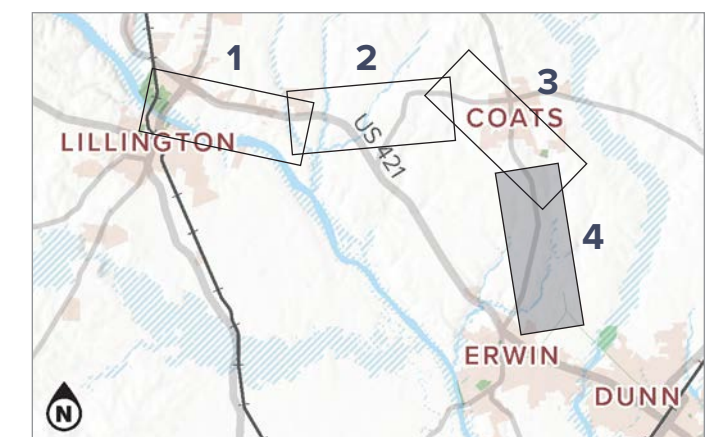


Table 4. **Map 4 Notes and Recommendations**

MAP NOTE #	NOTES / RECOMMENDATIONS
1	A signed back roads bike route along Crawford Rd and Clayhole Rd could serve as an interim connection between downtown Coats and Coats Erwin Middle School.
2	Short existing section of sidepath recently constructed as part of new development - this segment is along the old rail bed and could be connected to the proposed rail trail from the Coats Erwin Middle School to the Dunn-Erwin Rail Trail.
3	The old rail bed between the Coats Erwin Middle School and the existing Dunn-Erwin Rail Trail is partially owned by Harnett County as well as three different private property owners. The rail bed would be the ideal location for the greenway and would require purchase or easement agreements with three different landowners before trail implementation can take place.
4	Harnett County owns much of this land north of the old rail bed (Harnett County Solid Waste facility), which could be considered for alternative routing if easements cannot be agreed upon with private landowners for the old rail bed; multiple creek crossings would be required in this alternative.
5	A new greenway bridge would be needed to cross Stewart Creek along the old rail bed here.
6	This section of the old rail bed crosses the Stewart Creek tributary here.
7	Harnett County owns the rail spur from the Dunn-Erwin Rail Trail to Ashe Ave, and could serve as an opportunity for near-term implementation.

Right - Short existing section of sidepath recently constructed as part of new development.



4

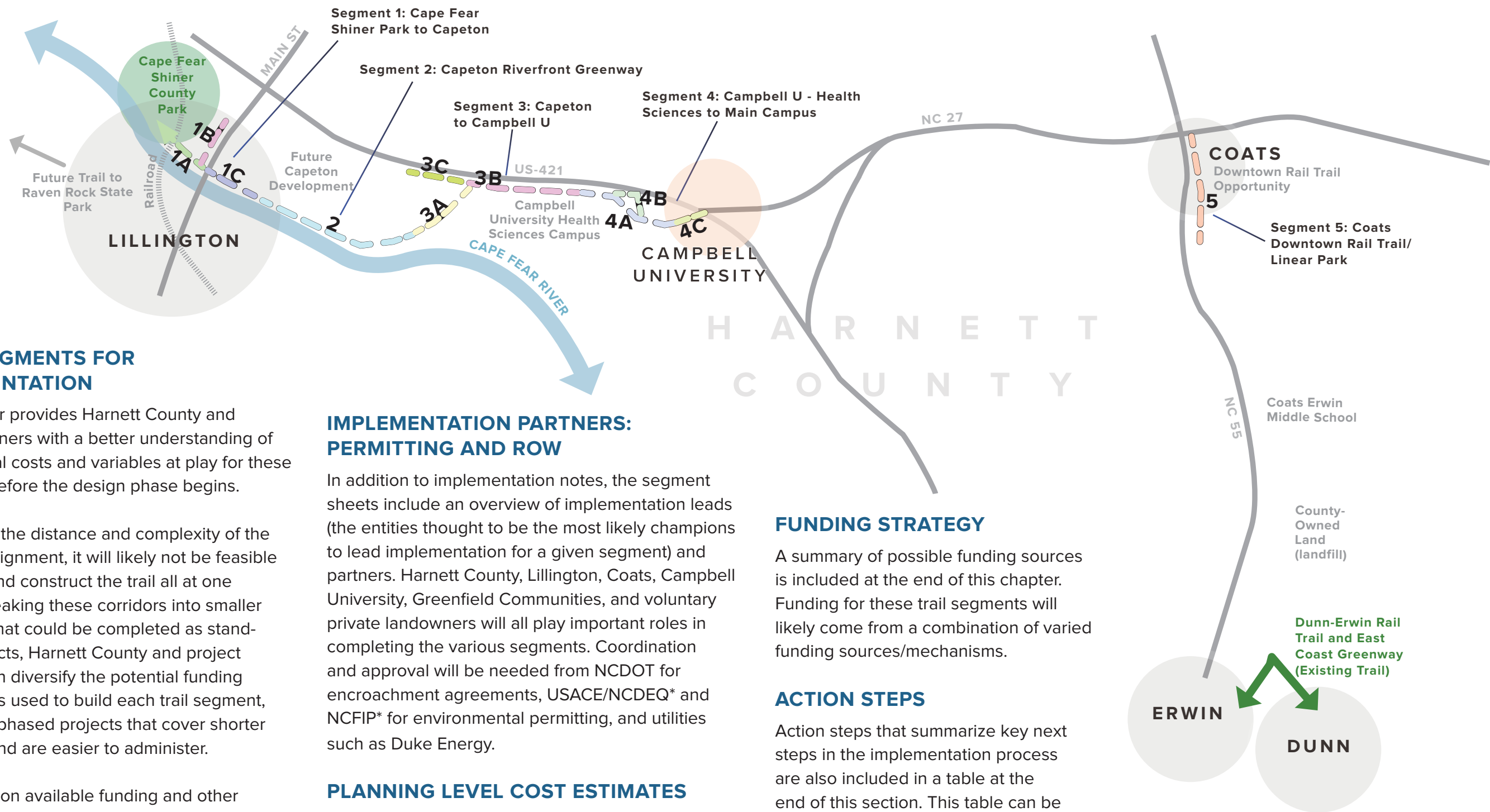
Action Plan



Trestle Trail Link ↑
Beaver Pond Trail ↑
Government Complex + Library ↑

Action Plan Overview

For implementation, the preferred alignment is broken into smaller segments that could be administered as individual projects. These segments are summarized in the pages that follow with notes on implementation and potential project partners.



TRAIL SEGMENTS FOR IMPLEMENTATION

This chapter provides Harnett County and project partners with a better understanding of the potential costs and variables at play for these corridors, before the design phase begins.

Because of the distance and complexity of the preferred alignment, it will likely not be feasible to design and construct the trail all at one time. By breaking these corridors into smaller segments that could be completed as stand-alone projects, Harnett County and project partners can diversify the potential funding mechanisms used to build each trail segment, and create phased projects that cover shorter distances and are easier to administer.

Depending on available funding and other conditions during implementation, some of these segments could also be combined (and some may need to be).

IMPLEMENTATION PARTNERS: PERMITTING AND ROW

In addition to implementation notes, the segment sheets include an overview of implementation leads (the entities thought to be the most likely champions to lead implementation for a given segment) and partners. Harnett County, Lillington, Coats, Campbell University, Greenfield Communities, and voluntary private landowners will all play important roles in completing the various segments. Coordination and approval will be needed from NCDOT for encroachment agreements, USACE/NCDEQ* and NCFIP* for environmental permitting, and utilities such as Duke Energy.

PLANNING LEVEL COST ESTIMATES

The planning level cost estimates provided for each segment give each implementation lead an idea of potential costs for each segment so that appropriate funding streams can be secured.

FUNDING STRATEGY

A summary of possible funding sources is included at the end of this chapter. Funding for these trail segments will likely come from a combination of varied funding sources/mechanisms.

ACTION STEPS

Action steps that summarize key next steps in the implementation process are also included in a table at the end of this section. This table can be used as a quick reference during the implementation process.

*USACE = United States Army Corps of Engineers; NCDEQ = North Carolina Department of Environmental Quality; NCFIP = North Carolina Floodplain Insurance Program

Priority Segment 1: Cape Fear Shiner Park to the Capeton Development

Overview

Cape Fear Shiner Park borders the Cape Fear River and is less than a mile from the Capeton development. A riverfront connection could become a signature trail link, opening up views and access to the Cape Fear River and filling the gap between the existing greenways in Cape Fear Shiner Park and the planned future greenway in the Capeton development. Depending on ROW availability (negotiations and agreements with existing property owners will be needed), segments 1A, 1B, and 1C could be designed and constructed as individual projects, or they could be combined as one project.

Segment 1A Notes (Distance = 0.34 Miles)

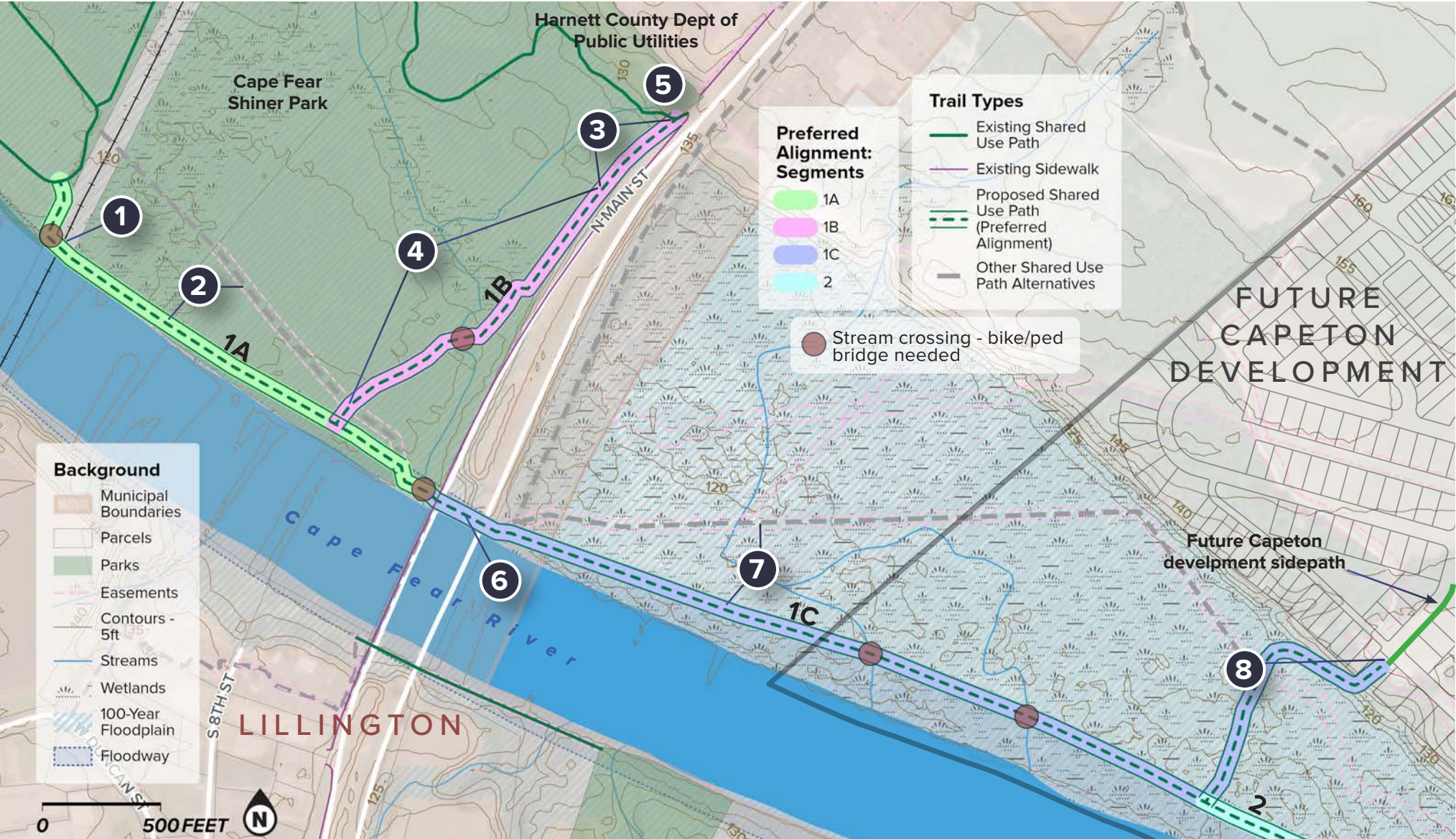
- 1 Railroad under-crossing: Space exists underneath the RJ Corman (owner of the railroad line) railroad bridge to extend the existing Cape Fear Shiner Park trail to the east - options include a new connection under the railroad bridge at the river's edge or just to the north underneath one of the gaps in the railroad trestle. This option would also require a protective canopy underneath the railroad bridge or trestle to protect trail users from debris. Additionally, a short bridge or culvert crossing would need to be built to span a drainage ditch parallel to the west of the railroad tracks. Consultation and approval would be needed from RJ Corman.
- 2 A specific alignment along this portion of the trail will be determined during the design phase, will depend on a wetland delineation study and will likely require some boardwalk - could follow river's edge here or possibly the existing cleared utility easement to the north (or some variation of these options).
 - Combined with segment 1B and the existing Cape Fear Shiner Park greenways, segment 1A could complete a larger loop within Cape Fear Shiner Park.

Segment 1B Notes (Distance = 0.31 Miles)

- 3 For the northern section of this trail segment, consider utilizing the existing unpaved driveway from the Harnett County Department of Public Utilities driveway to the existing billboard.
- 4 South of the existing billboard, consider routing the trail along the existing cleared utility path, connecting to the Cape Fear River and segment 1A.
- 5 Consider adding parking spaces along the Harnett County Department of Public Utilities driveway edge to serve as a small trailhead.

Segment 1C Notes (Distance = 0.73 Miles)

- 6 N Main Street bridge under-crossing: space is available between the bridge support and the Cape Fear River for the proposed greenway (utilizing NCDOT ROW).
- 7 An agreement is needed with one private landowner to make



- the connection from the N Main Street bridge to the Capeton development along the Cape Fear River. Depending on coordination with the landowner, Town of Lillington, Greenfield Communities (Capeton developer), and a wetland delineation study, routing could follow the river's edge here or the existing cleared waste water easement to the north (or some variation of these options).
- 8 Potentially connect into the Capeton development via the open space here - depending on the final routing during the design phase, several open space connections could be considered to link into Capeton.

Implementation Lead

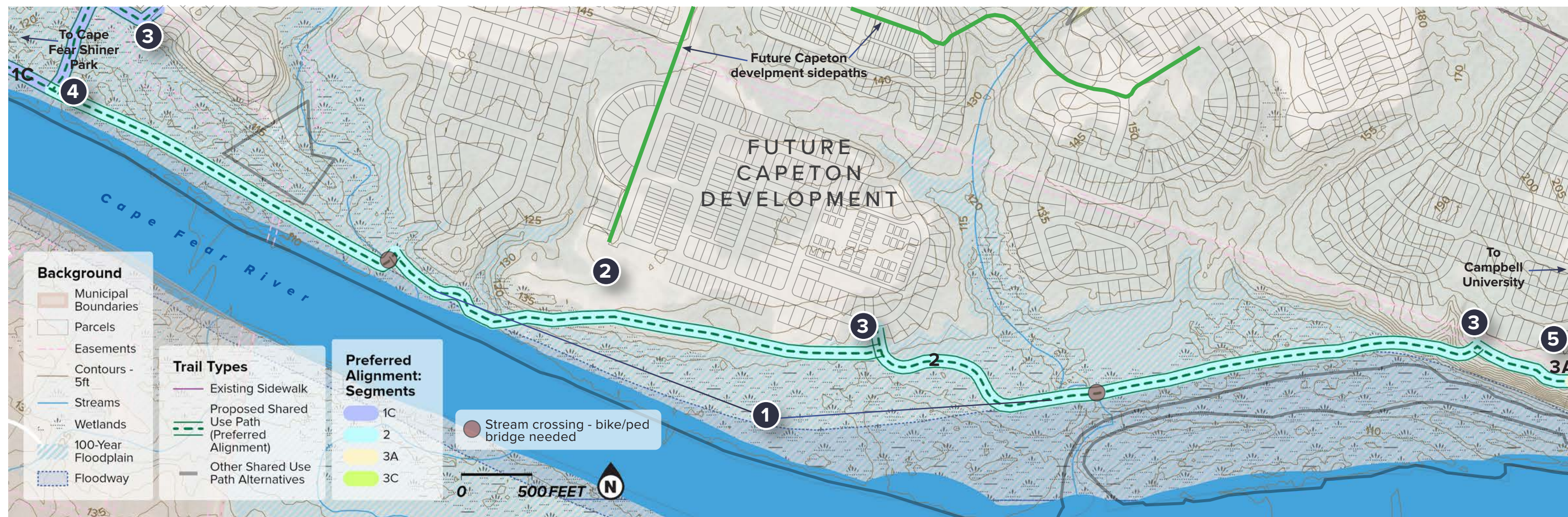
- Segments 1A and 1B - Harnett County
- Segment 1C - Harnett County and the Town of Lillington

Implementation Partners - Permitting and ROW

- USACE/NCDEQ Environmental Permitting
 - Section 404/401 permitting will be required since each of these sections are in the floodplain, and permitting will also be needed for each jurisdictional stream crossing.

- » A wetland delineation study will be needed to refine the final routing and quantify how much boardwalk will be needed in constructing the trail in these areas.
- » A hydraulics and hydrology (H&H) study and a no rise determination will be needed if the trail is to be constructed in the Cape Fear River floodway for the railroad or N Main Street bridge undercrossing.
- NCDOT Encroachment Agreement - will be needed for the N Main Street bridge undercrossing and possibly for the northern section of Segment 1B.
- RJ Corman (railroad owner) - consultation and approval would be needed for crossing under the railroad tracks.
- Greenfield Communities (Capeton developer) and private landowner west of Capeton - coordination and easements/ROW needed to identify best connection point into Capeton development and riverfront greenway.
- Segment 1B would run under Duke Energy power lines, and part of 1C would need to cross under a Duke Energy power line - coordination and approval needed with Duke Energy.





Priority Segment 2: Capeton Development Riverfront Greenway

Overview

The Capeton development will reserve an easement along the Cape Fear River for a greenway trail, which will allow the Town of Lillington to construct a greenway trail. Eventually, the trail can become a riverfront destination on its own, and also fill a significant part of the gap between Cape Fear Shiner Park and Campbell University. The Capeton development will be mixed use, and this greenway project will enhance connectivity for both residences and businesses to the Cape Fear River and eventually to the Town of Lillington and Campbell University. This project is currently in design.

Segment 2 Notes (Distance = 1.8 Miles)

- 1 The greenway is planned to be constructed along the southern end of the Capeton Development property in the floodplain along the riverfront. The exact route will be defined during the design phase.
- 2 This location will likely be a larger amenity space with a connection to the riverfront greenway.

- 3 Preliminary site plans for the Capeton development include several connections to the proposed riverfront greenway at these locations - connection points to be finalized during design phase.
- 4 Connect this greenway segment to the west toward Cape Fear Shiner Park (see Segment 1 on page 27).
- 5 Connect this greenway segment to the east to Campbell University (see Segment 3 on the following pages).

Implementation Lead

- Town of Lillington

Implementation Partners - Permitting and ROW

- Greenfield Communities (Capeton developer) - as part of the requirements for this development, Greenfield Communities has dedicated a greenway easement to the Town of Lillington. The Town of Lillington will lead the design, construction, and maintenance of the greenway in coordination with Greenfield Communities.

- USACE/NCDEQ Environmental Permitting
 - » Section 404/401 permitting will be required since most of the proposed riverfront greenway is in the floodplain, and permitting will also be needed for each jurisdictional stream crossing.
 - » Greenfield Communities has completed a wetland delineation study along the riverfront, and the Town of Lillington is currently working on trail design. Boardwalk may be needed for much of this project.
 - » A hydraulics and hydrology (H&H) study and a no rise determination will be needed if the trail needs to be constructed in any part of the Cape Fear River floodway.
- Dominion Energy Gas line - crossing or any trail development over the gas line will require coordination and approval.
- A future waste water project will likely connect through this area - coordination needed between the waste water project and greenway project to save on cost and avoid having to redo work in the near term.

Priority Segment 3: Capeton Development to Campbell University Health Sciences Campus

Overview

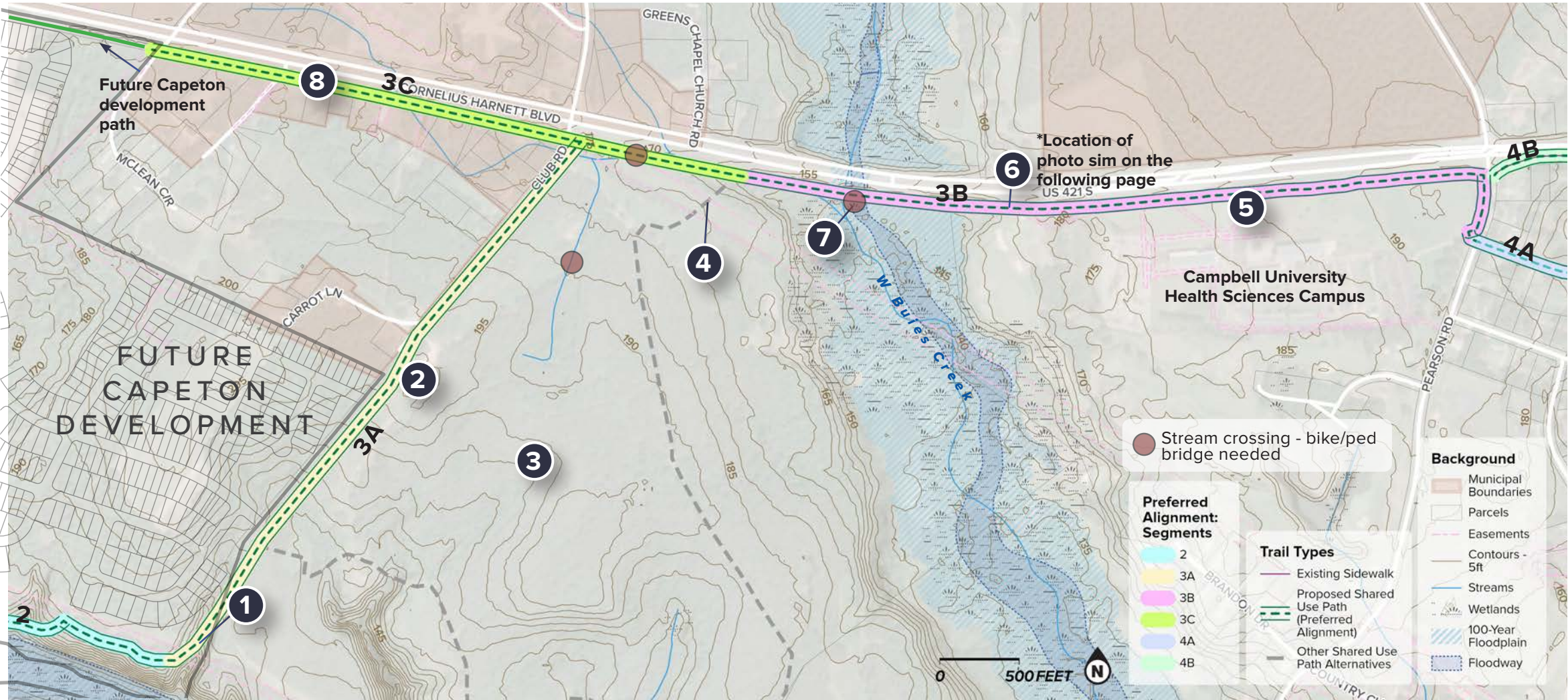
With the Capeton development reserving an easement and the Town of Lillington constructing a riverfront greenway, an opportunity exists to extend trail connectivity east to the Campbell University Health Sciences Campus. Depending on ROW coordination that would be needed, segments 3A, 3B, and 3C could be designed and constructed as individual projects, or they could be combined as one project. Campbell University will be conducting a campus master plan over the next two years, and trail alignments should be further explored as part of that process.

Segment 3A Notes (Distance = 0.86 Miles)

- 1 This connection to the Capeton riverfront greenway has steep slopes and will need more grading and space to navigate the elvation change or possibly a bike/ped bridge.
- 2 Work with Campbell University to find the ideal greenway route from the Capeton development/Cape Fear River to the Health Sciences Campus. This section of the greenway would need to meander to avoid too steep of a grade due to the slopes.
- 3 This property is currently owned by Campbell University. It is a former golf course that has been converted into nature trails, pollinator gardens, and left as generally forested. If the property is sold in the future, any future development should include a greenway easement for this trail.
- 4 Greenway will need to cross under Duke Energy power lines.

Segment 3B Notes (Distance = 0.9 Miles)

- 5 The large, flat open space in front of the Health Sciences Campus would be an ideal route for the greenway. The path should be designed with enough buffer space for trees between the trail and US 421 traffic, for



trail user safety and comfort. Campbell University could decide in future design phases to also provide sidewalk or path connections between the trail and the Health Sciences Campus buildings. Connect to the US 421 sidewalk and Powell Ave.

- 6 Trail routing could fit in between US 421 and the Campbell University golf course hole #5 green - some cut, fill, and a low retaining wall may be needed here due to the berm separating the green and US 421 (may need to use some NCDOT ROW).
- 7 A greenway bridge will need to be constructed to cross W Buies Creek - some amount of boardwalk may be needed depending on exact extent of wetland on either side of W Buies Creek floodway.

Segment 3C Notes (Distance = 0.58 Miles)

- 8 Continue the sidepath along the south side of US 421 from the Campbell University Health Sciences Campus to the future Capeton development sidepath, utilizing the NCDOT ROW that is very wide here. This section can help close a potential greenway loop around the Capeton development if combined with segment 3A and internal Capeton trails. If combined with segment 3B, it could complete the connection between the Campbell University Health Sciences Campus and the Capeton development.

Implementation Lead

- Harnett County and Campbell University

Implementation Partners - Permitting and ROW

- Campbell University owns most of the land needed for this segment - coordination and approval would be needed for implementation.
- Greenfield Communities will need to be consulted for any connectivity to the Capeton development.
- USACE/NCDEQ Environmental Permitting
 - Section 404/401 permitting will be required since segment 3B crosses the W Buies Creek floodplain, and permitting will also be needed for each jurisdictional stream crossing.
 - A wetland delineation study will be needed to refine the final routing and quantify how much boardwalk will be needed in constructing the trail in crossing the W Buies Creek floodplain and wetlands.
 - A hydraulics and hydrology (H&H) study and a no rise determination will be needed for crossing the W Buies Creek floodway.
- NCDOT Encroachment Agreement - will be needed for sections of segments 3B and 3C that will need to utilize the wide NCDOT ROW along the south side of US 421.
- The northern part of segment 3A and parts of 3B and 3C would need to cross under the Duke energy power lines - coordination and approval needed with Duke Energy.



Photo simulation of proposed greenway heading east toward the Campbell University Health Sciences campus, along the south side of US 421.

Priority Segment 4: Campbell University Health Sciences Campus to Main Campus

Overview

This proposed segment would provide a safer, multimodal option protected from the high speeds and traffic volumes along US 421 to make this connection between the Campbell University Health Sciences Campus and Main Campus. A sidewalk along US 421 with almost no buffer is currently the only walking connection between the two campuses (there is currently no connection for bicycles or scooters). Depending on ROW coordination, segments 4A and 4C could be designed and constructed as individual projects, or they could be combined as one project. Campbell University will be conducting a campus master plan over the next two years, and this trail should be further explored as part of that process.

Segment 4A Notes (Distance = 0.73 Miles)

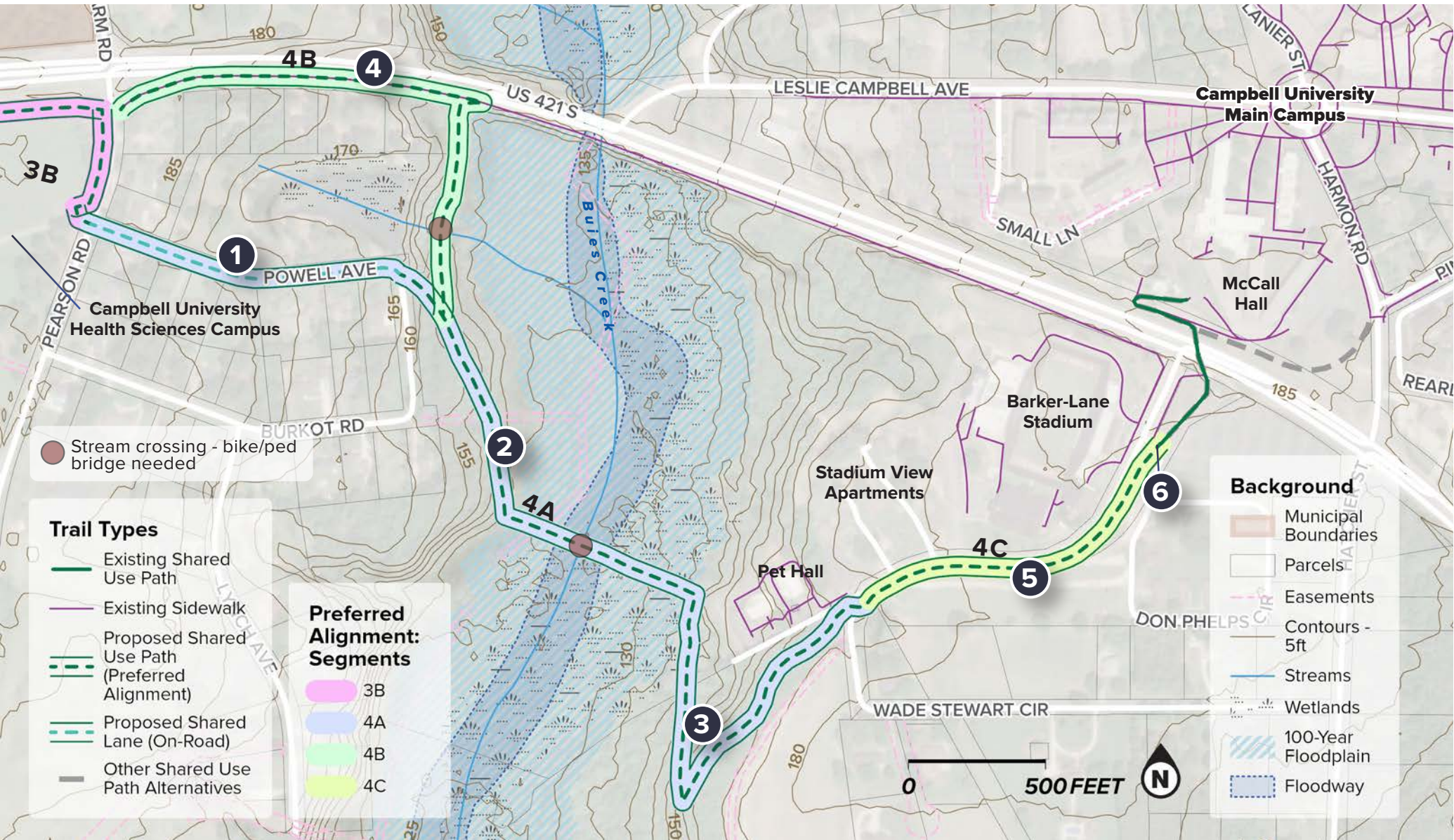
- 1 From the Health Sciences Campus, Powell Avenue could serve as a quiet neighborhood on-street connection between segments 3B and 4A. Powell Ave is a private street and permission would be needed from the neighborhood owners.
- 2 From Powell Ave to the south side of Main Campus, an agreement would be needed with one private landowner as well as Campbell University to make this connection. This link would require a greenway bridge over Buies Creek. The design for this connection would need to include extensive switchbacks and likely retaining walls to drop down into the creek bed before bridging over the creek, or a longer bridge could be constructed spanning the higher ground on either side of the creek floodplain.
- 3 Potential connection point routing near the terminus of Wade Stewart Circle; this southernmost option provides greater separation from nearby student housing, while still providing access to nearby housing. Due to the slopes, a longer switchback would be needed (would need to avoid lift station).

Segment 4B Notes (Distance = 0.34 Miles)

- 4 As an alternative to Powell Ave, this option would utilize the short section of US 421 with wider space for a sidepath before dropping into the Buies Creek corridor to make the crossing. The cost would be much higher for this section compared to utilizing Powell Ave as a shared street.

Segment 4C Notes (Distance = 0.2 Miles)

- 5 Plenty of space for proposed greenway connection along the south side of Wade Stewart Cir, but may need to shift the light poles location slightly. The north side of Wade Stewart Cir has



space as well. This connection would also serve football game day pedestrian traffic from the parking areas.

- 6 Connect to existing bike/ped undercrossing of US 421.

Implementation Lead

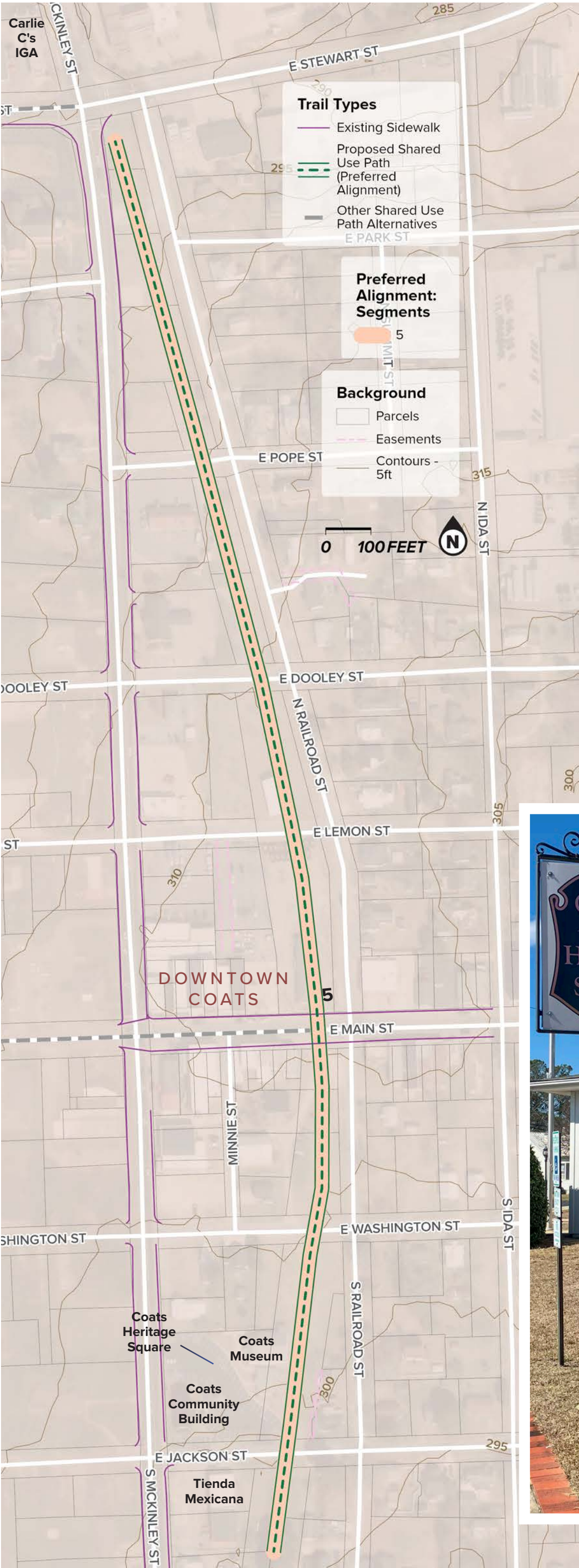
- Harnett County and Campbell University

Implementation Partners - Permitting and ROW

- Campbell University and one private landowner owns most of the land needed for this segment - coordination and approval would be needed for implementation.
- Powell Ave neighborhood - Powell Ave is a private street - permission would be needed to utilize this section to connect the greenway segments.
- USACE/NCDEQ Environmental Permitting
 - » Section 404/401 permitting will be required since segment 4A crosses the Buies Creek floodplain, and permitting will also be needed for each jurisdictional stream crossing.

- » A wetland delineation study will be needed to refine the final routing and quantify how much boardwalk will be needed to construct the trail crossing the Buies Creek floodplain and wetlands.
- » A hydraulics and hydrology (H&H) study and a no rise determination will be needed for crossing the Buies Creek floodway.

- NCDOT Encroachment Agreement - if option 4B is selected instead of Powell Ave, an NCDOT encroachment agreement will be needed to reconstruct the sidewalk into a sidepath in the NCDOT ROW along the south side of US 421.



Priority Segment 5: Downtown Coats Rail Trail Linear Park

Overview (Distance = 0.49 Miles)

The Town Coats, Chamber of Commerce, private property owners, and downtown businesses should explore trail/linear park development along the old rail bed (from Stewart St to Jackson St) as part of a downtown economic development strategy. This downtown linear park would also serve a transportation function, safety improvement, historical/cultural heritage feature, and health and wellness benefit. From Stewart St to Jackson St, the Town of Coats and Coats Museum own about one-third of this property, and eight other private property owners own the other two-thirds the old railroad bed.

Segment 5 Notes - see following page.

Implementation Lead

- Harnett County and Town of Coats

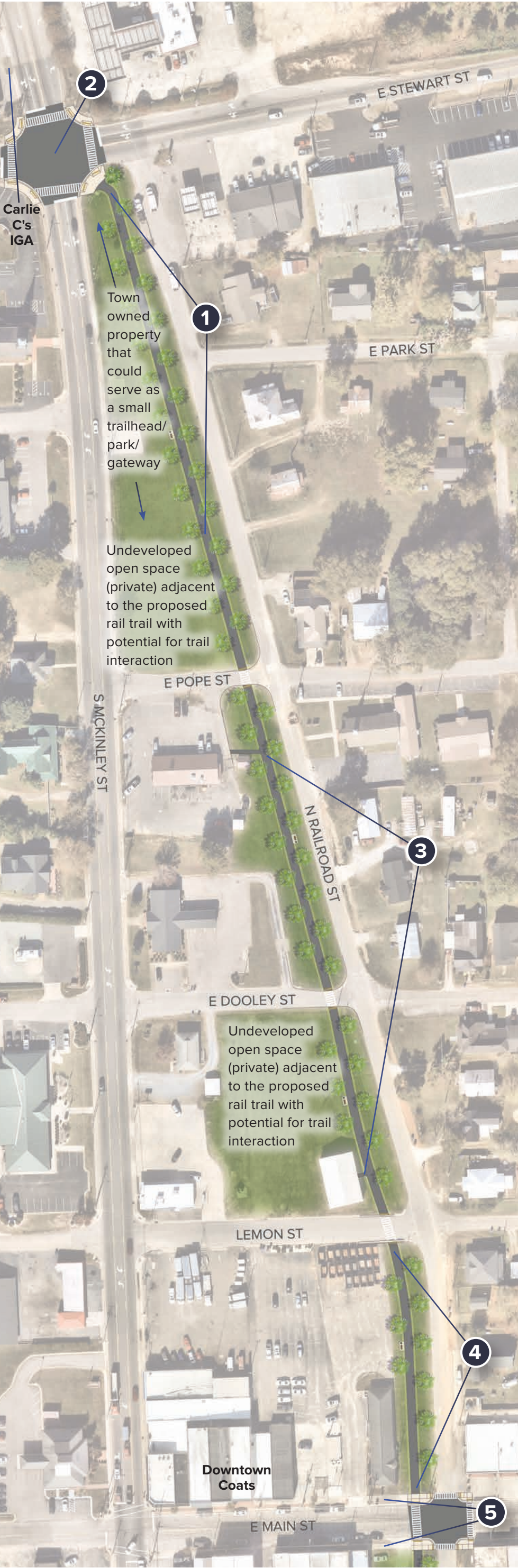
Implementation Partners - Permitting and ROW

- Town of Coats, Chamber of Commerce, Coats Museum, private property owners of old rail bed - ROW agreements and coordination needed. Coats Museum currently has plans to expand and the idea of project should be taken into account as part of that process.
- NCDOT - coordination for intersection improvements needed at NC 55/27 intersection; encroachment agreement possibly needed for section of Railroad St between Main St and Lemon St.
- Several Duke Energy power lines/utility poles may be impacted along corridor - coordination and approval needed with Duke Energy.



Above - Coats Heritage Square at the southern terminus of the proposed downtown rail trail/linear park.

Priority Segment 5: Downtown Coats Rail Trail Linear Park



Rail Trail/Linear Park Notes (Distance = 0.49 Miles)

- 1** The southeast corner of the NC 55/27 intersection and several adjoining parcels to the south are owned by the Town of Coats. This location could be a good location for a trailhead/linear park/gateway into town. Consider constructing this first as a small park with a trail along the old rail bed. This could be the first segment constructed.
- 2** Pedestrian signals and high visibility crosswalks needed on all four legs of the NC 55/27 intersection.
- 3** Opportunity to open back end of businesses (or future businesses) with a connection to the proposed trail.
- 4** One property is currently actively using the rail bed at this location (at the site of the old depot) - either an agreement with the property owner is needed or the trail would need to be constructed in the NCDOT ROW (options would include curb and gutter - may need to narrow Railroad St some amount).
- 5** Sidewalks on both sides of Main St would connect the trail into downtown Coats.
- 6** South of Main St, opportunities for businesses to connect directly to the trail - also, opportunity for a downtown trailhead.
- 7** The Coats Museum owns 350 feet of the rail bed at the southern end, opportunity for the museum to directly interface with the trail.
- 8** The Coats Museum, Coats Community Building, and the neighboring grocery store along Jackson St could serve as an excellent southern terminus of the downtown rail trail, and could serve as a trailhead as well.



Funding Strategy

Typically, a funding "quilt" is required to finance all elements of greenway development. This quilt may be made from a variety of sources that are used in combination to fund project development. A project is most likely to be funded with design completeness, some level of environmental review, and high degree of project readiness in general. In some cases, funding for both design and construction can be accomplished through a federal grant, although it is important to keep in mind that federal funding can often take 6 to 12 months just to get under contract. Harnett County and local partners should be prepared to assist with matching funds for grants.

Local governments like Harnett County often plan for the funding of greenway projects through development of Capital Improvement Projects (CIP) or occasionally, through their annual Operating Budgets. Typical capital funding mechanisms include the capital reserve fund, taxes, fees, and bonds. Grants from federal, state, and private/non-profit sources should be pursued to leverage local dollars from Harnett County and local partners - below and on the following pages is a list of these potential funding sources.

Building Capacity for Grant Writing

The funding quilt needed to build these trail segments can take considerable hours in grant writing. Some ways to build capacity for grant writing include:

- ▶ Working with CAMPO, who regularly writes grants
- ▶ Coordinating with NCDOT IMD about any upcoming grant opportunities, as they often have all-call submissions for potential projects in which they will then help write or pay for professional grant writers, especially for larger federal grants
- ▶ Contract with professional grant writers that specialize in active transportation funding

Potential Funding Sources:	SEGMENT 1: CAPE FEAR SHINER PARK TO CAPETON	SEGMENT 2: CAPETON (CURRENTLY IN DESIGN)	SEGMENT 3: CAPETON TO CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS	SEGMENT 4: CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS TO MAIN CAMPUS	SEGMENT 5: COATS RAIL TRAIL/ LINEAR PARK
FEDERAL SOURCES					
Better Utilizing Investments to Leverage Development (BUILD) Grant Program - The BUILD program’s selection criteria gives special consideration to projects that emphasize improved access to reliable, safe, and affordable transportation for projects in rural areas like Harnett County. BUILD can fund design and/or construction. For more information - https://www.transportation.gov/BUILDgrants .	X	X	X	X	X
CAMPO Locally Administered Projects Program (LAPP) - This program is used by CAMPO to prioritize and program local transportation projects in the region that utilize federal funding and are the responsibility of the MPO (such as Surface Transportation Block Grant Program – Direct Allocation (STBGP-DA), Congestion Mitigation for Air Quality (CMAQ), etc.). Projects compete as either roadway, bicycle, and pedestrian, or transit projects. Only segment 7 lies outside of the CAMPO boundary. LAPP can fund design and/or construction. For more information - https://www.campo-nc.us/funding/locally-administered-projects-program .	X	X	X	X	X
Land and Water Conservation Fund - In North Carolina, the Land and Water Conservation Fund is administered by the Department of Natural and Cultural Resources for outdoor recreation development and land acquisition by local and state government agencies. For more information - https://www.ncparks.gov/about-us/grants/land-and-water-conservation-fund .	X	X	X	X	X
Recreational Trails Program (RTP) Grants - RTP Grants in NC are administered by NC Parks and support all types of greenways and trails for hikers, bikers, paddlers, equestrians, and off-road vehicle users. This grant program is geared to projects that are construction ready. For more information - https://trails.nc.gov/trail-grants .	X	X	X	X	X

X = Likely Eligible for Funding Source

Potential Funding Sources:					
	SEGMENT 1: CAPE FEAR SHINER PARK TO CAPETON	SEGMENT 2: CAPETON (CURRENTLY IN DESIGN)	SEGMENT 3: CAPETON TO CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS	SEGMENT 4: CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS TO MAIN CAMPUS	SEGMENT 5: COATS RAIL TRAIL/ LINEAR PARK
STATE SOURCES					
North Carolina Parks and Recreation Trust Fund (PARTF) - PARTF awards matching grants to local governments for parks, public beach access, and improvements in state parks. The statewide program helps local governments reach their park and public access goals to improve the quality of life in their communities. For more information - https://www.ncparks.gov/about-us/grants/parks-and-recreation-trust-fund .	X	X	X	X	X
Accessible Parks Grant - These grants can be used for the construction of or adaptation of existing facilities that meet the unique needs of persons living with disabilities. Accessibility features for each of the proposed trail segments could consider utilizing this grant program. For more information - https://www.ncparks.gov/about-us/grants/accessible-parks-grant .	X	X	X	X	X
Great Trails State Program - The Great Trails State Program provides funding for new trail development and extension of existing trails anywhere in the state of North Carolina. This includes paved trails or greenways, natural surface trails, biking trails, equestrian trails, and any other type of trail recognized by the Department of Natural and Cultural Resources. All seven of these segments are part of the recommended 'Great Trails State Network' identified in the 2020 Great Trails State Plan. One time funding was provided for this grant program through 2025, and continued funding has not been allotted at the time of this writing. For more information - https://www.ncparks.gov/about-us/grants/great-trails-state-program .	X	X	X	X	X
North Carolina Land and Water Fund - Formerly known as the Clean Water Management Trust Fund, the NC Land and Water Fund is used to conserve land including access to trails, greenways, and open space. This funding source is likely most appropriate for the segments along or across riparian corridors where land acquisition/conservation is needed. For more information - https://nclwf.nc.gov/ .	X	X	X	X	
Highway Safety Improvement Program/ SPOT Safety Program - The Spot Safety Program is used to develop smaller improvement projects to address safety, potential safety, and operational issues. This could be a potential source of funding for improving the NC 55/27 intersection or other intersection improvements as part of the Coats Downtown Rail Trail/Linear Park project. For more information - https://connect.ncdot.gov/resources/safety/pages/nc-highway-safety-program-and-projects.aspx#:~:text=The%20Spot%20Safety%20Program%20is,million%20per%20state%20fiscal%20year .					X
NC Forest Service - Urban and Community Forestry Financial Assistance Program - This grant is used to help plan and establish street trees as well as trees for urban open space. This could be a potential source for creating a tree canopy along the proposed Coats Downtown Rail Trail/Linear Park. For more information - https://www.ncagr.gov/divisions/nc-forest-service/urban/financial-assistance-program#:~:text=The%20primary%20objective%20of%20the,matches%20their%20goals%20and%20capacity .					X

X = Likely Eligible for Funding Source

Potential Funding Sources:					
	SEGMENT 1: CAPE FEAR SHINER PARK TO CAPETON	SEGMENT 2: CAPETON	SEGMENT 3: CAPETON TO CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS	SEGMENT 4: CAMPBELL UNIVERSITY HEALTH SCIENCES CAMPUS TO MAIN CAMPUS	SEGMENT 5: COATS RAIL TRAIL/ LINEAR PARK
PRIVATE/ NON-PROFIT SOURCES					
Rails-to-Trails Conservancy - Applications for projects on rail trails and rails-with-trails are given preference, which could be an opportunity for segments 6 and 7. For more information - https://www.railstotrails.org/grants/ .					X
National Fish and Wildlife Fund - National Fish and Wildlife Foundation priorities include conservation of bird, fish, plants and wildlife habitats, providing access for people to enjoy outdoors, and connecting existing protected lands. Projects with the greatest potential for wildlife protection are noted. For more information - https://www.nfwf.org/apply-grant .	X	X	X	X	
The Trust for Public Land - The Trust for Public Land helps acquire land and transfer it to public agencies, land trusts, or other groups that intend to conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities. For more information - https://www.tpl.org/state/north-carolina .	X		X	X	X
The Conservation Alliance - Conservation Alliance projects seek to secure lasting and quantifiable protection of a specific wild land or waterway and prioritize landscape-scale projects that have a clear benefit for habitat. For more information - https://conservationalliance.com/grants/ .	X		X	X	X

X = Likely Eligible for Funding Source

Land Acquisition Toolbox

CONSERVATION TOOLS

The following conservation tools offer various benefits and drawbacks to consider as ROW acquisition and land conservation is pursued along these corridors in the coming years. Harnett County should coordinate closely with conservation partners, such as land trusts operating in the region (such as the Conservation Fund, Triangle Land Conservancy, and Three Rivers Land Trust) who have strong expertise in these conservation tools and extensive local knowledge.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
CONSERVATION PRACTICES		
The term “conservation practices” refers to a variety of methods to conserve natural resources by a range of stakeholder types. Examples of conservation practices include stormwater management, low impact development, soil and nutrient management, riparian restoration, etc. Examples of stakeholders involved in these practices include developers, municipalities, households, farmers, landowners, forest managers, and businesses.	The main benefit of a conservation practice over purchasing land or conservation easements is that practices can be implemented by land owners and managers without selling the land or putting it under easement.	One challenge in relying only on conservation practices to protect natural resources and open spaces is that most practices are voluntary in nature, or may rely on incentives for participation by landowners, farmers, developers, and others. Education and encouragement may go a long way in increasing use of conservation practices, but there is a limit to which people are willing and able to invest time and resources into such practices.
TRAIL EASEMENT		
This is a legal agreement typically between a landowner and government agency that involves granting a specific right to use or access a portion of private land for a walking and/or biking trail (or other trail use), while the landowner retains ownership.	A trail easement can be effective in preserving space for a trail if it meets mutual goals of landowner and agency, and can be a useful tool when working with developers that have trail requirements along their property. Easement provisions are tailored to needs of landowner and site goals. Easements run with the land, despite changes in ownership.	Less protection than outright acquisition. Easement purchases may be costly, even though they are less than fee acquisition. Terms must be carefully and clearly outlined. Management intensive: easements must be monitored and enforced; grantee agency must work closely with landowners. Easement restrictions may limit property resale opportunities. Tax benefits may not be sufficient motivation for landowner to donate or sell easement.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
CONSERVATION EASEMENT		
This is a legal agreement between a landowner and a qualified conservation organization or government agency to voluntarily restrict the use and development of the property. Easement grantee (i.e. local government) would hold a partial interest or some specified right in a parcel of land. A conservation, historic preservation, open space, or scenic easement is designed to protect a specific sensitive natural, historic, or cultural resource. An easement may be in effect for a specified period of time, but is usually perpetual.	A conservation easement can be effective in preserving open space if it meets mutual goals of landowner and agency. Easement provisions are tailored to needs of landowner and site preservation goals. Landowner retains ownership, use and management of the land. Potential property, income, and estate tax benefits for donation or bargain sale of an easement if it is permanent. Easements run with the land, despite changes in ownership. Reduces costs for site protection when easements are acquired at less than fair market value for the protected area.	Baseline survey required to identify the extent of natural, historic, or cultural resources within the easement. Less protection than outright acquisition. Easement purchases may be costly, even though they are less than fee acquisition. Terms must be carefully and clearly outlined. Management intensive: easements must be monitored and enforced; grantee agency must work closely with landowners. Easement grantee must possess technical expertise and financial wherewithal to monitor and enforce easement. Easement restrictions may limit property resale opportunities. Tax benefits may not be sufficient motivation for landowner to donate or sell easement.
FEE SIMPLE ACQUISITION		
Usually the sale of land at full market value. Ownership and responsibilities are transferred completely to the buyer. While cash payment yields the greatest return, taxes and other expenses may reduce net return.	The most straight forward acquisition method. Provides agency with full control over future of property.	Most expensive. Buyer assumes full responsibility for care and management of property. Loss of revenue when land is removed from tax rolls. Capital gains issues for seller.
DONATION		
Owner grants full title and ownership to conservation agency.	Resources are acquired at very low costs to the agency. Agency may receive endowment for long-term land stewardship. Donor may qualify for income tax deductions, estate tax relief, and property tax breaks.	Landowner loses potential income from sale of land. Receiving agency must accept responsibility and long-term costs of land management. Stewardship endowments may make donations cost prohibitive for landowners.
BARGAIN SALE		
Land, or a conservation easement, is purchased at less than fair market value. The difference between the bargain sale price and the easement or land’s fair market value becomes a charitable donation.	Reduced acquisition costs. Seller may qualify for tax benefits for charitable donation. May offset capital gains on the sale.	Difficult and time-consuming to negotiate. May still be costly to acquire land.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
RIGHT OF FIRST REFUSAL		
Agreement giving the conservation agency the option to match an offer and acquire the property if the landowner is approached by another buyer. This can be done so when the landowner decides to sell. The agency or organization has the first right to either purchase or refuse the purchase.	Agency can gain extra time to acquire funds for purchase.	Resource may be lost if offer can't be matched by the conservation agency. Some landowners are unwilling to enter into this kind of binding agreement.
LEASE		
An agreement between an agency and landowner to rent the land to protect and manage a sensitive resource.	Low cost approach to site protection. Landowner receives income and retains control of property. An alternative for preservation-minded landowners not ready to commit to sale of easement. Restrictions can be included in the lease to direct the activities of the conservation agency on the land.	Short-term protection strategy. Leases are not permanent.
ACQUISITION AND SALEBACK OR LEASEBACK		
Agency or private organization acquires land, places a conservation and/or trail easement, protective restrictions or covenants on the land, then resells or leases land.	Proceeds from sale or lease can offset acquisition costs. Land may be more attractive to buyer due to lower sale price resulting from restrictions. Management responsibilities are assumed by new owner or tenant.	It is often a complicated procedure. Owner retains responsibility for the land but may have less control over the property. Leases may not be suitable on some protected lands.
CLUSTER DEVELOPMENT/CONSERVATION SUBDIVISIONS		
Cluster development allows land developers to develop in a compact form at higher densities, thereby preserving greenspace within the same tract that would not be developed. This approach can be combined with conservation and/or trail easements to protect the undeveloped greenspace and provide trail access.	Allows for flexibility in design to protect natural resource areas located on the parcel. Construction and infrastructure costs for land developers are reduced. Trail connectivity can be woven into greenspace.	Participation is voluntary. If not implemented correctly, protected lands are often scattered and non-contiguous. Clustering may not be a preferred option for developers. Long-term management of common greenspace may become problematic for homeowner associations.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
INSTALLMENT SALE		
A percentage of purchase price is deferred and paid over successive years.	Possible capital gains tax advantages for seller.	Complicates budgeting and financing of acquisitions.
ROLLING OPTION		
A series of options to buy a property, in portions or sections, extending the purchase over a period of years.	When insufficient funds are available, this option is used to purchase land at fair market value over a period of time using smaller annual appropriations.	May not work for the landowner due to elongated period of payment.
DONATION VIA BEQUEST		
Land is donated to a conservation agency at the owner's death through a will.	Reduces estate taxes and may benefit heirs with reduced inheritance taxes. Allows owner to retain full use and control over land while alive; ensures its protection after death.	No income tax deduction for donation of land through a will. Requires careful estate planning by the landowner.
DONATION WITH RESERVED LIFE ESTATE		
Owner retains rights to use all or part of the donated land for his or her remaining lifetime and the lifetimes of designated family members.	Allows owner to continue living on and using the property during his or her lifetime while ensuring the land's protection. Allows designation of family members to remain on land.	Tax benefits may be earned prior to death; some types of open space may not qualify. May delay transfer of title to the conservation agency for a long period of time.
INTERGOVERNMENTAL PARTNERSHIP		
Federal, state, and local agencies form joint partnerships to own and manage land.	Sharing the responsibilities and costs of acquisition and management can protect larger or more expensive properties. Can foster countywide cooperation to preserve greenspace.	Partners must agree on management strategies in order to reduce potential for conflict. Agency budgets and acquisition criteria may restrict acquisitions. Slower response time; acquisition opportunities may be lost due to agency procedures. May remove land from tax base.
AGENCY TRANSFER		
Government transfers excess land to another agency that can assume resource protection and management responsibilities.	Resource protection and management with little additional expenditures.	Excess property may not be suitable for resource protection. Obtaining fair market value for the property may be agency's priority.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
LAND EXCHANGE		
Land may be exchanged for another parcel that is more desirable for resource protection.	Lower acquisition costs. Scattered properties can be exchanged for a single, larger parcel. When equal value properties are exchanged, there is no tax on the transfer.	Complicated process; not widely known and rarely used. Subject to IRS regulations. Property owners must be willing to participate and properties must be of equal value.
NONPROFIT ACQUISITION AND CONVEYANCE TO PUBLIC AGENCY		
Nonprofit organization (such as land trust) buys a parcel of land and resells it to a local government or other public agency.	Nonprofits can often move more quickly to purchase and hold land until the public agency is able to purchase the land. Could reduce acquisition costs for public agency.	Local government must be willing to purchase land and assume management responsibilities.
JOINT VENTURE PARTNERSHIP		
Strategy used by public agencies and private organizations to accomplish projects serving mutual goals. For example, some government grant programs could be matched with both private contributions and public funds.	Partners share benefits, responsibilities, and costs of acquisition and management. Creates a coalition of support for protecting diverse resources. Brings diverse sources of knowledge and expertise to solve resource protection issues.	More complicated property management and decision-making. Conflicts in acquisition criteria and funding priorities must be resolved.
MANAGEMENT AGREEMENT		
Agreement between landowner and conservation agency to manage property to achieve resource conservation goals.	Owner may be eligible for direct payments, cost-share assistance, or other technical assistance from the agency. Management plan is developed based on owner's preservation goals.	Mutual agreement is more easily terminated than a lease. Agreements are not permanent.
MUTUAL COVENANTS		
Agreement between adjoining landowners to control future land uses through mutually agreed upon restrictions.	Permanent (unless parties agree to change); covenants can be enforced by any of the landowners or future landowners of the involved properties. Significant incentive to comply with restrictions since all parties are aware of use controls. Can reduce property taxes.	Loss in market value from mutual covenants does not qualify as a charitable deduction for income tax purposes.

STRATEGY DESCRIPTION	BENEFITS	DRAWBACKS
PARKLAND DEDICATION ORDINANCE		
Parkland dedication is a local government requirement imposed on subdivision developers or builders mandating that they dedicate land for a park and/or pay a fee to be used by the government entity to acquire and develop park facilities. Harnett County currently requires open space as part of new development and fees for future park land.	These dedications are a means of providing park facilities in newly developed areas of a jurisdiction without burdening existing residents. They may be conceptualized as a type of user fee because the intent is that the landowner, developer, or new homeowners, who are responsible for creating the demand for the new park facilities, should pay for the cost of new parks.	Difficult to introduce new development regulations in some communities and it does not address the need for conservation outside of new development areas.
DEVELOPMENT IMPACT FEE		
Impact fees (currently used by Harnett County) are also known as exactions. In its simplest form, the developer is charged an easy-to-calculate fee. A formula may be created to decide the cost that development will impose on the community. The formula can account for the area of land affected, the number of units built, the expected market value of those units, the distance from the fire and police stations, costs of building roads, and the expected population growth resulting from the construction. The exaction can come in forms other than money. The developer can be required to provide streets, sewers, street lights, parks, or other infrastructure and amenities. The town or county can develop a comprehensive system or formula or exactions can be formulated on a case-by-case basis from more general criteria.	A “pay-as-you-grow” program that really has been proven to help communities keep pace with rapid land development.	Can be difficult to implement, as it must meet Supreme Court rulings on “essential nexus,” fair and equitable implementation. Politically challenging because impact fees are generally not favored by the development community.

Summary Action Steps

TASK	ORGANIZATIONS	RESOURCES NEEDED	TIME FRAME
INITIAL ACTION			
1. Approve Study - Jurisdictions present to regulating board for approval.	Harnett County, Town of Lillington, Town of Coats	Staff needed to present to regulating board (Alta to provide a project summary PPT slide deck to Harnett County)	Fall 2025
EARLY ACTIONS			
2. Continue Partnership Meetings - Meet quarterly, or as needed, to coordinate with partners.	Harnett County led, partners include Town of Lillington, Town of Coats, Campbell University, NCDOT, CAMPO, Greenfield Communities, RJ Corman, and other partners as-needed (such as permitting agencies, utilities, and other private landowners)	Staff time	Ongoing
3. Solidify Alignments for the Design Phase - Work with landowners and developers to secure ROW/ easements or dedicated future open space where needed.	Harnett County and segment leads/partners	Staff time; funding needed to secure easements if not donated	Ongoing
TRAIL DEVELOPMENT ACTIONS			
4. Appropriate Funding For Design, Complete Design - Once land for trail segments are secured, fully complete design (survey, plans, specifications, and estimates (PS&E), permits).	Harnett County and segment leads/partners	Funding for consultant; Harnett County project manager to manage consultant or be part of a project team managing consultant	Funding secured as soon as possible, ideally completed in next 1-3 years (depending on the segment/ROW needs) before construction funds secured
5. Appropriate Funding For Construction - Fully fund construction based on design.	Harnett County and segment leads/partners	Construction funding; staff time (or consultant) for grant writing and/or local or county bond funding	Secure within 2026-2030, if possible
6. Bid and Construct Trail Segments - Bid, award, and construct segments.	Harnett County and segment leads/partners	Construction funding; Harnett County project manager to manage contractor or be on project team managing contractor	Complete most or all segments within 10 years
ONGOING OPERATIONS			
7. Operations and Maintenance - Develop operations and maintenance (O&M) plan, program the greenway, and evaluate performance.	Harnett County and segment leads/partners	Staff time; funding for ongoing maintenance	O&M plan completed by step 6, (see Harnett County Bicycle, Pedestrian, and Greenway Plan (2021) for overview of trail maintenance)



2025

Harnett County

GREENWAY FEASIBILITY STUDIES

Prepared for: Harnett County

Prepared by: Alta Planning + Design