GOOCHLAND COUNTY UDA MULTIMODAL PLANNING

BICYCLE AND PEDESTRIAN ACCESSIBILITY ASSESSMENT

Prepared for Goochland County

MAY 2022

GAP SUMMARY DOCUMENT

GOOCHLAND COUNTY UDA MULTIMODAL PLANNING

ACKNOWLEDGMENTS

Tom Coleman, Principal Planner
Jo Ann Hunter, Deputy County Administrator
Jamie Sherry, Director of Community Development
Ray Cash, Assistant Director of Community Development
Austin Goyne, Transportation Manager

ABOUT GAP-TA

The following study was conducted under a Growth and Accessibility Planning (GAP) technical assistance grant. Administered by Virginia's Office of Intermodal Planning and Investment (OIPI), GAP technical assistance projects seek to align infrastructure development with designated and emerging growth areas to improve efficiency and effectiveness. Visit vtrans.org/about/GAP-TA for information about the Growth and Accessibility Planning Technical Assistance program.

CONTACT INFORMATION

Tom Coleman
804-556-5865
tcoleman@goochlandva.us
1800 Sandy Hook Road
P.O.Box 103
Goochland, VA 23063

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BICYCLE & PEDESTRIAN ANALYSIS

Introduction

This bicycle and pedestrian analysis for the Centerville and Goochland Courthouse Village Areas of Goochland County has been completed under a Growth and Accessibility Planning (GAP) technical assistance grant. This bicycle and pedestrian analysis is a companion to a separate analysis of transit accessibility summarized in a separate document.

This analysis has considered a variety of factors in recommending and prioritizing potential bicycle and pedestrian infrastructure improvements for existing public roadways. Consultants reviewed existing plans, including the County's Comprehensive Plan and plans for the larger Richmond region, conducted a public engagement workshop to gather citizen input, and incorporated a wide variety of transportation network data, including nodes of activity, traffic, speed, facility design, right-of-way, population density, employment density, transit provision, and safety criteria, among others.

Taken together, the steps of this process identify individual routes and projects to form future bicycle and pedestrian networks in the two Village Areas.

Identifying Desirable Bicycle and Pedestrian Routes

To identify desirable bicycle and pedestrian routes, the analysis began with destinations or nodes of activity identified in several ways. County staff provided local knowledge of important points, as well as knowledge of planned development projects. A community meeting was held to allow public input on desirable destinations and routes for walking and cycling. Finally, on-site conditions in both Village Areas were studied and mapped. Identified nodes include existing residential developments, planned future residential developments, shopping centers, other commercial uses, places of worship, government buildings, schools, and others.

Routes connecting key nodes of activity were identified as potential bicycle or pedestrian corridors and further considered based on network data including traffic (AADT) and posted speed limit. Available road right-of-way and average lane width were also considered based on County-provided GIS mapping. In all cases, further field survey of physical characteristics will be required for the full design of improvements.

For potential pedestrian improvements, routes within 1/4 mile of key nodes were analyzed, while this scope was expanded to 2 miles for potential bicycle improvements. Typically, roads with average traffic under 1,000 trips per day, where pedestrian and bicyclists can most often mix safely with very limited vehicle traffic, were excluded. These very low traffic routes may still benefit from simple signage or marking improvements. Other adjustments were made for special conditions, including identifying segments that would help to fill gaps in existing pedestrian facilities and excluding any road segments from consideration that were unsafe, had extreme terrain, or had unworkable right-of-way conditions.

Infrastructure Recommendations

With nodes and potential route segments established, the analysis considered potential infrastructure improvements for identified routes.

On roads with posted speed limits of 25 mph, sidewalks are recommended where five of more feet of right-of-way is available. From routes with less available right-of-way, sidewalks may be installed once right-of-way is acquired. For higher speed roads, where a greater measure of pedestrian safety is needed, wider sidewalks or separated sidewalks are recommended. Within the core of each village area, within key activity centers, or along primary roadways, sidewalks on boths sides of the street are recommended, while outside of the village core, sidewalks on one side of the street

On roads with posted speed limits less than 35 miles per hour and lane widths of at least 15 feet, bicycle lanes are recommended, while roads with narrower lanes may use shared lane markings, also called sharrows. On higher speed roads with excess right-of-way of less than 10 feet, paved shoulders are recommended to provide some measure of bicyclist safety outside of officially designated bike lanes or routes. Where more than 10 feet of excess right-of-way exists, or where new rights-of-way are established for future roadways, off-road shared use paths should be considered.

Figure 1: Decision Criteria, Pedestrian Routes

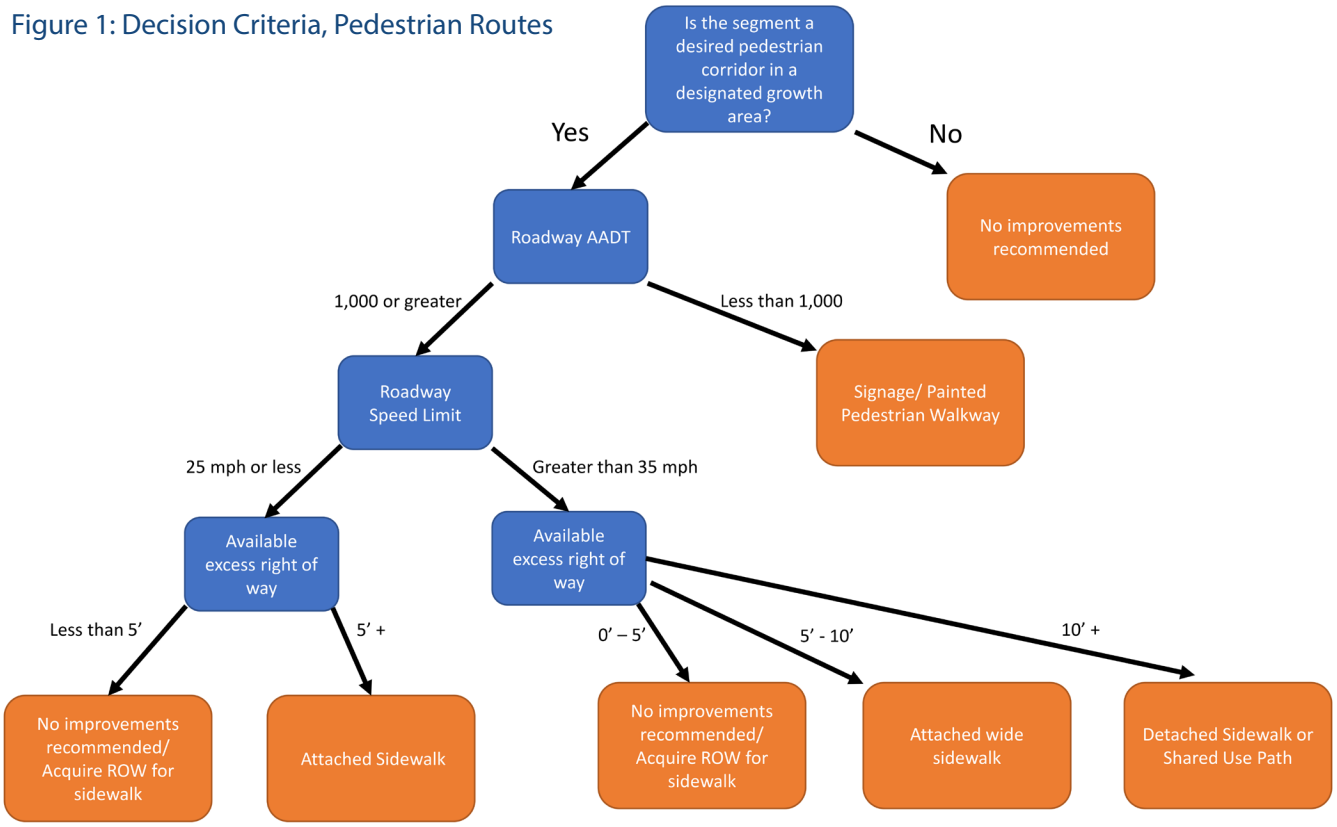
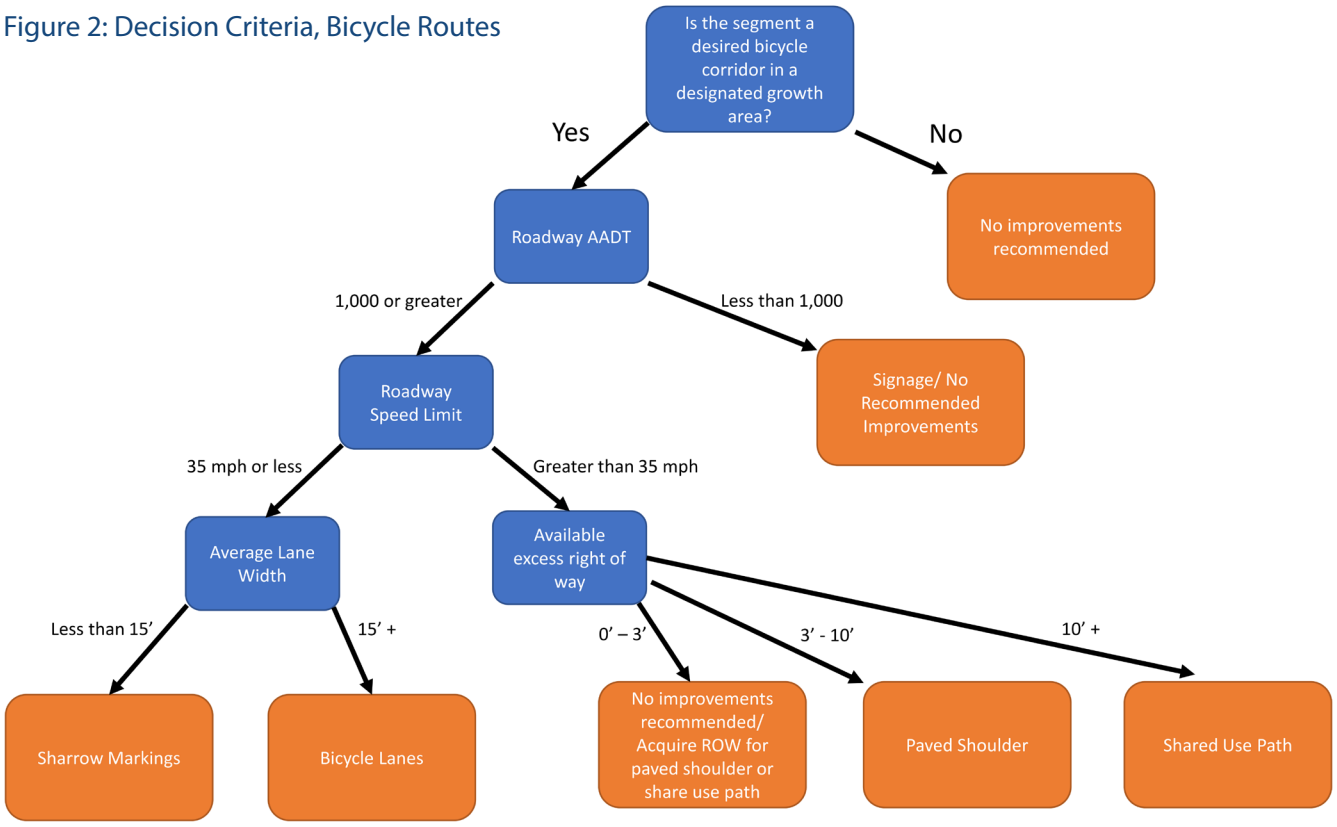


Figure 2: Decision Criteria, Bicycle Routes



Prioritization of Improvements

The above section described how the recommendations for bicycle and pedestrian improvements were developed. Part of the scope for this project also required the development of a prioritization process to identify high priority recommendations. The purpose of this process is to be able to sort recommendations through a data driven process, although additional priorities such as local support or funding feasibility may also enter into the considerations for which projects get advanced to funding applications.

The following section describes the criteria for this prioritization process in three categories; Traffic Level of Stress, Community Need, and Tactical Viability:

Traffic Level of Stress

The traffic level of stress evaluation is used to identify corridors where vehicular traffic creates the most hazardous travel conditions for bicyclists and pedestrians. Considerations include:

- Speed Limit
- Traffic Volume (AADT)
- Number of Travel Lanes
- Recorded Bike/Ped Crashes

Community Need

The community need evaluation is used to identify corridors where the built environment and demographic conditions are most suited for bicycle and pedestrian travel. Considerations include:

- Activity Centers
- Schools
- Transit
- Bike/Walk Score
- Population Density
- Employment Density
- VTrans Equity Emphasis Areas

Project Viability

Project viability evaluation is used to identify corridors where additions or improvements are anticipated to be easiest to implement. Considerations include:

- Scale of Corridor
- Right-of-Way Needs
- Connectivity
- Project Readiness

Short Term vs. Long Term Recommendations

While this analysis has focused primarily on data-driven recommendations for existing conditions and needs, it is important to note that both Village Areas have grown rapidly and will likely continue to grow. The planned growth of these areas will continue to produce new routes and nodes of activity which will both generate and attract bicycle and pedestrian travel. The initial results of this data-driven analysis of existing conditions are designated as short-term recommendations, while other routes directed by local staff as potential future corridors for bicycle and pedestrian travel as development occurs are designated as long-term recommendations.

Figure 3: Traffic Level of Stress Score

Traffic Level of Stress Score			
Element	**Low (1 point)**	**Medium (2 points)**	**High (3 Points)**
Speed Limit	25 or lower	30-40	45 or Higher
AADT	Less than 2,500	2,500 to 7,499	7,500 or Higher
Vehicle Lanes	2 Lanes	3-4 Lanes	More than 4 Lanes
Safety	No reported bicycle or pedestrian crashes	Non-fatal or serious injury bicycle or pedestrian crash	Fatal or serious injury bicycle or pedestrian crash

Figure 4: Community Need Score

Community Need Score			
Element	**Low (1 point)**	**Medium (2 points)**	**High (3 Points)**
Activity Center	More than 0.5 miles from a VTRANS Activity Center or other primary community activity center	0.25-0.5 miles of a VTRANS Activity Center or other primary community activity center	Located within 0.25 miles of a VTRANS Activity Center or other primary community activity center
School	More than 0.25 miles from a school	Within 0.25 miles of a school	Located within 500 ft of a school
Transit	More than 0.25 miles from a transit stop	Within 0.25 miles of a transit stop	Segment includes transit stop
Bike Score/Walk Score	Located in an area with a combined Bike Score + Walk Score of less than 50.	Located in an area with a combined Bike Score + Walk Score of 50-99.	Located in an area with a combined Bike Score + Walk Score of 100 or more.
Population Density	Located in a Block Group that falls within the 4th or 5th quintile of population density for the community.	Located in a Block Group that falls within the 2nd or 3rd quintile of population density for the community.	Located in a Block Group that falls within the highest quintile of population density for the community.
Employment Density	Located within the 4th or 5th quintile of employment density for the community based on Census LEHD primary employment data.	Located within the 2nd or 3rd quintile of employment density for the community based on Census LEHD primary employment data.	Located within the highest quintile of employment density for the community based on Census LEHD primary employment data.
Equity Emphasis Area (VTRANS)	Not located in an Equity Emphasis Area	Located in Equity Emphasis Area with an index score that is less than the average index score of all EEAs in the community.	Located in Equity Emphasis Area with an index score that is greater than the average index score of all EEAs in the community.

Figure 5: Tactical Viability Score

Tactical Viability			
Element	**Low (1 point)**	**Medium (2 points)**	**High (3 Points)**
Scale of Corridor	Corridor has a "Principal Arterial" functional classification.	Corridor has a "Minor Arterial" or "Collector" functional classification.	Corridor has a "Local" functional classification.
ROW Needs	Additional right of way is anticipated to be acquired from multiple properties.	Additional right of way is anticipated to be aquired from a single property.	No additional right of way is anticipated.
Connectivity	Improvements enhance existing bike/ped infrastructure or are not connected to existing bike/ped facilities.	Improvements extend existing bike/ped infrastructure network but do not connect discontinuous facilities.	Improvements establish a link between existing but discontinuous bike/ped infrastructure.
Project Readiness	Improvements will require a new project.	Improvements are part of or can be incorporated into a planned project.	Improvements are part of or can be incorporated into a committed project.

Figure 6: **Courthouse Village: Combined Pedestrian and Bicycle Infrastructure Recommendations**

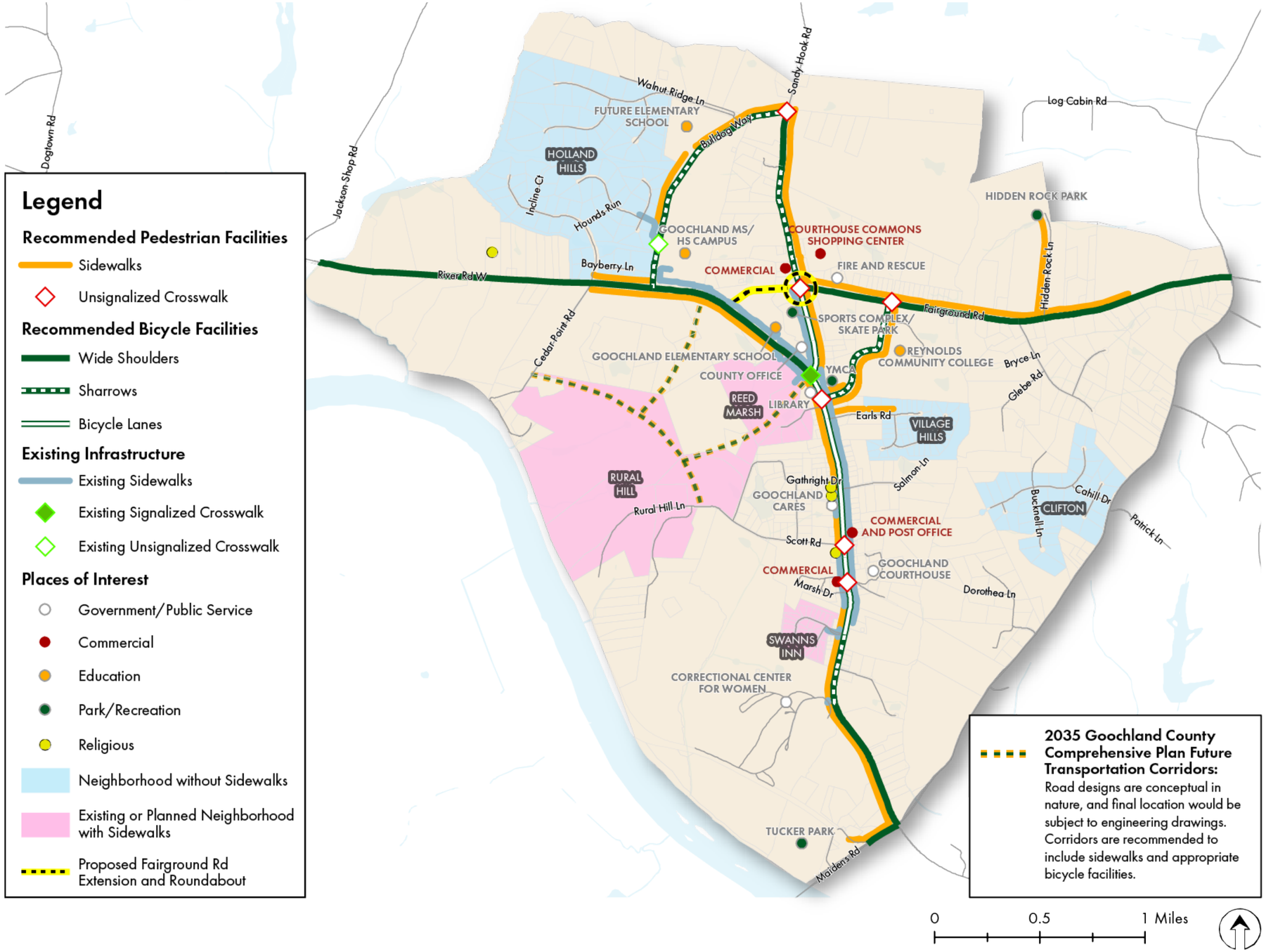


Table 1: Recommended Pedestrian Improvements; Courthouse Village Area

Segment	Start	End	Recommended Pedestrian Improvements	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Fairground Rd	Sand Hook Rd	Truett property	Sidewalk - north side	high	med	med	short	Coordinate with property development
Hidden Rock Ln	Fairground Rd	Terminus	Sidewalk - west side	low	low	med	short	
Sandy Hook Rd	Fairground Rd	Bulldog Way	Sidewalk - east side	med	med	med	long	
Sandy Hook Rd	Fairground Rd	River Rd	Sidewalk - east side	med	low	low	short	
Bulldog Way	Sandy Hook Rd	Goochland High School	Sidewalk - west side	low	med	high	long	Existing sidewalk east side from River Rd to high school. Coordinate with development of new elementary school
River Rd	Cedar Pt Rd	Sandy Hook Rd	Sidewalk - south side, Cedar Pt to exist. Reed Marsh sidewalks; north side, Cedar Pt to exist. sidewalk at Bulldog	high	med	med	long	Coordinate with potential adjacent development
River Rd	Sandy Hook Rd	Scott Rd	Sidewalk - west side	med	high	med	short	Existing sidewalks on entire east side and small segment at Goochland Cares
River Rd	Marsh Dr	Swanns Inn Cres	Sidewalk - fill sidewalk gap from commercial development near Marsh Dr to near Swanns Inn Cres	med	high	high	short	
River Rd	Swanns Inn Cres	Maidens Rd	Sidewalk - west side	high	med	med	short	
Dickinson Rd	River Rd	Fairground Rd	Sidewalk - south side	low	med	med	long	Limited right-of-way but potential to acquire from community college. Potential north side sidewalk to YMCA
Earls Rd	River Rd	Kline Ct	Sidewalk - north side	low	low	med	short	
Maidens Rd	River Rd	Tucker Park	Sidewalk - west side	high	low	med	short	

Table 2: Recommended Crosswalk Improvements; Courthouse Village Area

Segment	At	Recommended Crosswalk Type	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Sandy Hook	Bulldog Way	Unsignalized	med	med	high	long	One leg, crossing Sandy Hook
Sandy Hook	Fairground Rd	Unsignalized	med	med	med	short	All legs to ccordinate with proposed future roundabout.
River Rd	Dickinson Rd	Unsignalized	med	med	med	short	All directions
River Rd	Scott Rd	Unsignalized	med	high	med	short	All directions
River Rd	Courthouse Cir	Unsignalized	med	high	med	short	One leg, crossing River Rd

Table 3: Recommended Bicycle Improvements; Courthouse Village Area

Segment	Start	End	Recommended Bicycle Improvements	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Sandy Hook Rd	Fairground Rd	River Rd	Bicycle Lanes - both sides	med	low	low	short	
River Rd	Sandy Hook Rd	Swanns Inn Cres	Bicycle Lanes - both sides	med	high	med	short	
River Rd	Swanns Inn Cres	Near Correc. Facility	Sharrows	med	med	med	short	
River Rd	Near Correc. Facility	Maidens Rd	Wide Shoulders	high	med	med	short	
Maidens Rd	River Rd	Tucker Park	Wide Shoulders	high	low	med	short	
Fairground Rd	Sand Hook Rd	Village Boundary	Wide Shoulders	high	med	med	short	
Dickinson Rd	River Rd	Fairground Rd	Sharrows	low	med	med	short	
River Rd	Village Boundary	Sand Hook Rd	Wide Shoulders	high	med	med	short	
Bulldog Way	River Rd	Sandy Hook Rd	Sharrows	low	med	high	long	
Sandy Hook Rd	Fairground Rd	Bulldog Way	Sharrows	med	med	med	long	

Figure 7: **Centerville Village: Combined Pedestrian and Bicycle Infrastructure Recommendations**

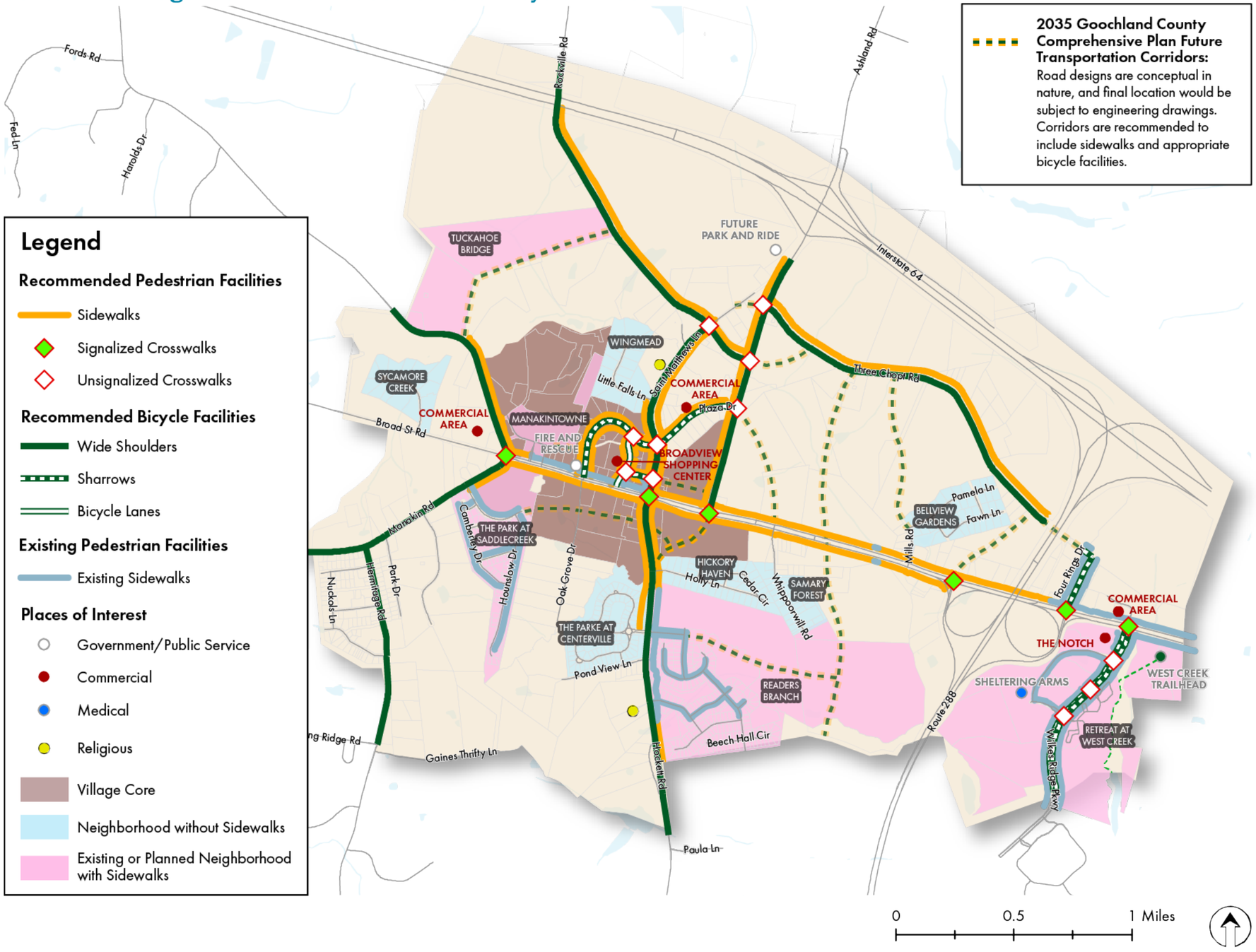


Table 4: Recommended Pedestrian Improvements; Centerville Village Area

Segment	Start	End	Recommended Pedestrian Improvements	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Ashland Rd	Broad St Rd	Future Park and Ride	Sidewalk - west side	med	low	med	long	Coordinate design and phasing with future park and ride lot
Three Chopt Rd	Ashland Rd	Dead-End (near Rt-288)	Sidewalk - one side	low	low	med	long	Connection of Three Chopt under 288 to Four Rings Dr a long-term County desire
St Matthews Ln	Broad St Rd	Rockville Rd	Sidewalks - both sides	med	low	med	short	Existing sidewalk west side Broad to Lablayre
Rockville Rd	Ashland Rd	Village Area Boundary	Sidewalk - one side	med	low	med	long	Coordinate with potential adjacent development
Briggs Dr	Broad St Rd	Plaza Dr	Sidewalks - both sides	low	high	med	short	Existing sidewalk east side Broad to Lablayre
Lablayre Way	Briggs Dr	St Matthews Ln	Sidewalks - both sides	low	high	high	short	Existing sidewalks north side near St Matthews Ln
Plaza Dr	St Matthews Ln	Ashland Rd	Sidewalk - north side	low	high	med	short	
Manakin Road - north	Broad St Rd	Tuckahoe Bridge Development	Sidewalk - north side	low	low	med	long	Coordinate with potential adjacent development
Broad St Rd - north side	Manakin Rd	Four Rings Dr	Sidewalk - north side	high	high	med	short	Existing sidewalk Manakin Towne Pkwy to St Matthews Ln, segment west of Four Rings Dr. Expand sidewalk to widths up to 8' and separate with landscape strip where right-of-way allows
Broad St Rd - south side	Manakin Rd	South 288 ramp	Sidewalk - south side	high	high	med	short	Expand sidewalk to widths up to 8' and separate with landscape strip where right-of-way allows
Manakin Road - south	Saddle Creek Pkwy	Broad Street Rd	Sidewalk - east side	med	low	med	short	
Hockett Rd	Broad St Rd	Centerville Parke Dr	Sidewalks- west side, east side from existing trail to Broad	med	low	med	short	Existing trail Readers Pt Dr to near Holly Ln

Table 5: Recommended Crosswalk Improvements; Centerville Village Area

Segment	At	Recommended Crosswalk Type	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Broad St Rd	Manakin Rd	Signalized	high	med	med	short	All directions
Broad St Rd	St Matthews/Hockett	Signalized	high	high	med	short	All directions
Broad St Rd	Ashland Rd	Signalized	high	high	med	short	All directions
Broad St Rd	South 288 Ramp	Signalized	high	high	med	short	One leg, crossing Broad
Broad St Rd	Four Rings Dr	Signalized	high	med	med	short	One leg, crossing Four Rings
Broad St Rd	Wilkes Ridge Pkwy	Signalized	high	med	med	short	All directions
Plaza Dr	Briggs Dr	Unsignalized	low	high	med	short	All directions
Plaza Dr	St Matthews Ln	Unsignalized	low	high	med	short	All directions
Plaza Dr	Ashland Rd	Unsignalized	low	high	med	short	All directions
Lablayre Way	Briggs Dr	Unsignalized	low	high	high	short	All directions
Lablayre Way	St Matthews Ln	Unsignalized	low	high	high	short	All directions
Rockville Rd	St Matthews Ln	Unsignalized	med	low	med	short	All directions
Rockville Rd	Ashland Rd	Unsignalized	med	low	med	long	All directions
Ashland Rd	Three Chopt Rd	Unsignalized	med	low	med	long	All directions
Wilkes Ridge Pkwy	Wilkes Ridge Cir	Unsignalized	med	med	med	short	All directions
Wilkes Ridge Pkwy	Wilkes Ridge Pl	Unsignalized	med	med	med	short	All directions
Wilkes Ridge Pkwy	Wilkes Ridge Dr	Unsignalized	med	low	med	short	All directions

Table 6: Recommended Bicycle Improvements; Centerville Village Area

Segment	Start	End	Recommended Bicycle Improvements	Traffic Stress Rating	Community Need Rating	Project Viability Rating	Term	Notes
Ashland Rd	Broad St Rd	Future Park and Ride	Wide Shoulders	med	low	med	long	
Three Chopt Rd	Ashland Rd	Dead-End (near Rt-288)	Wide Shoulders	low	low	high	long	Connection of Three Chopt under 288 to Four Rings Dr a long-term County desire
St Matthews Ln	Broad St Rd	Rockville Rd	Wide Shoulders	med	low	med	short	
Rockville Rd	Ashland Rd	Village Area Boundary	Wide Shoulders	med	low	med	long	
Briggs Dr	Broad St Rd	Plaza Dr	Bicycle Lanes - both sides	low	high	med	short	
Lablayre Way	Briggs Dr	St Matthews Ln	Sharrows	low	high	high	short	
Plaza Dr	Broad St Rd	Ashland Rd	Sharrows	low	high	med	short	
Manakin Road - north	Broad St Rd	Village Area Boundary	Wide Shoulders	low	low	med	long	
Manakin Road - south	Saddle Creek Pkwy	Village Area Boundary	Wide Shoulders	med	low	med	short	
Hermitage Rd	Manakin Rd	Village Area Boundary	Wide Shoulders	low	low	med	short	
Hockett Rd	Broad St Rd	Village Area Boundary	Wide Shoulders	med	low	med	short	
Four Rings Dr	Broad St Rd	Terminus	Sharrows	low	med	med	short	
Wilkes Ridge Pkwy	Broad St Rd	Village Area Boundary	Sharrows	med	med	med	short	

BICYCLE AND PEDESTRIAN DESIGN GUIDANCE

The purpose of this technical assistance project is to provide general bicycle and pedestrian improvement recommendations for these two village areas in the county. It should be noted that this study did not include detailed field observations or surveys of existing roadway conditions, but instead used available GIS data, mapping and statewide data sets as the basis for the recommendations. Implementation of these recommendations will need to incorporate more detailed study of conditions in the field for any given project, including existing rights of way and ownership, pavement and curb and gutter width and conditions, topography and storm drainage considerations.

For each improvement type recommended, this document provides information on general use and best practices for facility design, optional elements, and visual examples.

Improvement Types

This analysis considers five main types of bicycle and pedestrian improvements for designated locations in the Goochland Courthouse and Centerville Village Areas. Each includes optional elements that can be used to meet specific needs and the location constraints. The five categories of recommended improvements include:

Pedestrian Improvements:

- Sidewalks
- Crosswalks

Bicycle Improvements:

- Bicycle Lanes
- Shared Lane Markings (Sharrows)
- Paved Shoulders

This analysis focuses on bicycle and pedestrian improvements along existing roads, where improvements may be installed within existing public rights-of-way. Improvements such as wide shared use paths for both bicyclists and pedestrians in separate rights-of-way away from existing roads have not been considered due to the County's general desire to avoid purchasing large amounts of additional right-of-way. Still, shared use paths, or other improvement types not proposed in this analysis, may be considered for future needs where public right-of-way may exist, or may be provided to the County by private donations or other means. Resources for additional improvement types not recommended by the study include:

VDOT:
https://www.virginiadot.org/programs/bikeped/biking_and_pedestrian_treatments.asp#:~:text=Virginia%20guidance%20on%20spacing%20is,average%2C%20cost%20%245%2C000%20to%20%248%2C000

NACTO:
https://nacto.org/publication/urban-street-design-guide/

Both the Goochland Courthouse and Centerville Village Areas contain ample space for future residential, commercial, and other development, and are designated by the County's Comprehensive Plan for growth. Future private development proposals may also incorporate bicycle and pedestrian facilities, and should not be limited by the facility types represented in this analysis. In many cases, new developments will be free from the right-of-way constraints of existing public roads, allowing for more extensive and more creative bicycle and pedestrian solutions.

Design Factors

The detailed design of bicycle and pedestrian facilities will vary widely based on site-specific factors at the time of engineering and construction. This analysis presents general guidance on design standards and considerations to guide future planning.

Facility Description - general facility information is given on the overall layouts, types, styles, and optional additions to bicycle and pedestrian accommodations.

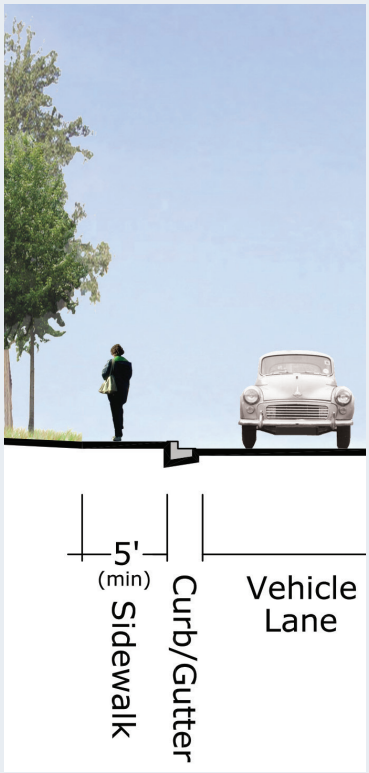
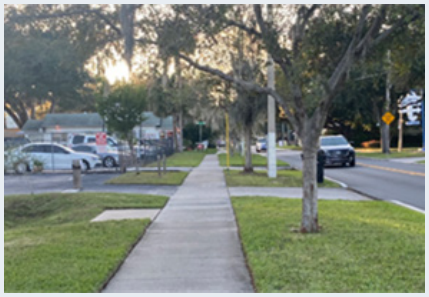
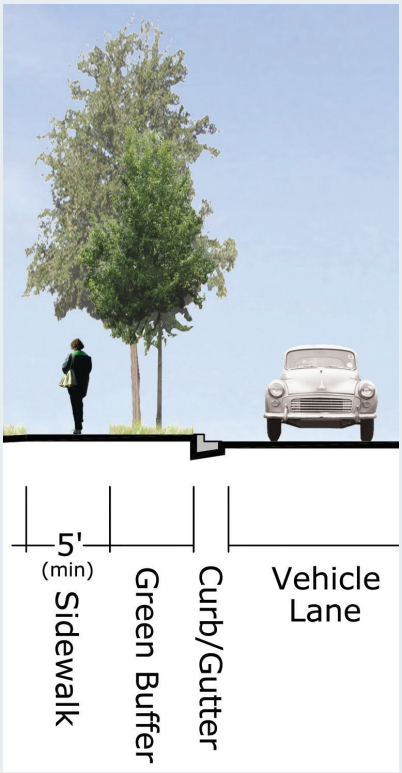
Context of Use - recommended facilities may be deployed in varying locations based on existing pedestrian traffic, expected future development, and other factors, as well as scaled to meet the needs of individual locations.

Traffic Considerations - the size, placement, and design of bicycle and pedestrian facilities may vary based on the volume and speed of traffic on adjacent roadways. In general, facilities should offer greater separation and protection where traffic volume and speed are high.

Section Design - typical section designs are given using common or minimum measurements for facility width and placement. The precise dimensions of individual segments must be planned at the time of engineering using up-to-date standards and surveys of existing conditions.

Sidewalks

Sidewalks are the most typical and most familiar method of incorporating pedestrian infrastructure into the transportation network. Sidewalk standards vary widely, but for the purposes of this analysis a minimum sidewalk width of five feet is assumed to allow circulation for a wide range of users. Wider sidewalks may be appropriate in areas with expectations of heavy pedestrian use. Sidewalks may be located adjacent to a roadway curb, or separated from vehicular traffic by a green buffer space in corridors with or without a curb. Buffering is most appropriate where traffic volumes or speeds are high, where attractive landscaping is desired, or where right-of-way space allows. Sidewalks must be coordinated with crosswalks in appropriate locations to create a safe and connected pedestrian network.

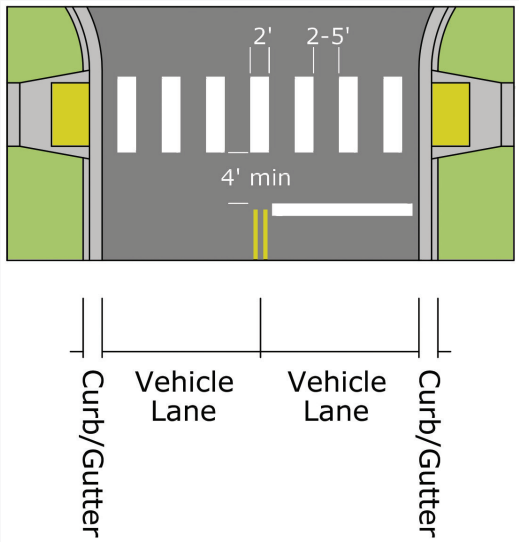
	Sidewalks
Description	• Intended for pedestrian accommodation • Provides a concrete or other hard-surfaced path that runs parallel to the street • Recommended 5′ - 8′ width • 8′ - 12′ sidewalks may be appropriate in commercial areas or along high-speed/high-volume roadways • Can be designed with a buffer zone including elements such as street furniture, street trees, or lighting to provide additional separation from traffic
Context of Use	• Generally should be included on both sides of the street within ¼ mile of activity centers or other areas with frequent pedestrian travel but will depend on land uses and anticipated pedestrian activity levels • Sidewalks along one side of the road may be sufficient for corridors that are located more than ¼ from an activity center but still receive some pedestrian travel
Traffic Considerations	• The buffer zone separating the sidewalk from travel lanes should grow wider wherever possible as speed limits and traffic volumes increase. This separation increases the comfort and safety of pedestrians
Section and Examples	   

Crosswalks

Together with sidewalks, crosswalks form the most basic and typical elements of a pedestrian network. Crosswalks should be provided at all appropriate locations where sidewalks intersect with vehicle lanes.

While a wide variety of crosswalk designs exist, this analysis recommends high-visibility crosswalks that are made of wide, longitudinal stripes marked on the roadway at regular intervals. These high visibility markings provide a visual cue for vehicular traffic of where to expect crossing pedestrians. In addition to painted stripes, accessible curb ramps are required by the Americans with Disabilities Act (ADA) at all crosswalks.

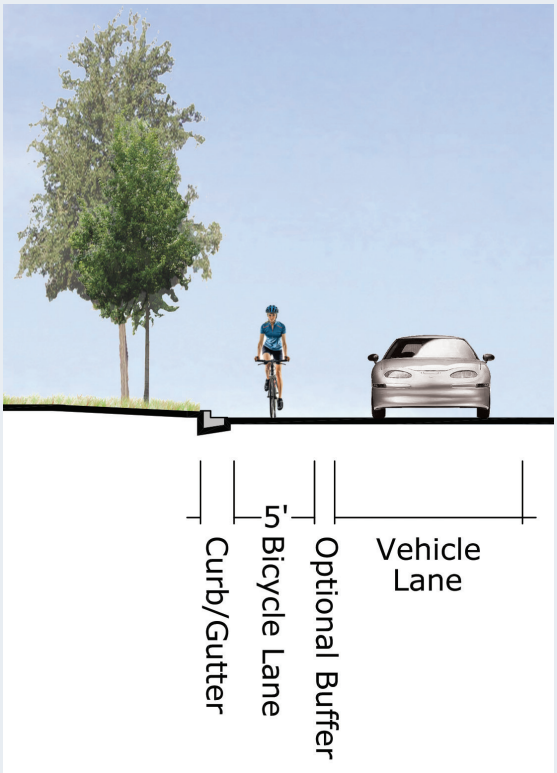
Where crosswalks must cross higher speed or higher volume roadways, signalized crosswalks are recommended. Signalized crossings may be activated by a pedestrian push button and coordinate pedestrian crossing timing along with the timing of traffic lights for vehicle travel.

	Crosswalks
Description	• Intended for pedestrian accommodation • Uses pavement markings to designate locations for pedestrian road crossings • Wide longitudinal lines are used to enhance the visibility of the crosswalk to drivers • Crosswalks should be striped as wide or wider than the walkway it connects to • Accessible curb ramps are required at all crosswalks
Context of Use	• Install where pedestrians must cross vehicular traffic lanes • Prioritize at crossings and intersections located within ¼ mile of an activity center, school, or other key destinations
Traffic Considerations	• An advanced stop bar should be located a minimum of 4' in advance of the crosswalk to reinforce yielding to pedestrians • High visibility crosswalks should be considered at all crossings with traffic greater than 1,000 trips per day
Signalization	• Add pedestrian signals (walk/don't walk) for all crosswalks at intersections controlled by traffic signals at present or in the future • Pedestrian-activated push buttons to be provided adjacent to signalized crosswalks
Section and Examples	 

Bicycle Lanes

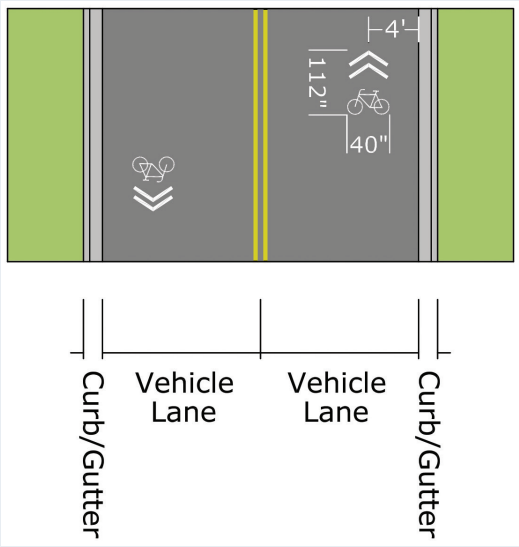
A bicycle lane is a portion of the roadway that has been designated by striping, signage, and pavement markings for the exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists. Bike lanes typically run in the same direction as traffic and are typically designated with painted lines only, although physical barriers are used in some conditions. The configuration of a bike lane requires consideration of existing traffic levels and behaviors, adequate safety buffers to protect bicyclists from parked and moving vehicles, and enforcement to prohibit motorized vehicle encroachment and double-parking. Bike Lanes may be distinguished using color, lane markings, signage, and intersection treatments.

As noted, bike lanes may be buffered, with a larger painted separation between cyclists and automobiles to increase safety and comfort where space is available.

	Bicycle Lanes
Description	• Intended for bicycle accommodation • Marks a narrow (5' minimum), one-way lane along the curb, shoulder, or on-street parking lane that carries bicycle traffic in the same direction as motor vehicle traffic • Designated for exclusive bicycle use with signage and pavement markings • Pavement area within bicycle lane can be colored with green paint to enhance visibility
Context of Use	• Include on streets in activity centers or other higher density development areas with frequent bicycle travel. • Should form part of an interconnected network of bicycle facilities in a community
Traffic Considerations	• Moderate traffic volumes • Speed limit of 35mph or less • On streets with higher traffic volumes, steep grades, or high truck traffic, treatments that provide greater physical separation, such as buffered bike lanes, should be considered
Section and Examples	  

Shared Lane Markings (Sharrows)

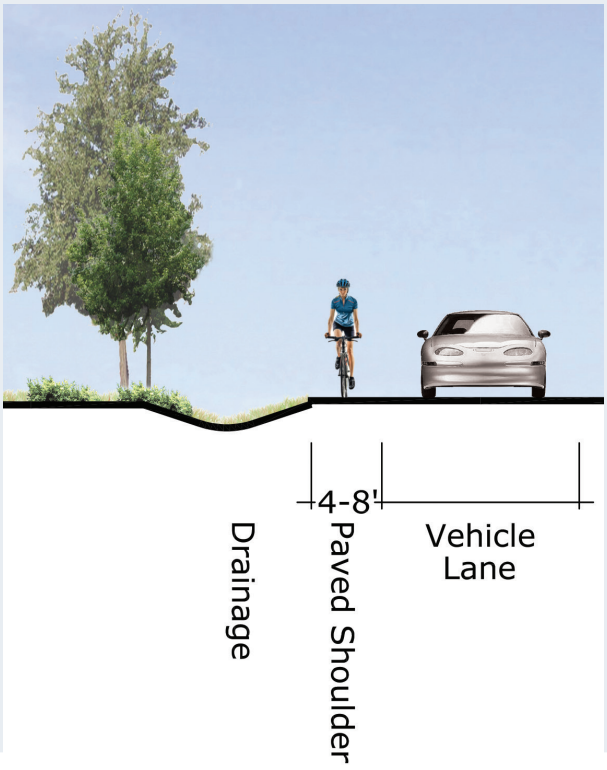
Shared Lane Markings, often called "sharrows", are road markings used to indicate a shared lane environment for bicycles and automobiles on low traffic volume streets. Among other benefits shared lane markings reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning within the lane, and may be configured to offer directional and wayfinding guidance to cyclists. The shared lane marking is a standardized pavement marking with a variety of uses to support a complete bikeway network. Used in areas with low traffic volume and where no additional space is available for bicycle lanes, sharrows can help to make cyclists more visible to drivers.

	Shared Lane Markings (Sharrows)
Description	• Intended for bicycle accommodation • Uses a recurring pavement marking symbol to designate proper bicycle travel positioning on the street • Raises driver awareness and reinforces the legitimacy of bicycle traffic on the street
Context of Use	• Locate in activity centers or other higher density development areas with low traffic volume and frequent bicycle travel • Useful on existing roadways with low traffic volume and insufficient pavement width to provide separated bicycle lanes
Traffic Considerations	• Low traffic volumes • Speed limit of 35mph or less
Section and Examples	 

Paved Shoulders

In areas where bike lanes are not feasible, paved shoulders provide a space that bicyclists can use to get away from direct traffic, primarily in rural contexts. Unlike bike lanes, paved shoulders are not considered travel lanes, and therefore may be used for temporary storage of disabled vehicles or vehicle parking, unless prohibited. Shoulder widths are typically a function of the amount of bicycle usage, vehicle speeds, topography, percentage of truck traffic, and other factors, although widths are often purely a function of available right-of-way. The cost of paved shoulders may be lower than other facilities and may be combined with road repaving projects.

Paved shoulders tend to result in fewer erratic motor vehicle driver maneuvers, more predictable bicyclist riding behavior and enhanced comfort levels for both motorists and bicyclists as compared to roadways without paved shoulders. While routes with paved shoulders are not officially designated cycle routes, these facilities provide a measure of safety for cyclists.

	Paved Shoulder
Description	• Intended as a vehicular safety feature that could also accommodate bicycles • Extends the pavement area of the road corridor 4' – 8' beyond the striped vehicle travel lane
Context of Use	• Typically used in low density or rural development areas more than 0.5 miles from major activity centers • May also be used along high speed (45mph or greater) roadways in higher density development areas, but typically with greater shoulder widths • Utilize on roadways that have been identified as priority bicycle travel corridors but where bicycle lanes are not feasible.
Traffic Considerations	• ADT greater than 1,000 • Speed limit of 35mph or greater • If the roadway exceeds 45mph or there is a high percentage of heavy vehicles, the paved shoulder should be wider
Section and Examples	  

SUBDIVISION STREET STANDARDS

Introduction

As part of the goals of the Growth and Accessibility Planning (GAP) program, each grant recipient should consider potential "alternatives for the reduction of subdivision street widths and turning radii." As in most counties in Virginia, Goochland County has its roadways owned and maintained by VDOT. Therefore the design standards for subdivision streets, including street widths and turning radii, are governed by the VDOT Road Design Manual. Specifically these standards are outlined in Appendix B(1) of the Subdivision Street Design Guide in the Road Design Manual.

This manual lists a number of different subdivision road standards depending on the amount of traffic they handle.

Turning Radii

Under Section 3 – Roadway Geometric Design Criteria of the Road Design Manual, minimum turning radii are listed for Local Roads as follows[1]:

- For roadways with up to 2000 projected traffic volume (ADT) - the minimum centerline radius shall be 200 feet
- For roadways with from 2001 up to 4000 projected traffic volume (ADT) - the minimum centerline radius shall be 335 feet

Street Widths

Under Section 3 – Roadway Geometric Design Criteria of the Road Design Manual, minimum street widths are listed for Local Roads as follows[2]:

Curb and Gutter Roadways

For roadways with up to 2000 projected traffic volume (ADT) - the minimum widths measured face of curb to face of curb shall be[3]:

- 24 feet with no parking
- 24 feet with parking on one side
- 29 feet with parking on both sides

For roadways with from 2001 up to 4000 projected traffic volume (ADT) - the minimum centerline radius shall be[4]:

- 26 feet with no parking
- 31 feet with parking on one side
- 36 feet with parking on both sides

Shoulder and Ditch Roadways

For roadways with up to 2000 projected traffic volume (ADT) - the minimum widths measured face of curb to face of curb shall be[5]:

- 24 feet with no parking[6]
- 24 feet with parking on one side
- 29 feet with parking on both sides

These roadways shall also include a minimum 3-foot shoulder

For roadways with from 2001 up to 4000 projected traffic volume (ADT) - the minimum centerline radius shall be[7]:

- 26 feet with no parking
- 31 feet with parking on one side
- 36 feet with parking on both sides

[1] VDOT Road Design Manual, Appendix B, Table B(1)-1 Curb and Gutter Section and Table B(1)-2 Shoulder and Ditch Section

[2] VDOT Road Design Manual, Appendix B, Table B(1)-1 Curb and Gutter Section and Table B(1)-2 Shoulder and Ditch Section

[3] If the Local Street has 1 point of access and ADT>400 vpd, then the roadway width must meet design values (2001 to 4000 vpd).

[4] Lane widths may vary between 10'-12' feet for collectors with 2001-4000 ADT. Widths shown may be decreased by 2 feet (26 feet to 24 feet), (31 feet to 29 feet) and (36 feet to 34 feet) based upon engineering judgment subject to VDOT approval.

[5] If the Local Street has 1 point of access and ADT>400 vpd, then the roadway width must meet design values (2001 TO 4000 vpd).

[6] For 0-400 ADT and "No Parking" ONLY minimum pavement width may be reduced from 24 feet to 18 feet and shoulder width may be reduced in accordance with Note 8 above.

[7] Lane widths may vary between 10'-12' feet for collectors with 2001-4000 ADT. Widths shown may be decreased by 2 feet (26 feet to 24 feet), (31 feet to 29 feet) and (36 feet to 34 feet) based upon engineering judgment subject to VDOT approval.

Traditional Neighborhood Design

In addition the road design manual has a special section called, Section 6 –Traditional Neighborhood Design[8]. This section recognizes that localities may see a relaxation of some of the minimum standards in certain areas where traditional neighborhood design principles might apply.

VDOT allows for this option if certain criteria are met. VDOT states that "the following features are characteristic of Traditional Neighborhood Developments and may be allowed within these subdivision guidelines."

A. All or most streets must be part of a dense interconnected pattern. The degree of interconnectivity should be maximized to permit multiple routes, diffuse traffic and shorten walking distances. Most Traditional Neighborhood Development streets are designed to minimize the impact of through traffic.

B. One-way street pairs are often used. The design features for one-way streets are shown on Table B(1)-3*.

C. Large vehicular corridors are usually found within the core area and near the perimeter of the proposed development. Traditional Neighborhood Developments typically include transit availability within a 15-minute walk of most areas of the development so a good network of streets that can accommodate buses is important.

D. All or most local streets should have short block lengths of between 250 and 500 feet.

E. Traffic calming – Many of the previously identified traffic calming devices may be utilized in a Traditional Neighborhood Development to promote pedestrian movement. Loop streets or eyebrows are often used in Traditional Neighborhood Development and may be considered acceptable ancillary pavement areas used only with curb and gutter sections. These features are not normally considered separate streets but may be used within the internal subdivision street network and should not adjoin any existing road. See Figure B(1)-22* – Traffic Calming Details.

F. Curb Extensions – Curb extensions at intersections are frequently used in Traditional Neighborhood Developments. Curb Extensions are also used to protect parking areas and to reduce pedestrian crossing times.

Innovative Design Proposals

Finally, the Road Design Manual also has a section dealing with alternative standards called Section 7 – Innovative Design Proposals. If a development proposes use of a recognized acceptable concept or material not previously approved for VDOT use, a request shall be submitted to VDOT's District Engineer/Administrator's Designee or designee for review. The District Engineer/Administrator's Designee or designee, through consultation with appropriate divisions, will determine if the request will be approved for a VDOT maintained street. If it is determined that the non-standard item may be installed within the dedicated right of way and should be maintained by others, a permit will be required.

[8] Road Design Manual Appendix B(1) Page B(1)-59

CONCEPTUAL COST GUIDANCE

For each selected project the Consultant Team has constructed a conceptual estimate of project cost. Cost estimates are based on typical costs for individual construction elements including sidewalks, road markings, ADA curb ramps, and pedestrian signals, along with engineering, construction mobilization, and contingency costs. Typical costs have been drawn from regional sources. While efforts have been made to recommend projects within existing rights-of-way, the cost of any necessary right-of-way acquisition have not been included.

The conceptual cost estimates provided in this document will aid the County in budgeting for capital projects or seeking grants and outside funding. Importantly, project costs can vary widely depending on many factors. Specific engineering of individual projects may uncover issues that change project costs. Construction costs will also vary over time. The conceptual estimates included here should not be relied upon beyond six months from the publication of this document.

See Appendix A for additional cost details.

Funding Considerations

These projects can be funded through a variety of sources and those sources can often be combined to ensure full project completion. The following section outlines potential sources of funding for bicycle and pedestrian projects and notes about each source.

SMART SCALE

SMART SCALE is the one of the most prominent sources of funding for transportation projects in the Commonwealth of Virginia. As of 2022, the program is in its fifth round and it is administered through the Office of Intermodal Planning and Investment (OIPI) with the assistance of the Virginia Department of Transportation (VDOT) and Department of Rail and Public Transportation (DRPT). It is a highly competitive program and projects are scored and the scores are relative to other projects in the VDOT district. There are a variety of factors that make projects competitive but adding bicycle and pedestrian elements to other projects potentially improves their scoring. For example, if a locality would like to pursue SMART SCALE for intersection improvements, the addition of bicycle and pedestrian facilities identified in planning documents increases the multimodality of the project and may make it more competitive. Goochland can refer to this plan when considering larger transportation (intersection or corridor) projects for opportunities to fund bicycle and pedestrian infrastructure.

Note that not all recommended projects may be eligible for SMART SCALE funds. While SMART SCALE may be ideal for establishing new sidewalks or bicycle facilities, this funding source may not support widening sidewalks were sidewalks already exist, or adding other streetscaping elements.

Transportation Alternatives Funding

The Transportation Alternatives Program (TAP) provides for construction and design of bicycle and pedestrian facilities through a formula program administered by VDOT. The program is intended to help localities fund projects that expand non-motorized travel choices centered around cultural, historical, and environmental resources.

Recreation-Oriented Grants

The Virginia Department of Conservation and Recreation (DCR) offers a number of grant programs but two programs that may assist in some of the off-road paths and trails are its Trail Access Grant program and the Recreational Trails Program. The former is a 100 percent reimbursement program for trail projects and projects that increase access to trails for individuals with disabilities. The latter is a matching program aimed at building and rehabilitating trails and acquiring land for trail corridors. These programs are potential funding options for connecting village areas to new or existing parks, trails, and greenways.

Table 7: Conceptual Cost Estimates; Courthouse Village Area Pedestrian Improvements

Segment	Start	End	Included Improvements	Conceptual Cost
Bulldog Way	River Rd	Sandy Hook Rd	Sidewalk on west side; Goochland MS/HS to Sandy Hook. Crosswalks at Sandy Hook	$1,549,313
Earls Road	River Rd	Kline Ct	Sidewalk on north side	$393,371
Fairground Road	Sandy Hook Rd	mapped extent	Sidewalk on north side	$4,982,119
Hidden Rock Lane	Fairground Rd	parking lot	Sidewalk on east side	$797,035
Maidens Road	River Rd	Maidens Lp	Sidewalk on north side	$557,082
River Road	Cedar Point Rd	Reed Marsh Dr	Sidewalk on north side to Bulldog Wy. Sidewalk on south side to existing	$2,440,323
River Road	Reed Marsh Ln	Maidens Rd	Fill sidewalk gaps; Reed Marsh to existing, existing to Scott, existing to Swanns Inn, Swanns In to Maidens	$3,342,957
Sandy Hook Road	Bulldog Wy	River Rd	Sidewalk on east side	$3,117,440

Table 8: Conceptual Cost Estimates; Courthouse Village Area Bicycle Improvements

Segment	Start	End	Included Improvements	Conceptual Cost
Bulldog Way	River Rd	Sandy Hook Rd	Shared lane markings (sharrows)	$63,660
Fairground Road	Sandy Hook Rd	Maidens Rd	Widen shoulders	$2,015,293
Maidens Road	River Rd	Maidens Lp	Widen shoulders	$322,422
River Road	Jackson Shop Rd	Sandy Hook Rd	Widen shoulders	$2,300,105
River Road	Sandy Hook Rd	Maidens Rd	Bicycle lanes on both sides; Sandy Hook to Swanns Inn. Shared lane markings (sharrows); Swanns Inn to Correctional Center. Widen shoulders; Correctional Center to Maidens	$1,941,388
Sandy Hook Road	Bulldog Wy	River Rd	Widen shoulders on both sides from Bulldog to Forestry Dept. Shared lane markings (sharrows) from Forestry Dept to Fairground. Bicycle lanes on both sides; Fairground to River Rd	$738,227

Table 9: Conceptual Cost Estimates; Centerville Village Area Pedestrian Improvements

Segment	Start	End	Included Improvements	Conceptual Cost
Ashland Road	Interstate 64	Broad Street Rd	Sidewalk on west side. Unsignalized crossings at Three Chopt, Rockville, and Plaza	$2,055,218
Briggs Drive	Plaza Dr	Broad Street Rd	Sidewalk on west side; Plaza to Broad Street. Sidewalk on east side; Plaza to existing sidewalk	$828,999
Broad Street Road	Manakin Rd	Route 288	Sidewalk on both sides; filling existing gaps. Install six pedestrian signalized intersections	$5,073,715
Lablayre Way	Briggs Dr	Broad Street Rd	Sidewalk on both sides. Install two unsignalized intersections	$361,101
Manakin Road	Saddlecrk Pkwy	Broad Street Rd	Sidewalk on east side	$1,009,725
Plaza Drive	Broad Street Rd	St Matthews Ln	Sidewalk on both sides	$1,175,527
Plaza Drive	St Matthews Ln	Ashland Rd	Sidewalk on north side	$849,362
Rockville Road	I-64 bridge	Ashland Rd	Sidewalk on north side. Unsignalized crossing at St Matthews	$2,066,206
Saint Matthews Lane	Rockville Rd	Broad Street Rd	Sidewalk on west side; Rockville to Broad. Sidewalk on east side; Little Falls to Broad. Install two unsignalized intersections. Install pedestrian facilities on existing bridge	$2,359,191
Hockett Road	Broad Street Rd	Centerville Parke	Sidewalk on west side. Sidewalk on east side to existing sidewalk	$1,920,157
Three Chopt Road	Ashland Rd	end	Sidewalk on north side	$2,120,609

Table 10: Conceptual Cost Estimates; Centerville Village Area Bicycle Improvements

Segment	Start	End	Included Improvements	Conceptual Cost
Ashland Road	I-64	Broad Street Rd	Widen shoulders	$1,320,672
Briggs Drive	Broad Street Rd	Plaza Dr	Bicycle lanes on both sides	$142,174
Four Rings Drive	Broad Street Rd	end	Shared lane markings (sharrows)	$21,180
Hermitage Road	Manakin Rd	Hunting Ridg Rd	Widen shoulders	$854,350
Hockett Road	Broad Street Rd	Paula Ln	Widen shoulders	$1,494,267
Lablayre Way	Briggs Dr	St Matthews Ln	Shared lane markings (sharrows)	$10,531
Manakin Road	Broad Street Rd	Grand Dr	Widen shoulders	$1,213,088
Plaza Drive	Broad Street Rd	Ashland Rd	Shared lane markings (sharrows)	$93,478
Rockville Road	I-64 bridge	Ashland Rd	Widen shoulders	$1,441,166
Saint Matthews Lane	Rockville Rd	Broad Street Rd	Widen shoulders	$1,168,320
Three Chopt Road	Ashland Rd	end	Widen shoulders	$1,586,220
Wilkes Ridge Parkway	Broad Street Rd	Avery Pt Ln	Shared lane markings (sharrows)	$59,400

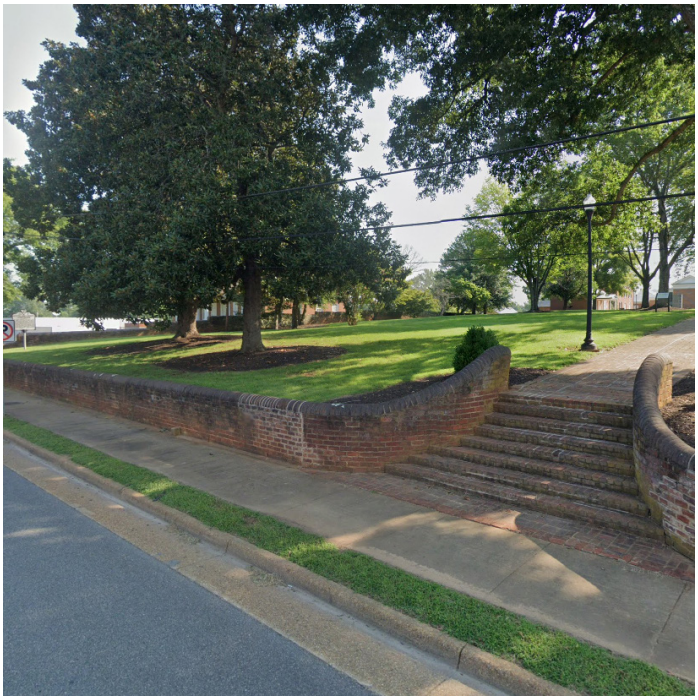
CONCLUSIONS

The Goochland Courthouse and Centerville Village areas are key components of Goochland County's plans for future growth. As Urban Development Areas (UDAs), both villages are planned as focus areas for new residential and employment growth, placing new residents in proximity to existing infrastructure, and helping to preserve the rural character of other areas of the County.

An analysis of bicycle and pedestrian accessibility shows that, although there is limited existing infrastructure in both villages there is also the potential to establish significant bicycle and pedestrian networks as both villages continue to grow over the long term. This study focuses on improvements along existing public routes and primarily within existing rights-of-way, showing significant potential to add new sidewalks, crosswalks, bicycle lanes, shared lane markings, and paved shoulders to provide for bicycle and pedestrian needs in both village areas. The future growth of both village areas can play a positive role, as future bicycle and pedestrian improvements may be implemented by a combination of public action and private action through the development of new properties. New development may also add internal bicycle and pedestrian paths, in addition to other amenities, such as horse or golf cart infrastructure and additional nodes of recreation or other activity, to meet the needs and desires of future residents.

The focus of this study on existing routes and rights-of-way should not discount the potential of other improvements or needs. While improvements requiring the County to acquire right-of-way will likely be more difficult and costly, critical links in the bicycle and pedestrian network may require it. One such example is Broad Street Road, where high speed and high volume traffic would suggest bike/ped facilities separated from the roadway, but where right-of-way is not currently available. A long-term strategy such as a separate shared use path may be warranted but remains outside of this study's scope.

The individual recommendations of this plan, along with associated designs and conceptual costs, should be used by the County as it pursues further study, design, engineering, and funding to expand bicycle and pedestrian networks.



APPENDIX A - CONCEPTUAL COST DETAILS

PROJECT COST ESTIMATE

PROJ.: Bulldog Way Bicycle Facilities
SITE: Bulldog Way Sharrows from River Road W to Sandy Hook Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	52	$717.14	$ 37,291.28	

Total Number of Bid items = 2

PROJ.: Bulldog Way Bicycle Facilities
SITE: Bulldog Way Sharrows from River Road W to Sandy Hook Road

MOBILIZATION	$	4,286.84	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	47,155.24		
ENGINEERING	$	7,073.29	***15.0%*** OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	11,788.81	***25.0%*** OF SUBTOTAL	
CONTINGENCIES	$	9,431.05	***20.0%*** OF SUBTOTAL	
TOTAL	**$**	**63,659.57**		
			Network Version	
Regression Model:		***Linear***		
District:				
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***	

PROJECT COST ESTIMATE

PROJ.: Bulldog Way Sidewalk - West Side

SITE: Goochland MS/HS entrance to Sandy Hook Road. Include the Crosswalks at Sandy Hook Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.9	$49,549.35	$ 44,594.42	
120	REGULAR EXCAVATION	CY	2057	$76.08	$ 156,496.56	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1728	$51.83	$ 89,562.24	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	5	$724.92	$ 3,624.60	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2178	$99.98	$ 217,756.44	
13540	CONC. CLASS A3 RETAINING WALL	CY	130	$95.00	$ 12,350.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
24600	REMOVE EXISTING GUARDRAIL	LF	1760	$4.64	$ 8,166.40	
27012	TOPSOIL CLASS A 2"	ACRE	0.9	$17,757.46	$ 15,981.71	
27101	TEMPORARY SEED	LB	90	$29.80	$ 2,682.00	
27102	REGULAR SEED	LB	108	$28.30	$ 3,056.40	
27103	OVERSEEDING	LB	108	$19.75	$ 2,133.00	
27505	TEMP. SILT FENCE	LF	3920	$5.16	$ 20,227.20	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	248	$27.00	$ 6,696.00	

Total Number of Bid items = 16

PROJ.: Bulldog Way Sidewalk - West Side

SITE: Goochland MS/HS entrance to Sandy Hook Road. Include the Crosswalks at Sandy Hook Road

MOBILIZATION	$ 66,417.81	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 885,321.90			
ENGINEERING	$ 221,330.47	***25.0%***	OF SUBTOTAL	
CEI	$ 265,596.57	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 442,660.95	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 1,549,313.32**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

Enter % based on Proj. specific conditions & requirements

PROJECT COST ESTIMATE

PROJ.: Earls Road
SITE: Sidewalk on the north side of roadway from River Road to Kline Court.

PROJ.: Earls Road
SITE: Sidewalk on the north side of roadway from River Road to Kline Court.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$10,000.00	$ 10,000.00	
111	CLEARING AND GRUBBING	ACRE	0.31	$49,549.35	$ 15,360.30	
120	REGULAR EXCAVATION	CY	715	$76.08	$ 54,397.20	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	600	$51.83	$ 31,098.00	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	756	$99.98	$ 75,584.88	
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	
27012	TOPSOIL CLASS A 2"	ACRE	0.31	$17,575.46	$ 5,448.39	
27101	TEMPORARY SEED	LB	31	$29.80	$ 923.80	
27102	REGULAR SEED	LB	38	$28.30	$ 1,075.40	
27103	OVERSEEDING	LB	38	$19.75	$ 750.50	
27505	TEMP. SILT FENCE	LF	1361	$5.16	$ 7,022.76	

Total Number of Bid items = 11

MOBILIZATION	$	20,333.73	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)
SUBTOTAL	$	224,783.53		
ENGINEERING	$	56,195.88	***25.0%***	OF SUBTOTAL
CEI	$	67,435.06	***30.0%***	OF SUBTOTAL
CONTINGENCIES	$	112,391.76	***50.0%***	OF SUBTOTAL
TOTAL	**$**	**393,371.17**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Fairground Road Bicycle Facilities
Provide wide shoulders on both sides of the roadway from Sandy
SITE: Hook Road to Maidens Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	2	$49,549.35	$ 99,098.70	
120	REGULAR EXCAVATION	CY	3657	$76.08	$ 278,224.56	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	3636	$51.83	$ 188,453.88	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	1149	$184.12	$ 211,553.88	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	2326	$115.25	$ 268,071.50	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

PROJ.: Fairground Road Bicycle Facilities
Provide wide shoulders on both sides of the roadway from Sandy Hook
SITE: Road to Maidens Road

MOBILIZATION	$	92,548.98	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$	1,343,528.62			
ENGINEERING	$	268,705.72	***20.0%***	OF SUBTOTAL	
CEI	$	403,058.59	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	403,058.59	***30.0%***	OF SUBTOTAL	
TOTAL	**$**	**2,015,292.93**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Fairground Road

SITE: Sidewalk on North side from Sandy Hook Road to past Hidden Rock Park

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.5	$49,549.35	$ 74,324.03	
120	REGULAR EXCAVATION	CY	2786	$76.08	$ 211,958.88	
1242	24" CONC. PIPE	LF	6000	$245.02	$ 1,470,120.00	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2927	$51.83	$ 151,706.41	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	5	$724.92	$ 3,624.60	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	3688	$99.98	$ 368,726.24	
13260	SALVAGE EXIST. GUARDRAIL	LF	1055	$14.00	$ 14,770.00	
13263	INSTALL SALVAGED GUARDRAIL	LF	1055	$30.00	$ 31,650.00	
13286	GUARDRAIL TERMINAL GR-MGS2 TANGENT END TERMINAL GR-MGS2	EA	4	$3,551.02	$ 14,204.08	
13555	NS RETAINING WALL	CY	250	$95.00	$ 23,750.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	1.5	$17,575.46	$ 26,363.19	
27101	TEMPORARY SEED	LB	150	$29.80	$ 4,470.00	
27102	REGULAR SEED	LB	180	$28.30	$ 5,094.00	
27103	OVERSEEDING	LB	180	$19.75	$ 3,555.00	
27505	TEMP. SILT FENCE	LF	6638	$5.16	$ 34,252.08	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	320	$27.00	$ 8,640.00	

PROJ.: Fairground Road

SITE: Sidewalk on North side from Sandy Hook Road to past Hidden Rock Park

MOBILIZATION	$	164,139.28	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$	2,846,924.91			
ENGINEERING	$	711,731.23	***25.0%***	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$	854,077.47	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	1,423,462.45	***50.0%***	OF SUBTOTAL	
TOTAL	**$**	**4,982,118.59**			
			Network Version		
Regression Model:		***Linear***			
District:					
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Hidden Rock Lane
SITE: Sidewalk on the east side from Fairground to End (Parking Lot)

PROJ.: Hidden Rock Lane
SITE: Sidewalk on the east side from Fairground to End (Parking Lot)

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$15,000.00	$ 15,000.00	
111	CLEARING AND GRUBBING	ACRE	0.55	$49,549.35	$ 27,252.14	
120	REGULAR EXCAVATION	CY	1013	$76.08	$ 77,069.04	
1242	24" CONC. PIPE	LF	300	$245.02	$ 73,506.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1064	$51.83	$ 55,147.12	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	5	$724.92	$ 3,624.60	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	1340	$99.98	$ 133,973.20	
13555	NS RETAINING WALL	CY	10	$95.00	$ 950.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.55	$17,575.46	$ 9,666.50	
27101	TEMPORARY SEED	LB	55	$29.80	$ 1,639.00	
27102	REGULAR SEED	LB	66	$28.30	$ 1,867.80	
27103	OVERSEEDING	LB	66	$19.75	$ 1,303.50	
27505	TEMP. SILT FENCE	LF	2412	$5.16	$ 12,445.92	

Total Number of Bid items = 14

MOBILIZATION	$	36,426.65	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)	
SUBTOTAL	$	455,448.59		
ENGINEERING	$	113,862.15	***25.0%*** OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	136,634.58	***30.0%*** OF SUBTOTAL	
CONTINGENCIES	$	227,724.30	***50.0%*** OF SUBTOTAL	
TOTAL	**$**	**797,035.03**		
			Network Version	
Regression Model:		***Linear***		
District:				
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***	

PROJECT COST ESTIMATE

PROJ.: Maidens Road Bicycle Facilities
Provide wide shoulders on both sides of the roadway from River
SITE: Road to Maidens Loop

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	0.38	$49,549.35	$ 18,828.75	
120	REGULAR EXCAVATION	CY	608	$76.08	$ 46,256.64	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	678	$51.83	$ 35,140.74	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	215	$184.12	$ 39,585.80	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	434	$115.25	$ 50,018.50	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 6

PROJ.: Maidens Road Bicycle Facilities
Provide wide shoulders on both sides of the roadway from River Road
SITE: to Maidens Loop

MOBILIZATION	$ 19,540.76	= 10% OF THE SUM OF BID ITEMS		
SUBTOTAL	$ 214,948.31			
ENGINEERING	$ 42,989.66	***20.0%***	OF SUBTOTAL	
CEI	$ 64,484.49	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 64,484.49	***30.0%***	OF SUBTOTAL	
TOTAL	**$ 322,422.46**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Maidens Road
Sidewalk on the north side of roadway from River Road to
SITE: Maidens Loop.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$15,000.00	$ 15,000.00	
111	CLEARING AND GRUBBING	ACRE	0.38	$49,549.35	$ 18,828.75	
120	REGULAR EXCAVATION	CY	855	$76.08	$ 65,048.40	
1242	24" CONC. PIPE	LF	150	$245.02	$ 36,753.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	719	$51.83	$ 37,265.77	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	905	$99.98	$ 90,481.90	
13540	CONC. CLASS A3 RETAINING WALL	CY	43	$95.00	$ 4,085.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.38	$17,575.46	$ 6,678.67	
27101	TEMPORARY SEED	LB	38	$29.80	$ 1,132.40	
27102	REGULAR SEED	LB	46	$28.30	$ 1,301.80	
27103	OVERSEEDING	LB	46	$19.75	$ 908.50	
27505	TEMP. SILT FENCE	LF	1630	$5.16	$ 8,410.80	

Total Number of Bid items = 13

PROJ.: Maidens Road
Sidewalk on the north side of roadway from River Road to Maidens
SITE: Loop.

MOBILIZATION	$ 26,860.41	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 318,332.53			
ENGINEERING	$ 79,583.13	***25.0%***	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$ 95,499.76	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 159,166.26	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 557,081.92**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: River Road West
SITE: North Cedar Point Rd to Bulldog Way (HS/MS School Entrance), and South Cedar Point Rd to Existing (Elementary School)

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.2	$49,549.35	$ 59,459.22	
120	REGULAR EXCAVATION	CY	2806	$76.08	$ 213,480.48	
1242	24" CONC. PIPE	LF	1212	$245.02	$ 296,964.24	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2359	$51.83	$ 122,266.97	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	3	$724.92	$ 2,174.76	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2972	$99.98	$ 297,140.56	
13540	CONC. CLASS A3 RETAINING WALL	CY	16	$95.00	$ 1,520.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
24600	REMOVE EXISTING GUARDRAIL	LF	205	$4.64	$ 951.20	
27012	TOPSOIL CLASS A 2"	ACRE	1.2	$17,575.46	$ 21,090.55	
27101	TEMPORARY SEED	LB	120	$29.80	$ 3,576.00	
27102	REGULAR SEED	LB	144	$28.30	$ 4,075.20	
27103	OVERSEEDING	LB	144	$19.75	$ 2,844.00	
27505	TEMP. SILT FENCE	LF	5344	$5.16	$ 27,575.04	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	400	$27.00	$ 10,800.00	

Total Number of Bid items = 17

PROJ.: River Road West
SITE: North Cedar Point Rd to Bulldog Way (HS/MS School Entrance), and South Cedar Point Rd to Existing (Elementary School)

MOBILIZATION	$ 94,974.77	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,394,470.11			
ENGINEERING	$ 348,617.53	***25.0%***	OF SUBTOTAL	
CEI	$ 418,341.03	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 697,235.05	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 2,440,322.69**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: River Road W Bicycle Facilities
Provide wide shoulders on both sides of the roadway from
SITE: Jackson Shop Road to Sandy Hook Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	2.84	$49,549.35	$ 140,720.15	
120	REGULAR EXCAVATION	CY	3861	$76.08	$ 293,744.88	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	4311	$51.83	$ 223,439.13	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	1361	$184.12	$ 250,587.32	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	2757	$115.25	$ 317,744.25	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

PROJ.: River Road W Bicycle Facilities
Provide wide shoulders on both sides of the roadway from Jackson Shop
SITE: Road to Sandy Hook Road

MOBILIZATION	$	101,590.64	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$	1,533,403.50			
ENGINEERING	$	306,680.70	***20.0%***	OF SUBTOTAL	
CEI	$	460,021.05	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	460,021.05	***30.0%***	OF SUBTOTAL	
TOTAL	**$**	**2,300,105.25**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: River Road
Sidewalk on the east side from Reed Marsh Lane to Maidens Road. This is a sidewalk gap improvement. Reed Marsh Lane to existing sidewalk, Existing to Scott Road, Existing to Swann's Inn,
SITE: Swann's Inn to Maidens Road

PROJ.: River Road
Sidewalk on the east side from Reed Marsh Lane to Maidens Road. This is a sidewalk gap improvement. Reed Marsh Lane to existing sidewalk, Existing to Scott Road, Existing to Swann's Inn, Swann's Inn to Maidens
SITE: Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$25,000.00	$ 25,000.00	
111	CLEARING AND GRUBBING	ACRE	1.75	$49,549.35	$ 86,711.36	
120	REGULAR EXCAVATION	CY	3998	$76.08	$ 304,167.84	
1242	24" CONC. PIPE	LF	516	$245.02	$ 126,430.32	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	3171	$51.83	$ 164,352.93	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	7	$724.92	$ 5,074.44	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	4233	$99.98	$ 423,215.34	
13540	CONC. CLASS A3 RETAINING WALL	CY	33	$95.00	$ 3,135.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	1.75	$17,575.46	$ 30,757.06	
27101	TEMPORARY SEED	LB	175	$29.80	$ 5,215.00	
27102	REGULAR SEED	LB	210	$28.30	$ 5,943.00	
27103	OVERSEEDING	LB	210	$19.75	$ 4,147.50	
27505	TEMP. SILT FENCE	LF	7619	$5.16	$ 39,314.04	
49012	NS UTILITIES (Relocate Utility Poles and Electrical Box)	EA	5.5	$60,000.00	$ 330,000.00	
50300	REMOVE EXISTING 1 POST SIGN STRUCTURE	EA	8	$341.03	$ 2,728.24	
50302	REMOVE EXISTING 2 POST SIGN STRUCTURE	EA	1	$515.36		
50340	RELOCATE EXISTING 1 POST GROUND MOUNTED SIGN PANEL	EA	8	$458.86	$ 3,670.88	
50342	RELOCATE EXISTING 2 POST GROUND MOUNTED SIGN PANEL	EA	1	$660.89	$ 660.89	

MOBILIZATION	$ 119,536.25	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,910,261.21			
ENGINEERING	$ 477,565.30	*25.0%*	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$ 573,078.36	*30.0%*	OF SUBTOTAL	
CONTINGENCIES	$ 955,130.60	*50.0%*	OF SUBTOTAL	
TOTAL	**$ 3,342,957.11**			
		Network Version		
Regression Model:	*Linear*			
District:				
Pricing Model Date:	*2/8/2022*	*Current To 11/2021 Letting*		

PROJECT COST ESTIMATE

PROJ.: Sandy Hook Road
SITE: Sidewalk on the East Side from Bulldog Way to River Road W.

PROJ.: Sandy Hook Road
SITE: Sidewalk on the East Side from Bulldog Way to River Road W.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.2	$49,549.35	$ 59,459.22	
120	REGULAR EXCAVATION	CY	2799	$76.08	$ 212,947.92	
1242	24" CONC. PIPE	LF	765	$245.02	$ 187,440.30	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2353	$51.83	$ 121,955.99	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	9	$724.92	$ 6,524.28	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2964	$99.98	$ 296,340.72	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	1.2	$17,575.46	$ 21,090.55	
27101	TEMPORARY SEED	LB	120	$29.80	$ 3,576.00	
27102	REGULAR SEED	LB	144	$28.30	$ 4,075.20	
27103	OVERSEEDING	LB	144	$19.75	$ 2,844.00	
27505	TEMP. SILT FENCE	LF	5334	$5.16	$ 27,523.44	
49012	NS UTILITIES (Relocate Utility Poles)	EA	8	$60,000.00	$ 480,000.00	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	320	$27.00	$ 8,640.00	

Total Number of Bid items = 16

MOBILIZATION	$	113,399.74	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$	1,781,394.48			
ENGINEERING	$	445,348.62	***25.0%***	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$	534,418.34	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	890,697.24	***50.0%***	OF SUBTOTAL	
TOTAL	**$**	**3,117,440.34**			
			Network Version		
Regression Model:		***Linear***			
District:					
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Sandy Hook Road Bicycle Facilities
Provide wide shoulders on both sides of the roadway from Bulldog Way to the Forestry Department then Sharrows to Fairgrounds Road and from Fairground Road to River Road W
SITE: provide bike lanes both sides.

PROJ.: Sandy Hook Road Bicycle Facilities

SITE: Provide wide shoulders on both sides of the roadway from Bulldog Way to the Forestry Department then Sharrows to Fairgrounds Road and from Fairground Road to River Road W provide bike lanes both sides.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	0.8	$49,549.35	$ 39,639.48	
120	REGULAR EXCAVATION	CY	1305	$76.08	$ 99,284.40	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1456	$51.83	$ 75,464.48	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	460	$184.12	$ 84,695.20	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	931	$115.25	$ 107,297.75	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
54043	TY.B CL.II PAVE. LINE MARK.4"	LF	7036	$2.61	$ 18,363.96	
54652	PVMT SYMB MRKG BICYCLE THRU ARROW TY B CL II	EA	24	$246.80	$ 5,923.20	
54660	PVMT SYMB MRKG HELMETED BICYCLIST TY B CL II	EA	24	$301.59	$ 7,238.16	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	26	$372.32	$ 9,680.32	

Total Number of Bid items = 10

MOBILIZATION	$	38,987.31	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)
SUBTOTAL	$	492,151.38		
ENGINEERING	$	98,430.28	***20.0%***	OF SUBTOTAL
CEI	$	147,645.41	***30.0%***	OF SUBTOTAL
CONTINGENCIES	$	147,645.41	***30.0%***	OF SUBTOTAL
TOTAL	**$**	**738,227.06**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: River Road Bicycle Facilities
Provide bike lanes both sides from River Road W to Swann' Inn then provide sharrows from Swann's Inn to the Correctional
SITE: Center and from there provide wide shoulders to Maidens Road.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.79	$49,549.35	$ 88,693.34	
120	REGULAR EXCAVATION	CY	2880	$76.08	$ 219,110.40	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	3214	$51.83	$ 166,581.62	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	1015	$184.12	$ 186,881.80	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	2056	$115.25	$ 236,954.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
54043	TY.B CL.II PAVE. LINE MARK.4"	LF	20852	$2.61	$ 54,423.72	
54652	PVMT SYMB MRKG BICYCLE THRU ARROW TY B CL II	EA	70	$246.80	$ 17,276.00	
54660	PVMT SYMB MRKG HELMETED BICYCLIST TY B CL II	EA	70	$301.59	$ 21,111.30	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	20	$372.32	$ 7,446.40	

Total Number of Bid items = 11

PROJ.: River Road Bicycle Facilities
Provide bike lanes both sides from River Road W to Swann' Inn then provide sharrows from Swann's Inn to the Correctional Center and from
SITE: there provide wide shoulders to Maidens Road.

MOBILIZATION	$ 90,202.78	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,294,258.48			
ENGINEERING	$ 258,851.70	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$ 388,277.54	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 388,277.54	***30.0%***	OF SUBTOTAL	
TOTAL	**$ 1,941,387.72**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Ashland Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Interstate 64 to Broad Street Road

PROJ.: Ashland Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Interstate
SITE: 64 to Broad Street Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.2	$49,549.35	$ 59,459.22	
120	REGULAR EXCAVATION	CY	1954	$76.08	$ 148,660.32	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2181	$51.83	$ 113,041.23	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	689	$184.12	$ 126,858.68	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	1395	$115.25	$ 160,773.75	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

MOBILIZATION	$	66,077.77	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)	
SUBTOTAL	$	880,448.09			
ENGINEERING	$	176,089.62	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	264,134.43	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	264,134.43	***30.0%***	OF SUBTOTAL	
TOTAL	**$**	**1,320,672.14**			

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Ashland Road Sidewalk - Westside
Interstate 64 to Broad Street Road - sidewalk on the westside.
Includes three unsignalized crossing, one at Three Chop Road,
SITE: One at Rockville Road, and one at Plaza Drive

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.2	$49,549.35	$ 59,459.22	
120	REGULAR EXCAVATION	CY	2214	$76.08	$ 168,441.12	
1242	24" CONC. PIPE	LF	180	$277.29	$ 49,912.20	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2326	$51.83	$ 120,556.58	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	10	$724.92	$ 7,249.20	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2930	$99.98	$ 292,941.40	
13260	SALVAGE EXIST. GUARDRAIL	LF	1127	$14.00	$ 15,778.00	
13263	INSTALL SALVAGED GUARDRAIL	LF	1127	$30.00	$ 33,810.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	1.2	$17,575.46	$ 21,090.55	
27101	TEMPORARY SEED	LB	120	$29.80	$ 3,576.00	
27102	REGULAR SEED	LB	144	$28.30	$ 4,075.20	
27103	OVERSEEDING	LB	144	$19.75	$ 2,844.00	
27505	TEMP. SILT FENCE	LF	5275	$5.16	$ 27,219.00	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	1755	$27.00	$ 47,385.00	

Total Number of Bid items = 17

PROJ.: Ashland Road Sidewalk - Westside
Interstate 64 to Broad Street Road - sidewalk on the westside. Includes
three unsignalized crossing, one at Three Chop Road, One at Rockville
SITE: Road, and one at Plaza Drive

MOBILIZATION	$ 84,495.73	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,174,410.32			
ENGINEERING	$ 293,602.58	***25.0%***	OF SUBTOTAL	
CEI	$ 352,323.10	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 587,205.16	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 2,055,218.06**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

Enter % based on Proj. specific conditions & requirements

PROJECT COST ESTIMATE

PROJ.: Briggs Drive Bicycle Facilities

SITE: Provide bike lane markings both sides with 10 foot travel lanes.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1456	$48.56	$ 70,703.36	
54043	TY.B CL.II PAVE. LINE MARK.4"	LF	5868	$2.80	$ 16,430.40	
54652	PVMT SYMB MRKG BICYCLE THRU ARROW TY B CL II	EA	7	$47.66	$ 333.62	
54660	PVMT SYMB MRKG HELMETED BICYCLIST TY B CL II	EA	7	$238.59	$ 1,670.13	

Total Number of Bid items = 4

PROJ.: Briggs Drive Bicycle Facilities

SITE: Provide bike lane markings both sides with 10 foot travel lanes.

MOBILIZATION	$	8,913.75	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	98,051.26		
ENGINEERING	$	14,707.69	***15.0%*** OF SUBTOTAL	
CEI	$	29,415.38	***30.0%*** OF SUBTOTAL	
CONTINGENCIES	$	29,415.38	***30.0%*** OF SUBTOTAL	
TOTAL	**$**	**142,174.33**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***

District:

Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Briggs Drive - Both sides of the roadway
Both sides of roadway, 5 foot sidewalk. West side from Plaza Drive to Broad Street and East side from Plaza Drive to the
SITE: existing sidewalk

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.37	$49,549.35	$ 18,333.26	
120	REGULAR EXCAVATION	CY	675	$76.08	$ 51,354.00	
1242	24" CONC. PIPE	LF	200	$277.29	$ 55,458.00	
8992	NS SWM	LS	1	$100,000.00	$ 100,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	710	$51.83	$ 36,799.30	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	16	$724.92	$ 11,598.72	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	894	$99.98	$ 89,382.12	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.37	$17,575.46	$ 6,502.92	
27101	TEMPORARY SEED	LB	37	$29.80	$ 1,102.60	
27102	REGULAR SEED	LB	45	$28.30	$ 1,273.50	
27103	OVERSEEDING	LB	45	$19.75	$ 888.75	
27505	TEMP. SILT FENCE	LF	1609	$5.16	$ 8,302.44	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	720	$27.00	$ 19,440.00	

Total Number of Bid items = 15

PROJ.: Briggs Drive - Both sides of the roadway
Both sides of roadway, 5 foot sidewalk. West side from Plaza Drive to
SITE: Broad Street and East side from Plaza Drive to the existing sidewalk

MOBILIZATION	$ 37,700.95	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 473,713.68			
ENGINEERING	$ 118,428.42	***25.0%***	OF SUBTOTAL	
CEI	$ 142,114.11	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 236,856.84	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 828,998.95**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

Enter % based on Proj. specific conditions & requirements

PROJECT COST ESTIMATE

PROJ.: Broad Street Road - North and South side of roadway
Sidewalks on the north and south side of road. Fill all Gaps from Manakin Road to Route 288. Includes 6 pedestrian signalized
SITE: intersections. Northside Saint Matthews Lane to Four Rings

PROJ.: Broad Street Road - North and South side of roadway
Sidewalks on the north and south side of road. Fill all Gaps from Manakin Road to Route 288. Includes 6 pedestrian signalized intersections.
SITE: Northside Saint Matthews Lane to Four Rings Drive

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$45,000.00	$ 45,000.00	
111	CLEARING AND GRUBBING	ACRE	3.6	$49,549.35	$ 178,377.66	
120	REGULAR EXCAVATION	CY	6537	$76.08	$ 497,334.96	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	6868	$51.83	$ 355,968.44	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	65	$724.92	$ 47,119.80	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	8653	$99.98	$ 865,126.94	
13260	SALVAGE EXIST. GUARDRAIL	LF	1295	$14.00	$ 18,130.00	
13263	INSTALL SALVAGED GUARDRAIL	LF	1295	$30.00	$ 38,850.00	
24160	CONSTRUCTION SIGNS	SF	432	$25.58	$ 11,050.56	
27012	TOPSOIL CLASS A 2"	ACRE	3.6	$17,575.46	$ 63,271.66	
27101	TEMPORARY SEED	LB	360	$29.80	$ 10,728.00	
27102	REGULAR SEED	LB	432	$28.30	$ 12,225.60	
27103	OVERSEEDING	LB	432	$19.75	$ 8,532.00	
27505	TEMP. SILT FENCE	LF	15575	$5.16	$ 80,367.00	
51198	PEDESTRIAN ACTUATION PA 2	EA	48	$1,500.00	$ 72,000.00	
51210	PEDESTAL POLE PF 2 10'	EA	25	$1,822.42	$ 45,560.50	
51240	CONC. FOUNDATION PF 2	EA	25	$1,111.66	$ 27,791.50	
51834	HANGER ASSEMBLY SMB 2, ONE WAY	EA	48	$175.88	$ 8,442.24	
52403	PEDESTRIAN SIGNAL HEAD SP 8	EA	48	$465.44	$ 22,341.12	

MOBILIZATION	$	166,631.70	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)	
SUBTOTAL	$	2,899,265.67		
ENGINEERING	$	724,816.42	***25.0%***	OF SUBTOTAL
CEI	$	869,779.70	***30.0%***	OF SUBTOTAL
CONTINGENCIES	$	1,449,632.84	***50.0%***	OF SUBTOTAL
TOTAL	**$**	**5,073,714.93**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Four Rings Drive Bicycle Facilities

SITE: Four Rings Drive Sharrows from Broad Street Road to end (cul de sac)

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	16	$717.14	$ 11,474.24	

Total Number of Bid items = 2

PROJ.: Four Rings Drive Bicycle Facilities

SITE: Four Rings Drive Sharrows from Broad Street Road to end (cul de sac)

MOBILIZATION	$	1,426.28	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	15,689.08		
ENGINEERING	$	2,353.36	***15.0%*** OF SUBTOTAL	
CEI	$	3,922.27	***25.0%*** OF SUBTOTAL	
CONTINGENCIES	$	3,137.82	***20.0%*** OF SUBTOTAL	
TOTAL	**$**	**21,180.26**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***

District:

Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Hermitage Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Manakin Road to Hunting Ridge Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	0.73	$49,549.35	$ 36,171.03	
120	REGULAR EXCAVATION	CY	1165	$76.08	$ 88,633.20	
8992	NS SWM	LS	1	$150,000.00	$ 150,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1413	$51.83	$ 73,235.79	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	411	$184.12	$ 75,673.32	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	832	$115.25	$ 95,888.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

PROJ.: Hermitage Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Manakin
SITE: Road to Hunting Ridge Road

MOBILIZATION	$	44,388.38	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)	
SUBTOTAL	$	569,566.84			
ENGINEERING	$	113,913.37	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	170,870.05	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	170,870.05	***30.0%***	OF SUBTOTAL	
TOTAL	**$**	**854,350.26**			

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Hockett Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Broad Street Road to Paula Lane

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.4	$49,549.35	$ 69,369.09	
120	REGULAR EXCAVATION	CY	2302	$76.08	$ 175,136.16	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2569	$51.83	$ 133,151.27	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	811	$184.12	$ 149,321.32	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	1644	$115.25	$ 189,471.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

PROJ.: Hockett Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Broad
SITE: Street Road to Paula Lane

MOBILIZATION	$ 74,151.95	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 996,177.91			
ENGINEERING	$ 199,235.58	*20.0%*	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$ 298,853.37	*30.0%*	OF SUBTOTAL	
CONTINGENCIES	$ 298,853.37	*30.0%*	OF SUBTOTAL	
TOTAL	**$ 1,494,266.86**			

Network Version

Regression Model: *Linear*
District:
Pricing Model Date: *2/8/2022* *Current To 11/2021 Letting*

PROJECT COST ESTIMATE

PROJ.: Lablayre Way Bicycle Facilities

SITE: Lablayre Way Sharrows from Briggs Drive to Saint Matthews Lane

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	6	$717.14	$ 4,302.84	

Total Number of Bid items = 2

PROJ.: Lablayre Way Bicycle Facilities

SITE: Lablayre Way Sharrows from Briggs Drive to Saint Matthews Lane

MOBILIZATION	$	709.14	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	7,800.54		
ENGINEERING	$	1,170.08	***15.0%***	OF SUBTOTAL
CEI	$	1,950.14	***25.0%***	OF SUBTOTAL
CONTINGENCIES	$	1,560.11	***20.0%***	OF SUBTOTAL
TOTAL	**$**	**10,530.73**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***

District:

Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Lablayre Way - Both sides of the roadway

SITE: Both sides of roadway, 5 foot sidewalk. From Briggs Dr to Broad Street Road. Also includes the markings for two unsignalized intersections

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$15,000.00	$ 15,000.00	
111	CLEARING AND GRUBBING	ACRE	0.24	$49,549.35	$ 11,891.84	
120	REGULAR EXCAVATION	CY	428	$76.08	$ 32,562.24	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	450	$51.83	$ 23,323.50	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	9	$724.92	$ 6,524.28	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	567	$99.98	$ 56,688.66	
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	
27012	TOPSOIL CLASS A 2"	ACRE	0.24	$17,575.46	$ 4,218.11	
27101	TEMPORARY SEED	LB	24	$29.80	$ 715.20	
27102	REGULAR SEED	LB	29	$28.30	$ 820.70	
27103	OVERSEEDING	LB	29	$19.75	$ 572.75	
27505	TEMP. SILT FENCE	LF	1020	$5.16	$ 5,263.20	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	1008	$27.00	$ 27,216.00	

Total Number of Bid items = 13

PROJ.: Lablayre Way - Both sides of the roadway

SITE: Both sides of roadway, 5 foot sidewalk. From Briggs Dr to Broad Street Road. Also includes the markings for two unsignalized intersections

MOBILIZATION	$	18,758.50	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	206,343.55		
ENGINEERING	$	51,585.89	***25.0%*** OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CEI	$	61,903.06	***30.0%*** OF SUBTOTAL	
CONTINGENCIES	$	103,171.77	***50.0%*** OF SUBTOTAL	
TOTAL	**$**	**361,101.21**		
			Network Version	
Regression Model:		***Linear***		
District:				
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***	

PROJECT COST ESTIMATE

PROJ.: Manakin Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Broad Street Road to Grand Drive

PROJ.: Manakin Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Broad
SITE: Street Road to Grand Drive

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.1	$49,549.35	$ 54,504.29	
120	REGULAR EXCAVATION	CY	1735	$76.08	$ 131,998.80	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1937	$51.83	$ 100,394.71	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	611	$184.12	$ 112,497.32	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	1238	$115.25	$ 142,679.50	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

MOBILIZATION	$ 61,073.88	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 808,725.62			
ENGINEERING	$ 161,745.12	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$ 242,617.68	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 242,617.68	***30.0%***	OF SUBTOTAL	
TOTAL	**$ 1,213,088.42**			

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Manakin Road - Eastside of the roadway
Eastside of the roadway, 5 foot sidewalk. From Saddlecreek
SITE: Parkway to Broad Street Road to Private Drive

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.7	$49,549.35	$ 34,684.55	
120	REGULAR EXCAVATION	CY	911	$76.08	$ 69,308.88	
8992	NS SWM	LS	1	$150,000.00	$ 150,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1354	$51.83	$ 70,177.82	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	7	$724.92	$ 5,074.44	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	1207	$99.98	$ 120,675.86	
13260	SALVAGE EXIST. GUARDRAIL	LF	280	$14.00	$ 3,920.00	
13263	INSTALL SALVAGED GUARDRAIL	LF	280	$30.00	$ 8,400.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.7	$17,575.46	$ 12,302.82	
27101	TEMPORARY SEED	LB	70	$29.80	$ 2,086.00	
27102	REGULAR SEED	LB	84	$28.30	$ 2,377.20	
27103	OVERSEEDING	LB	84	$19.75	$ 1,659.00	
27505	TEMP. SILT FENCE	LF	3069	$5.16	$ 15,836.04	

Total Number of Bid items = 15

PROJ.: Manakin Road - Eastside of the roadway
Eastside of the roadway, 5 foot sidewalk. From Saddlecreek Parkway to
SITE: Broad Street Road to Private Drive

MOBILIZATION	$ 44,905.98	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 576,985.71			
ENGINEERING	$ 144,246.43	***25.0%***	OF SUBTOTAL	
CEI	$ 173,095.71	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 288,492.85	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 1,009,724.99**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Plaza Drive Bicycle Facilities
SITE: Plaza Drive Sharrows from Broad Street Road to Ashland Drive

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	80	$717.14	$ 57,371.20	

Total Number of Bid items = 2

PROJ.: Plaza Drive Bicycle Facilities
SITE: Plaza Drive Sharrows from Broad Street Road to Ashland Drive

MOBILIZATION	$	6,294.83	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	69,243.15		
ENGINEERING	$	10,386.47	***15.0%*** OF SUBTOTAL	
CEI	$	17,310.79	***25.0%*** OF SUBTOTAL	
CONTINGENCIES	$	13,848.63	***20.0%*** OF SUBTOTAL	
TOTAL	**$**	**93,478.26**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Plaza Drive - Both sides of the roadway
Both sides of the roadway, 5 foot sidewalk. From Broad Street
SITE: Road to Saint Matthews Lane

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.5	$49,549.35	$ 24,774.68	
120	REGULAR EXCAVATION	CY	917	$76.08	$ 69,765.36	
1242	24" CONC. PIPE	LF	415	$277.29	$ 115,075.35	
8992	NS SWM	LS	1	$150,000.00	$ 150,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	963	$51.83	$ 49,912.29	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	25	$724.92	$ 18,123.00	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	1213	$99.98	$ 121,275.74	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.5	$17,575.46	$ 8,787.73	
27101	TEMPORARY SEED	LB	50	$29.80	$ 1,490.00	
27102	REGULAR SEED	LB	60	$28.30	$ 1,698.00	
27103	OVERSEEDING	LB	60	$19.75	$ 1,185.00	
27505	TEMP. SILT FENCE	LF	4370	$5.16	$ 22,549.20	

Total Number of Bid items = 14

PROJ.: Plaza Drive - Both sides of the roadway
Both sides of the roadway, 5 foot sidewalk. From Broad Street Road to
SITE: Saint Matthews Lane

MOBILIZATION	$	51,516.01	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$	671,729.47			
ENGINEERING	$	167,932.37	***25.0%***	OF SUBTOTAL	
CEI	$	201,518.84	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	335,864.74	***50.0%***	OF SUBTOTAL	
TOTAL	**$**	**1,175,526.58**			

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Plaza Drive - Northside of the roadway
SITE: Northside of the roadway, 5 foot sidewalk. From Saint Matthews Lane to Ashland Road

PROJ.: Plaza Drive - Northside of the roadway
SITE: Northside of the roadway, 5 foot sidewalk. From Saint Matthews Lane to Ashland Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.37	$49,549.35	$ 18,333.26	
120	REGULAR EXCAVATION	CY	685	$76.08	$ 52,114.80	
1242	24" CONC. PIPE	LF	300	$277.29	$ 83,187.00	
8992	NS SWM	LS	1	$100,000.00	$ 100,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	719	$51.83	$ 37,265.77	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	16	$724.92	$ 11,598.72	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	906	$99.98	$ 90,581.88	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.37	$17,575.46	$ 6,502.92	
27101	TEMPORARY SEED	LB	37	$29.80	$ 1,102.60	
27102	REGULAR SEED	LB	45	$28.30	$ 1,273.50	
27103	OVERSEEDING	LB	45	$19.75	$ 888.75	
27505	TEMP. SILT FENCE	LF	1630	$5.16	$ 8,410.80	

Total Number of Bid items = 14

MOBILIZATION	$ 38,512.78	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 485,349.90			
ENGINEERING	$ 121,337.48	***25.0%***	OF SUBTOTAL	
CEI	$ 145,604.97	***30.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CONTINGENCIES	$ 242,674.95	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 849,362.33**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Rockville Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Interstate 64 Bridge to Ashland Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.4	$49,549.35	$ 69,369.09	
120	REGULAR EXCAVATION	CY	2177	$76.08	$ 165,626.16	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2470	$51.83	$ 128,020.10	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	768	$184.12	$ 141,404.16	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	1554	$115.25	$ 179,098.50	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 7

PROJ.: Rockville Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Interstate
SITE: 64 Bridge to Ashland Road

MOBILIZATION	$	71,682.13	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)	
SUBTOTAL	$	960,777.26			
ENGINEERING	$	192,155.45	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	288,233.18	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$	288,233.18	***30.0%***	OF SUBTOTAL	
TOTAL	**$**	**1,441,165.90**			

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Rockville Road Sidewalk - North Side
Interstate 64 bridge to Ashland Road - sidewalk on the northside.
SITE: Includes unsignalized crossing at Saint Matthews Road

PROJ.: Rockville Road Sidewalk - North Side
Interstate 64 bridge to Ashland Road - sidewalk on the northside.
SITE: Includes unsignalized crossing at Saint Matthews Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.4	$49,549.35	$ 69,369.09	
120	REGULAR EXCAVATION	CY	2468	$76.08	$ 187,765.44	
126	EARTHWORK	LS	1	$50,000.00	$ 50,000.00	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2592	$51.83	$ 134,343.36	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	6	$724.92	$ 4,349.52	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	3266	$99.98	$ 326,534.68	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
24600	REMOVE EXISTING GUARDRAIL	LF	168	$4.64	$ 779.52	
25000	HANDRAIL HR 1	LF	168	$25.00	$ 4,200.00	
27012	TOPSOIL CLASS A 2"	ACRE	1.4	$17,575.46	$ 24,605.64	
27101	TEMPORARY SEED	LB	140	$29.80	$ 4,172.00	
27102	REGULAR SEED	LB	168	$28.30	$ 4,754.40	
27103	OVERSEEDING	LB	168	$19.75	$ 3,318.00	
27505	TEMP. SILT FENCE	LF	5878	$5.16	$ 30,330.48	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	585	$27.00	$ 15,795.00	

Total Number of Bid items = 17

MOBILIZATION	$	84,794.71	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)	
SUBTOTAL	$	1,180,688.97		
ENGINEERING	$	295,172.24	***25.0%*** OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$	354,206.69	***30.0%*** OF SUBTOTAL	
CONTINGENCIES	$	590,344.48	***50.0%*** OF SUBTOTAL	
TOTAL	**$**	**2,066,205.69**		
			Network Version	
Regression Model:		***Linear***		
District:				
Pricing Model Date:		***2/8/2022***	***Current To 11/2021 Letting***	

PROJECT COST ESTIMATE

PROJ.: Saint Matthews Lane Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Rockville Road to Broad Street Road

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	0.8	$49,549.35	$ 39,639.48	
120	REGULAR EXCAVATION	CY	1225	$76.08	$ 93,198.00	
1242	24" CONC. PIPE	LF	650	$277.29	$ 180,238.50	
8992	NS SWM	LS	1	$150,000.00	$ 150,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1367	$51.83	$ 70,851.61	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	432	$184.12	$ 79,539.84	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	875	$115.25	$ 100,843.75	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	

Total Number of Bid items = 8

PROJ.: Saint Matthews Lane Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Rockville Road to Broad Street Road

MOBILIZATION	$	58,991.62	=	$20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)
SUBTOTAL	$	778,879.92		
ENGINEERING	$	155,775.98	***20.0%***	OF SUBTOTAL
CEI	$	233,663.98	***30.0%***	OF SUBTOTAL
CONTINGENCIES	$	233,663.98	***30.0%***	OF SUBTOTAL
TOTAL	**$**	**1,168,319.88**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Saint Matthews Lane Sidewalk - West and Eastside

SITE: Westside sidewalk from Rockville Road to Broad Street Road, Eastside sidewalk from Little Falls Lane to Broad Street Road. This includes two unsignalized intersections at Plaza Dr and Lablayre Way. Pedestrain improvements to existing bridge.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$50,000.00	$ 50,000.00	
111	CLEARING AND GRUBBING	ACRE	1.1	$49,549.35	$ 54,504.29	
120	REGULAR EXCAVATION	CY	1979	$76.08	$ 150,562.32	
1242	24" CONC. PIPE	LF	180	$277.29	$ 49,912.20	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2080	$51.83	$ 107,806.40	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	14	$724.92	$ 10,148.88	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2620	$99.98	$ 261,947.60	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	1.1	$17,575.46	$ 19,333.01	
27101	TEMPORARY SEED	LB	110	$29.80	$ 3,278.00	
27102	REGULAR SEED	LB	132	$28.30	$ 3,735.60	
27103	OVERSEEDING	LB	132	$19.75	$ 2,607.00	
27505	TEMP. SILT FENCE	LF	4717	$5.16	$ 24,339.72	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	1170	$27.00	$ 31,590.00	
66921	NS BRIDGE (Pedestrain Bridge)	LF	140	$2,000.00	$ 280,000.00	

Total Number of Bid items = 16

PROJ.: Saint Matthews Lane Sidewalk - West and Eastside

SITE: Westside sidewalk from Rockville Road to Broad Street Road, Eastside sidewalk from Little Falls Lane to Broad Street Road. This includes two unsignalized intersections at Plaza Dr and Lablayre Way. Pedestrian improvements to existing bridge.

MOBILIZATION	$ 92,767.11	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,348,109.24			
ENGINEERING	$ 337,027.31	***25.0%***	OF SUBTOTAL	
CEI	$ 404,432.77	***30.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CONTINGENCIES	$ 674,054.62	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 2,359,191.17**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Hockett Road - Both sides of the roadway
West side of roadway from Broad Street Road to Centerville
SITE: Park Drive and East side from Broad Street Road to the existing sidewalk

PROJ.: Hockett Road - Both sides of the roadway
West side of roadway from Broad Street Road to Centerville Park Drive
SITE: and East side from Broad Street Road to the existing sidewalk

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	0.97	$49,549.35	$ 48,062.87	
120	REGULAR EXCAVATION	CY	1765	$76.08	$ 134,281.20	
1242	24" CONC. PIPE	LF	350	$277.29	$ 97,051.50	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	1854	$51.83	$ 96,092.82	
13108	CG 12 DETECTABLE WARNING SURFACE	SY	14	$724.92	$ 10,148.88	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	2335	$99.98	$ 233,453.30	
13260	SALVAGE EXIST. GUARDRAIL	LF	356	$14.00	$ 4,984.00	
13263	INSTALL SALVAGED GUARDRAIL	LF	356	$30.00	$ 10,680.00	
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
27012	TOPSOIL CLASS A 2"	ACRE	0.97	$17,575.46	$ 17,048.20	
27101	TEMPORARY SEED	LB	97	$29.80	$ 2,890.60	
27102	REGULAR SEED	LB	116	$28.30	$ 3,282.80	
27103	OVERSEEDING	LB	116	$19.75	$ 2,291.00	
27505	TEMP. SILT FENCE	LF	4203	$5.16	$ 21,687.48	
49012	NS UTILITIES	EA	1	$60,000.00	$ 60,000.00	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	1440	$27.00	$ 38,880.00	

MOBILIZATION	$ 80,820.59	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)		
SUBTOTAL	$ 1,097,232.35			
ENGINEERING	$ 274,308.09	***25.0%***	OF SUBTOTAL	
CEI	$ 329,169.71	***30.0%***	OF SUBTOTAL	*Enter % based on Proj. specific conditions & requirements*
CONTINGENCIES	$ 548,616.18	***50.0%***	OF SUBTOTAL	
TOTAL	**$ 1,920,156.62**			
		Network Version		
Regression Model:	***Linear***			
District:				
Pricing Model Date:	***2/8/2022***	***Current To 11/2021 Letting***		

PROJECT COST ESTIMATE

PROJ.: Three Chopt Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from
SITE: Ashland Road to Cul de Sac

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
111	CLEARING AND GRUBBING	ACRE	1.5	$49,549.35	$ 74,324.03	
120	REGULAR EXCAVATION	CY	2497	$76.08	$ 189,971.76	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2787	$51.83	$ 144,450.21	
10636	ASPHALT CONCRETE TY. SM 9.5D	TON	880	$184.12	$ 162,025.60	
10643	ASPHALT CONCRETE TY. BM 25.0D	TON	1783	$115.25	$ 205,490.75	
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	

Total Number of Bid items = 7

PROJ.: Three Chopt Road Bicycle Facilities
Provide 5' wide shoulders on both sides of the roadway from Ashland
SITE: Road to Cul de Sac

MOBILIZATION	$ 78,428.82	= $20,000 + 7.5% OF (THE SUM OF BID ITEMS - $200,000)		
SUBTOTAL	$ 1,057,479.72			
ENGINEERING	$ 211,495.94	***20.0%***	OF SUBTOTAL	***Enter % based on Proj. specific conditions & requirements***
CEI	$ 317,243.92	***30.0%***	OF SUBTOTAL	
CONTINGENCIES	$ 317,243.92	***30.0%***	OF SUBTOTAL	
TOTAL	**$ 1,586,219.58**			

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Three Chopt Road Sidewalk - North Side
SITE: Ashland Road to Cul de sac - sidewalk on the northside.

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
101	CONSTRUCTION SURVEYING (CONSTR.)	LS	1	$30,000.00	$ 30,000.00	
111	CLEARING AND GRUBBING	ACRE	1.5	$49,549.35	$ 74,324.03	
120	REGULAR EXCAVATION	CY	2829	$76.08	$ 215,230.32	
8992	NS SWM	LS	1	$200,000.00	$ 200,000.00	
10128	AGGR. BASE MATL. TY. I NO. 21B	TON	2972	$51.83	$ 154,038.76	
13220	HYDR. CEMENT CONC. SIDEWALK 4"	SY	3746	$99.98	$ 374,525.08	
24160	CONSTRUCTION SIGNS	SF	108	$25.82	$ 2,788.56	
27012	TOPSOIL CLASS A 2"	ACRE	1.5	$17,575.46	$ 26,363.19	
27101	TEMPORARY SEED	LB	150	$29.80	$ 4,470.00	
27102	REGULAR SEED	LB	180	$28.30	$ 5,094.00	
27103	OVERSEEDING	LB	180	$19.75	$ 3,555.00	
27505	TEMP. SILT FENCE	LF	6742	$5.16	$ 34,788.72	
54042	TY.B CL.I PAVE. LINE MARK. 24"	LF	12	$27.00	$ 324.00	

Total Number of Bid items = 13

PROJ.: Three Chopt Road Sidewalk - North Side
SITE: Ashland Road to Cul de sac - sidewalk on the northside.

MOBILIZATION	$	86,275.08	= $80,000 + 5% OF (THE SUM OF BID ITEMS - $1 MILLION)	
SUBTOTAL	$	1,211,776.74		
ENGINEERING	$	302,944.18	***25.0%***	OF SUBTOTAL
CEI	$	363,533.02	***30.0%***	OF SUBTOTAL
CONTINGENCIES	$	605,888.37	***50.0%***	OF SUBTOTAL
TOTAL	**$**	**2,120,609.29**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***

PROJECT COST ESTIMATE

PROJ.: Wilkes Ridge Parkway Bicycle Facilities
SITE: Wilkes Ridge Parkway Sharrows from Broad Street Road to Avery Pt Lane

ITEM	ITEM DESCRIPTION	UNITS	QUAN.	UNIT PRICE	AMOUNT	Locked
24160	CONSTRUCTION SIGNS	SF	216	$25.82	$ 5,577.12	
54664	PVMT SYMB MRKG SHARED LANE TY B, CL II	EA	48	$717.14	$ 34,422.72	

Total Number of Bid items = 2

PROJ.: Wilkes Ridge Parkway Bicycle Facilities
SITE: Wilkes Ridge Parkway Sharrows from Broad Street Road to Avery Pt Lane

MOBILIZATION	$	3,999.98	= 10% OF THE SUM OF BID ITEMS	
SUBTOTAL	$	43,999.82		
ENGINEERING	$	6,599.97	***15.0%***	OF SUBTOTAL
CEI	$	10,999.96	***25.0%***	OF SUBTOTAL
CONTINGENCIES	$	8,799.96	***20.0%***	OF SUBTOTAL
TOTAL	**$**	**59,399.76**		

Enter % based on Proj. specific conditions & requirements

Network Version

Regression Model: ***Linear***
District:
Pricing Model Date: ***2/8/2022*** ***Current To 11/2021 Letting***