



County of Albemarle
COMMUNITY DEVELOPMENT DEPARTMENT
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MEMORANDUM

TO: Albemarle County Board of Supervisors

FROM: Community Development – Transportation

DATE: June 21, 2023

RE: Free Bridge Lane Conceptual Design Final Package

The Free Bridge Lane Conceptual Design Project was completed by staff at LPDA earlier this year. The consultants developed three deliverables that are included in this final package. First, there is an Opportunities and Constraints Summary; this document was prepared at the beginning of the project and highlighted opportunities for transforming the corridor and outlined potential challenges. Second, there is a Draft Concept Plan featuring the Promenade and One-way Street designs. Third, there is a Final Concept Plan featuring the preferred Promenade design.

Towards the conclusion of the project, Community Development received valuable information from a Parks & Recreation team member regarding streambank integrity along Free Bridge Lane. This team member noted that the Bank Erosion Hazard Index (BEHI) indicates that some sections of the Rivanna River adjacent to Free Bridge Lane are rated as having a “high” or “very high” potential for erosion. The final document in this package is a BEHI ratings map from the Rivanna River Prioritization Study and Streambank Assessment Technical Report; this study and report were completed by Ecosystem Services for Rivanna Conservation Alliance and the National Fish & Wildlife Foundation, and the ratings map was provided by Parks & Recreation staff. Community Development and Parks & Recreation staff will take this information under advisement while planning the Promenade Pilot Program.

Free Bridge Lane Conceptual Design Final Package Table of Contents

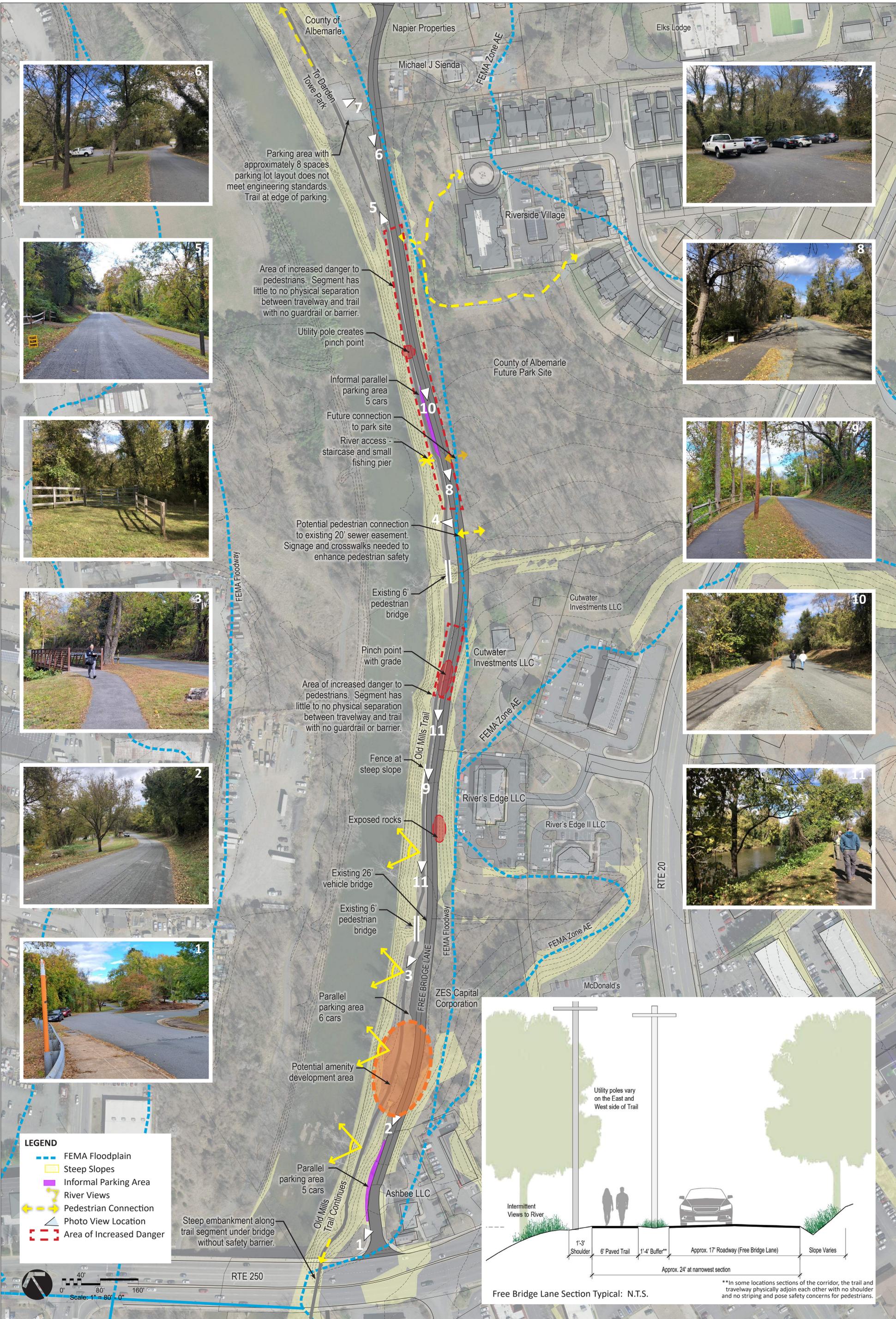
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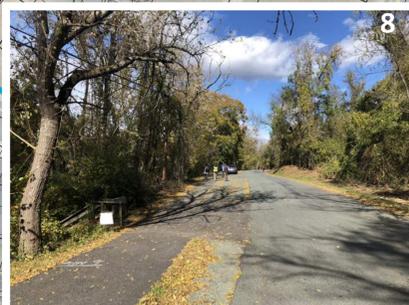
Opportunities and Constraints



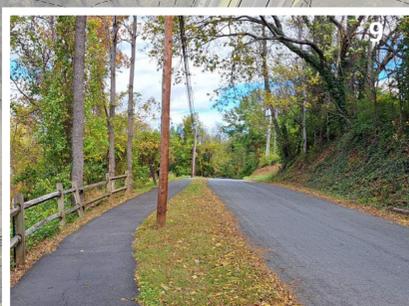
Parking area with approximately 8 spaces parking lot layout does not meet engineering standards. Trail at edge of parking.



Area of increased danger to pedestrians. Segment has little to no physical separation between travelway and trail with no guardrail or barrier.



Informal parallel parking area 5 cars



Future connection to park site
River access - staircase and small fishing pier



Potential pedestrian connection to existing 20' sewer easement. Signage and crosswalks needed to enhance pedestrian safety



Existing 6' pedestrian bridge



Area of increased danger to pedestrians. Segment has little to no physical separation between travelway and trail with no guardrail or barrier.



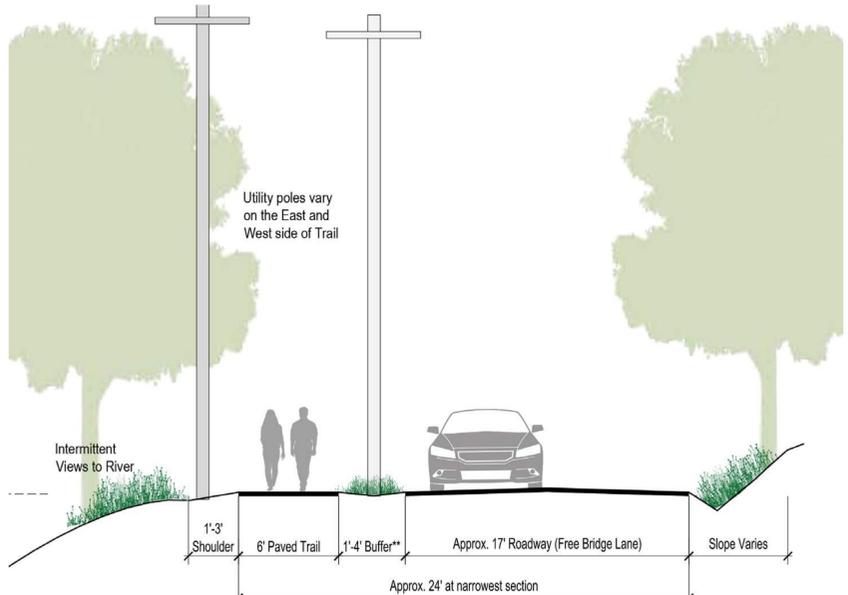
Fence at steep slope



Exposed rocks

- LEGEND**
- FEMA Floodplain
 - Steep Slopes
 - Informal Parking Area
 - River Views
 - Pedestrian Connection
 - ▲ Photo View Location
 - Area of Increased Danger

Steep embankment along trail segment under bridge without safety barrier.



Free Bridge Lane Section Typical: N.T.S.

**In some locations sections of the corridor, the trail and travelway physically adjoin each other with no shoulder and no striping and pose safety concerns for pedestrians.



Free Bridge Lane - Opportunities and Constraints

Albemarle County, Virginia

November 2022

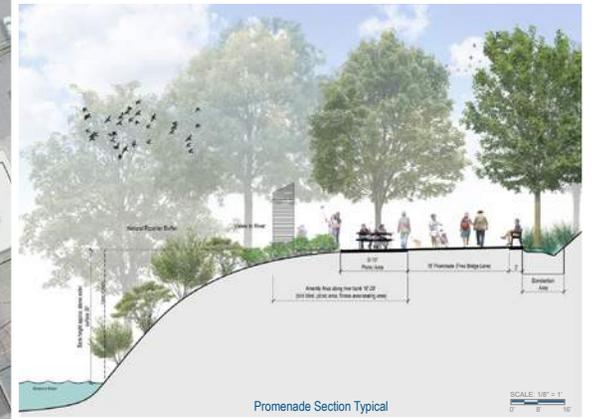
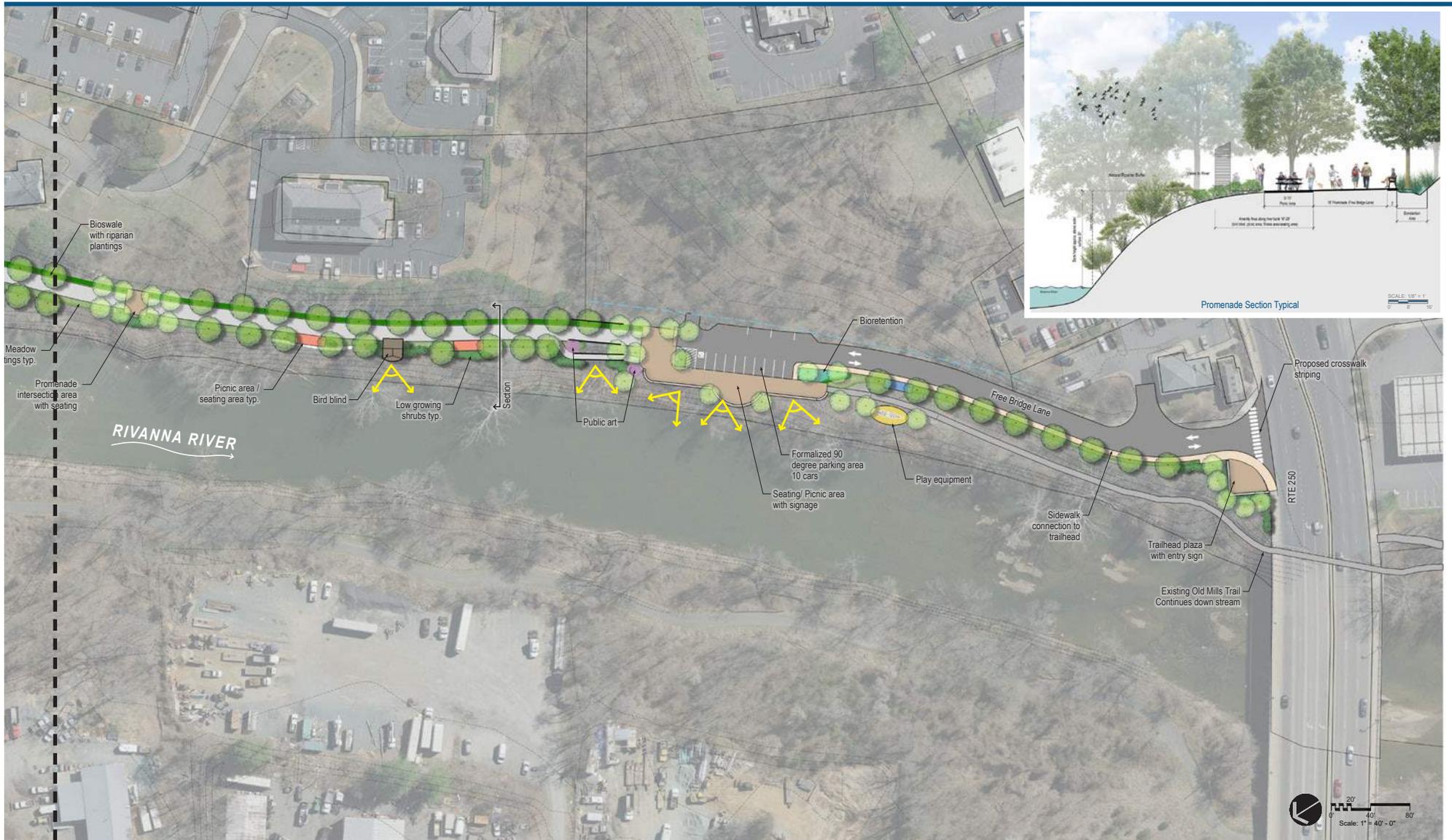


Draft Concept Plan



FREE BRIDGE LANE - Draft Concept Plan 1 - Promenade







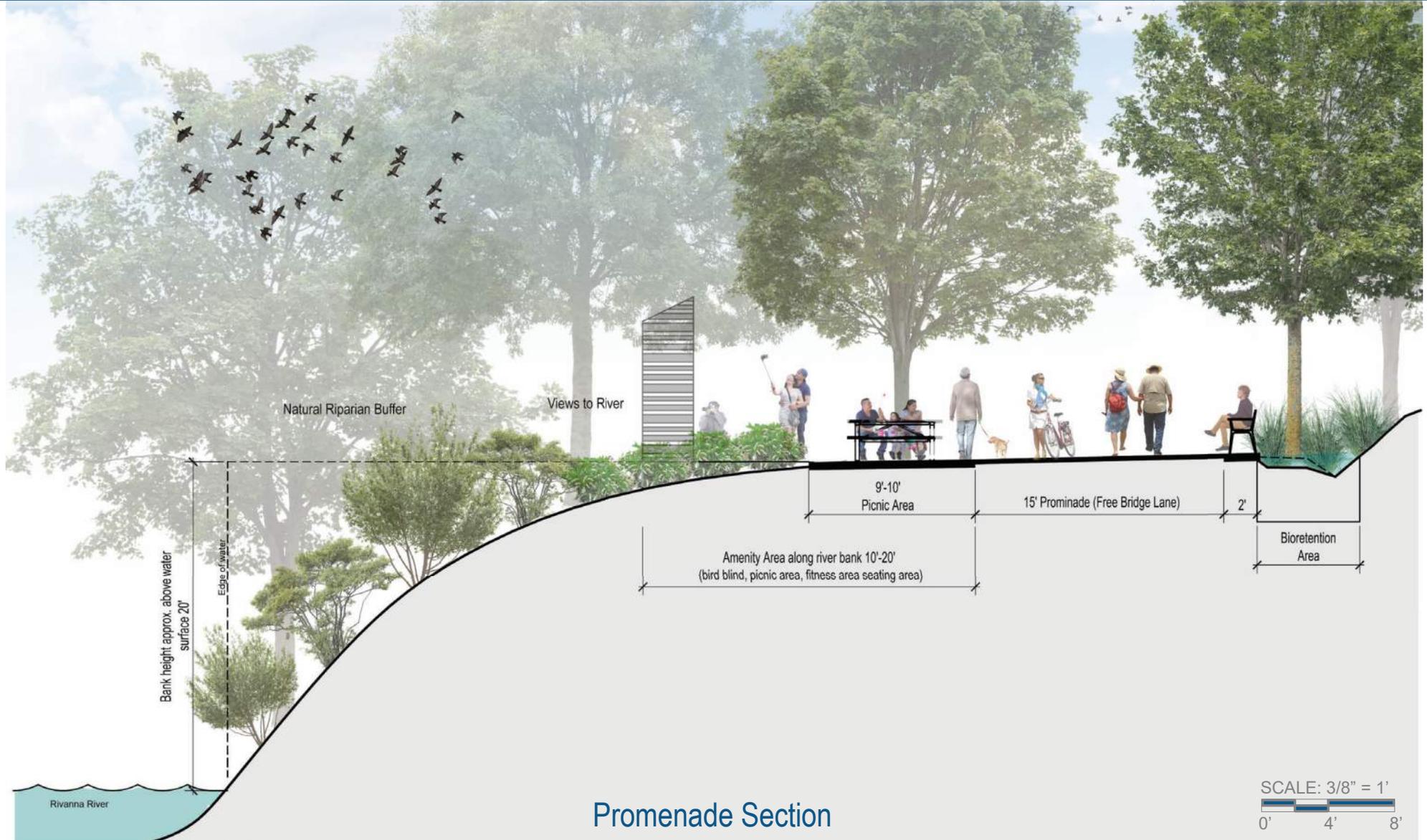
FREE BRIDGE LANE - Draft Concept Plan 2 - Multi-Modal Boule



I Boulevard

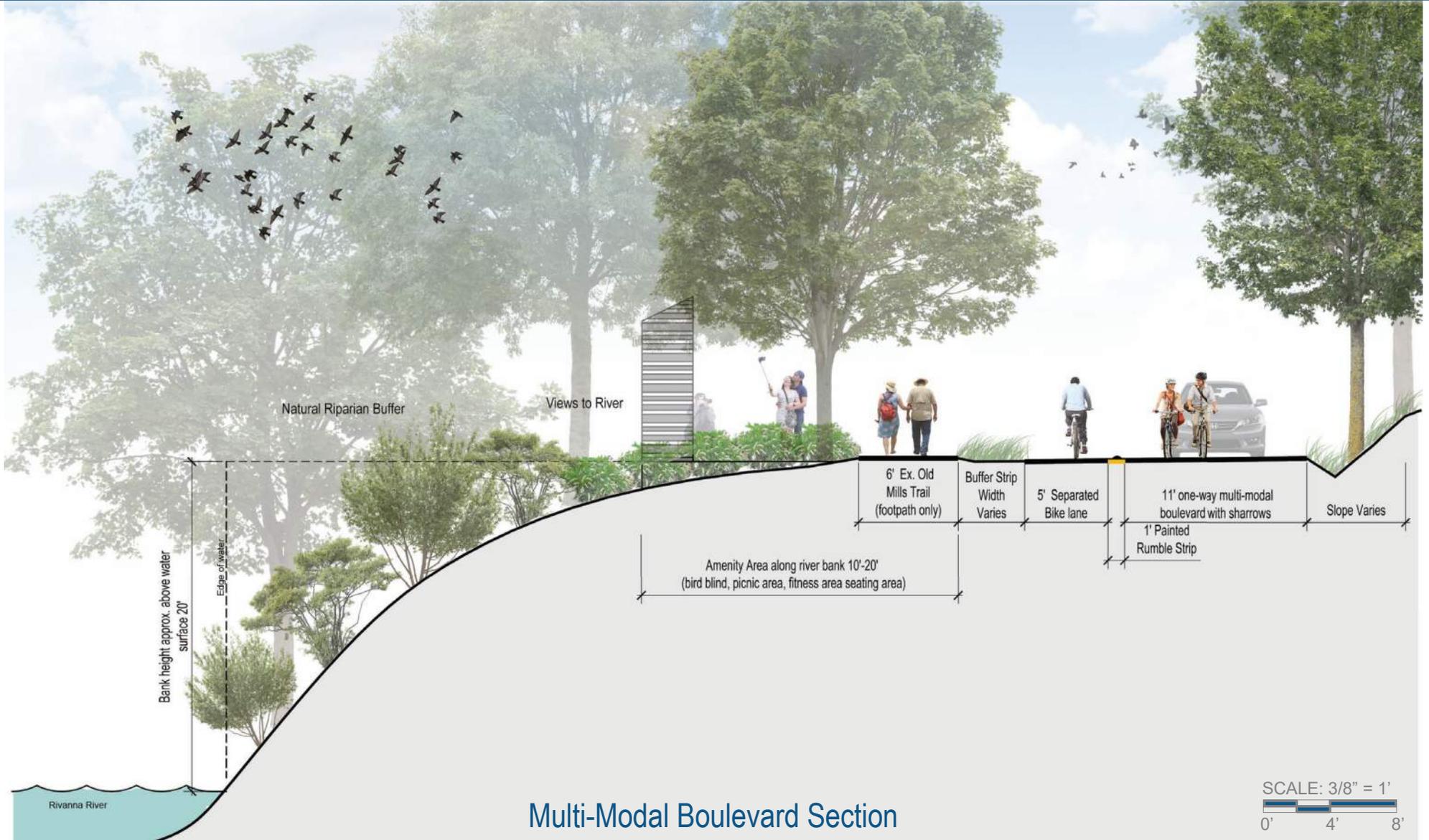
December 2022





Promenade Section

SCALE: 3/8" = 1'
0' 4' 8'



Free Bridge Lane Master Plan

Albemarle County, VA

Estimate of Probable Cost

9-Dec-22

Prepared by: LPDA

Total Park Length: Approx. 1/2 Mile

Comments	UNIT	UNIT PRICE	Promenade		Multi-Modal Boulevard	
			QTY.	TOTAL	QTY.	TOTAL
Sitework & Mobilization						
Design and Engineering (10%)	LS	10%		\$ 203,100		\$ 128,950
Mobilization, Permits, E&S, (20%)	LS	20%		\$ 406,200		\$ 257,900
Demolition, remove existing asphalt	SF	\$3		\$ -	45,000	\$ 135,000
Clearing and grubbing	AC	\$8,000	0.50	\$ 4,000	0.5	\$ 4,000
Earthwork - on site	CY	\$30	900	\$ 27,000	900	\$ 27,000
Stormwater Management	LS	\$60,000	1	\$ 60,000	1	\$ 60,000
Sub total				\$ 700,300		\$ 612,850
Paving and Hardscape						
Retaining wall/ seatwall	FF	\$50	900	\$ 45,000	900	\$ 45,000
Asphalt surfacing	SF	\$15	40,000	\$ 600,000	12,000	\$ 180,000
Asphalt vehicle access road	SF	\$15	12,000	\$ 180,000	-	\$ -
Asphalt parking	SF	\$15	11,000	\$ 165,000	11,000	\$ 165,000
Playground area surfacing	SF	\$20	800	\$ 16,000	800	\$ 16,000
Concrete plaza intersection area	SF	\$25	10,000	\$ 250,000	10,000	\$ 250,000
Concrete pad for Picnic / Seating areas	SF	\$25	1,800	\$ 45,000	300	\$ 7,500
Concrete Sidewalk	SF	\$25	2,500	\$ 62,500	2,500	\$ 62,500
Splitter island at RTE 250	SF	\$25	-	\$ -	700	\$ 17,500
Fitness area surface treatment	SF	\$20	1,500	\$ 30,000	900	\$ 18,000
Crosswalk Striping	EA	\$3,000	1	\$ 3,000	1	\$ 3,000
Bike Lane Marking- Thermoplastic	EA	\$400		\$ -	10	\$ 4,000
Milled rumble Strip and Paint	SF	\$2		\$ -	2,500	\$ 5,000
Sub total				\$ 1,396,500		\$ 773,500
Misc. Structures						
Bird blind structure	EA	\$10,000	2	\$ 20,000	2	\$ 20,000
Art Installations	EA	\$10,000	4	\$ 40,000	4	\$ 40,000
River overlook structure	EA	\$150,000	1	\$ 150,000	1	\$ 150,000
Sub total				\$ 210,000		\$ 210,000
Furnishings						
Wayfinding/ Interpretive sign	EA	\$1,000	1	\$ 1,000	1	\$ 1,000
Fitness station equip.	EA	\$15,000	7	\$ 105,000	3	\$ 45,000
Park entrance sign	EA	\$5,000	1	\$ 5,000	1	\$ 5,000
Benches	EA	\$2,500	20	\$ 50,000	10	\$ 25,000
Picnic Tables	EA	\$2,500	8	\$ 20,000	3	\$ 7,500
Trash receptacles	EA	\$1,500	6	\$ 9,000	6	\$ 9,000
Sub total				\$ 190,000		\$ 92,500
Landscaping						
Landscape beds (3" mulch)	SF	\$6	7,000	\$ 42,000	6,000	\$ 36,000
Trees	EA	\$500	130	\$ 65,000	100	\$ 50,000
Shrubs	EA	\$80	300	\$ 24,000	300	\$ 24,000
Native meadow seeding mix and turf mix	SF	\$0.5	25,000	\$ 12,500	25,000	\$ 12,500
Sub total				\$ 143,500		\$ 122,500
Subtotal				\$ 2,640,300		\$ 1,811,350
10% Contingency				\$ 264,030		\$ 181,135
TOTAL				\$ 2,904,000		\$ 1,992,000

* Note: This estimate is given in 2022 dollars. If any part of construction is done in subsequent years, cost may no longer be accurate. Costs include labor, materials, and overhead. Costs assume all work done by contractor.

Final Concept Plan

Free Bridge Lane Trail

Feasibility Study
April 2023



PROJECT NARRATIVE:

Albemarle County Planning and Parks commissioned a feasibility assessment of aligning a multiuse pedestrian trail along the western edge of Free Bridge Lane from the Route 250 intersection to the trail head at the edge of Darden Towe Park. The assessment evaluated two options: modifying Free Bridge Lane as one-way road with bike and pedestrian facilities, or closing the road to public vehicular traffic entirely, creating a pedestrian and bike friendly green promenade.

Based on public comments and Board of Supervisor feedback, Planning and Parks selected the “Promenade” option. The final design was developed in consultation between the consultant and county staff. The design reuses the existing asphalt roadway surface as much as possible, creating a 15’ wide share use promenade, or green multimodal corridor and linear park similar to the concept of a “Woonerf” but with more vegetation. The concept features several wider plazas along the promenade, where there are trail connections planned or good views.

There are a series of park amenities along the promenade, including wildlife viewing blinds, picnic areas, seating nodes, fitness stations, public art installations, and play equipment, as well as benches. The promenade is a green linear park, lined with shade trees, a bioswale, and native riparian plantings along the riverbank. Vehicular parking lots are defined and enlarged at the north and south ends of the project area, maintaining 2-way vehicular access to adjoining private properties. A new trailhead plaza and sidewalk connection from Route 250 to the Old Mills Trail is added, as well as defining the vehicular access between Route 250 and Free Bridge Lane as right-in/right-out with a splitter island.

This package documents the Promenade Concept Plan, illustrative typical sections, a photo palette board, and an estimate of probable cost.

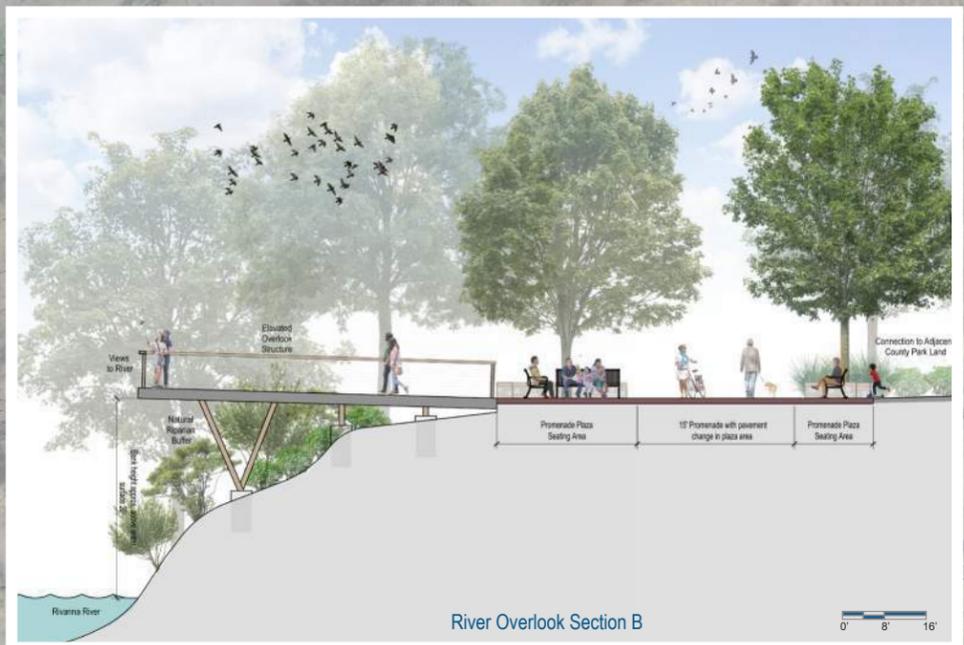


County of Albemarle
Dept of Community
Development





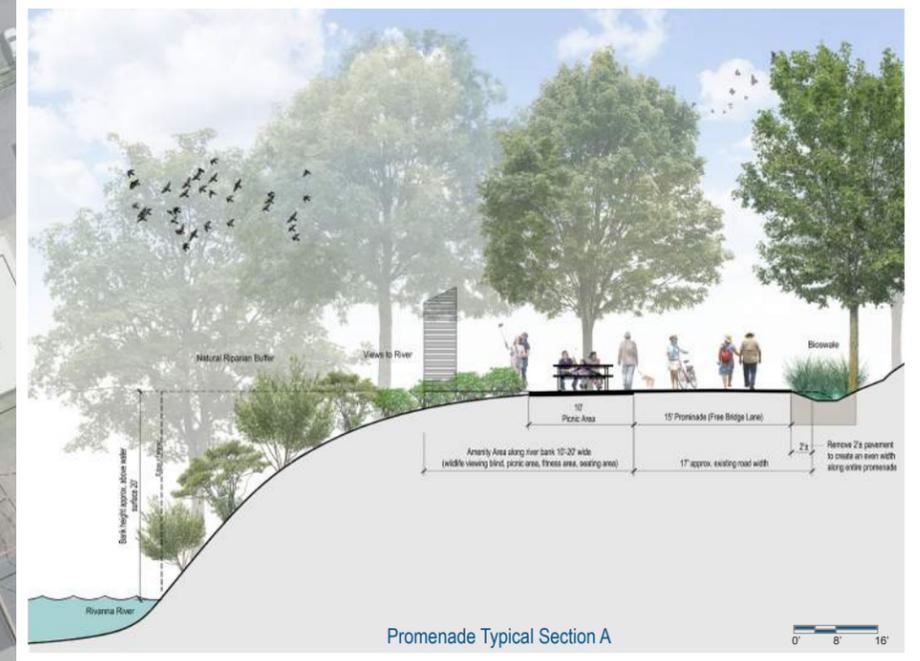
FREE BRIDGE LANE - Promenade Concept Plan



Matchline

River Overlook Section B



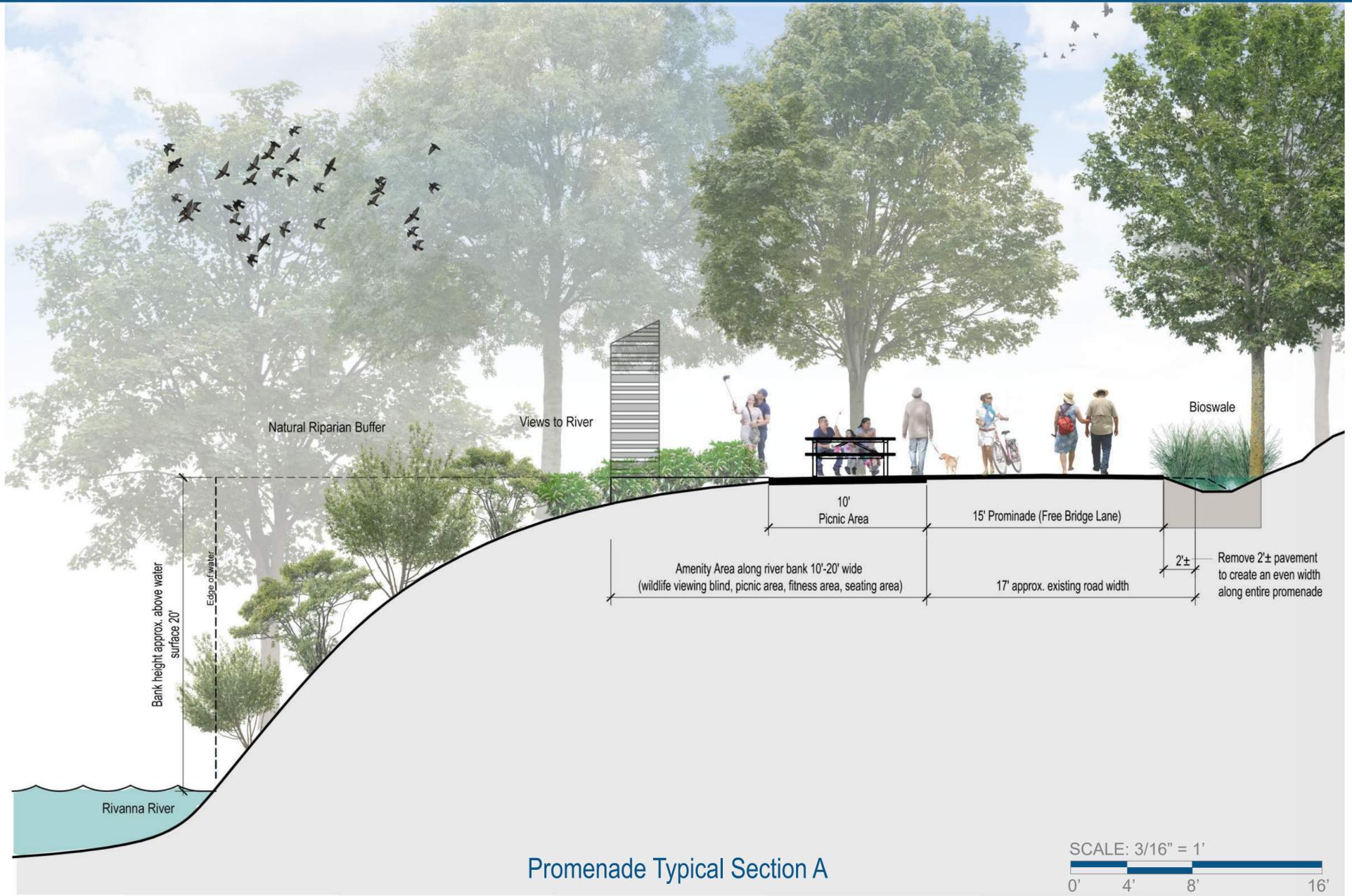


Matchline

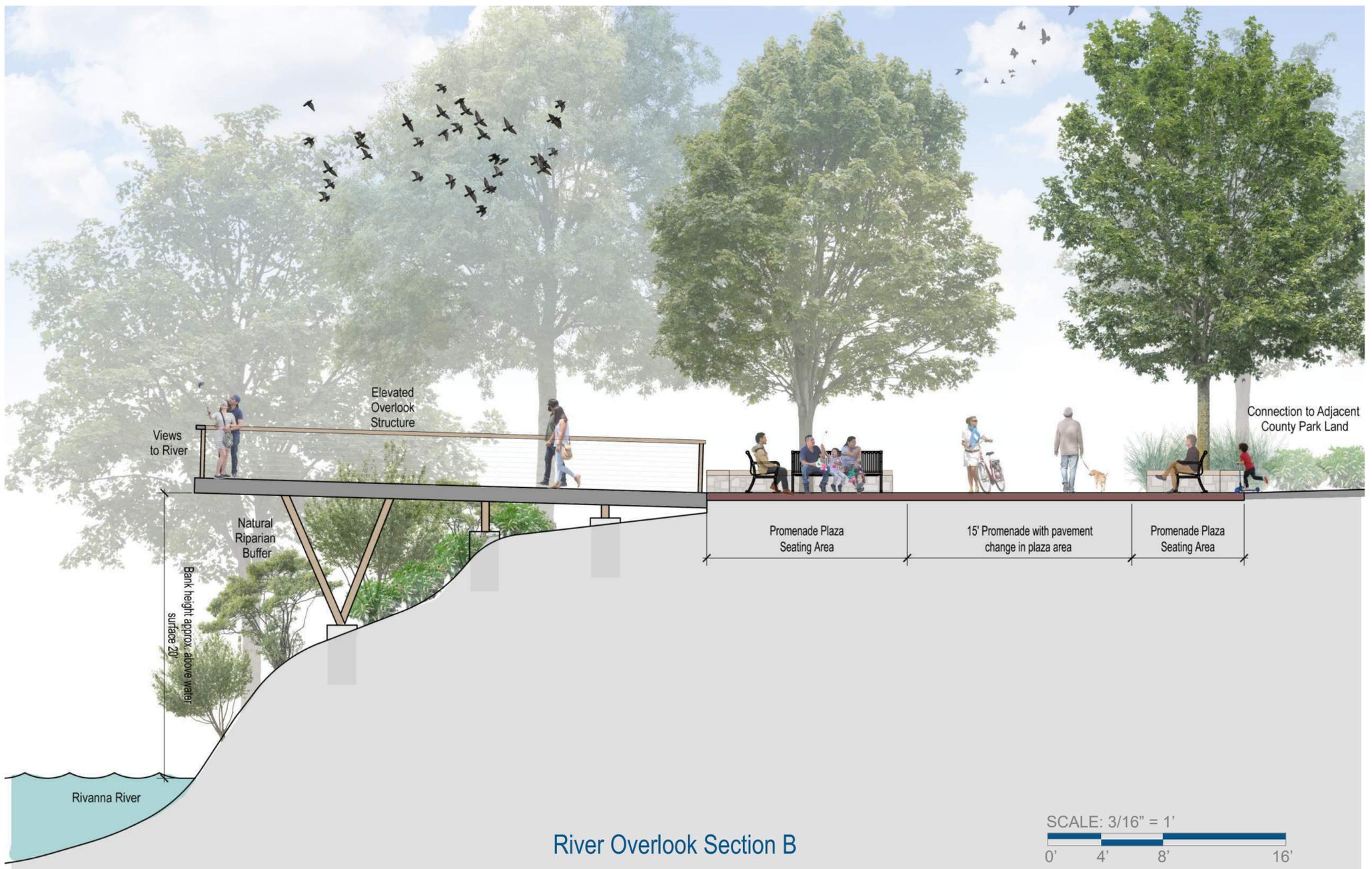
RIVANNA RIVER

RTE 250





Promenade Typical Section A



River Overlook Section B





Public Art



Play Equipment



Fitness Station



Bioswale



Access Gate



Promenade Plaza



River Overlook



Bioretention



Trail Amenities



Promenade Plaza



Wildlife Viewing Blind



Native Riparian Buffer Infall



Trail Amenities



Promenade Trail



Trailhead



Wildflower Meadow

Free Bridge Lane Master Plan

Albemarle County, VA

Estimate of Probable Cost

4/4/2023

Prepared by: LPDA

Total Park Length: Approx. 1/2 Mile

			Promenade	
Comments	UNIT	UNIT PRICE	QTY.	TOTAL
Sitework & Mobilization				
Mobilization, Permits, E&S, (20%)	LS	20%		\$ 326,420
Saw Cut Asphalt <i>To establish 15' promenade from ex. Roadway</i>	LF	\$2	1800	\$ 3,600
Demolition, remove ex. asphalt	SF	\$3	20,000	\$ 60,000
Clearing and grubbing <i>Clear for trail widening, secondary parking lot.</i>	AC	\$8,000	0.50	\$ 4,000
Earthwork - on site <i>Regrade parking areas. Add secondary parking.</i>	CY	\$30	900	\$ 27,000
Stormwater Management	LS	\$60,000	1	\$ 60,000
		Sub total		\$ 481,020
Paving and Hardscape				
Retaining wall/ seatwall	FF	\$50	2,000	\$ 100,000
Asphalt surfacing <i>Widen entrance road, secondary parking, added trail width.</i>	SF	\$15	20,000	\$ 300,000
Crushed stone service access <i>VDOT 21-A 6"</i>	SF	\$20	800	\$ 16,000
Concrete plaza intersection area <i>4" Colored and stamped concrete with 4" subbase</i>	SF	\$25	10,000	\$ 250,000
Concrete pad for Picnic Areas <i>4" concrete with 4" compacted aggregate</i>	SF	\$25	1,200	\$ 30,000
Concrete Sidewalk <i>4" concrete with 4" compacted aggregate</i>	SF	\$25	2,500	\$ 62,500
Splitter island at RTE 250 <i>8" poured in place concrete- includes subbase</i>	SF	\$50	500	\$ 25,000
Playground area surfacing <i>Poured in place safety surface</i>	SF	\$20	800	\$ 16,000
Fitness area surface treatment <i>Poured in place safety surface</i>	SF	\$20	1,200	\$ 24,000
Crosswalk Striping <i>Thermoplastic paint</i>	EA	\$3,000	1	\$ 3,000
		Sub total		\$ 826,500
Misc. Structures				
Wildlife viewing blind structure	EA	\$15,000	2	\$ 30,000
Art Installations	EA	\$10,000	4	\$ 40,000
River overlook structure	EA	\$150,000	1	\$ 150,000
		Sub total		\$ 220,000
Furnishings				
Wayfinding/ Interpretive sign	EA	\$1,000	1	\$ 1,000
Fitness station equip.	EA	\$5,000	7	\$ 35,000
Park entrance sign	EA	\$5,000	1	\$ 5,000
Benches	EA	\$2,500	27	\$ 67,500
Bike repair station	EA	\$1,200	8	\$ 9,600
Picnic Tables	EA	\$2,500	8	\$ 20,000
Trash receptacles	EA	\$1,500	6	\$ 9,000
		Sub total		\$ 147,100
Landscaping				
Mulch beds <i>3" mulch depth</i>	SF	\$6	7,000	\$ 42,000
landscape bed <i>bed prep, perennials, shrubs</i>	EA	\$15	3,000	\$ 45,000
Trees	EA	\$600	130	\$ 78,000
Shrubs	EA	\$80	500	\$ 40,000
Bioretention <i>includes, soil media, mulch, base layer, plants.</i>	SF	\$20	1,500	\$ 30,000
Bioswale (5' width) <i>includes, soil media, mulch, base layer, plants.</i>	LF	\$100	1,000	\$ 100,000
Native meadow seeding mix and turf mix	SF	\$0.5	25,000	\$ 12,500
		Sub total		\$ 347,500
		Subtotal		\$ 2,022,120
		10% Contingency		\$ 202,212
Design and Engineering (10%)		10%		\$ 169,570
		TOTAL		\$ 2,394,000

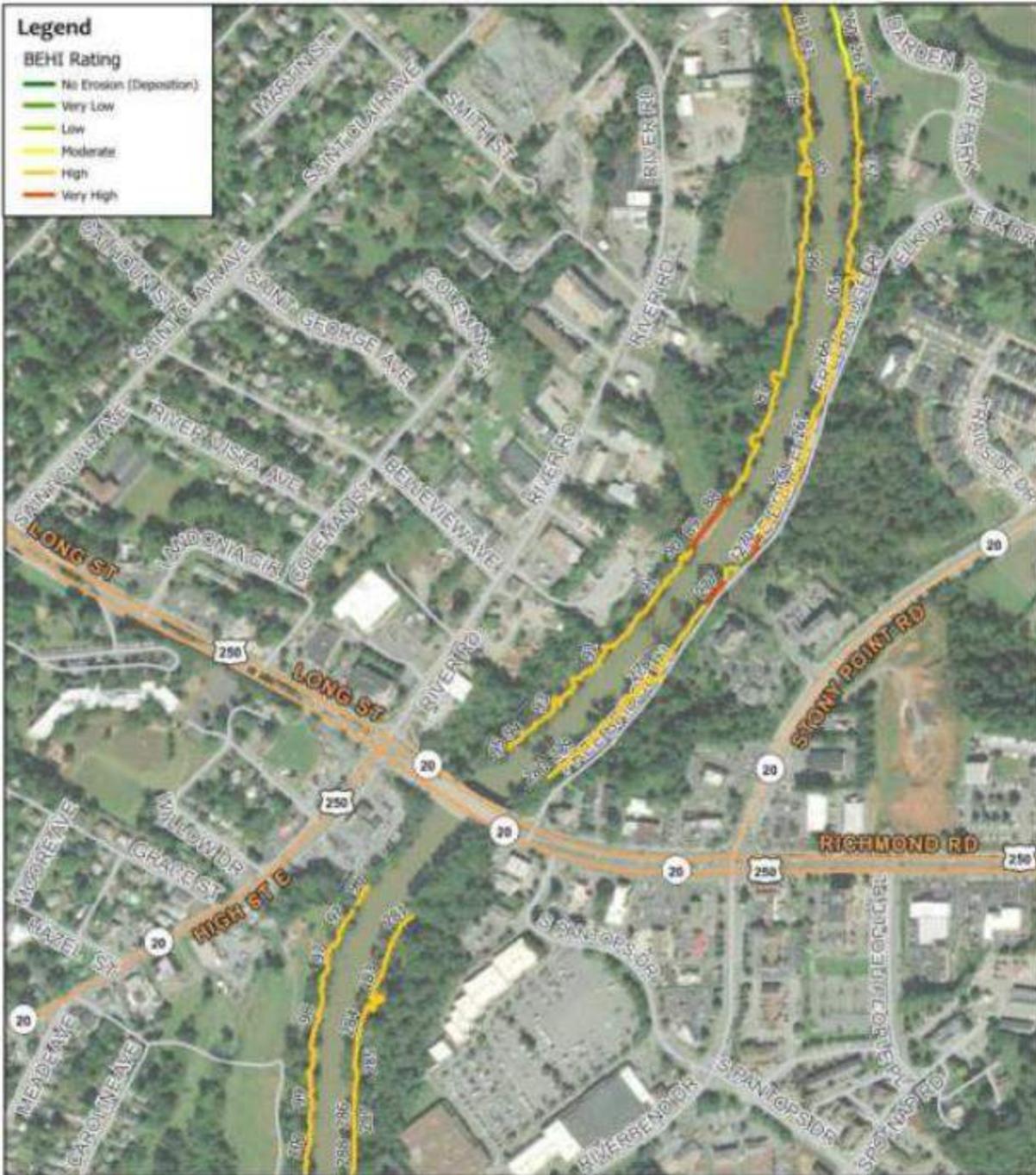
* Note: This estimate is given in 2023 dollars. If any part of construction is done in subsequent years, cost may no longer be accurate. Costs include labor, materials, and overhead. Costs assume all work done by contractor.

BEHI Ratings Map

Legend

BEHI Rating

- No Erosion (Deposition)
- Very Low
- Low
- Moderate
- High
- Very High



BEHI RATINGS MAP

Rivanna River Prioritization Study

ECOSYSTEM SERVICES

MAP 4 OF 5

N

0 250 500 US Feet