

# JACKSON COUNTY PLANNING OFFICE

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## MEMO

To: Don Adams, County Manager  
From: Michael Poston, Planning Director *MAP*  
Date: February 7, 2023

RE: NCDOT's Carbon Reduction Grant- NC Hwy 107 (Cullowhee)

As you are aware, NCDOT has an open grant (submitted through the Southwestern RPO) for projects that reduce carbon in our transportation systems. One of the eligible types of projects would be the construction of shared paths/greenways. Throughout our planning processes (Cullowhee Small Area Plan, and Jackson County Walks) we have identified a shared use path/greenway segment along NC Hwy 107 connecting the Cullowhee Recreation Center, Cullowhee Valley School, the Village of Forest Hills, and Western Carolina University. This project was rated as on the top 10 projects in the Jackson County Walks Plan. We are currently working with Transportation Planning Design, transportation-engineering firm out of Asheville, on a feasibility study for this project.

The grant would require a local match of 20 percent. The total cost of the project must include a 10 percent administration fee for NCDOT to manage all aspects of the project. I have attached a proposed construction budget based on the draft feasibility study. That figure includes construction costs as well as a 25 percent contingency. The in addition to the costs shown on the attachment, there is an estimated \$ 400,000 for engineering, surveying, and permitting for the project, \$105,000 in projected costs to move utility poles within the project boundary. I have also included a 10% escalation cost over a two-year period. The total construction cost (1,132,566 + 105,000+ 10% escalation over two- year period) is \$1,497,455.

The total cost for the project (1,497,455 + 400,000+ \$189,745) is proposed to be \$2,087,200. The County's 20% would be \$417,440.

The grant provides a three-year period to construct the project. Grant applications are due from the Southwestern RPO by March 17, 2023. NCDOT has stated an anticipated award date for projects. That makes the timeframe hard to predict in totality. In general, there will be a few months to sign the contract with NCDOT and then another 9-12 months to develop construction documents and prepare for bid. After awarding the contract it could take an additional 9-12 months for construction. In total time from award to final construction could be 24-36 months in duration.

<b>SIGNS AND LANE MARKINGS</b>				
POST MOUNTED SIGNS	SF	155	\$15.00	\$2,325
4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	LF	90	\$1.00	\$90
4" YELLOW WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	LF	180	\$1.00	\$180
24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	SF	1,160	\$5.00	\$5,800
HOT THERMOPLASTIC LEGEND, LEFT ARROW	EA	1	\$150.00	\$150
HOT THERMOPLASTIC PAINT LEGEND, RIGHT-THRU ARROW	EA	1	\$250.00	\$250
HOT THERMOPLASTIC PAINT LEGEND, MISC SINGLE LINE WORDS 10' TRAIL	EA	8	\$150.00	\$1,200
THERMOPLASTIC YIELD TRIANGLES	EA	20	\$10.00	\$200
<b>SUBTOTAL SIGNS AND LANE MARKINGS</b>				<b>\$10,195</b>
<b>MISCELLANEOUS CONSTRUCTION ITEMS</b>				
NON-QUANTIFIED ITEMS (25%)	LS	1	\$113,360	\$113,360
RETAINING WALL 1 260 LF X 4' EXPOSED HEIGHT WALL	SF	1040	\$50	\$52,000
RETAINING WALL 2 150 LF X 4' EXPOSED HEIGHT WALL	SF	600	\$50	\$30,000
RETAINING WALL 3 16 LF X 4' EXPOSED HEIGHT WALL	SF	64	\$50	\$3,200
SAFETY FENCE ON RETAINING WALLS	LF	426	\$80	\$34,080
PEDESTRIAN SIGNAL WISDOM DRIVE	LS	1	\$40,000	\$40,000
PEDESTRIAN SIGNAL COUNTRY CLUB DRIVE	LS	1	\$55,000	\$55,000
<b>SUBTOTAL MISCELLANEOUS ITEMS</b>				<b>\$327,640</b>
<b>SUBTOTAL PAY ITEMS</b>				<b>\$781,080</b>
<b>OTHER ITEMS</b>				
MOBILIZATION (4%)	LS	1	\$31,243	\$31,243
MAINTENANCE AND PROTECTION OF TRAFFIC (6%)	LS	1	\$46,865	\$46,865
CONSTRUCTION SURVEY & STAKEOUT (3%)	LS	1	\$23,432	\$23,432
EROSION AND SEDIMENTATION CONTROL (3%)	LS	1	\$23,432	\$23,432
<b>SUBTOTAL OTHER ITEMS</b>				<b>\$124,973</b>
<b>TOTAL: PAY ITEMS + OTHER ITEMS</b>				<b>\$906,053</b>
ESCALATION (4% FOR 0 YEARS)				\$0
<b>ESTIMATE TO MID-CONSTRUCTION YEAR (2022)</b>				<b>\$906,053</b>
CONTINGENCY (25% FOR CONCEPTUAL)				\$226,513
REDUCTION FOR PRIVATE CONSTRUCTION (0%)				\$0
<b>TOTAL ESTIMATE FOR CONSTRUCTION*</b>				<b>\$1,132,566</b>

\* *Does not include:*

*Surveying/Engineering/Permitting/Legal Fees*

*Acquisition Costs for Right-of-Way/Easements/Releases*

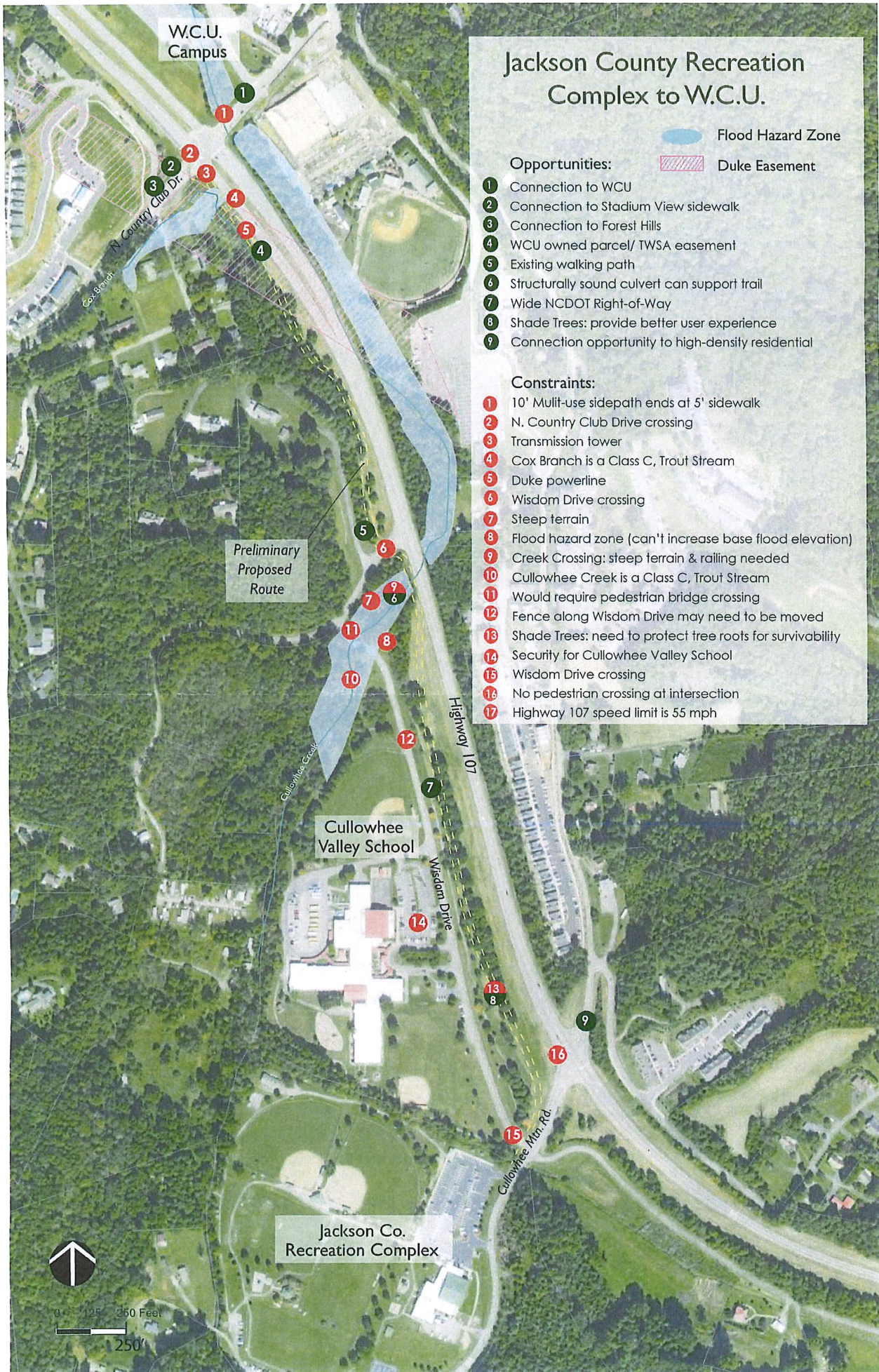
*Construction Inspection*

*Utility pole relocation, underground utility relocation/exploration*



**Note: Estimated number of utility poles to be relocated = 3**

*Construction Management*

*or any other items not specifically listed above.*



# Jackson County Recreation Complex to W.C.U.

 Flood Hazard Zone  
 Duke Easement

**Opportunities:**

- 1 Connection to WCU
- 2 Connection to Stadium View sidewalk
- 3 Connection to Forest Hills
- 4 WCU owned parcel/ TWSA easement
- 5 Existing walking path
- 6 Structurally sound culvert can support trail
- 7 Wide NCDOT Right-of-Way
- 8 Shade Trees: provide better user experience
- 9 Connection opportunity to high-density residential

**Constraints:**

- 1 10' Mult-use sidepath ends at 5' sidewalk
- 2 N. Country Club Drive crossing
- 3 Transmission tower
- 4 Cox Branch is a Class C, Trout Stream
- 5 Duke powerline
- 6 Wisdom Drive crossing
- 7 Steep terrain
- 8 Flood hazard zone (can't increase base flood elevation)
- 9 Creek Crossing: steep terrain & railing needed
- 10 Cullowhee Creek is a Class C, Trout Stream
- 11 Would require pedestrian bridge crossing
- 12 Fence along Wisdom Drive may need to be moved
- 13 Shade Trees: need to protect tree roots for survivability
- 14 Security for Cullowhee Valley School
- 15 Wisdom Drive crossing
- 16 No pedestrian crossing at intersection
- 17 Highway 107 speed limit is 55 mph

Preliminary Proposed Route

