

TOWN of RIVER BEND, NC BICYCLE & PEDESTRIAN PLAN



Prepared for the Town of River Bend & the New Bern Area Metropolitan Planning Organization (MPO)
Prepared by Alta Planning + Design

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John Kirkland, Mayor, Town of River Bend
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Prepared for the New Bern Area Metropolitan Planning Organization (MPO) and the Town of River Bend, North Carolina

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PROJECT BACKGROUND AND PLANNING PROCESS

PROJECT BACKGROUND

The Town of River Bend has long-supported the idea of creating a bicycle and pedestrian plan. For example, the Town’s 2013 Comprehensive Plan contains the following goals and strategies:

- » “Ensure that the citizens of the Town of River Bend and its visitors have a range of opportunities for all age groups to maintain and improve their well-being.” (Comp. Plan, page 14)
- » “Encourage bicycles as a means of travel in Town.” (Comp. Plan, page 16)
- » “Create a community-wide bike and pedestrian plan.” (Comp. Plan, pages 14 & 17)

In years following the 2013 Comprehensive Plan, Town leadership took important steps towards developing such a plan. They submitted grant applications to the NCDOT Division of Bicycle and Pedestrian Transportation’s Planning Grant Program. However, due to the competitive nature of those grants, the Town was not selected. Therefore, the New Bern Area Metropolitan Planning Organization (NBAMPO), on behalf of the Town of River Bend, NC, decided to fund the preparation of this Bicycle and Pedestrian Plan.

PLANNING PROCESS

The planning process began with a field tour of the Town with the Town Mayor, the NBAMPO, and the project consultants, Alta Planning + Design. The tour focused on key opportunities and constraints for walking and bicycling in town (see opposite page). The tour was followed up by a meeting with Town staff and an initial public workshop, to gather further input on existing conditions and potential projects. Consultants then drafted recommendations based on that input, and presented them back to the public for further comment and feedback. Feedback received at the public workshop was extremely supportive, particularly for improvements to Shoreline Drive and expanding the trails around Town Commons.

The field tour, staff meetings, and public workshops were followed up by an implementation-focused meeting with the NBMPO, and the subsequent development of this draft plan report. The Final Plan was presented to the Town in September 2018.



From the top: Field tour of the Town, followed by stakeholder meetings and public workshops.

EXISTING CONDITIONS

RIVER BEND OVERVIEW

The Town of River Bend was chartered in 1981, and is located along the Trent River, about six miles southwest of Historic Downtown New Bern.

The Town's waterways and golf course provide beautiful views for its 3,100 residents. According to the U.S. Census Bureau, River Bend residents have a median age of 56.8 years, with 24% of the population having served in the armed forces. Nearly 40% of the population is over the age of 65, however, there is an increasing trend of younger families with children moving to the town (the latest census data indicates 15% of homes with children under 18). Despite the older population, River Bend is a very active community, with many residents walking and bicycling on a regular basis.

KEY OPPORTUNITIES AND CONSTRAINTS FOR WALKING AND BICYCLING

According to the field tour, public input, and input from Town leadership, key factors include:

- » River Bend has numerous water features, a golf course, kayak launch, and several undeveloped areas, all of which provide a picturesque setting, which encourage walking and biking.
- » River Bend has five major municipal streets that connect 15 distinct residential areas, in a network of winding streets. Many of those have numerous cul-de-sacs, which reduce through traffic. However, the same street design also tends to separate residential areas from one another.
- » Nearly every street in Town is used for walking and bicycling, as-is, without dedicated walking and bicycling facilities. This is good in the sense that people are being active and healthy, but problematic and potentially dangerous in situations where they are at conflict with motor vehicle traffic.
- » The main corridor, Shoreline Drive, has 3-4' paved shoulders, providing some ability for walking and biking. Residents use these shoulders frequently, sometimes at risk to themselves (see photo at right). Residents expressed interest in having greater separation from motor vehicles along this corridor, and for the speed limit to be reduced to 25MPH.

- » The town has nearly 2,100 feet of unpaved walking trails around Town Commons and Ritter Field to build upon, but the current gravel surface is difficult for wheelchairs and for pedestrians who have difficulty with uneven surfaces (which is a significant portion of River Bend's population).
- » The town has very few existing crosswalks; One at the intersection of Shoreline Drive and Plantation Drive, and two mid-block trail crosswalks at Plantation Drive.
- » The town also has 500 feet of boardwalk that serves the Town kayak launch.
- » All of River Bend's street network is owned by the town, as opposed to many other NC communities that have some, if not many NCDOT-owned and maintained streets. This gives the Town more control, but also means that NCDOT funding sources for improvements do not apply to Town roads.

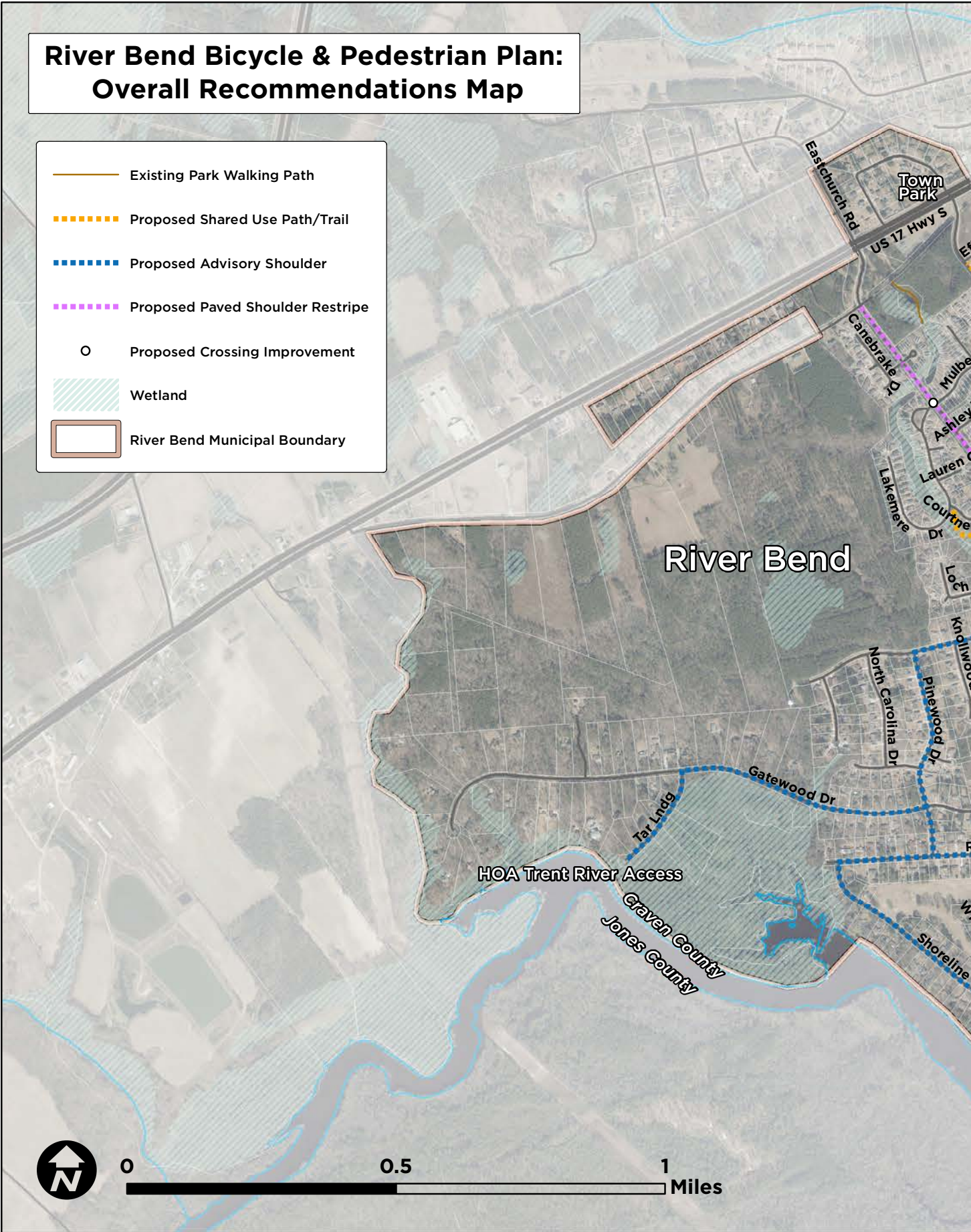


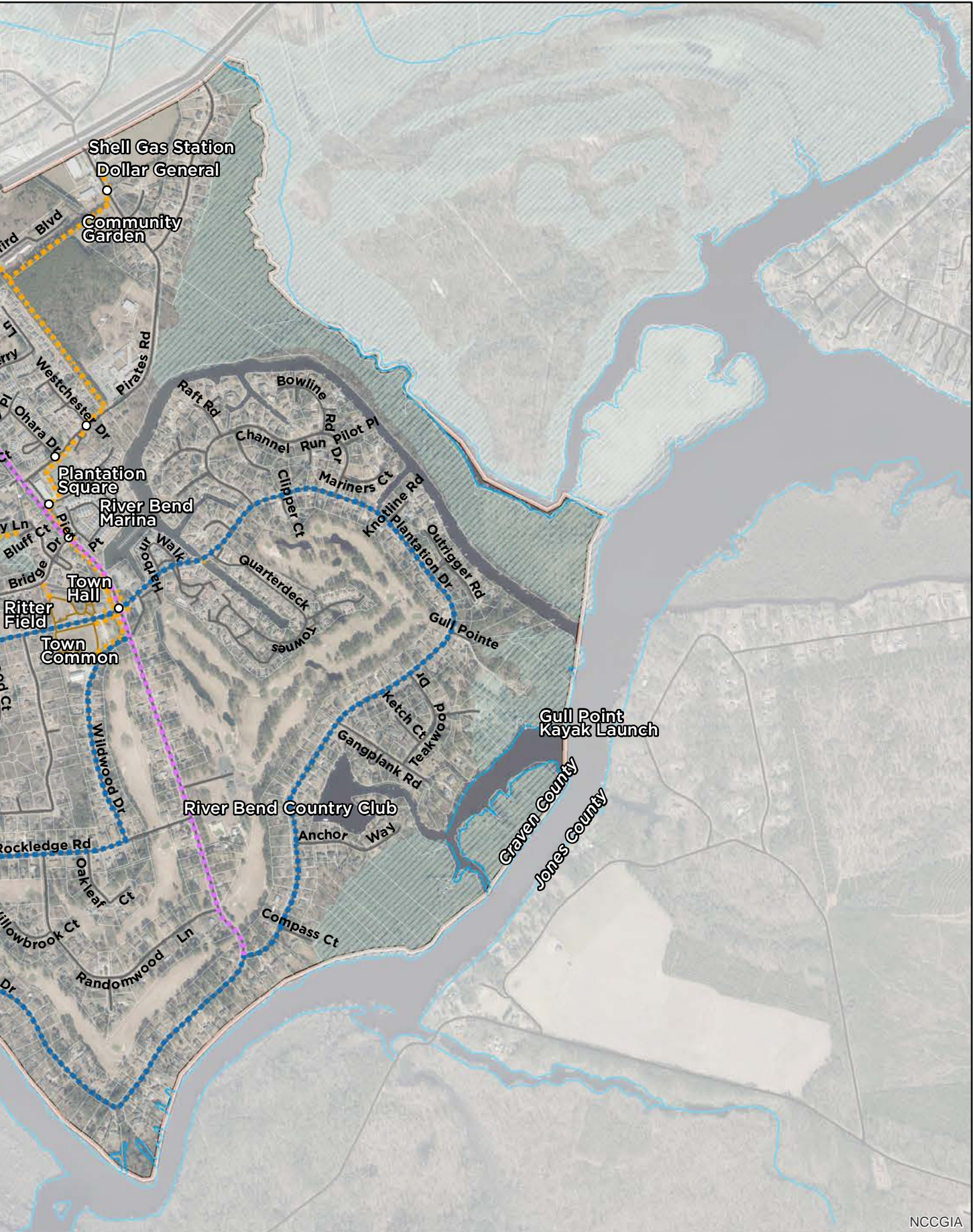
From the top: Part of the unpaved pathway at Town Commons, followed by people walking along the shoulder of Shoreline Drive, which is the only space for walking and biking along the main corridor through town.

PROJECT RECOMMENDATIONS

River Bend Bicycle & Pedestrian Plan: Overall Recommendations Map

-  Existing Park Walking Path
-  Proposed Shared Use Path/Trail
-  Proposed Advisory Shoulder
-  Proposed Paved Shoulder Restripe
-  Proposed Crossing Improvement
-  Wetland
-  River Bend Municipal Boundary





NCCGIA

PROJECT #1: SHORELINE DRIVE SIDEPATH

FROM MARINA RD TO PLANTATION DR

The existing roadway consists of one 10.5' travel lane in each direction, with 3' to 4' striped shoulders. The shoulders are the only place currently available for walking outside of the travel lanes, aside from walking in the sloped open drainage grass areas to the side of the road. The areas beyond the drainage vary in this section, including dense landscaping buffers, fences, retaining walls, and water. Therefore, a sidepath is proposed in this section to connect Plantation Square, the marina entrance, and Town Commons.

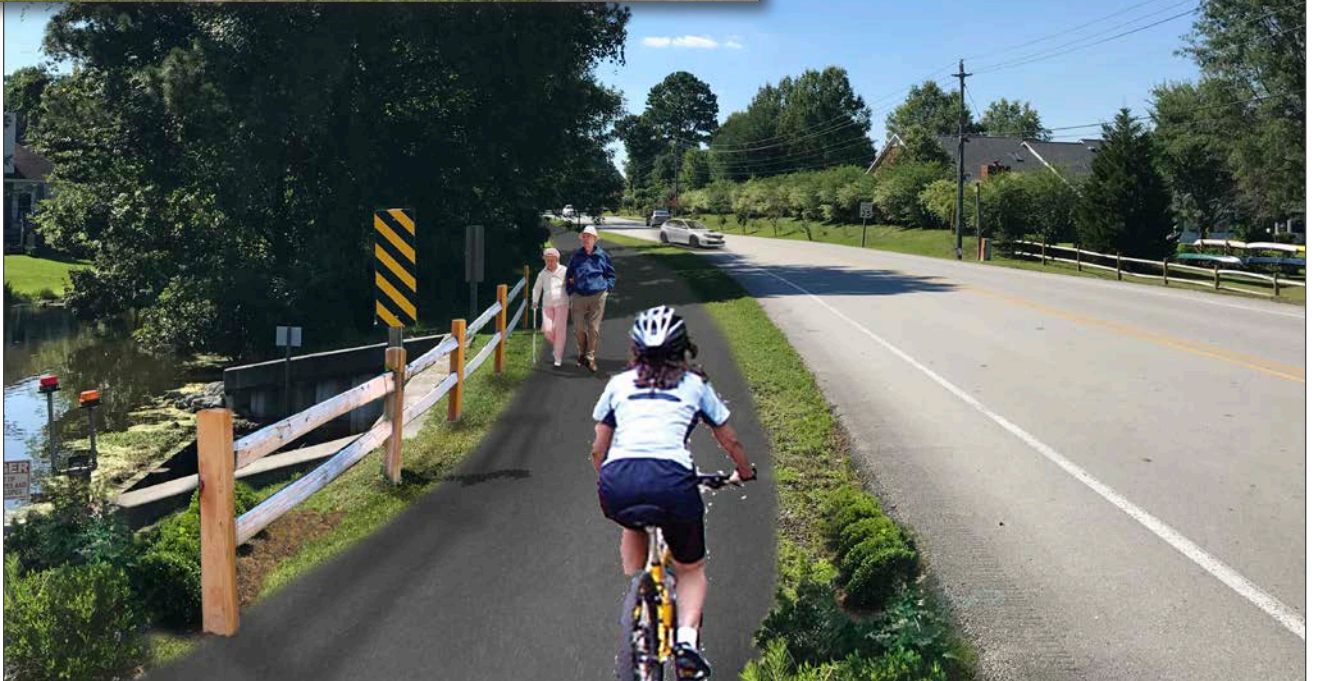
PROJECT AT A GLANCE

- » Project type: 10'-wide asphalt sidepath
- » Length: Appx. 1,200 ft total
 - » 1,080 ft in sidepath
 - » 120 ft in crosswalks
- » West side selected from Lochbridge Dr. to Town Hall due to slightly flatter terrain, less conflict with drainage, and more spacing on the west side of the bridge.
- » Start/Stop points selected due to key destinations served along this stretch, and due to the fact that this is one of the busiest sections for people traveling in and out of River Bend.
- » Connections: Plantation Square, Racquet Club, River Bend Marina, Harbor Centre, Town Hall, Town Commons, and Ritter Field.



Left: Existing conditions along Shoreline Dr, looking north toward Pier Pointe/Lochbridge Dr.

Below: Proposed conceptual improvements include a paved side path.



PROJECT #1 (CONTINUED)

Construct short, 50' section along the south side of Marina Road from the southeast corner of the Shoreline Drive intersection. This will link to project #3 and allow for connectivity to Plantation Square. This will require moving the existing chain link fence back several feet.

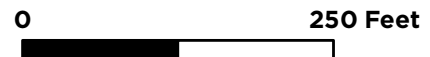
Construct this section along the east side of Shoreline Drive due to a slightly greater amount of space on the east side of Shoreline Drive.

Construct high visibility crosswalks along the southeast and northeast sides of the Lochbridge Drive/Shoreline Drive intersection.

The recommended first phase of this project is from Lochbridge Dr, south to the Town Hall parking lot. Construct this section along the west side of Shoreline Drive due to slightly flatter terrain, less conflict with drainage, and more spacing on the west side of the bridge.



- Shoreline Drive Sidepath
- Other Proposed Project



PROJECT #2: TOWN COMMONS TRAIL EXTENSION & ENHANCEMENT

There are approximately 2,100 ft of existing trails at Town Commons and Ritter Field, including the sidewalks that connect the Town Hall parking, gazebo, and picnic shelter.

Existing portions of trail could be enhanced through landscaping, providing beauty and much needed shade for use during the summer season. Making straight portions of the trail meander slightly could provide greater appeal as well.

Newly proposed portions of trail would build off the existing network, while remaining on Town-owned land.

PROJECT AT A GLANCE

- » Project type: Paved or Unpaved trail
- » Length: Appx. 3,250 ft total
 - » 2,100 ft existing (with 800 ft proposed landscaping)
 - » 1,150 ft proposed new
- » Trail enhancements and landscaping could be implemented over time, in sections, as funds are available. Smaller plantings, including some trees, could be done through a volunteer program, or a combination of volunteers and Town staff.
- » New sections of trail could also be phased for development, as funds are available.
- » Connections: Harbor Centre, Town Hall, Town Commons, and Ritter Field.



Existing conditions along the trail at Town Commons (looking west along W. Plantation Drive).



Proposed improvements using landscaping for shade.

PROJECT #2 (CONTINUED)

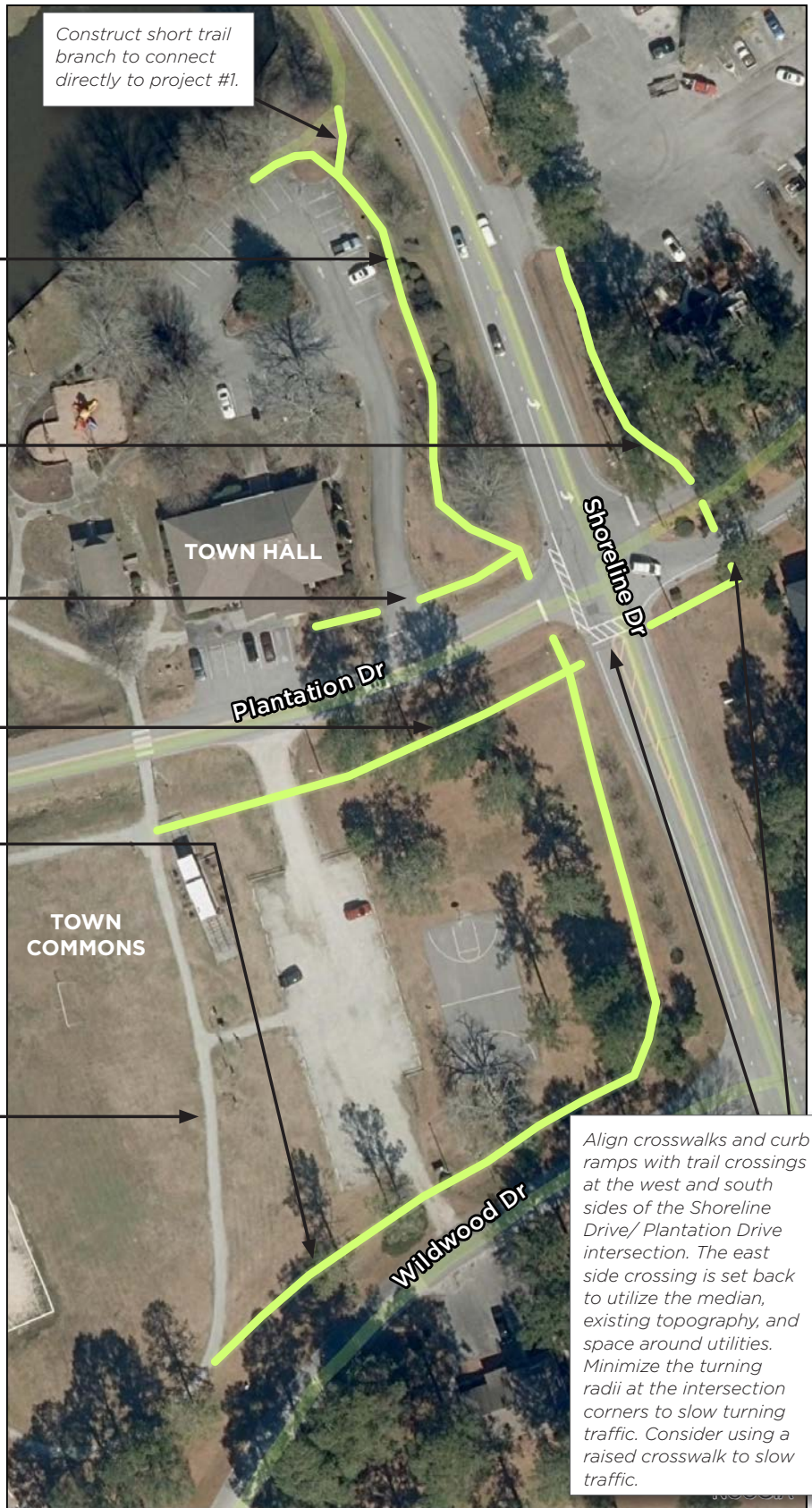
Construct trail connection from the Plantation Drive/Shoreline Drive intersection to the existing sidewalk connector at the northeast corner of the Town Hall parking lot, connecting to project #1.

Construct trail connection along the east side of Shoreline Drive from the southeastern corner of the Shoreline Drive/Plantation Drive intersection to Marina Place.

Extend trail connection from Town Hall to the Plantation Drive/Shoreline Drive intersection.

Extend the Town Commons trail to the Plantation Drive/Shoreline Drive intersection, and looping south along Shoreline Drive and west along Wildwood Drive to the southern section of the existing Town Commons trail.

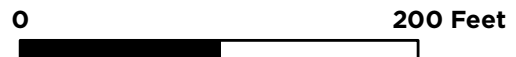
Existing portions of trail could be enhanced with trees for shade. Deciduous trees will offer shade in the summer and allow sun in the winter. If/when the existing trails are resurfaced, they could be designed to meander slightly to add interest. See photo rendering on previous page.



Construct short trail branch to connect directly to project #1.

Align crosswalks and curb ramps with trail crossings at the west and south sides of the Shoreline Drive/Plantation Drive intersection. The east side crossing is set back to utilize the median, existing topography, and space around utilities. Minimize the turning radii at the intersection corners to slow turning traffic. Consider using a raised crosswalk to slow traffic.

- Town Common Trail Links
- Other Proposed Project



PROJECT #3: PIRATES RD TO MARINA DR CONNECTORS

These connectors are proposed as an alternative to walking and biking along Shoreline Drive. They also build upon the proposed Project 1, which would terminate at Marina Dr. With this project, in combination with Project 1, people living in the approximately 70 homes off of Ohara Dr and Westchester Dr would be able to connect to Town Commons without walking or biking (or driving) on Shoreline Dr.

PROJECT AT A GLANCE

- » Project type: Paved or unpaved trail
- » Length: Appx. 930 ft
- » Trail sections could be phased for development, as funds are available. For example:
 - » Phase 1: Marina Rd to Pirates Rd
 - » Phase 2: South side of Pirates Rd
- » Connections: Plantation Square, Racquet Club, River Bend Marina, and residential areas near Ohara Dr and Westchester Dr.

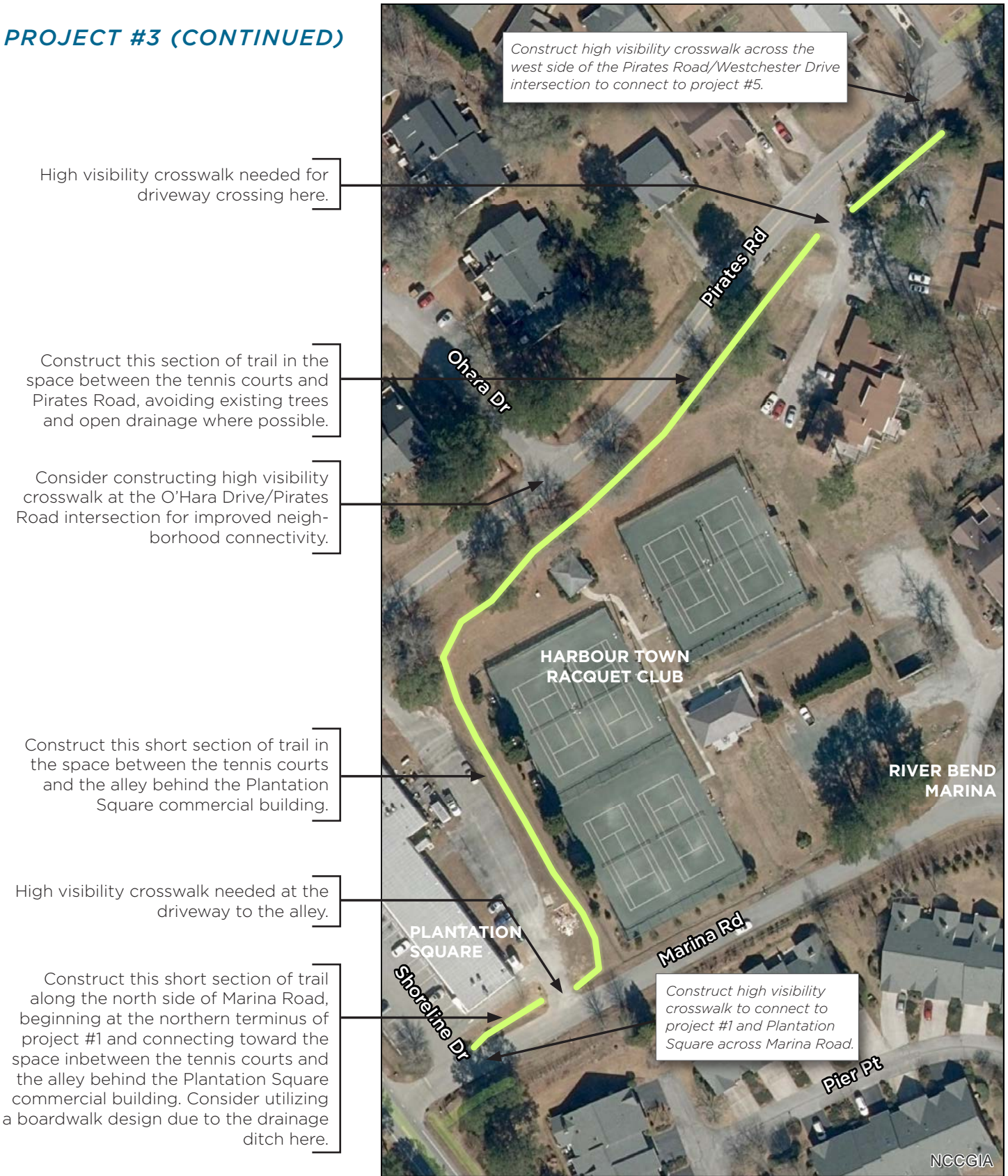


Top: Existing conditions between Plantation Square (left) and the Racquet Club (right), looking north from Marina Dr towards Pirates Rd. Above: A conceptual photo rendering of the proposed trail.



Top: Existing conditions along the south side of Pirates Rd (Google Streetview image). Above: A conceptual photo rendering of the proposed trail.

PROJECT #3 (CONTINUED)



Construct high visibility crosswalk across the west side of the Pirates Road/Westchester Drive intersection to connect to project #5.

High visibility crosswalk needed for driveway crossing here.

Construct this section of trail in the space between the tennis courts and Pirates Road, avoiding existing trees and open drainage where possible.

Consider constructing high visibility crosswalk at the O'Hara Drive/Pirates Road intersection for improved neighborhood connectivity.

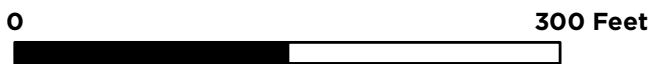
Construct this short section of trail in the space between the tennis courts and the alley behind the Plantation Square commercial building.

High visibility crosswalk needed at the driveway to the alley.

Construct this short section of trail along the north side of Marina Road, beginning at the northern terminus of project #1 and connecting toward the space inbetween the tennis courts and the alley behind the Plantation Square commercial building. Consider utilizing a boardwalk design due to the drainage ditch here.

Construct high visibility crosswalk to connect to project #1 and Plantation Square across Marina Road.

- Pirates Rd to Marina Dr Connectors
- Other Proposed Project



PROJECT #4: MULBERRY, LAKEMERE & LOCHBRIDGE CONNECTION

These connectors are proposed as an alternative to walking and biking along Shoreline Drive. Along with the proposed crosswalk over Shoreline Dr at Lakemere Dr/Mulberry Ln, they would allow the people living in areas near Mulberry Ln and Lakemere Dr to connect to Town Commons, without walking or biking (or driving) on Shoreline Dr.

The boardwalk section of this project will need to be aligned and designed carefully to respect the privacy of nearby residents, and will likely require negotiated easements to complete.

PROJECT AT A GLANCE

- » Project type: Crosswalk, boardwalk connector trail, and unpaved connector trail.
- » Length: Appx. 900 ft
 - » 28 ft crosswalk across Shoreline Dr
 - » 700 ft boardwalk & unpaved trail (Lakemere Dr to Bluff Ct)
 - » 170 ft unpaved trail (Lochbridge Dr to Town Commons path)
- » Connections: Ritter Field, Town Commons, Town Hall, and residential areas near Mulberry Ln, Lakemere Dr, and Lochbridge Dr.



Existing conditions at the intersection on Shoreline Dr and Mulberry Ln/Lakemere Dr. The only other existing crosswalk for Shoreline Dr is about 2,500 ft to the south, at Plantation Dr.



Existing conditions between Ritter Field and Lochbridge Dr. People can already walk through the grass as a connection, but extending the existing path would formalize the connection.



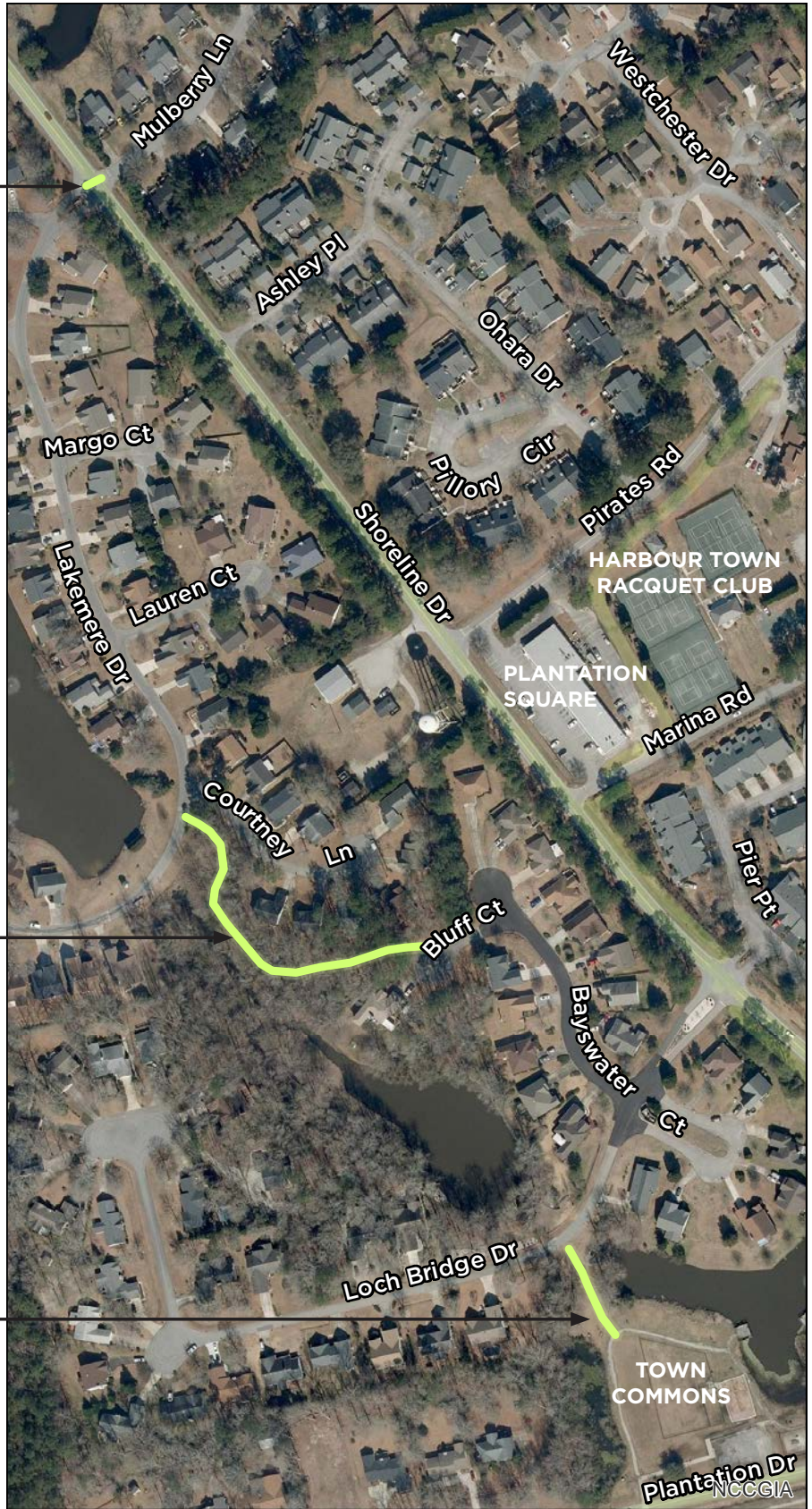
Existing conditions at the corner of Lakemere Dr and Courtney Ln, near where a boardwalk trail is proposed to connect south to Baywater Ct (Google Streetview Image).



PROJECT #4 (CONTINUED)

Construct high visibility crosswalk for Shoreline Drive crossing at Mulberry Lane/Lakemere Drive.

Construct this section of trail from Lakemere Drive to Bluff Court. Consider utilizing boardwalk construction due to creek proximity. This link will be the most critical piece in connecting multiple neighborhoods toward Ritter Field and the center of Town, creating a walking/biking alternative to Shoreline Drive.

Construct short trail to complete link between Lochbridge Drive and Ritter Field.



-  Mulberry, Lakemere & Lochbridge Connection
-  Other Proposed Project



PROJECT #5: NE RIVER BEND CONNECTOR

FROM PIRATES RD/WESTCHESTER DR INTERSECTION TO THE SHELL GAS STATION

Pirates Rd is currently 20' wide, consisting of two travel lanes 10' wide in each direction with no shoulders. For any resident wishing to walk or bike to the Dollar General, Shell Gas Station, Excel Learning Center, Riverstone Assisted Living, Community Garden, or Howell Center, the Pirates Rd corridor serves as the only option. Pedestrians and/or bicyclists must utilize the existing roadway surface or the sloped open drainage areas parallel to the road. The areas beyond the drainage vary in this section, including dense landscaping buffers, fences, retaining walls, front porches, and water. Therefore, a shared use path (for both walking and biking) is recommended, utilizing a combination of town owned property, the Riverstone Assisted Living property, and the Excel Learning Center property to efficiently make this connection.

PROJECT AT A GLANCE

- » Project type: 10'-wide shared use path (paved or unpaved)
- » Length: Appx. 3,500 ft total
- » Start/Stop points selected due to key local transportation needs including grocery shopping.
- » Connections: Dollar General, Shell Gas Station, Excel Learning Center, Riverstone Assisted Living, Community Garden, Howell Center, multiple residential areas.

Existing conditions of the proposed trail corridor, from Pirates Dr, looking north, with Howell's Center parking lot on the right.



Above: A conceptual photo rendering of the proposed trail.

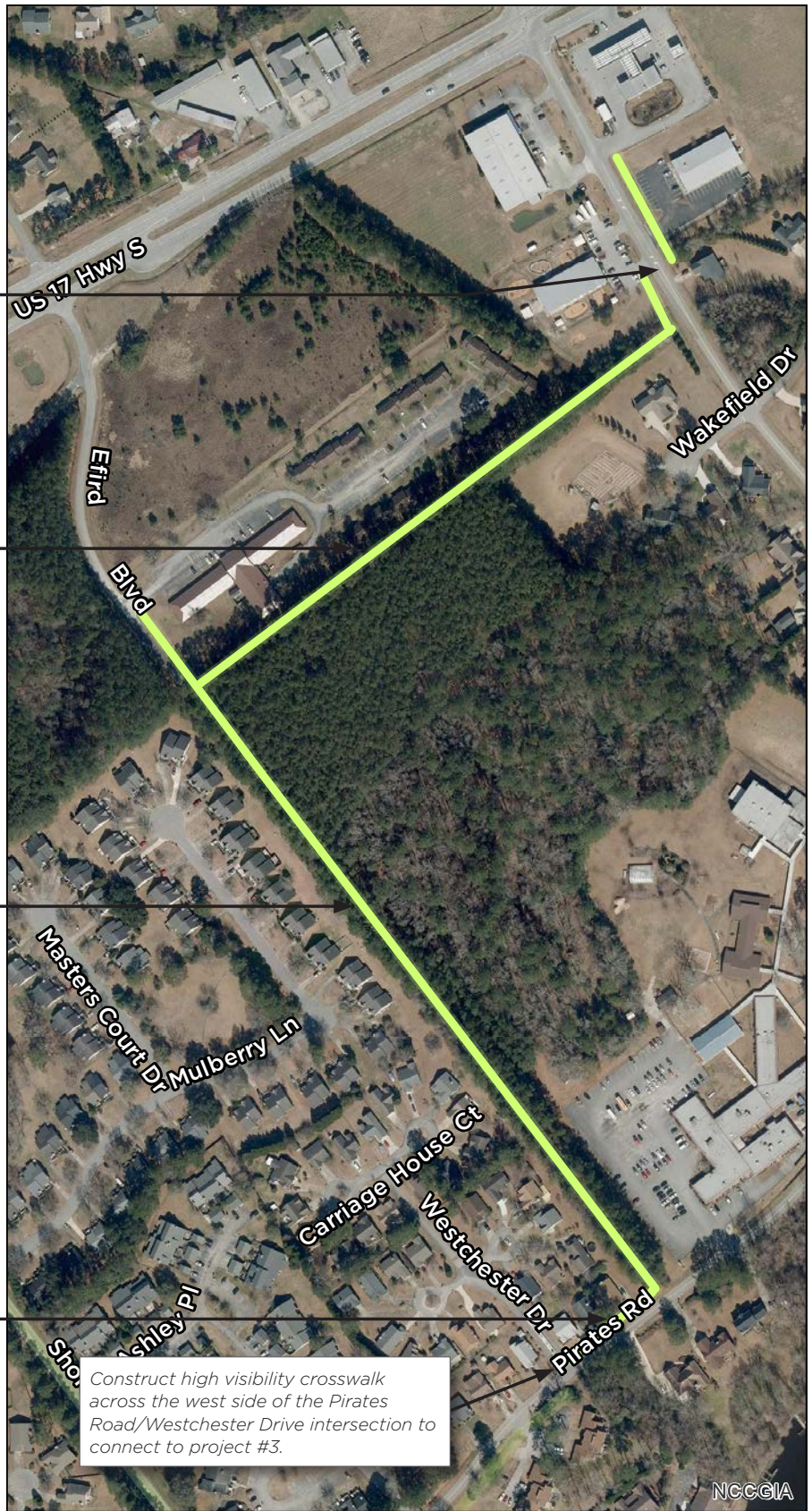
PROJECT #5 (CONTINUED)

Depending on the route selected through the Riverstone Assisted Living property (see text below), complete connection along Pirates Road to the Dollar General and Shell Gas Station. One high visibility crosswalk will need to be constructed across Pirates Road.

Construct this section along the wooded edge of the Riverstone Assisted Living property, or along the northern edge of the parking lot, connecting to the north side of the Excel Learning Center (informal foot trails exist along the latter option). The former option could be preferable due to shade provided by tree line.

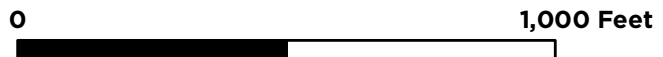
Construct this section along the Town-owned space between the Howell Center and neighborhoods to the west from Pirates Road to Efirid Boulevard and Riverstone Assisted Living. Consider working with the Howell Center to utilize part of their property if needed.

Construct this section along the north side of Pirates Road from Westchester Drive to the Town-owned space between the Howell Center and neighborhoods to the west. Consider working with the Howell Center to utilize part of their property if needed. Due to proximity to houses and roadway corridor along Pirates Road, consider planting vegetative buffer on both sides of the trail - trail width may need to be less than 10' here as well, depending on design.



Construct high visibility crosswalk across the west side of the Pirates Road/Westchester Drive intersection to connect to project #3.

- NE River Bend Connector
- Other Proposed Project



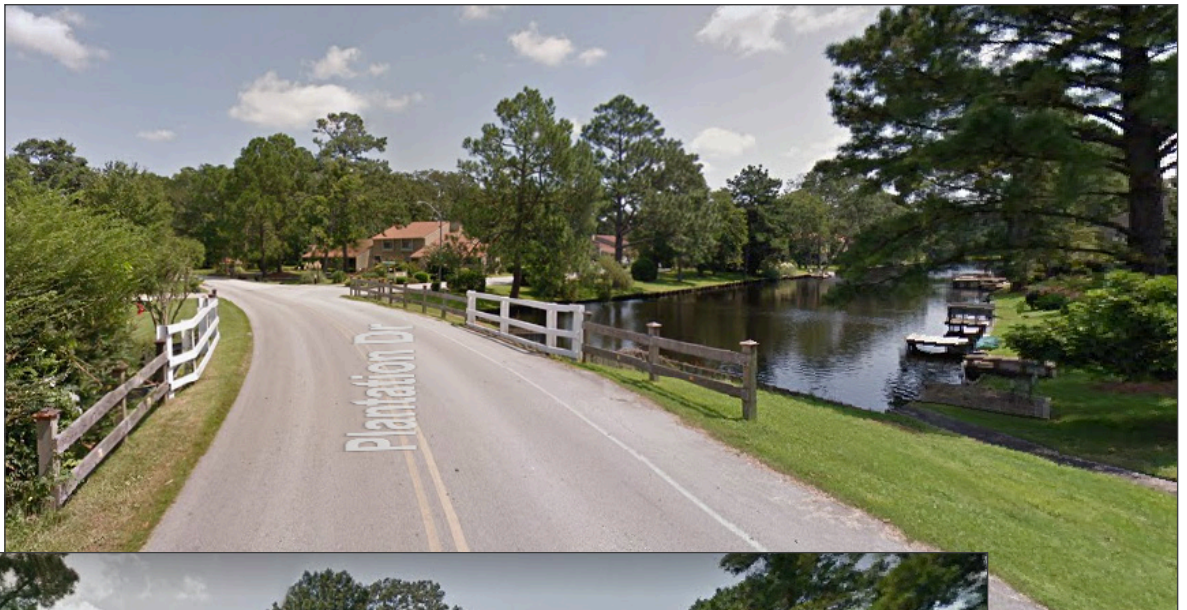
PROJECT #6: PLANTATION DR PEDESTRIAN BRIDGE

For pedestrians wishing to cross the canal along Plantation Dr, a 20-22' wide bridge is currently the only option for making this link. With no option for walking off the roadway, this can be particularly uncomfortable when cars approach the bridge at the same time as a pedestrian. A pedestrian bridge is proposed here to significantly enhance the comfort and safety level in crossing the canal along Plantation Dr.

PROJECT AT A GLANCE

- » Project type: 8-10'-wide pedestrian bridge
- » Length: Appx. 60 ft total
- » Selected due to pinch point created at bridge location.
- » Connections: Much of the residential areas in the southeastern quadrant and the town center

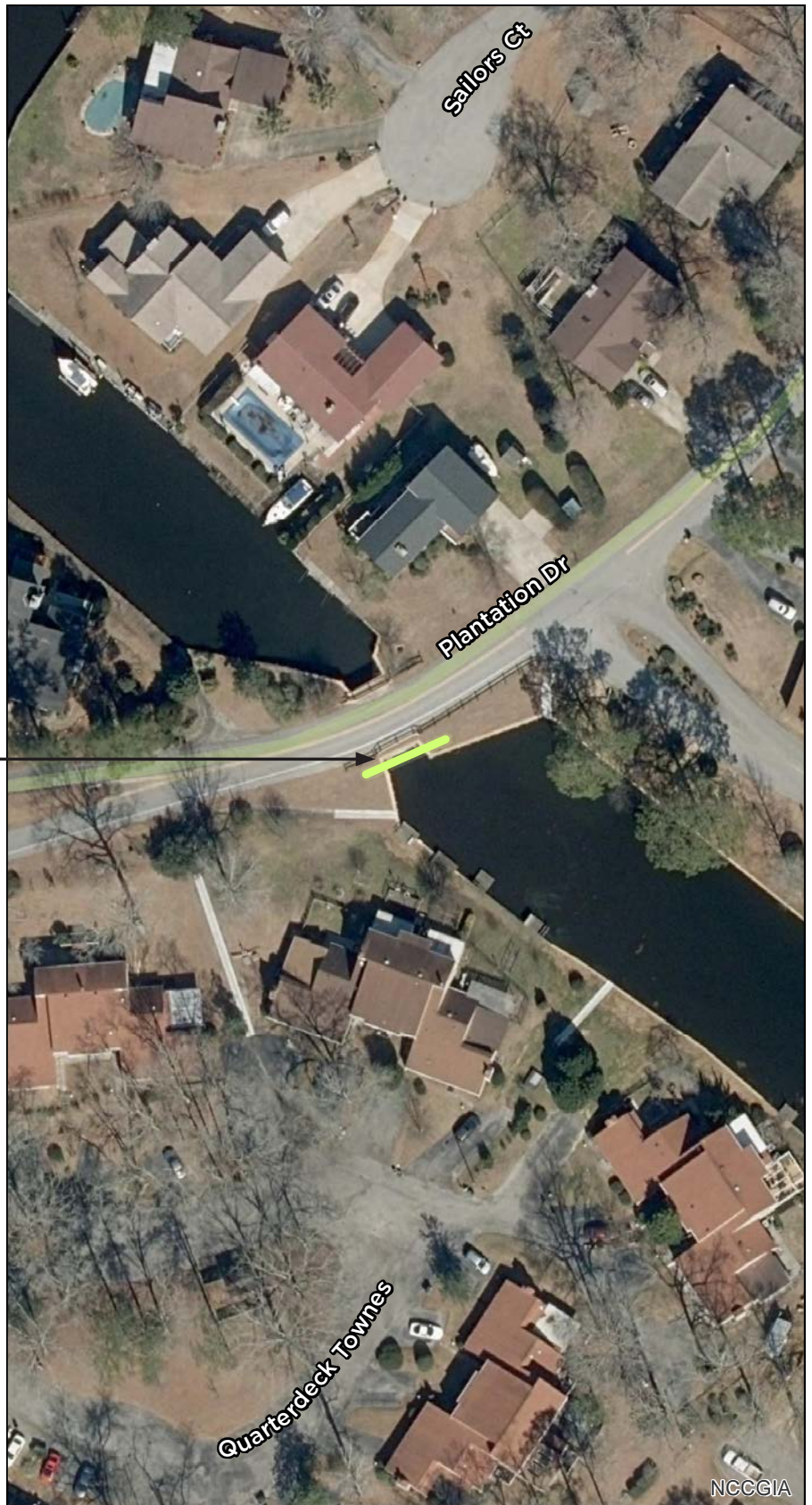
Existing conditions along the Plantation Dr bridge over the canal, looking east (Harbour Walk Townhouses across water at right). Google Streetview image.



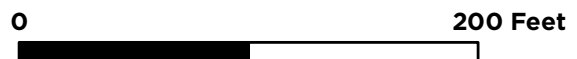
Existing conditions along the Plantation Dr bridge over the canal, looking west (Sailors Ct across water at left). Google Streetview image.

PROJECT #6 (CONTINUED)

Construct pedestrian bridge here along the south side of Plantation Drive, adjacent to the existing bridge.



-  Plantation Drive Pedestrian Bridge
-  Other Proposed Project



PROJECT #7: RIVER BEND ADVISORY SHOULDER LOOP

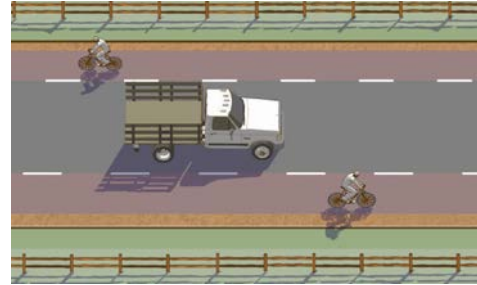
ALONG PLANTATION DR, SHORELINE DR, ROCKLEDGE RD, PINEWOOD DR, WILDWOOD DR, GATEWOOD DR, AND TAR LANDING

The existing roadway consists of 20' in total pavement width (10' travel lanes in each direction) with no shoulders. Beyond the roadway surface, minor open drainage areas and front yards provide the only alternatives. These roadways provide through-connectivity between neighborhoods on the south side of River Bend. Due to the lack of space and limited funds for constructing sidewalks and/or expanding the roadway surface, advisory shoulders are recommended. Advisory shoulders calm traffic, increase predictability and clarify desired lateral positioning between people bicycling or walking and people driving along these narrow roadways.

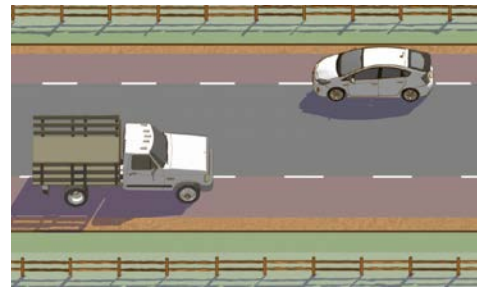
PROJECT AT A GLANCE

- » Project type: 5'-wide advisory shoulders and 10' center travel lane
- » Length: Appx. 5 miles total.
- » Connections: Direct access to most residential areas in the southern half of River Bend, Gull Point Kayak Launch, Town Hall, Town Commons, Ritter Field, and the Tar Landing HOA Trent River Access.

Advisory Shoulders



Motorists travel in the center two-way travel lane. When passing a bicyclist, no lane change is necessary.



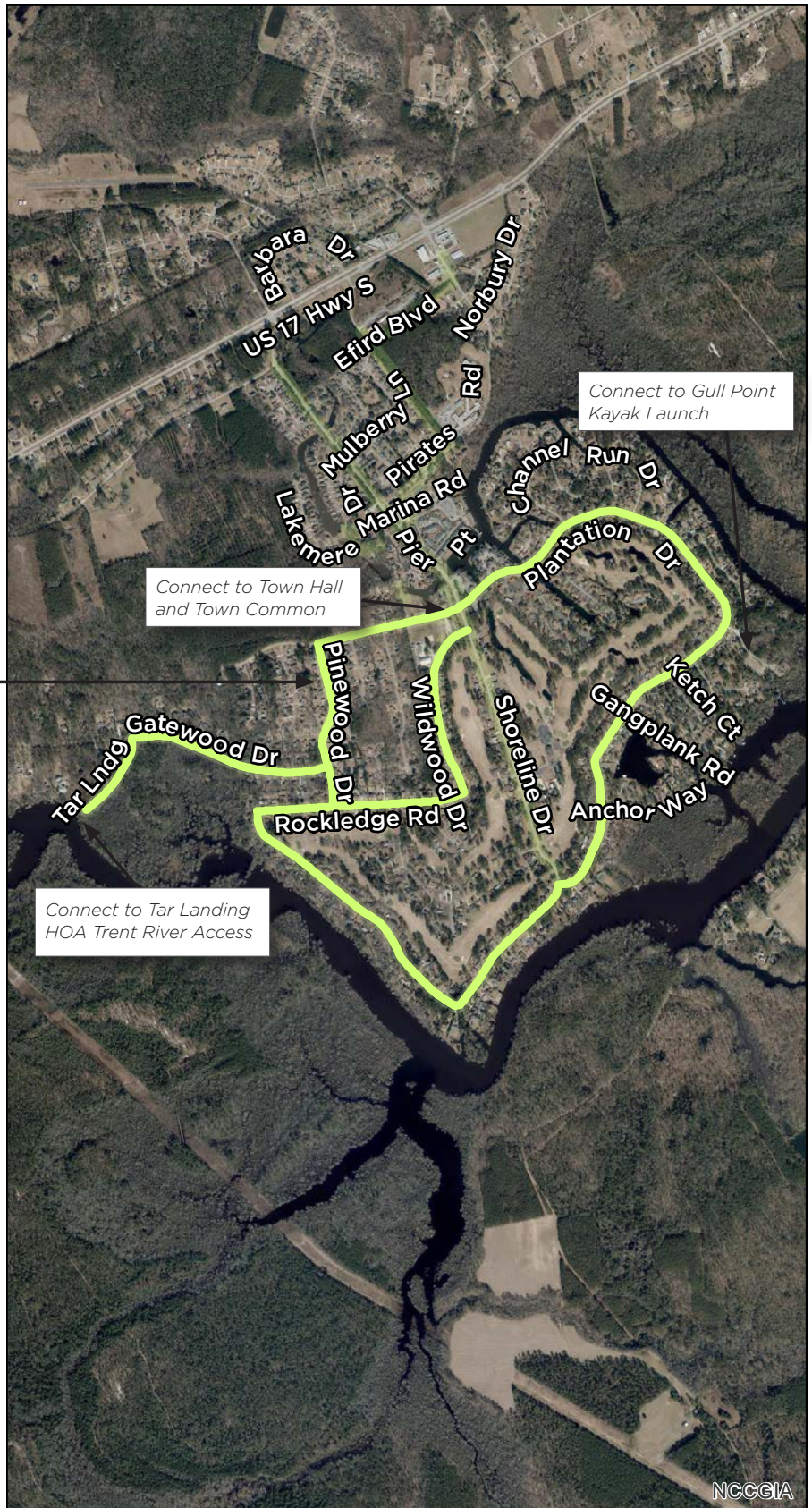
When two motor vehicles meet, motorists may need to encroach into the advisory shoulder space.



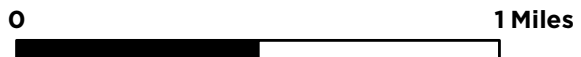
Example images of advisory shoulders (Hanover, NH).

PROJECT #7 (CONTINUED)

Advisory shoulders along the neighborhood collector roads that link each residential area in the south end of River Bend will re-prioritize roadway space for a higher level of bicycle and pedestrian (and motorist) comfort. These corridors also form a nice loop.



- River Bend Advisory Shoulder Loop
- Other Proposed Project



PROJECT #8: SHORELINE DR ENHANCEMENT

FROM OLD POLLOCKSVILLE RD TO PLANTATION DR

The existing roadway consists of one 10.5' travel lane in each direction, with 3' to 4' striped shoulders. The shoulders are the only place currently available for walking outside of the travel lanes, aside from walking in the sloped open drainage grass areas on each side of the road. The areas beyond the drainage vary in this section, including dense landscaping buffers, fences, retaining walls, and water. Ideally in the longer-term, a sidepath along the length of Shoreline Dr would be constructed. In the short-term, a low-cost, easily implementable improvement is recommended that narrows the existing travel lanes from 10.5' each to 10', allowing for a consistent 4' paved shoulder on each side of the road. This can be implemented during resurfacing.

Furthermore, lowering the speed limit to 25 mph to match the speed limit on all other streets in River Bend will enhance walking and bicycling safety (and motorist safety) along Shoreline Dr.

PROJECT AT A GLANCE

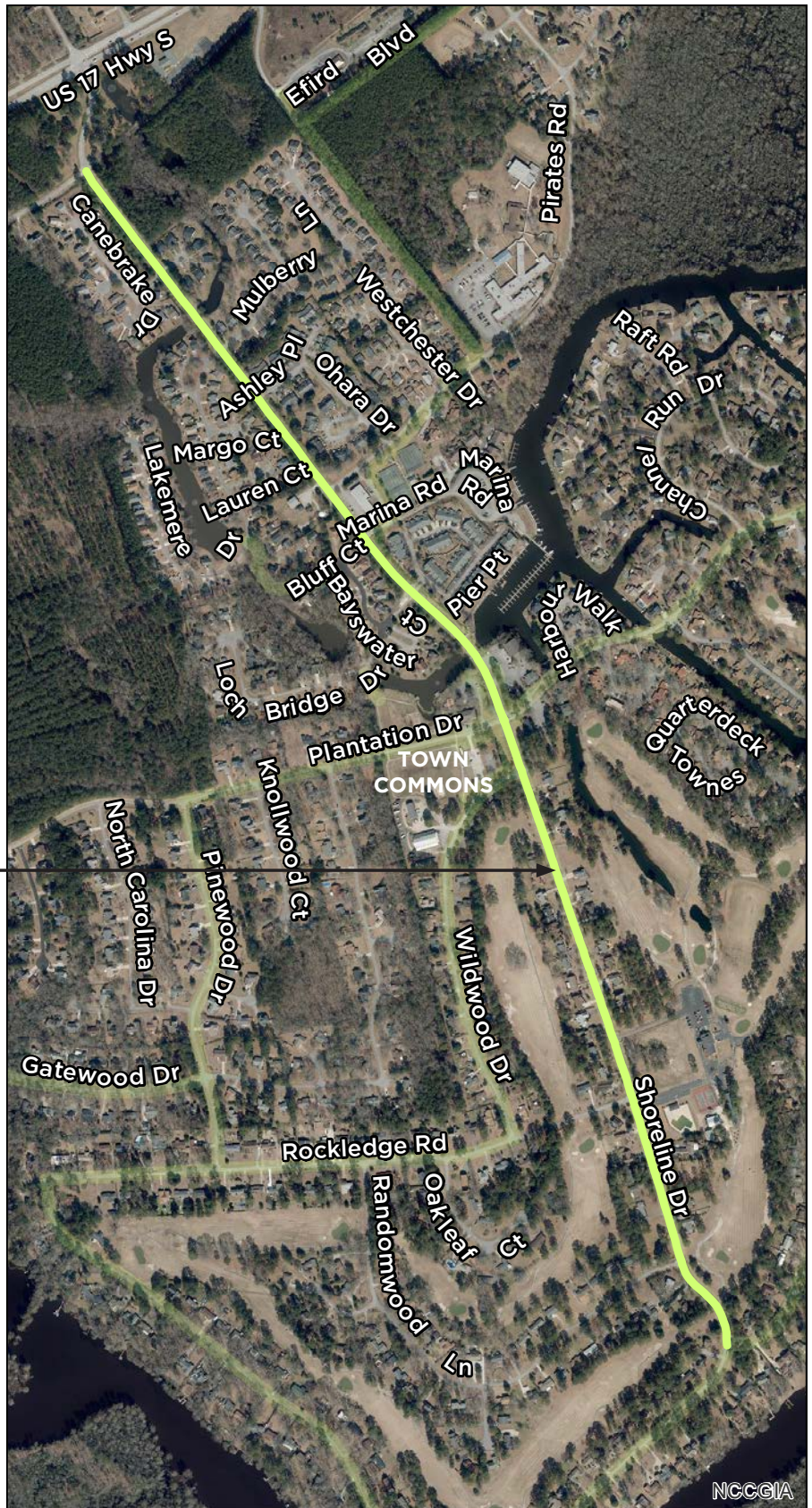
- » Project type: 4' paved shoulders (narrowing travel lanes from 10.5' to 10')
- » Length: Appx. 1.4 miles
- » Shoreline Dr connects north/south through the heart of River Bend
- » Connections: Plantation Square, River Bend Marina, Harbor Centre, Town Hall, Town Commons, Ritter Field, and is the gateway to nearly every neighborhood in River Bend.



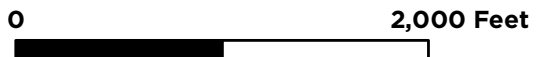
Existing conditions along Shoreline Drive.

PROJECT #8 (CONTINUED)

Shoreline Drive connects north/south through the heart of River Bend, serving as the central artery to the roadway network. Narrowing the travel lanes from 10.5' to 10' each and striping a consistent 4' shoulder, in addition to lowering the speed limit to 25 mph, will enhance bicycle and pedestrian safety (and motorist safety). This can be accomplished with resurfacing as a low-cost improvement.



- Shoreline Dr Enhancement
- Other Proposed Project



PROGRAM RECOMMENDATIONS

Education, encouragement, enforcement, and promotional programs will help improve safety and accessibility for residents, as they learn how to safely travel along sidewalks, trails, and bikeways.

MEDIA CAMPAIGN TO EDUCATE MOTORISTS, BICYCLISTS, AND PEDESTRIANS

Watch for Me NC is a comprehensive campaign aimed at reducing the number of bicyclists and pedestrians hit and injured in crashes with vehicles. The campaign consists of educational messages on traffic laws and safety, and an enforcement effort by area police.

Watch for Me NC is an ongoing statewide grant program administered by the NCDOT Division of Bicycle and Pedestrian Transportation (NCDOT DBPT). The Town should contact the NCDOT DBPT to request materials and guidance. As a part of this program, the Town could:

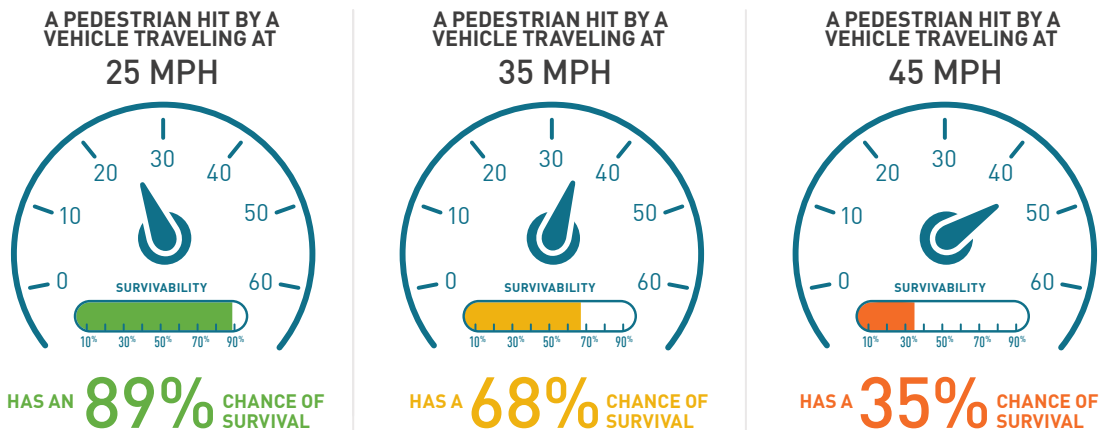
- » Distribute the educational materials made available by NCDOT at local festivals and other events, at local businesses.
- » Work with police officers to hand out bicycle lights along with bicycle and pedestrian safety cards.
- » Enforce motorist rates of yielding to pedestrians.

The Town may participate by visiting [WatchForMeNC.org](https://www.watchformenc.org) and downloading materials and information that may be used right away. The Town should also apply when the Call for Participants is issued, typically in February of each year. See the website for contact information and notice of the annual program opening: <https://www.watchformenc.org/>



SPEED LIMIT REDUCTION & TRAFFIC CALMING

Lowering speed limits has enormous safety benefits for all users, by lowering both the rate and severity of crashes, especially for pedestrians, as shown below. **Public feedback during this planning process showed support for reducing the posted speed limit on Shoreline Drive to 25 MPH, as it is in the rest of Town. Additionally, a significant portion of Riverbend residents are elderly, with slower reaction times, putting them at greater risk.**



Tefft, B. C. Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention 50 [2013] 871-878.

HIKE & BIKE MAP


One of the most effective ways of encouraging people to walk more often or to ride a bicycle is through the use of maps and guides to show where you can walk and bike, and to guide people to enjoyable routes and destinations. The Town of River Bend currently only has one such map (for the walking loops near Town Commons), but it could be updated and expanded to cover the whole community.

These maps can be designed so that a portion of the map is devoted to bicycle and pedestrian safety education, such as informational graphics that demonstrate bicycle hand signals and how to share the road and the trail safely. The map should be made available online and printed as needed to be actively distributed to residents and visitors.




Small towns in North Carolina are promoting walking and bicycling with maps that show bicycle and pedestrian facilities, highlighting destinations, and providing tips for safer walking and bicycling. Examples on this page from Columbia, NC.


TIPS FOR SAFER BICYCLING




OBEY TRAFFIC SIGNALS & SIGNS




RIDE WITH TRAFFIC




BE BRIGHT AT NIGHT



LOOK BEFORE ENTERING TRAFFIC & CHANGING LANES




USE HAND SIGNALS




WEAR A HELMET


TIPS FOR SAFER WALKING




BE BRIGHT AT NIGHT




WALK FACING TRAFFIC




WATCH FOR TURNING CARS



BE CAREFUL IN PARKING LOTS



BE CAREFUL AT DRIVEWAYS



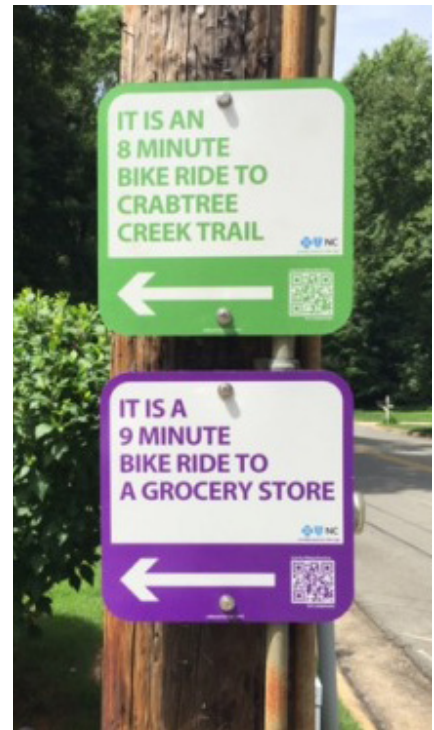
PULL THE PLUG AND PAY ATTENTION

SIGNAGE AND WAYFINDING

A relatively low-cost program that River Bend can pursue is to make and post simple wayfinding signs, to make it easier for people to find destinations, and to point how short it is to walk various places in Town. The Walk [Your City] program is designed to do just that. See below and Visit <http://walkyourcity.org/> for more information. BlueCross BlueShield of North Carolina has partnered on these efforts in the past.

For a step-by-step guide to help non-professionals participate in the process of developing and designing a signage system, as well as information on the range of signage types, visit the Project for Public Places website:

www.pps.org/reference/signage_guide




Road signage has traditionally been expensive and car-centered, leaving walkers and bikers by the wayside. Walk [Your City] lets anyone from citizens to corporations quickly and affordably promote healthy lifestyles, public safety, and human-centered transit. Walk Visit <http://walkyourcity.org/> for more information.

COST ESTIMATES FOR TOP PROJECTS

Top projects were selected based on feedback received during the public workshops and direction from Town leadership. The costs below represent a planning-level analysis and are likely to change as more information becomes available in the design phase of the project. Costs are listed in the base year of 2018, and should be escalated at an appropriate rate each year thereafter. Keep in mind that design costs are likely higher for projects that impact FEMA regulated floodways that require detailed flood modeling and permitting.

COST ESTIMATES FOR PROJECT #1, PHASE 1: SHORELINE DRIVE SIDEPATH (LOCHBRIDGE DR TO RIVER BEND GOV. OFFICE PARKING LOT)

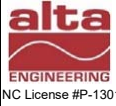
 NC License #P-1301		PLANNING ESTIMATE TOWN OF RIVER BEND, NC - BICYCLE & PEDESTRIAN PLAN					
		LOCATION: PROJECT #1: SHORELINE DRIVE SIDEPATH					
DESCRIPTION: 550 FT SIDE PATH ALONG SOUTH SIDE OF SHORELINE DR. FROM LOCHBRIDGE DR. TO TOWN OF RIVER BEND GOVERNMENT OFFICE PARKING LOT							
TOTAL LENGTH:		0.1 MILES					
EST. PROJECT COST:*		\$140,000					
*INCLUDING DESIGN FEES AND RIGHT-OF-WAY ACQUISITION		COUNTY:	CRAVEN	DIVISION:	2		
ITEM NO.			ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
LINE NO.	DESC. NO.	SECT. NO.					
ROADWAY ITEMS							
0001	0000100000-N	800	MOBILIZATION	1	LS	\$6,600.00	\$6,600.00
0002	0000400000-N	801	CONSTRUCTION SURVEYING	1	LS	\$2,500.00	\$2,500.00
0003	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	1	LS	\$4,200.00	\$4,200.00
0004	0022000000-E	225	UNCLASSIFIED EXCAVATION	310	CY	\$50.00	\$15,500.00
0005	1011000000-N	500	FINE GRADING	1	LS	\$3,100.00	\$3,100.00
0006	1121000000-E	520	AGGREGATE BASE COURSE	250	TON	\$55.00	\$13,750.00
0007	1275000000-E	600	PRIME COAT	210	GAL	\$6.00	\$1,260.00
0008	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	70	TON	\$95.00	\$6,650.00
0009	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	5	TON	\$650.00	\$3,250.00
0010	4399000000-N	1105	TEMPORARY TRAFFIC CONTROL	1	LS	\$2,000.00	\$2,000.00
0011	6084000000-E	1660	SEEDING & MULCHING	0.2	ACR	\$2,500.00	\$500.00
0012	8482000000-E		THREE BAR METAL RAIL	30	LF	\$180.00	\$5,400.00
0013			DRAINAGE ALLOWANCE	1	LS	\$6,000.00	\$6,000.00
0014			EROSION CONTROL ALLOWANCE	1	LS	\$3,000.00	\$3,000.00
0015			MINOR ITEMS (5%)	1	LS	\$3,000.00	\$3,000.00

CONSTRUCTION COST SUBTOTAL	\$77,000.00
CONSTRUCTION CONTINGENCY (30%)	\$23,100.00
OPINION OF PROBABLE CONSTRUCTION COST	\$100,100.00
ENGINEERING DESIGN (30%)	\$30,000.00
RIGHT-OF-WAY ACQUISITION	\$0.00
OPINION OF TOTAL PROJECT COST	\$130,100.00

NOTE: ESTIMATE IS NOT BASED ON AN ENGINEERING DESIGN, AND IS FOR PLANNING PURPOSES ONLY.
 BASED ON 2017/2018 UNIT PRICES, INFLATION NOT INCLUDED.
 EXCLUDES SPECIAL LANDSCAPING, LIGHTING, AND GREEN INFRASTRUCTURE.

COMPUTED BY: CJA
 DATE: 8/29/2018

COST ESTIMATES FOR PROJECT #2 (WITH STONE DUST SURFACE)


 NC License #P-1301		PLANNING ESTIMATE TOWN OF RIVER BEND, NC - BICYCLE & PEDESTRIAN PLAN					
		PROJECT #2: TOWN COMMONS TRAIL EXTENSION & ENHANCEMENT - OPTION 1: STONE DUST SURFACE					
LOCATION:							
DESCRIPTION:		1150 FT 8" STONE DUST PATH ON TOWN COMMONS AND RITTER FIELD PROPERTIES.					
TOTAL LENGTH:		0.2 MILES					
EST. PROJECT COST:*		\$150,000					
*INCLUDING DESIGN FEES AND RIGHT-OF-WAY ACQUISITION		COUNTY:	CRAVEN	DIVISION:	2		
LINE NO.	DESC. NO.	SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
ROADWAY ITEMS							
0001	0000100000-N	800	MOBILIZATION	1	LS	\$7,500.00	\$7,500.00
0002	0000400000-N	801	CONSTRUCTION SURVEYING	1	LS	\$2,500.00	\$2,500.00
0003	0001000000-E	200	CLEARING & GRUBBING ... ACRE(S)	1	LS	\$7,000.00	\$7,000.00
0004	0022000000-E	225	UNCLASSIFIED EXCAVATION	350	CY	\$50.00	\$17,500.00
0005	1011000000-N	500	FINE GRADING	1	LS	\$6,400.00	\$6,400.00
0006	1121000000-E	520	AGGREGATE BASE COURSE	320	TON	\$55.00	\$17,600.00
0007			2" STONE DUST TOP COURSE	55	CY	\$145.00	\$7,975.00
0008	6084000000-E	1660	SEEDING & MULCHING	0.3	ACR	\$2,500.00	\$750.00
0009			DRAINAGE ALLOWANCE	1	LS	\$8,000.00	\$8,000.00
0010			EROSION CONTROL ALLOWANCE	1	LS	\$5,000.00	\$5,000.00
0011			MINOR ITEMS (5%)	1	LS	\$4,000.00	\$4,000.00

CONSTRUCTION COST SUBTOTAL	\$84,000.00
CONSTRUCTION CONTINGENCY (30%)	\$25,200.00
OPINION OF PROBABLE CONSTRUCTION COST	\$109,200.00
ENGINEERING DESIGN (30%)	\$33,000.00
RIGHT-OF-WAY ACQUISITION	\$0.00
OPINION OF TOTAL PROJECT COST	\$142,200.00

NOTE: ESTIMATE IS NOT BASED ON AN ENGINEERING DESIGN, AND IS FOR PLANNING PURPOSES ONLY.
 BASED ON 2017/2018 UNIT PRICES, INFLATION NOT INCLUDED.
 EXCLUDES SPECIAL LANDSCAPING, LIGHTING, AND GREEN INFRASTRUCTURE.

COMPUTED BY CJA
 DATE 8/29/2018

COST ESTIMATES FOR PROJECT #2 (WITH ASPHALT PAVEMENT)

 NC License #P-1301			PLANNING ESTIMATE TOWN OF RIVER BEND, NC - BICYCLE & PEDESTRIAN PLAN				
			PROJECT #2: TOWN COMMONS TRAIL EXTENSION & ENHANCEMENT - OPTION 2: ASPHALT PAVEMENT				
LOCATION:							
DESCRIPTION:			1150 FT 8' ASPHALT PATH ON TOWN COMMONS AND RITTER FIELD PROPERTIES.				
TOTAL LENGTH:			0.2 MILES				
EST. PROJECT COST:*			\$190,000				
*INCLUDING DESIGN FEES AND RIGHT-OF-WAY ACQUISITION			COUNTY:	CRAVEN	DIVISION:	2	
ITEM NO.			ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
LINE NO.	DESC. NO.	SECT. NO.					
ROADWAY ITEMS							
0001	0000100000-N	800	MOBILIZATION	1	LS	\$9,700.00	\$9,700.00
0002	0000400000-N	801	CONSTRUCTION SURVEYING	1	LS	\$2,500.00	\$2,500.00
0003	0001000000-E	200	CLEARING & GRUBBING ... ACRE(S)	1	LS	\$7,000.00	\$7,000.00
0004	0022000000-E	225	UNCLASSIFIED EXCAVATION	350	CY	\$50.00	\$17,500.00
0005	1011000000-N	500	FINE GRADING	1	LS	\$6,400.00	\$6,400.00
0006	1121000000-E	520	AGGREGATE BASE COURSE	480	TON	\$55.00	\$26,400.00
0007	1275000000-E	600	PRIME COAT	360	GAL	\$6.00	\$2,160.00
0008	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	120	TON	\$95.00	\$11,400.00
0009	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	10	TON	\$650.00	\$6,500.00
0011	6084000000-E	1660	SEEDING & MULCHING	0.3	ACR	\$2,500.00	\$750.00
0014			DRAINAGE ALLOWANCE	1	LS	\$8,000.00	\$8,000.00
0015			EROSION CONTROL ALLOWANCE	1	LS	\$5,000.00	\$5,000.00
0016			MINOR ITEMS (5%)	1	LS	\$5,000.00	\$5,000.00

CONSTRUCTION COST SUBTOTAL	\$108,000.00
CONSTRUCTION CONTINGENCY (30%)	\$32,400.00
OPINION OF PROBABLE CONSTRUCTION COST	\$140,400.00
ENGINEERING DESIGN (30%)	\$42,000.00
RIGHT-OF-WAY ACQUISITION	\$0.00
OPINION OF TOTAL PROJECT COST	\$182,400.00

NOTE: ESTIMATE IS NOT BASED ON AN ENGINEERING DESIGN, AND IS FOR PLANNING PURPOSES ONLY.
 BASED ON 2017/2018 UNIT PRICES, INFLATION NOT INCLUDED.
 EXCLUDES SPECIAL LANDSCAPING, LIGHTING, AND GREEN INFRASTRUCTURE.

COMPUTED BY CJA
 DATE 8/29/2018

IMPLEMENTATION ACTION STEPS

The action steps draw from the opportunities shown in this document. These should be guiding steps for the Town of River Bend to initiate plan implementation and to begin top projects.

TASK	DETAILS	PHASE
Adopt this plan.	Through adoption, the Plan becomes an official planning document of the Town of River Bend. Adoption does not commit River Bend to dedication of funding, but rather shows intention to support plan implementation over time. It also signals to outside funding groups that River Bend has undergone a successful, supported planning process, which is key to securing outside funding.	Short-term (2018)
Seek multiple funding sources and facility development options.	Project recommendations contain cost estimates and potential funding opportunities are listed at the end of this report.	Short-term/ Ongoing (2018-)
Complete all priority projects.	Eight priority projects are recommended. Aim to complete all eight in 5-10 years.	Ongoing (2018-2028)
Develop a long-term funding strategy	To allow continued development of the project recommendations, capital funds for bicycle and pedestrian facility construction should be set aside every year. Funding for an ongoing maintenance program should also be included in operating budgets.	Short-term/ Ongoing (2018-)
Coordinate road resurfacing schedule with projects that could be furthered with resurfacing projects.	Resurfacing is a very important part of implementing bike facilities and comes at very little cost. It is essential for implementation that River Bend coordinates the resurfacing schedule with the advisory shoulder recommendations (Project #7) and Shoreline Drive enhancements (Project #8) (see pages 18-21).	Short-term/ Ongoing (2018-)
Launch new programs.	New programs should be launched to complement infrastructure improvements, as described in this document, including Watch For Me NC, speed limit reduction (especially on Shoreline Dr), a hike & bike map, and signage/wayfinding (see pages 22-24).	Ongoing (2018-)
Seek designation as a Bicycle-Friendly Community & Walk-Friendly Community.	The development and implementation of this plan is an essential first step toward becoming a designated Bicycle-Friendly and Walk-Friendly Community. With progress on these recommendations, River Bend should be in a position to apply for and receive recognition by 2023. See the League of American Bicyclists website - https://www.bikeleague.org/community and the Walk Friendly Community program website - http://walkfriendly.org/ for further information.	Mid- to Long-term (-2023-)
Plan Update	This plan should be updated by 2023 (about five years from adoption). If many of the recommendations have been completed by then, a new set of priorities should be established. If not, a new implementation strategy should be established.	Long-Term (2023)

DESIGN GUIDELINE RESOURCES

Planners and project designers should refer to these standards and guidelines in developing the infrastructure projects recommended by this plan. The following resources are from the NCDOT website, for *"Bicycle & Pedestrian Project Development & Design Guidance"*, located here:

<https://connect.ncdot.gov/projects/BikePed/Pages/Guidance.aspx>

All resources listed below are linked through the web page listed above, retrieved in August 2018.

NATIONAL GUIDELINES

American Association of State Highway and Transportation Officials (AASHTO):

- » Guide for the Development of Bicycle Facilities
- » Guide for the Planning, Design, and Operation of Pedestrian Facilities

The Federal Highway Administration (FHWA):

- » Accessibility Guidance
- » Design Guidance
- » Facility Design
- » Facility Operations

Manual on Uniform Traffic Control Devices (MUTCD):

- » 2009 NC Supplement to MUTCD
- » Part 4E: Pedestrian Control Features
- » Part 7: Traffic Controls for School Areas
- » Part 9: Traffic Controls for Bicycle Facilities

National Association of City Transportation Officials (NACTO):

- » Urban Bikeway Design Guide
- » Urban Street Design Guide

Safe Routes to School (SRTS) Non-Infrastructure:

- » National Center for Safe Routes to School
- » National Partnership for Safe Routes to School

US Access board:

- » ABA Accessibility Standards
- » ADA Accessibility Guidelines
- » ADA Accessibility Standards
- » Public Rights-of-Way, Streets & Sidewalks, and Shared Use Paths

NORTH CAROLINA GUIDELINES

North Carolina Department of Transportation (NCDOT):

- » WalkBikeNC: The Statewide Pedestrian and Bicycle Plan
- » Glossary of North Carolina Terminology for Active Transportation
- » NCDOT Complete Streets, including the Complete Streets Planning and Design Guidelines
- » Evaluating Temporary Accommodations for Pedestrians
- » NC Local Programs Handbook
- » Traditional Neighborhood Development Guidelines

Greenway Construction Standards:

- » Greenway Standards Summary Memo
- » Design Issues Summary
- » Greenway Design Guidelines Value Engineering Report
- » Summary of Recommendations
- » Minimum Pavement Design Recommendations for Greenways
- » Steps to Construct a Greenway or Shared-Use Trail

Route Signing & Mapping

- » Bike Maps and Routes
- » Share the Road Initiative
- » How to Select Routes
- » NCDOT Bicycle Route Signing & Mapping Program

Additional FHWA resources not currently linked through the main NCDOT link above:

- » Achieving Multimodal Networks (2016)
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/
- » Separated Bike Lane Planning and Design Guide (2015)
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/page00.cfm
- » Incorporating On-Road Bicycle Networks into Resurfacing Projects (2016)
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/resurfacing/
- » Small Town and Rural Multimodal Networks Design Guide (2017)
<http://ruraldesignguide.com/>

PROJECT BENEFIT RESOURCES

THE VALUE OF WALKABLE AND BICYCLE-FRIENDLY COMMUNITIES

Increased rates of bicycling and walking will help to improve people's health and fitness, improve livability of our communities, enhance environmental conditions, decrease traffic congestion, and contribute to a greater sense of community.

Scores of studies from the fields of public health, urban planning, urban ecology, real estate, tourism, and transportation have demonstrated the value of supporting bicycling and walking. Communities across the United States and throughout the world are investing in improvements for bicycling, walking, and trails. They do this because of their obligations to promote health, safety and welfare, and also because of the growing awareness of the many benefits outlined in the studies listed below.

TRAILS RESEARCH SEARCHABLE BENEFITS LIBRARY

Headwaters Economics compiled 120 studies on the impacts of trails in a single library, searchable by type of benefit, use, year, and region. Findings include:

- » Trails can generate business impacts and create new jobs by attracting visitors, especially overnight visitors.
- » Local trail users often use community trails multiple times per week, and trails are a valuable part of residents' quality of life.
- » Trails are often associated with higher property value, especially when a trail is designed to provide neighborhood access and maintain residents' privacy.
- » Trails are associated with increased physical activity and improved public health, especially in rural places without other safe places to exercise.

<https://headwaterseconomics.org/economic-development/trails-pathways/trails-research/>

BIKES IN BEDS: HOW TO MAXIMIZE BICYCLE TOURISM

A 2015 report in Haywood County, NC that details economic impact of bicycle tourists. While focusing on Haywood County, this study provides an overview of bicycle tourism opportunities for other NC communities as well.

http://highpointregionalbikeplan.com/pdf/2015_bikes-in-beds_wncbiketourism.pdf

WALKBIKENC

WalkBikeNC (North Carolina's Statewide Bicycle and Pedestrian Plan) is a blueprint for improving walking and bicycling for North Carolina communities. Here you will find further information on the benefits of walking and bicycling and the five 'pillars' - health, safety, economy, mobility, and the environment.

<https://www.ncdot.gov/bikeped/walkbikenc>

PATHWAYS TO PROSPERITY

A older, but relevant report on the economic impacts of investments in bicycle facilities by the Institute for Transportation Research & Education (focused on the NC's coastal region).

http://headwaterseconomics.org/wp-content/uploads/Trail_Study_7-pathways-to-prosperity-bicycle-facilities.pdf

WALKING THE WALK: HOW WALKABILITY RAISES HOME VALUES IN U.S. CITIES

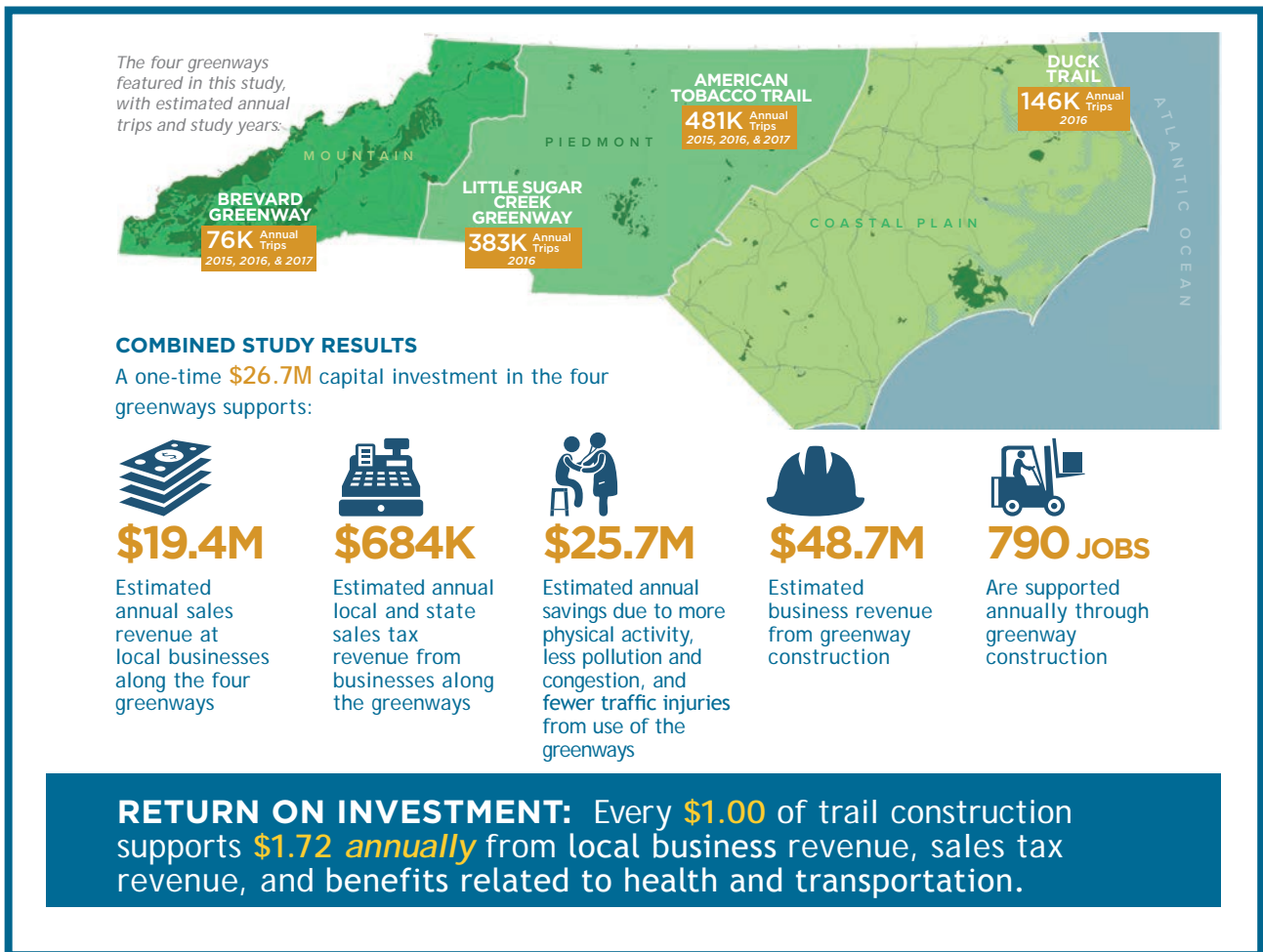
This report, by CEO's for Cities, which looked at 94,000 real estate transactions in 15 markets, found that in 13 of those markets, higher levels of "walkability" were directly linked to higher home values.

http://blog.walkscore.com/wp-content/uploads/2009/08/WalkingTheWalk_CEOsforCities.pdf

EVALUATING THE ECONOMIC CONTRIBUTION OF SHARED USE PATHS IN NC

Shared use paths, also known as greenways, provide a shared space for bicycle and pedestrian travel outside of the roadway. This project’s objective was to design and test an approach for measuring the economic contributions of greenways in North Carolina. The study found that, on average, every \$1.00 of trail construction in North Carolina supports \$1.72 annually from local business revenue, sales tax revenue, and benefits related to health and transportation.

For more information: <https://itre.ncsu.edu/focus/bike-ped/sup-economic-impacts/>



Excerpt from the Executive Summary for “Evaluating the Economic Contribution of Shared Use Paths in NC”.

PROJECT FUNDING RESOURCES

Important note about funding for River Bend:

River Bend's roadways are owned by the Town (as opposed to being NCDOT-owned and maintained). This gives the Town more control, but also means that NCDOT funding does not apply to roads in River Bend. Still, NCDOT funding is included below in case ownership ever changes, or in case there is a future desire to improve connections across or along US 17 (which is NCDOT-owned and maintained).

Multiple approaches should be taken to support bicycle and pedestrian facility development and programming. It is important to secure the funding necessary to undertake priority projects but also to develop a long-term funding strategy to allow continued development of the overall system. Dedicated local funding sources will be important for the implementation of this plan.

Local government funds for bicycle and pedestrian facilities should be set aside every year, even if only for a small amount. Small amounts of local funding can be matched to outside funding sources. A variety of local, state, federal, and non-governmental options and sources exist and should be pursued.

The following section identifies federal, state, local and private/non-profit foundation sources of funding for planning, design, implementation and maintenance of bicycle and pedestrian infrastructure. The descriptions are intended to provide an overview of available options and do not represent a comprehensive list. It should be noted that this section reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice.

FEDERAL FUNDING SOURCES

Federal funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations. Federal funding typically requires a local match of five percent to 50 percent, but there are sometimes exceptions. The following is a list of possible Federal funding sources that could be used to support the construction of bicycle and pedestrian facilities.

FIXING AMERICA'S SURFACE TRANSPORTATION (FAST ACT)

In December 2015, President Obama signed the FAST Act into law, which replaces the previous Moving Ahead for Progress in the Twenty-First Century (MAP-21). The Act provides a long-term funding source of \$305 billion for surface transportation and planning for FY 2016-2020. Overall, the FAST Act retains eligibility for larger programs - Transportation Investments Generating Economic Recovery (TIGER - Now called BUILD), Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ), and Highway Safety Improvement Program (HSIP). The FAST Act maintains the federal government's focus on safety, preserves the established structure of various highway-related programs, streamlines project delivery, and provides a dedicated funding source for freight projects.

In North Carolina, federal monies are administered through the North Carolina Department of Transportation (NCDOT) and Metropolitan/Rural Planning Organizations (MPOs/RPOs). Most, but not all, of these programs are focused on transportation rather than recreation, with an emphasis on reducing auto trips and providing intermodal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. Most FAST ACT funds are available through the STI process.

For more information: <https://www.fhwa.dot.gov/fastact/factsheets/transportationalternativesfs.cfm>

TRANSPORTATION ALTERNATIVES (TA)

Transportation Alternatives (TA) is a funding source under the FAST Act that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). Funds are available through a competitive process. These funds may be used for a variety of pedestrian, bicycle, and streetscape projects. These include:

- » SRTS programs - infrastructure and non-infrastructure programs
- » Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including sidewalks, bikeways, pedestrian and bicycle signals, traffic calming techniques, and lighting and other safety-related infrastructure
- » Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, seniors, and individuals with disabilities
- » Construction of rail-trails
- » Recreational trails program

Eligible entities for TA funding include local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts or schools, tribal governments, and any other local or regional government entity with responsibility for oversight of transportation or recreational trails that the State determines to be eligible.

The FAST Act provides \$84 million for the Recreational Trails Program. Funding is prorated among the 50 states and Washington D.C. in proportion to the relative amount of off-highway recreational fuel tax that its residents paid. To administer the funding, states hold a statewide competitive process. The legislation stipulates that funds must conform to the distribution formula of 30% for motorized projects, 30% for non-motorized projects, and 40% for mixed used projects. Each state governor is given the opportunity to “opt out” of the RTP.

For more information: <https://www.fhwa.dot.gov/fastact/factsheets/transportationalternativesfs.cfm>

SURFACE TRANSPORTATION BLOCK GRANT (STBG) PROGRAM

The FAST Act converts the Surface Transportation Program into the Surface Transportation Block Grant (STBG) program. This

program is among the most flexible eligibilities among all Federal-aid and highway programs. The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of pedestrian improvements are eligible, including trails, sidewalks, crosswalks, pedestrian signals, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Safe Routes to School programs, congestion pricing projects and strategies, and recreational trails projects are other eligible activities. Under the FAST Act, a State may use STBG funds to create and operate a State office to help design, implement, and oversee public-private partnerships eligible to receive Federal highway or transit funding. In general, projects cannot be located on local roads or rural minor collectors. However, there are exceptions. These exceptions include recreational trails, pedestrian and bicycle projects, and Safe Routes to School programs.

For more information: <https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

HSIP provides \$2.2 - \$2.4 billion nationally (FY 2016-2020) for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, including non-state-owned public roads and roads on tribal lands. The HSIP requirements prior to the enactment of the FAST Act are still applicable, including the need for a comprehensive, data-driven State Highway Safety Plan (SHSP) that defines the State’s safety goals and describes strategies to improve safety.

HSIP funds must be used for safety projects that are consistent with the State’s SHSP and that correct or improve a hazardous road location or features to address a highway safety problem. Most eligible activities are infrastructure-related. Bicycle and pedestrian safety improvements,

traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds. Examples include pedestrian hybrid beacons, medians, and pedestrian crossing islands. Workforce development, training, and education activities are other eligible uses of HSIP funds.

For more information: <http://www.fhwa.dot.gov/fastact/factsheets/hsipfs.cfm>

STATEWIDE AND NON-METROPOLITAN PLANNING

The FAST Act continues funding for statewide and non-metropolitan planning as part of a 2 percent set-aside for planning and research activities from each State's apportionments of five core programs: National Highway Performance Program, Surface Transportation Block Grant Program (STBG), Highway Safety Improvement Program, Congestion Mitigation and Air Quality Improvement Program, and National Highway Freight Program.

The FAST Act continues to require long-range statewide transportation plans and statewide transportation improvement programs (STIPs) to provide for the development and integrated management and operation of transportation systems and facilities that enable an intermodal transportation system, including pedestrian and bicycle facilities.

For more information: <https://www.fhwa.dot.gov/fastact/factsheets/statewideplanningfs.cfm>

SAFE ROUTES TO SCHOOL (SRTS) PROGRAM

SRTS enables and encourages children in grades K-8 to walk and bike to school. The program helps make walking and bicycling to school a safe and more appealing method of transportation for children. SRTS facilitates the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. Funding is administered by

State Departments of Transportation (DOTs). Eligible recipients are state, local, and regional agencies as well as nonprofit organizations. Project sponsors may be school or community based groups. Around 10-30% of each state's funding is to be spent on non-infrastructure activities, such as encouragement programs, additional law enforcement activities, and educational curricula.

Infrastructure-related projects improve the ability of students to walk or bike to and from school. Types of projects include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bike crossing improvements, bicycle facilities, pedestrian facilities, and secure bike parking.

For more information: http://www.fhwa.dot.gov/environment/safe_routes_to_school/guidance/#toc123542170

OTHER FEDERAL FUNDING SOURCES

BUILD TRANSPORTATION DISCRETIONARY GRANT PROGRAM

The Consolidated Appropriations Act, 2018 appropriated \$1.5 billion, available for obligation through September 30, 2020, for National Infrastructure Investments previously known as TIGER grants, and now renamed BUILD Transportation grants. As with previous rounds of TIGER, funds for the FY2018 BUILD Transportation program are to be awarded on a competitive basis for projects that will have a significant local or regional impact.

Funding provided under National Infrastructure Investments have supported capital projects which repair bridges or improve infrastructure to a state of good repair; projects that implement safety improvements to reduce fatalities and serious injuries, including improving grade crossings or providing shorter or more direct access to critical health services; projects that connect communities and people to jobs, services, and education; and, projects that anchor economic revitalization and job growth

in communities. DOT intends to award a greater share of FY2018 BUILD Transportation grants to projects located in rural areas that align well with the selection criteria than to such projects in urban areas.

For more information: <https://www.transportation.gov/BUILDgrants/2018-build-application-faqs>

FEDERAL TRANSIT ADMINISTRATION ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES

This program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program can be used for capital expenses that support transportation and non-emergency medical transportation to meet the special needs of older adults and persons with disabilities, including providing access to an eligible public transportation facility when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. States and designated recipients are direct recipients. Eligible sub-recipients include nonprofit organizations, states or local governments, or operators of public transportation. Types of eligible projects include transit-related information technology systems, building an accessible path to a bus stop (curb cuts, sidewalks, accessible pedestrian signals), and improving signage.

For more information: <https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310>

ECONOMIC DEVELOPMENT ADMINISTRATION

Under Economic Development Administration's (EDA) Public Works and Economic Adjustment Assistance programs, grant applications are accepted for projects that promote economic development. State and local entities may apply for funding for projects that address a wide range of economic challenges. Under this program,

Implementation Grants support infrastructure improvements, including site acquisition, site preparation, construction, and rehabilitation of facilities. Selection criteria emphasize projects that are able to start quickly, create jobs faster, and that will enable the community or region to become more economically prosperous. Application deadlines are typically in March and June.

For more information: <https://www.eda.gov/funding-opportunities/index.htm>

FEDERAL LANDS TRANSPORTATION PROGRAM (FLTP)

The FLTP funds projects that improve transportation infrastructure owned and maintained by the following Federal Lands Management Agencies: National Park Service (NPS), U.S. Fish and Wildlife Service (FWS), USDA Forest Service, Bureau of Land Management (BLM), U.S. Army Corps of Engineers, Bureau of Reclamation, and independent Federal agencies with land and natural resource management responsibilities. FLTP funds are for available for program administration, transportation planning, research, engineering, rehabilitation, construction, and restoration of Federal Lands Transportation Facilities. Transportation projects that are on the public network that provide access to, adjacent to, or through Federal lands are also eligible for funding. Under the FAST Act, \$335 - \$375 million has been allocated to the program per fiscal year from 2016 - 2020.

For more information: <https://flh.fhwa.dot.gov/programs/fltp/documents/FAST%20FLTP%20fact%20sheet.pdf>

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities (PSC) is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department

of Transportation (USDOT). The partnership aims to “improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide.”

PSC is based on six livability principles, one of which explicitly addresses the need for alternative transportation options. (“Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health”). PSC is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including both TIGER I and TIGER II grants). North Carolina jurisdictions should track PSC communications and be prepared to respond proactively to announcements of new grant programs. Initiatives that speak to multiple livability goals are more likely to score well than initiatives that are narrow in scope. PSC livability principles include: provide more transportation choices, promote equitable, affordable housing, enhance economic competitiveness, support existing communities, coordinate and leverage federal policies and investment, and value communities and neighborhoods.

For more information: <https://www.hud.gov/hudprograms/sci>

FEDERAL LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right-of-way acquisition and construction. The program is administered by the Department of Environment and Natural Resources as a grant program for states and local governments. Maximum annual grant awards for county governments, incorporated

municipalities, public authorities, and federally recognized Indian tribes are \$250,000. The local match may be provided with in-kind services or cash.

For more information: <https://www.nps.gov/subjects/lwcf/stateside.htm>

RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails, and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program that provides technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program only provides planning assistance; there are no implementation funds available. Projects are prioritized for assistance based on criteria, including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. Project applicants may be state and local agencies, tribes, nonprofit organizations, or citizen groups. National parks and other federal agencies may apply in partnership with other local organizations. This program may benefit trail development in North Carolina indirectly through technical assistance, particularly for community organizations, but is not a capital funding source. Annual application deadline is August 1st.

For more information: <https://www.nps.gov/orgs/rtca/index.htm>

ENVIRONMENTAL CONTAMINATION CLEANUP FUNDING SOURCES

EPA’s Brownfields Program provides direct funding for brownfields assessment, cleanup, revolving loans, and environmental job training. EPA’s Brownfields Program collaborates with other EPA programs, other federal partners, and state

agencies to identify and leverage more resources for brownfields activities. The EPA provides assessment grants to recipients to characterize, assess, and conduct community involvement related to brownfields sites. They also provide Area-wide planning grants (AWP) which provides communities with funds to research, plan, and develop implementation strategies for areas affected by one or more brownfields.

For more information: <https://www.epa.gov/brownfields/types-brownfields-grant-funding>

NATIONAL FISH AND WILDLIFE FOUNDATION: FIVE STAR & URBAN WATERS RESTORATION GRANT PROGRAM

The Five Star & Urban Waters Restoration Grant Program seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships for wetland, riparian, forest and coastal habitat restoration, urban wildlife conservation, stormwater management as well as outreach, education and stewardship. Projects should focus on water quality, watersheds and the habitats they support. The program focuses on five priorities: on-the-ground restoration, community partnerships, environmental outreach, education, and training, measurable results, and sustainability. Eligible applicants include nonprofit organizations, state government agencies, local governments, municipal governments, tribes, and educational institutions. Projects are required to meet or exceed a 1:1 match to be competitive.

For more information: <http://www.nfwf.org/fivestar/Pages/home.aspx>

STATE FUNDING SOURCES

There are multiple sources for state funding of bicycle and pedestrian transportation projects. However, state transportation funds cannot be used to match federally funded transportation projects, according to a law passed by the North Carolina Legislature.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STRATEGIC TRANSPORTATION INVESTMENTS (STI)

The NCDOT's State Transportation Improvement Program is based on the Strategic Transportation Investments Bill, signed into law in 2013. The Strategic Transportation Investments (STI) Initiative includes the Strategic Mobility Formula, a way to fund and prioritize transportation projects.

The Strategic Mobility Formula assigns projects for all modes into one of three categories: 1) Statewide Mobility, 2) Regional Impact, and 3) Division Needs. All independent bicycle and pedestrian projects are placed in the "Division Needs" category, and are currently ranked based on 50% data (safety, access, demand, connectivity, and cost effectiveness) and 50% local input, with a breakdown as follows:

SAFETY 15%

- » Definition: Projects or improvements where bicycle or pedestrian accommodations are non-existent or inadequate for safety of users
- » How it's measured: Crash history, posted speed limits, and estimated safety benefit
- » Calculation:
 - » Bicycle/pedestrian crashes along the corridor within last five years: 40% weight
 - » Posted speed limits, with higher points for higher limits: 40% weight
 - » Project safety benefit, measured by each specific improvement: 20% weight

ACCESS 10%

- » Definition: Destinations that draw or generate high volumes of bikes/pedestrians
- » How it's measured: Type of and distance to destination

DEMAND 10%

- » Definition: Projects serving large resident or employee user groups
- » How its measured: # of households and employees per square mile within 1.5 mile bicycle or 0.5 mile pedestrian facility + factor for unoccupied housing units (second homes)

CONNECTIVITY 10%

- » Definition: Measure impact of project on reliability and quality of network
- » How it's measured: Creates score per each Strategic Transportation Investments based on degree of bike/ped separation from roadway and connectivity to similar or better project type

COST EFFECTIVENESS 5%

- » Definition: Ratio of calculated user benefit divided by NCDOT project cost
- » How it's measured: Safety + Demand + Access + Connectivity)/Estimated Project Cost to NCDOT

LOCAL INPUT 50%

- » Definition: Input from MPO/RPOs and NCDOT Divisions, which comes in the form points assigned to projects.
- » How it is measured: Base points + points for population size. A given project is more likely to get funded if it is assigned base points from both the MPO/RPO and the Division, making the need for communicating the importance of projects to these groups critical. Further, projects that have a local match will score higher.

ADDITIONAL BICYCLE AND PEDESTRIAN PROJECT REQUIREMENTS:

- » Federal funding typically requires a 20% non-federal match
- » State law prohibits state match for bicycle and pedestrian projects (except for Powell Bill)
- » Limited number of project submittals per MPO/RPO/Division

- » Minimum project cost requirement is \$100,000
- » Bike/Ped projects typically include: bicycle lanes, multi-use path/greenway, paved shoulders, sidewalks, pedestrian signals, SRTS infrastructure projects, and other streetscape/multi-site improvements (such as median refuge, signage, etc.)

These rankings largely determine which projects will be included in NCDOT's State Transportation Improvement Program (STIP). The STIP is a federally mandated transportation planning document that details transportation planning improvements prioritized by the stakeholders for inclusion in NCDOT's Work Program. The STIP is updated every 2 years. The STIP contains funding information for various transportation divisions of NCDOT, including, highways, rail, bicycle and pedestrian, public transportation and aviation. A project does not have to be fully funded to be in the STIP.

For more information on STIP: <https://www.ncdot.gov/initiatives-policies/Transportation/stip/Pages/default.aspx>

INCIDENTAL PROJECTS

Bicycle and Pedestrian accommodations such as; bike lanes, wide paved shoulders, sidewalks, intersection improvements, bicycle and pedestrian safe bridge design, etc. are frequently included as "incidental" features of larger highway/roadway projects. This is increasingly common with the adoption of NCDOT's "Complete Streets" Policy.

In addition, bicycle safe drainage grates and handicapped accessible sidewalk ramps are now a standard feature of all NCDOT highway construction. Most pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects funded with a combination of federal and state roadway construction funds, and usually with a local match. On-road bicycle accommodations, if warranted, typically do not require a local match.

“Incidental Projects” are often constructed as part of a larger transportation project, when they are justified by local plans that show these improvements as part of a larger, multi-modal transportation system. Having a local bicycle or pedestrian plan is important, because it allows NCDOT or a locality to identify where bike and pedestrian improvements are needed, and can be included as part of highway or street improvement project. It also helps local government identify what their priorities are and how they might be able to pay for these projects. Under “Complete Streets” local governments may be responsible for a portion of the costs for bicycle and pedestrian projects (for NCDOT projects). The cost share breakdown is based on population size as follows:

- » 100,000 = 50% local match
- » 50,000 - 100,000 = 40% local match
- » 10,000 - 50,000 = 30% local match
- » 10,000 = 20% local match

For more information: <https://connect.ncdot.gov/projects/research/Pages/ProjDetails.aspx?ProjectID=2014-06>

SPOT SAFETY PROGRAM

The Spot Safety Program is a state-funded public safety investment and improvement program that provides highly effective low-cost safety improvements for intersections and sections of North Carolina’s 79,000 miles of state maintained roads in all 100 counties of North Carolina. The Spot Safety Program is used to develop smaller improvement projects to address safety, potential safety, and operational issues. The program is funded with state funds and currently receives approximately \$9 million per state fiscal year. Other monetary sources (such as Small Construction or Contingency funds) can assist in funding Spot Safety projects, however, the maximum allowable contribution of Spot Safety funds per project is \$250,000.

The Spot Safety Program targets hazardous locations for expedited low cost safety improvements such as traffic signals, turn lanes, improved shoulders, intersection upgrades, positive

guidance enhancements (rumble strips, improved channelization, raised pavement markers, long life highly visible pavement markings), improved warning and regulatory signing, roadside safety improvements, school safety improvements, and safety appurtenances (like guardrail and crash attenuators).

A Safety Oversight Committee (SOC) reviews and recommends Spot Safety projects to the Board of Transportation (BOT) for approval and funding. Criteria used by the SOC to select projects for recommendation to the BOT include, but are not limited to, the frequency of correctable crashes, severity of crashes, delay, congestion, number of signal warrants met, effect on pedestrians and schools, division and region priorities, and public interest.

For more information: <https://connect.ncdot.gov/resources/safety/Pages/NC-Highway-Safety-Program-and-Projects.aspx>

HIGHWAY HAZARD ELIMINATION PROGRAM

The Hazard Elimination Program is used to develop larger improvement projects to address safety and potential safety issues. The program is funded with 90 percent federal funds and 10 percent state funds. The cost of Hazard Elimination Program projects typically ranges between \$400,000 and \$1 million. A Safety Oversight Committee (SOC) reviews and recommends Hazard Elimination projects to the Board of Transportation (BOT) for approval and funding. These projects are prioritized for funding according to a safety benefit to cost (B/C) ratio, with the safety benefit being based on crash reduction. Once approved and funded by the BOT, these projects become part of the department’s State Transportation Improvement Program (STIP).

For more information: <https://connect.ncdot.gov/resources/safety/Pages/NC-Highway-Safety-Program-and-Projects.aspx>

GOVERNOR'S HIGHWAY SAFETY PROGRAM

The Governor's Highway Safety Program (GHSP) funds safety improvement projects on state highways throughout North Carolina. All funding is performance-based. Substantial progress in reducing crashes, injuries, and fatalities is required as a condition of continued funding. Permitted safety projects include checking station equipment, traffic safety equipment, and BikeSafe NC equipment. However, funding is not allowed for speed display signs. This funding source is considered to be "seed money" to get programs started. The grantee is expected to provide a portion of the project costs and is expected to continue the program after GHSP funding ends. Applications must include county level crash data. Local governments, including county governments and municipal governments, are eligible to apply.

For more information: <https://www.ncdot.gov/initiatives-policies/safety/ghsp/Pages/default.aspx>

SAFE ROUTES TO SCHOOL (SRTS)

SRTS is managed by NCDOT, but is federally funded; See Federal Funding Sources above for more information.

COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS

Community Development Block Grant (CDBG) funds are available to local municipal or county governments that qualify for community development projects that provide decent housing and suitable living environments and by expanding economic opportunities, principally for persons of low and moderate income. State CDBG funds are provided by the U.S. Department of Housing and Urban Development (HUD) to the state of North Carolina. Some urban counties and cities in North Carolina receive CDBG funding directly from HUD. Each year, CDBG provides funding to local governments for hundreds of critically-needed community improvement projects throughout the state. These community improvement projects are administered by the Division of Community Assistance and

the Commerce Finance Center under eight grant categories. CDBG funds may be used for activities which include, but are not limited to: acquisition of real property, construction of public facilities and improvements, such as streets, neighborhood centers, and conversion of school buildings for eligible purposes, and activities related to energy conservation.

For more information: <https://www.hudexchange.info/programs/cdbg-entitlement/cdbg-entitlement-program-eligibility-requirements/>

THE NORTH CAROLINA DIVISION OF PARKS AND RECREATION - RECREATIONAL TRAILS AND ADOPT-A-TRAIL GRANTS

The Adopt-a-Trail Grant Program (AAT) awards \$108,000 annually to government agencies, nonprofit organizations and private trail groups for trail projects. Funding from the federal Recreational Trails Program (RTP), which is used for renovating or constructing trails and greenways, is allocated to states. The North Carolina Division of Parks and Recreation and the State Trails Program manages these funds with a goal of helping citizens, organizations and agencies plan, develop and manage all types of trails ranging from greenways and trails for hiking, biking, and horseback riding to river trails and off-highway vehicle trails. Grants are available to governmental agencies and nonprofit organizations. The maximum grant amount is \$100,000 and requires a 25% match of RTP funds received. Permissible uses include:

- » New trail or greenway construction
- » Trail or greenway renovation
- » Approved trail or greenway facilities
- » Trail head/ trail markers
- » Purchase of tools to construct and/or renovate trails/greenways
- » Land acquisition for trail purposes
- » Planning, legal, environmental, and permitting costs - up to 10% of grant amount
- » Combination of the above

For more information: <http://www.ncparks.gov/more-about-us/grants/trail-grants/recreational-trails-program>

NC PARKS AND RECREATION TRUST FUND (PARTF)

The Parks and Recreation Trust Fund (PARTF) provides dollar-for-dollar matching grants to local governments for parks and recreational projects to serve the general public. Counties, incorporated municipalities, and public authorities, as defined by G.S. 159-7, are eligible applicants. A local government can request a maximum of \$500,000 with each application. An applicant must match the grant dollar-for-dollar, 50 percent of the total cost of the project, and may contribute more than 50 percent. The appraised value of land to be donated to the applicant can be used as part of the match. The value of in-kind services, such as volunteer work, cannot be used as part of the match. Property acquired with PARTF funds must be dedicated for public recreational use.

For more information: <http://www.ncparks.gov/more-about-us/parks-recreation-trust-fund/eligibility>

CLEAN WATER MANAGEMENT TRUST FUND

The Clean Water Management Trust Fund (CWMTF) is available to any state agency, local government, or non-profit organization whose primary purpose is the conservation, preservation, and restoration of North Carolina's environmental and natural resources. Grant assistance is provided to conservation projects that:

- » enhance or restore degraded waters;
- » protect unpolluted waters, and/or
- » contribute toward a network of riparian buffers and greenways for environmental, educational, and recreational benefits;
- » provide buffers around military bases to protect the military mission;
- » acquire land that represents the ecological diversity of North Carolina; and
- » acquire land that contributes to the development of a balanced State program of historic properties.

For more information: <http://www.cwmtf.net/#appmain.htm>

DUKE ENERGY WATER RESOURCES FUND

Duke Energy is investing \$10 million in a fund for projects that benefit waterways in the Carolinas. The fund supports science-based, research-supported projects and programs that provide direct benefit to at least one of the following focus areas:

- » Improve water quality, quantity and conservation;
- » Enhance fish and wildlife habitats;
- » Expand public use and access to waterways; and
- » Increase citizens' awareness about their roles in protecting these resources.

Applications are open to nonprofit organizations and local government agencies. Funding decisions are made twice a year. Local and regional government agencies could consider this resource for proposed greenways across the region.

For more information: <http://www.nccommunityfoundation.org/page/other-grant-opportunities/duke-energy-water-resource-fund-grants/applying-to-the-duke-energy-water-resources-fund>

URBAN AND COMMUNITY FORESTRY GRANT

The North Carolina Division of Forest Resources Urban and Community Forestry grant can provide funding for a variety of projects that will help plan and establish street trees as well as trees for urban open space. The goal is to improve public understanding of the benefits of preserving existing tree cover in communities and assist local governments with projects which will lead to more effective and efficient management of urban and community forests. Grant requests should range between \$1,000 and \$15,000 and must be matched equally with non-federal funds. Grant funds may be awarded to any unit of local or state government, public educational institutions, approved non-profit 501(c)(3) organizations, and other tax-exempt organizations. First time municipal applicant and municipalities seeking Tree City USA status are given priority for funding. Grant applications are due by March 31st of each year and recipients are notified by mid-July.

For more about Tree City USA status, visit: http://ncforestservice.gov/Urban/urban_grant_overview.htm

LOCAL GOVERNMENT FUNDING SOURCES

Municipalities often plan for the funding of pedestrian and bicycle facilities or improvements through development of Capital Improvement Projects (CIP) or occasionally, through their annual Operating Budgets. In Raleigh, for example, the greenway system has been developed over many years through an annual dedicated source of funding that has ranged from \$100,000 to \$500,000 and administered through the Recreation and Parks Department. CIPs should include all types of capital improvements (water, sewer, buildings, streets, etc.) versus programs for single purposes. This allows municipal decision-makers to balance all capital needs. Typical capital funding mechanisms include the capital reserve fund, capital protection ordinances, municipal service district, tax increment financing, taxes, fees, and bonds. Each category is described below. A variety of possible funding options available to North Carolina jurisdictions for implementing pedestrian and bicycle projects are also described below. However, many will require specific local action as a means of establishing a program if it's not already in place.

POWELL BILL FUNDS

Annually, State street-aid (Powell Bill) allocations are made to incorporated municipalities which establish their eligibility and qualify as outlined by G.S. 136-41.1 through 136-41.4. Powell Bill funds shall be expended only for the purposes of maintaining, repairing, constructing, reconstructing or widening of local streets that are the responsibility of the municipalities. It may also be used for planning, construction, and maintenance of bikeways or sidewalks within municipal limits or within the area of a metropolitan planning organization or rural planning organization. Beginning July 1, 2015, under the Strategic Transportation Investments initiative, Powell Bill funds may no longer be used to provide a match for federal transportation funds such as Transportation Alternatives. Certified Statement, street listing, add/delete sheet and certified map from all municipalities

are due between July 1st and July 21st of each year. Additional documentation is due shortly afterwards.

For more information: <https://connect.ncdot.gov/municipalities/State-Street-Aid/Pages/default.aspx>

CAPITAL RESERVE FUND

Municipalities have statutory authority to create capital reserve funds for any capital purpose, including pedestrian facilities. The reserve fund must be created through ordinance or resolution that states the purpose of the fund, the duration of the fund, the approximate amount of the fund, and the source of revenue for the fund. Sources of revenue can include general fund allocations, fund balance allocations, grants, and donations for the specified use.

CAPITAL PROJECT ORDINANCES

Municipalities can pass Capital Project Ordinances that are project specific. The ordinance identifies and makes appropriations for the project.

LOCAL IMPROVEMENT DISTRICT (LID)

Local Improvement Districts (LIDs) are most often used by cities to construct localized projects such as streets, sidewalks, or bikeways. Through the LID process, the costs of local improvements are generally spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as traffic trip generation.

MUNICIPAL SERVICE DISTRICT

Municipalities have statutory authority to establish municipal service districts, to levy a property tax in the district additional to the town-wide property tax, and to use the proceeds to provide services in the district. Downtown revitalization projects are one of the eligible uses of service districts, and can include projects such as street, sidewalk, or bikeway improvements within the downtown taxing district.

TAX INCREMENT FINANCING

Project Development Financing bonds, also known as Tax Increment Financing (TIF) is a relatively new tool in North Carolina, allowing localities to use future gains in taxes to finance the current improvements that will create those gains. When a public project (e.g., sidewalk improvements) is constructed, surrounding property values generally increase and encourage surrounding development or redevelopment. The increased tax revenues are then dedicated to finance the debt created by the original public improvement project. Streets, streetscapes, and sidewalk improvements are specifically authorized for TIF funding in North Carolina. Tax Increment Financing typically occurs within designated development financing districts that meet certain economic criteria that are approved by a local governing body. TIF funds are generally spent inside the boundaries of the TIF district, but they can also be spent outside the district if necessary to encourage development within it. Although larger cities use this type of financing more often, Woodfin, NC is an example of a small town that has used this type of financing.

MUNICIPAL VEHICLE TAX

NCGS 20-97 allows municipalities to establish a vehicle fee/tax and a percentage of funding can be used for maintaining, repairing, constructing, reconstructing, widening, or improving public streets in the city or town that do not form a part of the State highway system.

OTHER LOCAL FUNDING OPTIONS

- » Bonds/Loans
- » Taxes
- » Impact fees
- » Exactions
- » Installment purchase financing
- » In-lieu-of fees
- » Partnerships

PRIVATE AND NONPROFIT FUNDING SOURCES

Many communities have solicited greenway funding assistance from private foundations and other conservation-minded benefactors. Below are examples of private funding opportunities.

FUNDING FOR TRAIL DEVELOPMENT

RAILS-TO-TRAILS CONSERVANCY

RTC launched a new grant program in 2015 to support organizations and local governments that are implementing projects to build and improve rail-trails. Under the Doppelt Family Trail Development Fund, RTC will award a total of \$85,000 per year through a competitive process, which is then distributed among several qualifying projects. Eligible applicants include nonprofit organizations and state, regional, and local government agencies. Two types of grants are available - community support grants and project transformation grants. Around three to four community support grants are awarded each year, ranging from \$5,000-\$10,000 each. Community Support Grants support nonprofit organizations or "Friends of the Trail" groups that need funding to get trail development or trail improvement efforts off the ground. Each year, 1-2 Project Transformation Grants are awarded that range from \$15,000-\$50,000. The intention of these grants is to enable an organization to complete a significant trail development or improvement project. For both types of grants, applications for projects on rail-trails and rails-with-trails are given preference, but rail-trail designation is not a requirement. The trail must serve multiple user types, such as bicycling, walking, and hiking, and must be considered a trail, greenway, or shared-use path.

For more information: <http://www.railstotrails.org/our-work/doppelt-family-trail-development-fund/>

NATIONAL TRAILS FUND

American Hiking Society created the National Trails Fund in 1998, which is the only privately supported national grants program that provides funding to grassroots organizations working toward establishing, protecting, and maintaining foot trails in America. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America's cherished public trails. To date, American Hiking has granted more than \$588,000 to 192 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from \$500 to \$3,000 per project. Only 501(c)3 nonprofit organizations are eligible to apply. Applicants must be current members of American Hiking Society's Alliance of Hiking Organizations. Except for land acquisition projects, funded projects must be completed in a year. Multi-year projects may be considered if they are exceptional cases. Projects the American Hiking Society will consider include:

- » Securing trail lands, including acquisition of trails and trail corridors, and the costs associated with acquiring conservation easements.
- » Building and maintaining trails which will result in visible and substantial ease of access, improved hiker safety, and/or avoidance of environmental damage.
- » Constituency building surrounding specific trail projects - including volunteer recruitment and support.

For more information: <https://americanhiking.org/national-trails-fund/>

AMERICAN GREENWAYS EASTMAN KODAK AWARDS

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants (\$500 to \$2,500) to stimulate the planning, design, and development of greenways. These grants can be used for activities such as mapping, conducting

ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, planning bike paths, and building trails. Grants are primarily awarded to local, regional, or state-wide nonprofit organizations. Public agencies may apply but preference is given to community organizations. Grants are awarded based on the importance of the project to local greenway development efforts, demonstrated community support, extent to which the grant will result in matching funds, likelihood of tangible results, and the capacity of the organization to complete the project. Applications can be submitted from March 1st through June 1st of each calendar year.

For more information: <http://www.rlch.org/funding/kodak-american-greenways-grants>

FUNDING FOR CONSERVATION EFFORTS

NATIONAL FISH AND WILDLIFE FOUNDATION (NFWF)

The National Fish and Wildlife Foundation (NFWF) is a private, nonprofit, tax-exempt organization chartered by Congress in 1984. The National Fish and Wildlife Foundation sustains, restores, and enhances the Nation's fish, wildlife, plants, and habitats. Through leadership conservation investments with public and private partners, the Foundation is dedicated to achieving maximum conservation impact by developing and applying best practices and innovative methods for measurable outcomes.

The Foundation provides grants through more than 70 diverse conservation grant programs. One of the most relevant programs for bicycle and pedestrian projects is Acres for America. Funding priorities include conservation of bird, fish, plants and wildlife habitats, providing access for people to enjoy outdoors, and connecting existing protected lands. Federal, state, and local government agencies, educational institutions, Native American tribes, and nonprofit organizations may apply twice annually for matching grants. Due to the competitive

nature of grant funding for Acres for America, all awarded grants require a minimum 1:1 match.

For more information: <http://www.nfwf.org/whatwedo/grants/Pages/home.aspx>

THE TRUST FOR PUBLIC LAND

Land conservation is central to the mission of the Trust for Public Land (TPL). Founded in 1972, the TPL is the only national non-profit working exclusively to protect land for human enjoyment and well-being. TPL 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: <http://www.tpl.org>

LAND FOR TOMORROW CAMPAIGN

Land for Tomorrow is a diverse partnership of businesses, conservationists, farmers, environmental groups, health professionals, and community groups committed to securing support from the public and General Assembly for protecting land, water, and historic places. The campaign was successful in 2013 in asking the North Carolina General Assembly to continue to support conservation efforts in the state. The state budget bill includes about \$50 million in funds for key conservation efforts in North Carolina. Land for Tomorrow works to enable North Carolina to reach a goal of ensuring that working farms and forests, sanctuaries for wildlife, land bordering streams, parks, and greenways, land that helps strengthen communities and promotes job growth, and historic downtowns and neighborhoods will be there to enhance the quality of life for generations to come.

For more information: <http://www.land4tomorrow.org/>

THE CONSERVATION ALLIANCE

The Conservation Alliance is a nonprofit organization of outdoor businesses whose collective annual membership dues support grassroots citizen-action groups and their efforts to

protect wild and natural areas. Grants are typically about \$35,000 each. Since its inception in 1989, The Conservation Alliance has contributed \$4,775,059 to environmental groups across the nation, saving over 34 million acres of wild lands.

The Conservation Alliance Funding Criteria:

- » The Project should be focused primarily on direct citizen action to protect and enhance our natural resources for recreation.
- » The Alliance does not look for mainstream education or scientific research projects, but rather for active campaigns.
- » All projects should be quantifiable, with specific goals, objectives, and action plans and should include a measure for evaluating success.
- » The project should have a good chance for closure or significant measurable results over a fairly short term (within four years).

For more information: <http://www.conservationalliance.com/grants/?yearly=2017>

FUNDING FOR HEALTH AND ENVIRONMENTAL INITIATIVES

BLUE CROSS BLUE SHIELD OF NORTH CAROLINA FOUNDATION (BCBS)

Blue Cross Blue Shield (BCBS) focuses on programs that use an outcome-based approach to improve the health and well-being of residents. The Healthy Places grant concentrates on increased physical activity and active play through support of improved built environments such as sidewalks and safe places to bike. Nonprofit organizations and government entities are eligible to apply. Eligible grant applicants must be located in North Carolina, be able to provide recent tax forms, and depending on the size of the non-profit, provide an audit. BCBS does not have a traditional grant cycle and announces grant opportunities on a periodic basis. Grants can range from small-dollar equipment grants to large, multi-year partnerships.

For more information: <http://www.bcbsncfoundation.org/faqs>

DUKE ENERGY FOUNDATION

Funded by Duke Energy shareholders, this foundation makes charitable grants to nonprofit organizations and government agencies. Grant applicants must serve communities that are also served by Duke Energy. The grant program has several investment priorities, one of which is environment, and this is the most applicable to bicycle and pedestrian projects. Duke Energy supports initiatives that help protect and restore wildlife and natural resources, with a special focus on water and air. The application period is typically from July 1st to August 31st.

For more information: <https://www.duke-energy.com/community/duke-energy-foundation>

FUNDING FOR COMMUNITY DEVELOPMENT INITIATIVES

NORTH CAROLINA COMMUNITY FOUNDATION

The North Carolina Community Foundation, established in 1988, is a statewide foundation seeking gifts from individuals, corporations, and other foundations to build endowments and ensure financial security for non-profit organizations and institutions throughout the state. Based in Raleigh, the foundation also manages a number of community affiliates throughout North Carolina, that make grants in the areas of human services, education, health, arts, religion, civic affairs, and the conservation and preservation of historical, cultural, and environmental resources. The foundation also manages various scholarship programs statewide. Nonprofit organizations and local government units, such as public schools, are eligible to apply. The foundation will only give consideration to applicants that serve counties within its affiliate network.

For more information: <http://www.nccommunityfoundation.org/grants-scholarships>

Z. SMITH REYNOLDS FOUNDATION

This Winston-Salem-based foundation has been assisting environmental projects in North Carolina for many years. Grant recipients include nonprofit organizations, colleges and universities, religious entities, and government agencies that have projects or programs that serve North Carolinians. The Foundation focuses its grant making on five focus areas: Community Economic Development; Environment; Public Education; Social Justice and Equity; and Strengthening Democracy. The “environment” focus area is the most applicable for bicycle and pedestrian projects. This focus area seeks to protect and restore ecosystems in the state’s mountains and coastal areas. The Z. Smith Reynolds Foundation is committed to accommodating the increasing growth demands in the state in environmentally sustainable ways, including through enhanced transportation options. Deadline to apply is typically in August.

For more information: <http://www.zsr.org/grants-programs>

BANK OF AMERICA CHARITABLE FOUNDATION

The Bank of America Charitable Foundation is one of the largest in the nation. Its grantmaking activities are focused on 3 focus areas: workforce development and education, community development, and basic needs. The area of focus most relevant to increased recreational opportunities and trails is community development, which provides funding for projects that foster green communities and for transit oriented development projects. Only nonprofit organizations are eligible to apply for funding.

For more information: www.bankofamerica.com/foundation

LOCAL TRAIL SPONSORS

A sponsorship program for trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the greenways and open space system. Some recognition of the donors is appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Types of gifts other than cash could include donations of services, equipment, labor, or reduced costs for supplies.

CORPORATE DONATIONS

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented.

PRIVATE INDIVIDUAL DONATIONS

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds) or land. Municipalities typically create funds to facilitate and simplify a transaction from an individual's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented.

FUNDRAISING/CAMPAIGN DRIVES

Organizations and individuals can participate in a fundraiser or a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Often times fundraising satisfies the need for public awareness, public education, and financial support.

VOLUNTEER WORK

It is expected that many citizens will be excited about the development of a greenway corridor. Individual volunteers from the community can be brought together with groups of volunteers from church groups, civic groups, scout troops and environmental groups to work on greenway development on special community workdays. Volunteers can also be used for fund-raising, maintenance, and programming needs.

INNOVATIVE FUNDING OPTIONS

Crowdsourcing "is the process of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, and especially from an online community, rather than from traditional employees or suppliers."

For some success stories and ideas for innovative fundraising techniques: <https://www.americantrails.org/resources/trail-planning>



TOWN of RIVER BEND, NC BICYCLE & PEDESTRIAN PLAN

Prepared for the New Bern Area Metropolitan Planning Organization (MPO) and the Town of River Bend, North Carolina

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