Kanawha - Putnam Bicycle and Pedestrian Plan

Kanawha and Putnam Counties, West Virginia
May 30, 2019
Revised December 10, 2020

Regional Intergovernmental Council

Executive Summary

The Regional Intergovernmental Council (RIC), the Metropolitan Planning Organization (MPO) for the Charleston, WV Metropolitan Planning Area, has updated the Bicycle and Pedestrian Plan for Kanawha and Putnam counties. The Kanawha – Putnam Bicycle and Pedestrian Plan serves as a guide for communities interested in enhancing bicycle and pedestrian access, mobility, and safety. The Plan also provides communities with an implementation strategy for recommended improvements to a network of bikeways, trails, and pedestrian facilities.

The planning process began with a review of current demographic data, existing transportation facilities, and previous planning efforts of the City of Charleston, City of South Charleston, and the state of West Virginia. After the initial data gathering stage the planning team began the public engagement stage to identify gaps and needs in bicycle and pedestrian facilities within the Kanawha - Putnam region. The planning team hosted a bike safety rodeo, attended community events throughout the region, publicized an online survey, and held stakeholder interviews to assist with the development and prioritization of recommendations.

Through a review of existing conditions, analysis of survey results, numerous field reviews, and feedback from both public officials and the public-at-large, several locations for potential improvements were identified in both counties. Following the identification of the specific locations, a comprehensive field inventory and subsequent analysis to confirm the identified deficiencies was performed. Projects were given higher priority when improving connectivity throughout the region. In general, as a bicyclist travels away from the city centers, especially Charleston, network connectivity decreases. This makes bicycling more difficult as prospective riders are forced onto major roadways and must travel longer distances to reach their destinations. Specifically, connectivity across the Kanawha River and Elk River is limited due to a lack of separated bicycle facilities across many of the bridges.

With approximately $1.3 million per year available for bicycle and pedestrian improvements, the overall list of recommended projects (64 bikeway and 8 sidewalk) were separated into categories of high, medium, and low priorities. Developing a high priority category of 21 recommended projects gives RIC, WVDOT, and local municipalities and agencies a list to prioritize according to available funding and to explore incorporating in other projects.

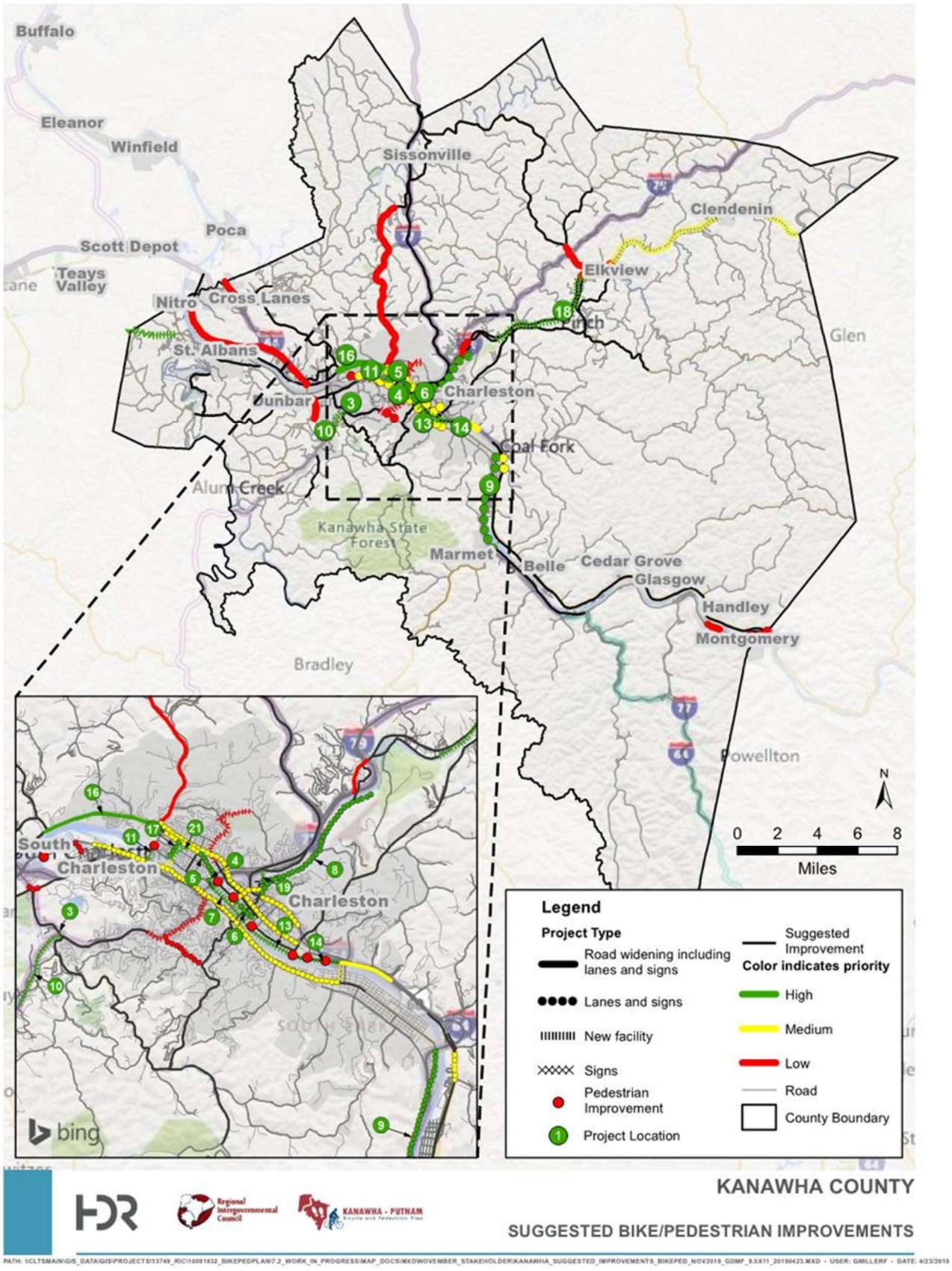
Table 1 shows the recommended bicycle and pedestrian projects that are a high priority for funding and implementation as a result of the plan. Individual project sheets follow the table.

Table 1: High Priority Recommended Projects

Number	Road	Between	Location	Proposed Improvement	Cost Range
1	**WV 62**	Winfield Bridge to Eleanor	Eleanor	Widen shoulder, Sidewalk, Bike Path	$600K-$900K
2	**Teays Valley Road**	CR 33 and Scott Depot	Teays Valley	Road widening, Sidewalks, Shoulder	$600K-$900K
3	**Jefferson Road**	at Davis Creek Interchange	Charleston	Signal, Bike lanes, Signs	$300K - $500K
4	**Tennessee Ave**	Kanawha Blvd to Virginia St. W	West Side Charleston	Bike Lanes, Signs	$60K-$90K
5	**Virginia St. West**	Tennessee Ave to Delaware Ave	West Side Charleston	Bike Lanes, Signs	$100K-$150K
6	**Quarrier St**	Capitol St to Clendenin St	Charleston	Two-Way Cycle Track bike lanes, Signs, sharrows	$90K-$140K
7	**Kanawha Boulevard**	Tennessee Ave to Capitol St	Charleston	Cycle Track	$900K - $1.3 mil
8	**Barlow Drive**	Slack St to Coonskin Park	Charleston	Bike Path, Widen Shoulders, Signs	$1.3 mil - $1.6 mil
9	**MacCorkle Ave SE**	Kanwaha City to Marmet	Kanawha County	Repave shoulder, Signs	$1 mil - $1.5 mil
10	**Corridor G**	Davis Creek Interchange to Southridge	Charleston	Bike Path	$2 mil - $2.6 mil
11	**US 60**	4th Avenue to MacCorkle Ave SW	West Side Charleston	Improve approaches, sharrows, signs	$60K-$90K
12	**WV 817**	Winfield to Hurricane Creek Rd	Putnam County	Widen shoulders, signs	$1.3 mil - $1.6 mil
13	**Kanawha Boulevard**	Capitol St to Chesapeake Ave	Charleston	Cycle Track	$2.0 mil - $2.4 mil
14	**Kanwaha Boulevard**	Chesapeake Ave to 35th St Bridge	Charleston	Cycle Track	$200K - $400K
15	**WV 817**	I-64 to Winfield	Putnam County	Widen shoulders, signs	$3 mil - $3.5 mil
16	**WV 25**	Iowa St to Washington St W	West Side Charleston	Widen shoulders for bike lanes, signs	$2.2 mil - $2.6 mil
17	**Stockton St**	Kanawha Blvd to 7th Ave	West Side Charleston	Bike Lanes, Signs	$10K-$30K
18	**Former B&O railroad**	Elk River trail connecting Coonskin Park to WV 114	Kanawha County	Bike Trail	$1.5 mil - $1.9 mil
19	**Elk River (NS) railroad bridge**	Pennsylvania Ave to Bullitt St	Charleston	Bike Path	$14 mil - $14.5 mil
20	**St. Albans to Teays Valley bike trail**		Putnam County	Bike Path	$5 mil - $5.5 mil
21	**Kanawha River Trestle Trail**	Kanawha Blvd and 6th St	West Side Charleston	Bike Path, remove viaduct	$900K - $1.3 mil

Recommended Project Rankings – Pedestrian Improvements

Number	Road/Between	Location	Proposed Improvement	Cost Range	Right of Way Necessary
1	**Kanawha Blvd and Chesapeake Avenue**	Charleston	ADA compliant curb ramps	$10K-$20K	No
2	**Kanawha Blvd and California Avenue**	Charleston	ADA compliant curb ramps	$10K-$20K	No
3	**Kanawha Blvd and Greenbrier Street**	Charleston	ADA compliant curb ramps	$10K-$20K	No
4	**Kanawha Blvd and Ruffner Avenue**	Charleston	crosswalks	$10K-$20K	No
5	**Patrick St/5th St intersection improvements**	West Side Charleston	crosswalks and ped signal	$10K-$20K	No
6	**WV 34 b/w Hurricane Creek Rd and Hurricane Middle School**	Hurricane	sidewalk	$300K-$400K	Possible
7	**Ped movements on Penn. Ave.to Women's and Children's Hospital**	Charleston	crosswalks	$10K-$20K	No
8	**MacCorkle Ave. (US 60) Gateway Shopping Center to Oliver Street**	S. Charleston	crosswalks	$10K-$20K	Possible
9	**WV-61 at Lens Creek Rd**	Marmet	Design and installation of new sidewalk	$300k-$400k	Unlikely


Buffalo
Eleanor
Winfield
Poca
Scott Depot
Teays Valley
Nitro
Cross Lanes
St. Albans
Dunbar
Sissonville
Clendenin
Elkview
Glen
Charleston
Coal Fork
Alum Creek
Kanawha State Forest
Marmet
Belle
Cedar Grove
Glasgow
Handley
Montgomery
Bradley
Powellton
South Charleston
N
0 2 4 6 8
Miles
Legend
Project Type
Road widening including lanes and signs
Lanes and signs
New facility
Signs
Pedestrian Improvement
Project Location
Suggested Improvement
Color indicates priority
High
Medium
Low
Road
County Boundary
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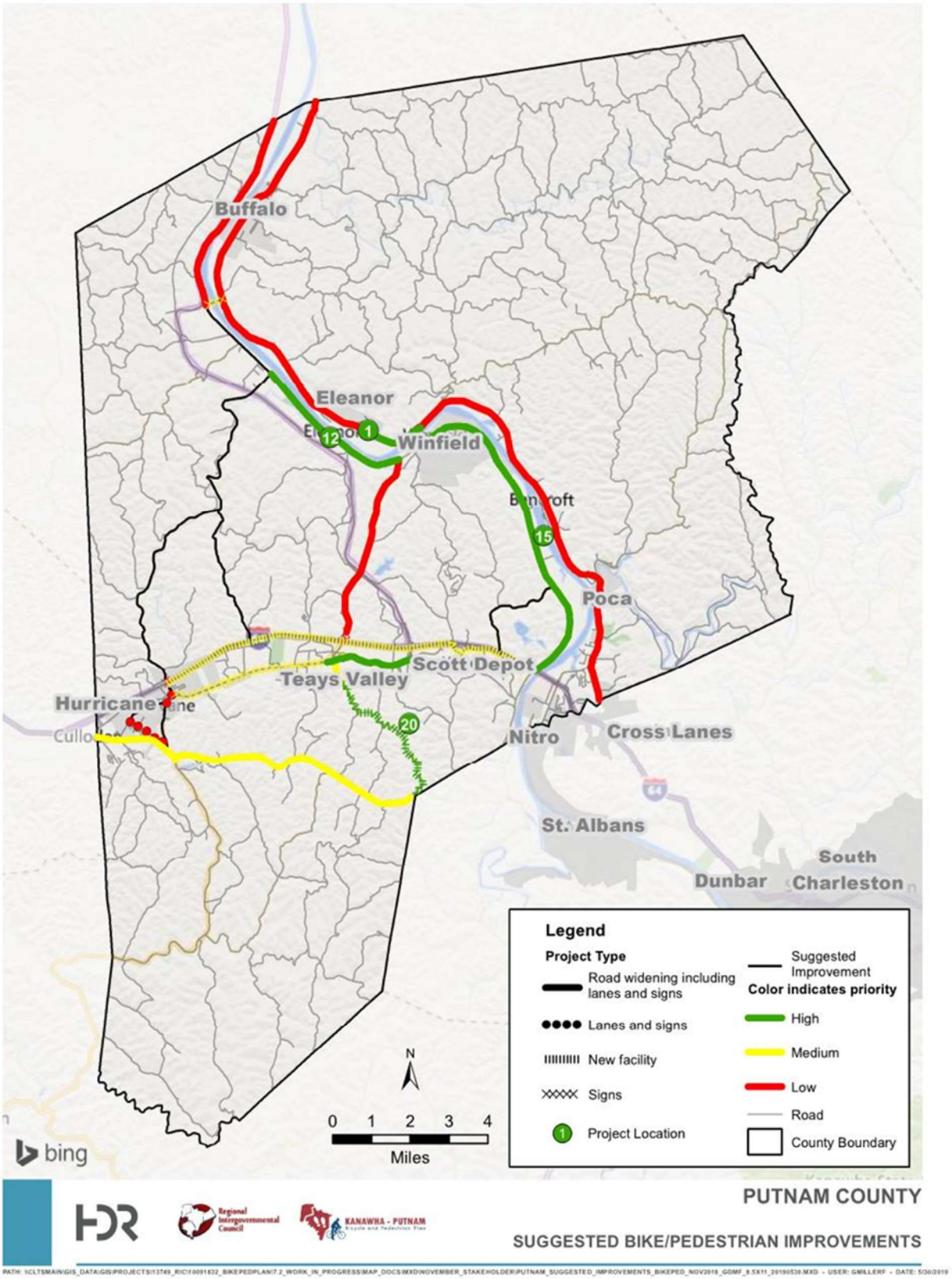
KANAWHA COUNTY
SUGGESTED BIKE/PEDESTRIAN IMPROVEMENTS


Buffalo
Eleanor
Winfield
Poca
Scott Depot
Teays Valley
Hurricane
Nitro
Cross Lanes
St. Albans
Dunbar
South Charleston
Legend
Project Type
Road widening including lanes and signs
Lanes and signs
New facility
Signs
Project Location
Suggested Improvement
Color indicates priority
High
Medium
Low
Road
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0 1 2 3 4
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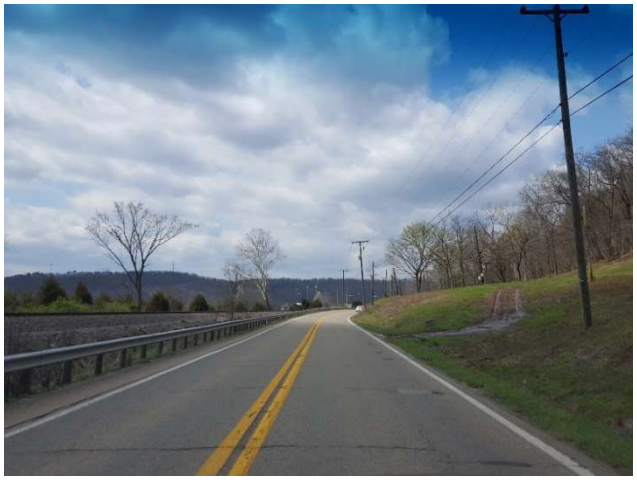
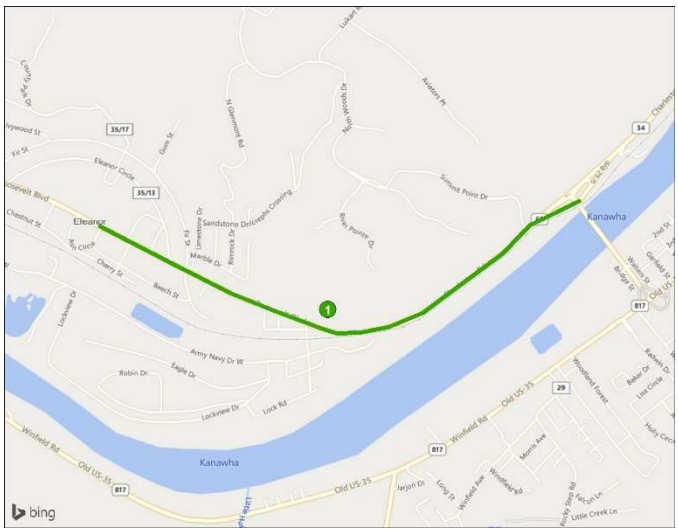
PUTNAM COUNTY
SUGGESTED BIKE/PEDESTRIAN IMPROVEMENTS

Project 1: WV 62 – Winfield Bridge to Eleanor

Roadway characteristics	Two lane roadway with 1-2' paved shoulders, guardrail along a railroad track, some right of way available on sides of the roadway.
Deficiencies/Key Issues	Guardrail and railroad on the south side of WV 62, hillside and utility poles on the north side of WV 62.
Improvement Goals/Opportunities	Connect Winfield and Eleanor for bicycle and pedestrian activities.
Proposed Improvements	Continuous 8' shoulders and signing.





Project Mileage	1.01 miles
Planning Level Cost	$600K to $900K not including right of way
Potential Constraints	Available right of way

Project 2: Teays Valley Road – CR 33 and Scott Depot

Roadway characteristics	Two lane roadway with 1' paved shoulders.
Deficiencies/Key Issues	No sidewalks, no turn lanes, narrow paved shoulder, utility poles on the south side of the roadway.
Improvement Goals/Opportunities	Connect to Hurricane and commercial areas around WV 34 and Great Teays Valley Boulevard.
Proposed Improvements	5' bike lanes and 5' sidewalks on both sides of the roadway as part of widening the roadway to three lanes.

Source: Google Maps

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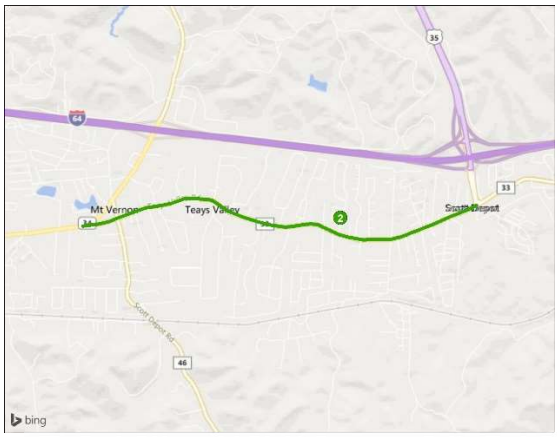
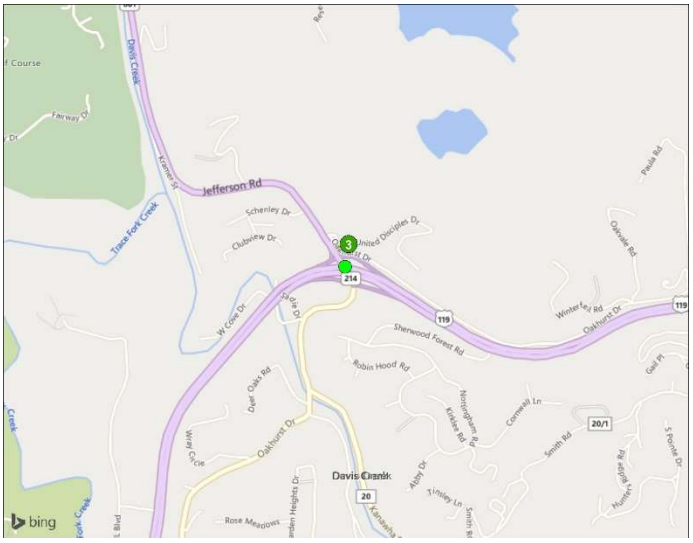


Project Mileage	2.2 miles
Planning Level Cost	$600K to $900K for bike lanes only
Potential Constraints	Available right of way

Project 3: Jefferson Road – at Davis Creek Interchange

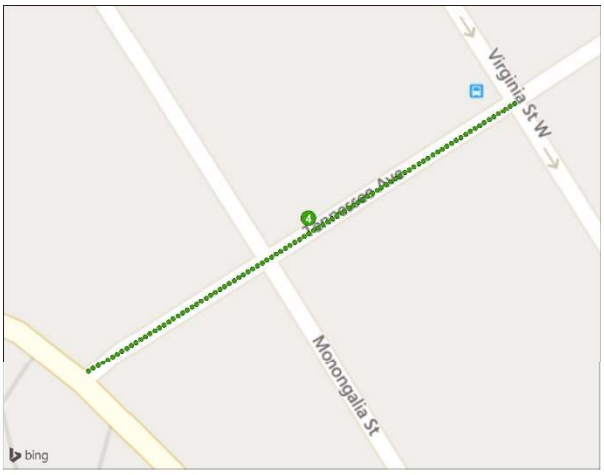
Roadway characteristics	Intersection of an arterial roadway with freeway ramps.
Deficiencies/Key Issues	No stop control for traffic travelling on Jefferson Road that causes conflicts for bicyclists.
Improvement Goals/Opportunities	Provide safe conditions for bicyclist traveling from South Charleston to Kanawha State Forest.
Proposed Improvements	Install traffic signal, add “Share the Road” signing, and stripe the pavement for bicycle lanes.



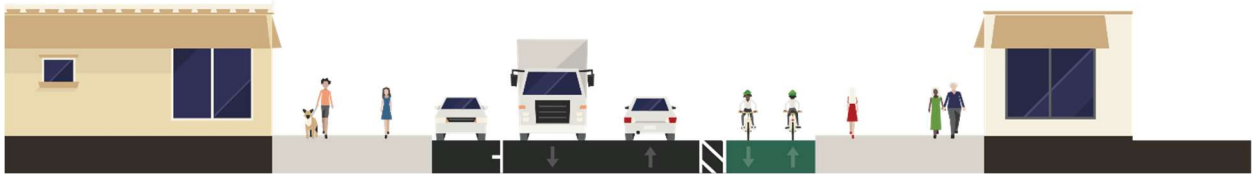
Project Mileage	0.2 miles
Planning Level Cost	$300K to $500K
Potential Constraints	None

Project 4: Tennessee Avenue – Kanawha Boulevard to Virginia Street W

Roadway characteristics	Two lane, two-way roadway with parking on each side of the street.
Deficiencies/Key Issues	Currently there is no bicycle connectivity along Tennessee Avenue.
Improvement Goals/Opportunities	Provide a bicycle connection through the Westside of Charleston to downtown from the existing Kanawha Boulevard Path to proposed facilities on Virginia Street.
Proposed Improvements	Remove parking on the east side of the street for bi-directional cycle track from Kanawha Boulevard to Virginia Street.

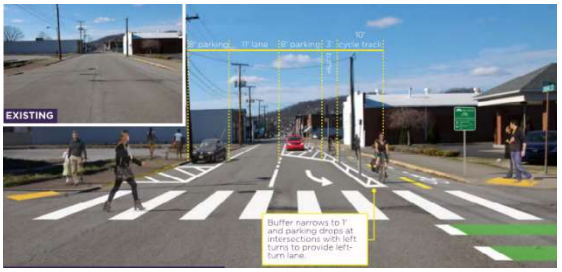


Project Mileage	0.3 miles
Planning Level Cost	$60K to $90K
Potential Constraints	Parking demand along Tennessee Avenue

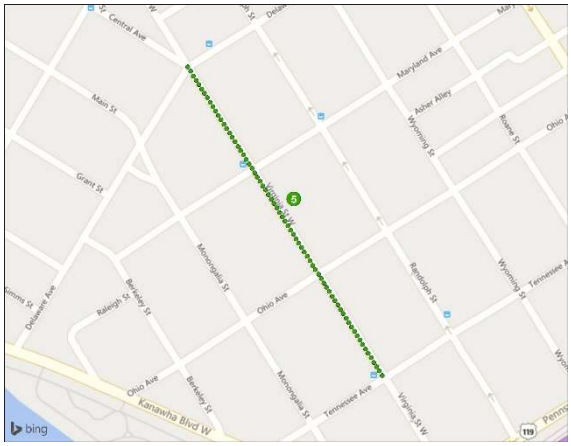


Project 5: Virginia Street West – Tennessee Avenue to Delaware Avenue

Roadway characteristics	2 lane, one direction (southbound) roadway with parking, 40’ wide pavement with parking.
Deficiencies/Key Issues	Currently there is no bicycle connectivity along Virginia St. The wide lanes and long, straight roadway encourage speeding which creates an unsafe and uninviting corridor for bicyclists and pedestrians.
Improvement Goals/Opportunities	The two-way cycle track on Virginia Street will provide a bicycle connection through the West Side to proposed facilities that connect to downtown and the riverfront.
Proposed Improvements	Two-way cycle track from Park Avenue to Tennessee Avenue. Existing conditions indicate that a two-way cycle track could be implemented by either re-purposing one travel lane or removing parking from one side of the street. Dedicated turn bays would likely maintain acceptable vehicular traffic flow if the number of lanes is reduced. Minor parking removal or conversion to a one-way road west of Central Avenue.



Source: Charleston Bike and Trail Master Plan

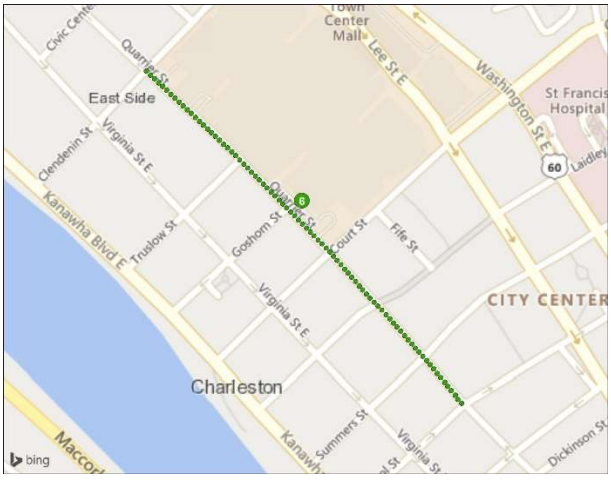


Project Mileage	0.6 miles
Planning Level Cost	$100K to $150K not including right of way
Potential Constraints	Parking demand and traffic constraints along Virginia Street West.

Project 6: Quarrier Street – Capitol Street to Clendenin Street

Roadway characteristics	4 lane, 40’ wide, one direction (northbound) roadway.
Deficiencies/Key Issues	Currently there is no bicycle connectivity along Quarrier Street. The street is currently unsafe and uninviting for bicyclists due to a lack of signage and pavement striping for bicyclists.
Improvement Goals/Opportunities	The two-way cycle track on Quarrier St. will provide a seamless bicycle connection from the Civic Center into the heart of downtown. The shared lane markings and bicycle boulevard sections of Quarrier St. will link adjacent neighborhoods to downtown.
Proposed Improvements	Project extents are from Elk River Trail at Civic Center to Elizabeth Street. The cycle track extends from the riverfront trail to Summers Street. It then continues as a shared lane marking until Morris Street, and then a bicycle boulevard until Elizabeth Street.

Source: Charleston Bike and Trail Master Plan

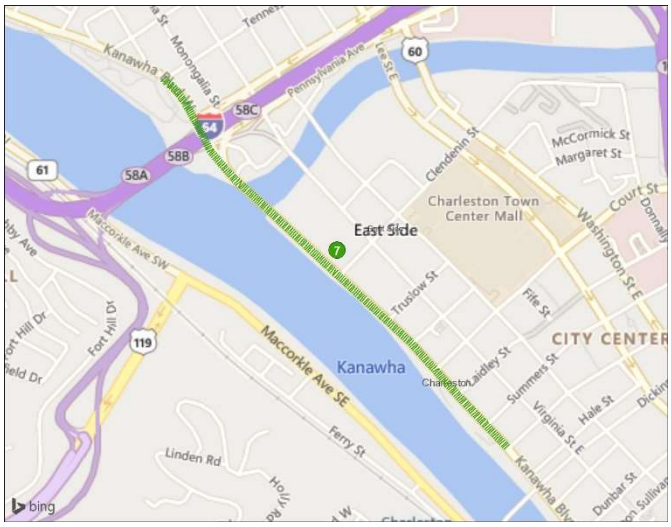


Project Mileage	1.69 miles
Planning Level Cost	$90K to $140K
Potential Constraints	Traffic demand

Project 7: Kanawha Boulevard – Tennessee Avenue to Capitol Street

Roadway characteristics	5 lanes, 11’ (3 northbound and 2 southbound), 10’ multiuse path between the roadway and Kanawha River
Deficiencies/Key Issues	Kanawha River proximity, one lane multiuse path is crowded.
Improvement Goals/Opportunities	Provide extension of path creating a connection from downtown Charleston to the Westside.
Proposed Improvements	This recommendation proposes continuing the existing facility south of Magic Island using the existing bridge structure at Elk River. Two-way cycle track with adjacent pedestrian path (16' minimum) or shared-use path/sidepath (12' minimum). Utilize design similar to improvements north of Magic Island.

Source: Charleston Bike and Trail Master Plan



Project Mileage	1 mile
Planning Level Cost	$900K to $1.3 million
Potential Constraints	Narrow under the I-64 bridge, connection around the Union Building

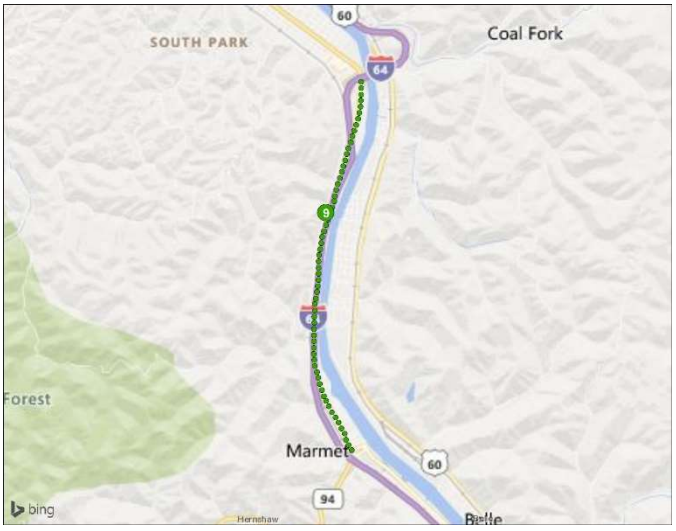
Project 8: Barlow Drive – Slack Street to Coonskin Park

Roadway characteristics	Narrow roadway, 12’ wide in some sections, one lane bridge west of Keystone, railroad bed begins just west of Keystone, north side of roadway is the Elk River.
Deficiencies/Key Issues	River and utility poles on the north side of the roadway. There is a hillside on the south side of the roadway.
Improvement Goals/Opportunities	Connect Downtown Charleston with Coonskin Park for bicycle and pedestrian activities.
Proposed Improvements	1. Add sharrows and signing. 2. Provide a 10' - 12' shared use path on one side of the roadway on railroad bed. 3. Pave the gravel path from the end of Barlow Drive to Coonskin Park. 4. Widen Barlow Drive on the south side of the roadway.

Project Mileage	3.9 miles
Planning Level Cost	$1.3 million to $1.6 million not including right of way
Potential Constraints	Available right of way

Project 9: MacCorkle Avenue SE – Kanawha City to Marmet

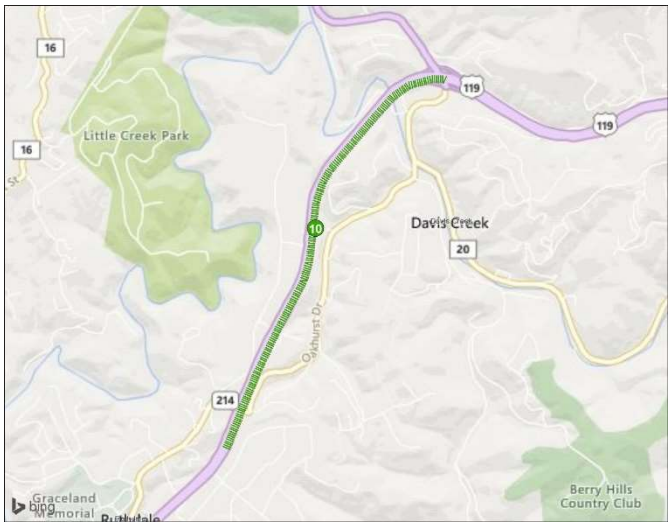
Roadway characteristics	Two lane roadway with 5-6' paved shoulders, concrete barrier along the east side between MacCorkle Avenue and I-64.
Deficiencies/Key Issues	Traffic volumes and speeds, speed bumps on side
Improvement Goals/Opportunities	Connect Kanawha City and Marmet and the southern part of Kanawha County for bicycle and pedestrian activities.
Proposed Improvements	1. Maintain continuous 8' shoulders and signing. 2. Grade and pave shoulders, remove rumble strips.



Project Mileage	5.3 miles
Planning Level Cost	$1 million to $1.5 million
Potential Constraints	None

Project 10: Corridor G - Jefferson Road to Southridge

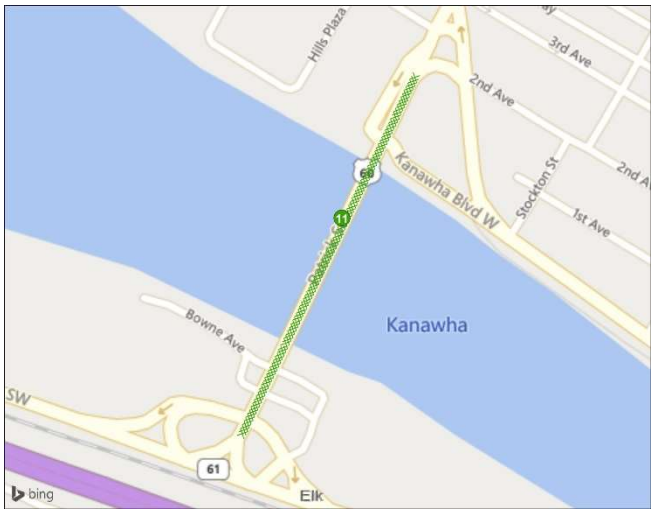
Roadway characteristics	Four lane divided freeway with 1-2' paved shoulders.
Deficiencies/Key Issues	Hilly terrain, right of way, heavy traffic volumes.
Improvement Goals/Opportunities	Connect path just north of US 119 at Jefferson Road intersection to the recreation amenities of the South Charleston Trace Fork commercial center and then to the Southridge Center.
Proposed Improvements	Connection would be made with bike lanes on Jefferson Road from US 119 to Kramer Street, bridge over Davis Creek, and then paving an existing roadbed to S. Charleston Memorial Ice Arena. Share the road signs would then be placed on RHL Blvd to Oakhurst Drive to cross US 119.



Project Mileage	2.1 miles
Planning Level Cost	$2 million to $2.6 million not including right of way
Potential Constraints	Available right of way

Project 11: US 60 – 4th Avenue to MacCorkle Avenue SW

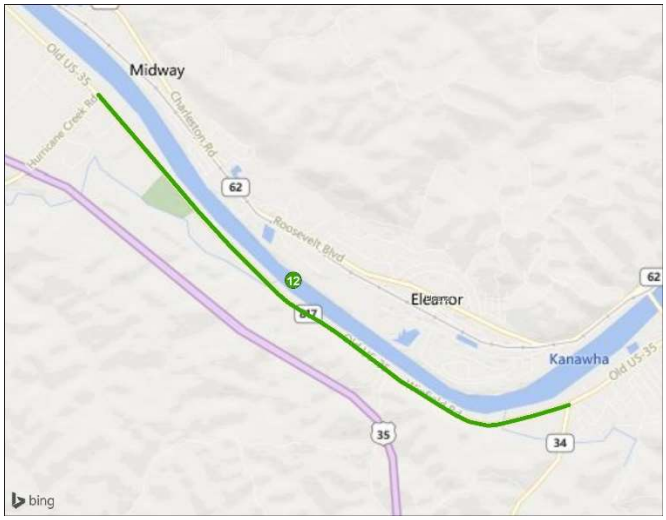
Roadway characteristics	4th Avenue is a 4 lane bridge across the Kanawha River with sidewalks on each side. MacCorkle Avenue SW is a two lane roadway in each direction at the bridge, with ramps to and from the bridge.
Deficiencies/Key Issues	Poor and unsafe connections from Patrick Street Bridge to 4th Avenue and to MacCorkle Avenue.
Improvement Goals/Opportunities	These improvements would provide a more bike-friendly connection across the Kanawha River to connect the Westside of Charleston and MacCorkle Avenue.
Proposed Improvements	1. Widen shoulder on ramps leading to and from the bridge on the MacCorkle Avenue side. 2. Provide crosswalks and pedestrian crossing on Patrick Street on the Westside intersections. 3. Provide share the road signs.



Project Mileage	0.2 miles
Planning Level Cost	$60K to $90K not including right of way
Potential Constraints	None

Project 12: WV 817 – Winfield to Hurricane Creek Road

Roadway characteristics	Two lane roadway with 1-2’ paved shoulders, unpaved graded shoulders alongside of the roadway, some right of way available on sides of roadway.
Deficiencies/Key Issues	Lack of signage and pavement markings indicating a priority cycling route. Lack of paved shoulders.
Improvement Goals/Opportunities	Connect Winfield and northern Putnam County for bicycle activities.
Proposed Improvements	Maintain 5’ paved shoulders and signage.



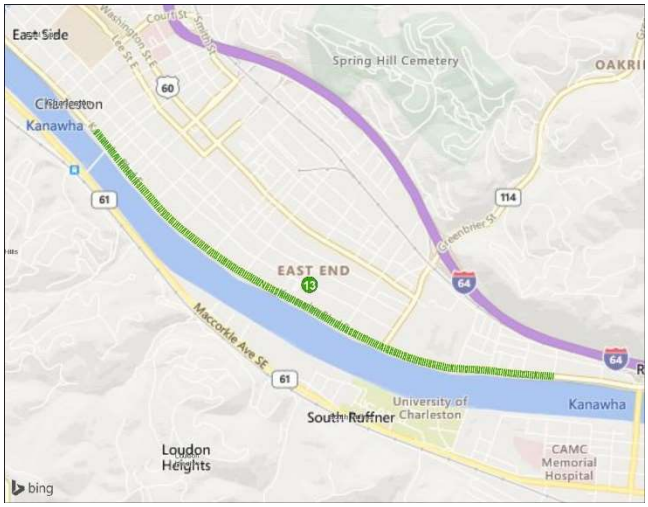
Project Mileage	4.2 miles
Planning Level Cost	$1.3 million to $1.6 million not including right of way
Potential Constraints	None

Project 13: Kanawha Boulevard – Capitol Street to Chesapeake Avenue

Roadway characteristics	5 lanes, 11' (3 northbound and 2 southbound), 10' multiuse path between roadway and Kanawha River.
Deficiencies/Key Issues	Kanawha River proximity, one lane multiuse path is crowded.
Improvement Goals/Opportunities	Provide extension of path creating a connection from downtown Charleston to the Westside, traffic capacity is available.
Proposed Improvements	This recommendation proposes continuing this facility south of Magic Island using the existing bridge structure at Elk River. Two-way cycle track with adjacent pedestrian path (16' minimum) or shared-use path/side path (12' minimum). Utilize design similar to improvements north of Magic Island.

Previously Proposed Improvements to Kanawha Boulevard North of Magic Island

Source: Charleston Bike and Trail Master Plan



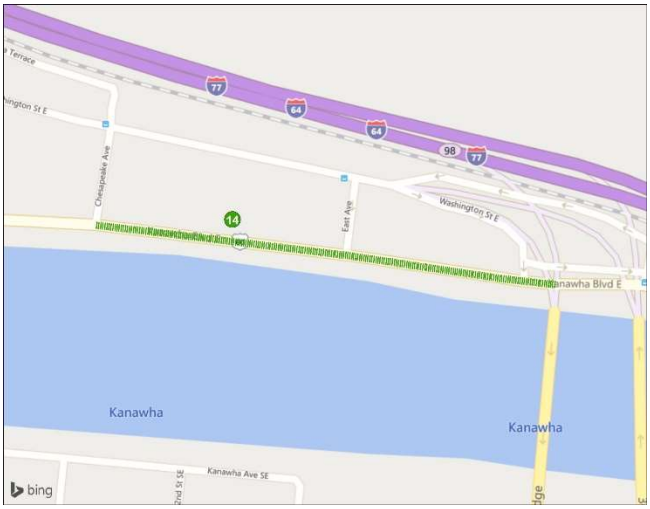
Project Mileage	2.1 miles
Planning Level Cost	$2 million to $2.4 million
Potential Constraints	Connection around Union Building

Project 14: Kanawha Boulevard – Chesapeake Avenue to 35th Street Bridge

Roadway characteristics	5 lanes, 11' (3 northbound and 2 southbound), 10' multiuse path between roadway and Kanawha River.
Deficiencies/Key Issues	Kanawha River proximity, one lane multiuse path is crowded.
Improvement Goals/Opportunities	Provide extension of path creating a connection from downtown Charleston to the Westside, traffic capacity is available.
Proposed Improvements	This recommendation proposes continuing this facility south of Magic Island using the existing bridge structure at Elk River. Two-way cycle track with adjacent pedestrian path (16' minimum) or shared-use path/sidepath (12' minimum). Utilize design similar to improvements north of Magic Island.

Previously Proposed Improvements to Kanawha Boulevard North of Magic Island

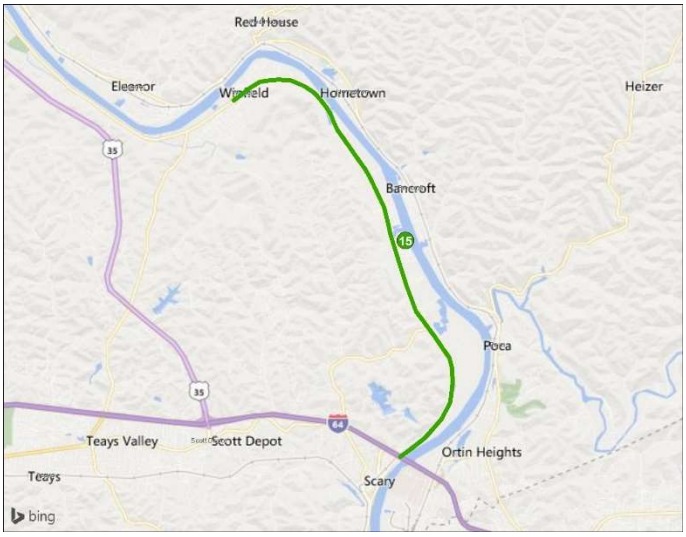
Source: Charleston Bike and Trail Master Plan



Project Mileage	0.4 miles
Planning Level Cost	$200K to $400K not including right of way
Potential Constraints	None

Project 15: WV 817 – I-64 to Winfield

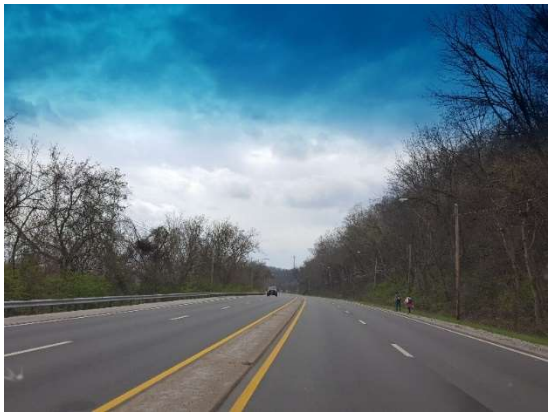
Roadway characteristics	Two lane roadway with 1-2' paved shoulders, some right of way available on sides of roadway
Deficiencies/Key Issues	Lack of paved shoulders.
Improvement Goals/Opportunities	Connect Winfield and St. Albans for bicycle and pedestrian activities.
Proposed Improvements	Maintain continuous 8' shoulders and signing.

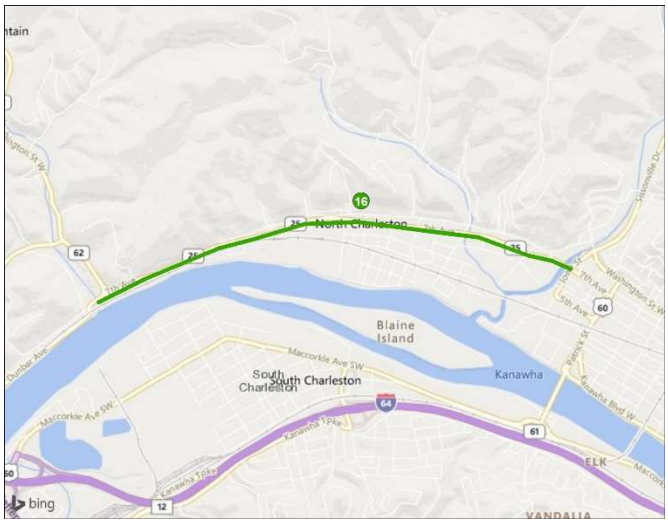


Project Mileage	8.6 miles
Planning Level Cost	$3 million to $3.5 million, not including right of way
Potential Constraints	Available right of way

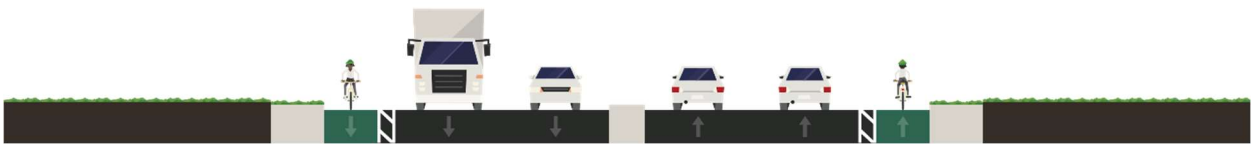
Project 16: WV 25 – Iowa Street to Washington St West

Roadway characteristics	Four lane divided roadway with 2'-8' paved shoulders, some right of way available on sides of roadway.
Deficiencies/Key Issues	Guardrail and railroad on the south side of WV 25, hillside and utility poles on the north side of WV 25.
Improvement Goals/Opportunities	Connect the westside of Charleston to the City of Dunbar for bicycle and pedestrian activities.
Proposed Improvements	"Share the Road" by maintaining continuous 8' shoulders and signing.



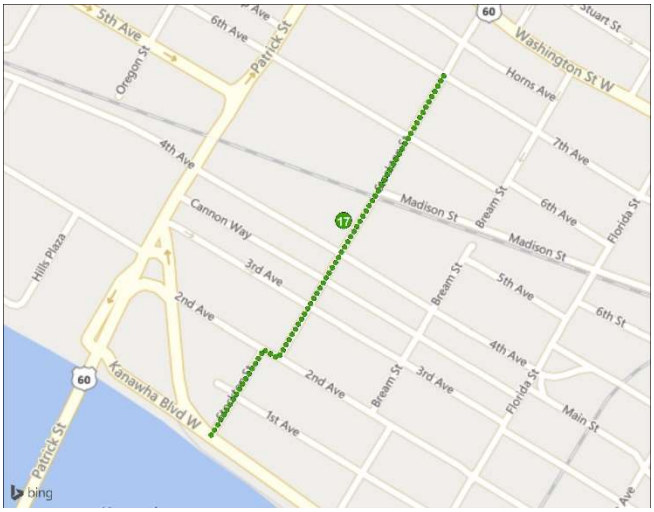


Project Mileage	3.5 miles
Planning Level Cost	$2.2 million to $2.6 million, not including right of way
Potential Constraints	Available right of way, utilities

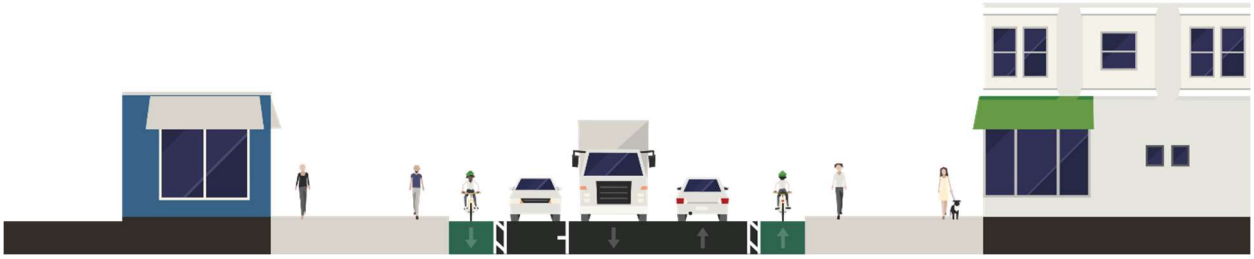


Project 17: Stockton Street – Kanawha Boulevard to 7th Avenue

Roadway characteristics	Two lane, two direction urban roadway, with parking.
Deficiencies/Key Issues	Narrow travel lanes
Improvement Goals/Opportunities	Provide a bicycle connection through the westside of Charleston to downtown from the existing Kanawha Boulevard Bicycle Path to proposed facilities on Virginia Street.
Proposed Improvements	Bicycle boulevard improvements include bicycle/pedestrian cut-throughs, wayfinding signage and pavement markings.

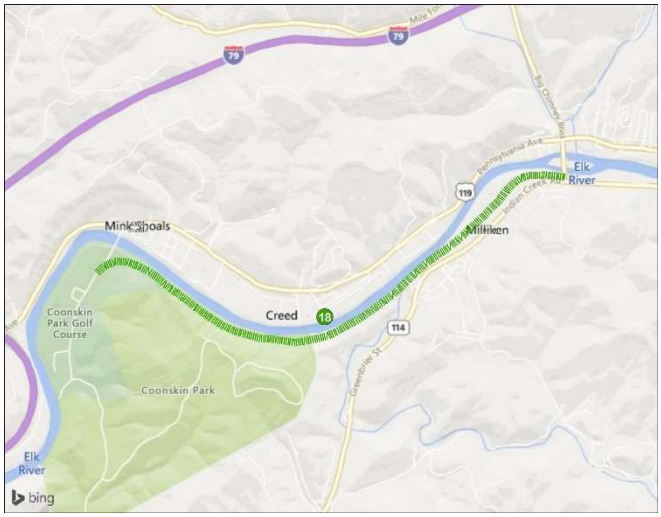


Project Mileage	0.4 miles
Planning Level Cost	$10K to $30K not including right of way
Potential Constraints	Available right of way



Project 18: Former B&O Railroad - Elk River trail connecting Coonskin Park to WV 114

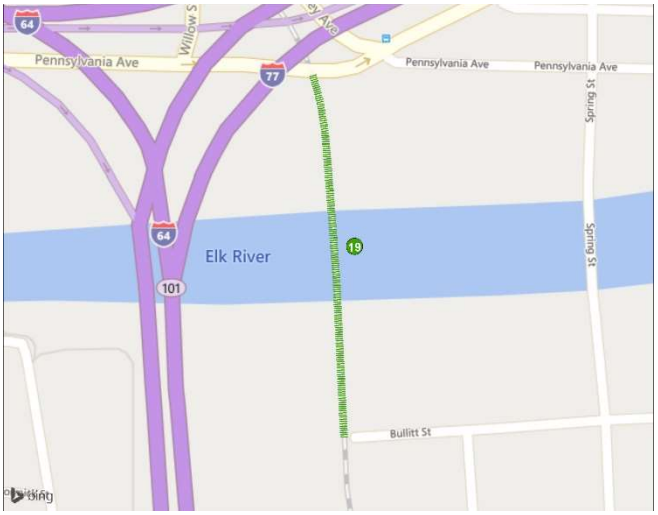
Roadway characteristics	Unused railroad bed
Deficiencies/Key Issues	Willingness of property owners to sell, vegetation is overgrown and there are many landslides.
Improvement Goals/Opportunities	Connect Elkview with Coonskin Park for bicycle and pedestrian activities.
Proposed Improvements	Rails to Trails improvement, provide a 10' - 12' shared use path on the railroad bed.



Project Mileage	2.5 miles
Planning Level Cost	$1.5 million to $1.9 million, not including right of way
Potential Constraints	Multiple property owners

Project 19: Elk River (NS) Railroad Bridge – Pennsylvania Avenue to Bullitt Street

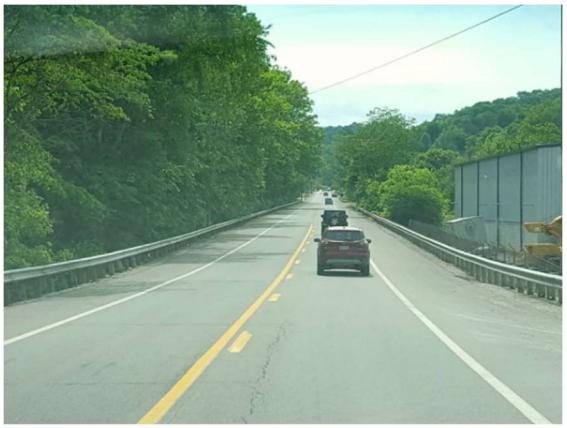
Roadway characteristics	Unused railroad bridge
Deficiencies/Key Issues	Willingness of property owner to sell, condition of the bridge.
Improvement Goals/Opportunities	Connect Westside, Downtown, and Coonskin Park by providing an Elk River crossing for bicycles and pedestrians with little conflict with vehicular traffic.
Proposed Improvements	Provide a 10' - 12' shared use path on a replaced structure.

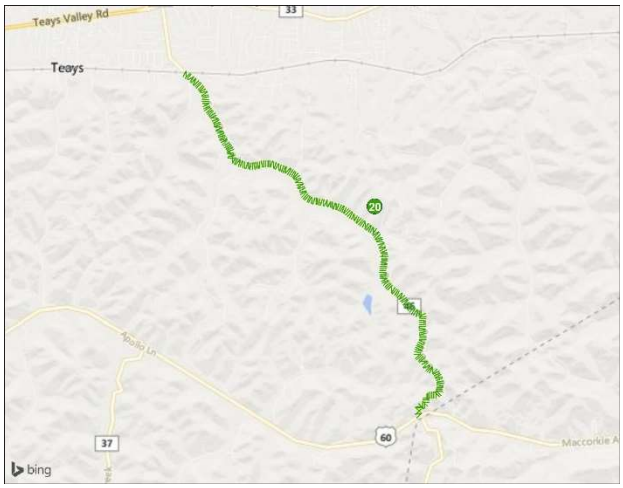


Project Mileage	0.1 miles
Planning Level Cost	$14 million to $14.5 million, not including right of way
Potential Constraints	Potential structure replacement, inspection will need to be conducted on the bridge

Project 20: St. Albans to Teays Valley Bike Trail

Roadway characteristics	Two lane rural roadway with 8'-10' wide paved shoulders, smooth pavement, high speed.
Deficiencies/Key Issues	Two lane roadway with no paved shoulders, high speed traffic, steep topography.
Improvement Goals/Opportunities	Connect St. Albans to Teays Valley for bicycle and pedestrian activities.
Proposed Improvements	"Share the Road" by maintaining continuous 8' shoulders on US 60 from WV 817 to Poplar Fork Road. Repave and provide 1-2' shoulders on Poplar Fork from US 60 to Teays Valley Road. Investigate right of way to provide a new 10-12' multi-use path directly from WV 817 to Poplar Fork Road.

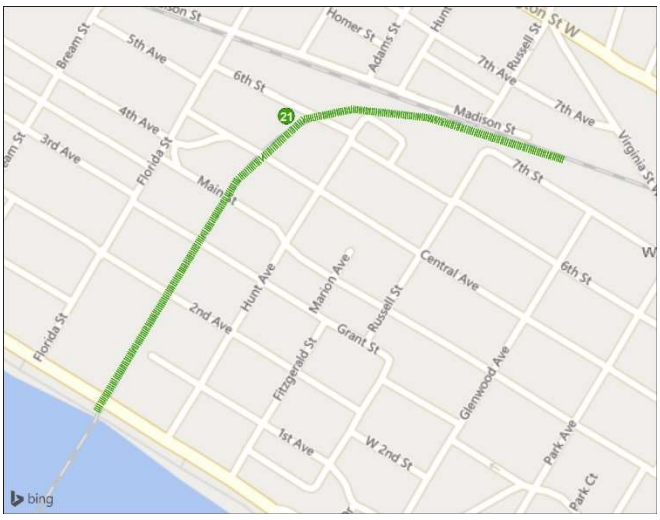




Project Mileage	7.7 miles
Planning Level Cost	$5 million to $5.5 million not including right of way
Potential Constraints	Available right of way

Project 21: NS Railroad trail – Kanawha Boulevard to 6th Street

Roadway characteristics	Unused railroad structures
Deficiencies/Key Issues	Unused railroad overpasses and sustaining property in the Westside for future bicycle and pedestrian use.
Improvement Goals/Opportunities	Connect Virginia Street with Kanawha Boulevard for bicycle and pedestrian activities and preserve the land for neighborhood use.
Proposed Improvements	Provide a 10' - 12' shared use path on the railroad right of way. Remove the railroad structures of Kanawha Boulevard from the NS Railroad trestle over the Kanawha River to 6th Street.



Project Mileage	0.4 miles
Planning Level Cost	$900K to $1.3 million not including right of way
Potential Constraints	Available right of way