Section 4: CORRIDOR OPTIONS DEVELOPMENT

Based on the purpose and need for the study and using input from the public, interested stakeholders, and environmental agencies, a range of multi-use trail corridor options were developed. The preliminary corridor options development considered the following:

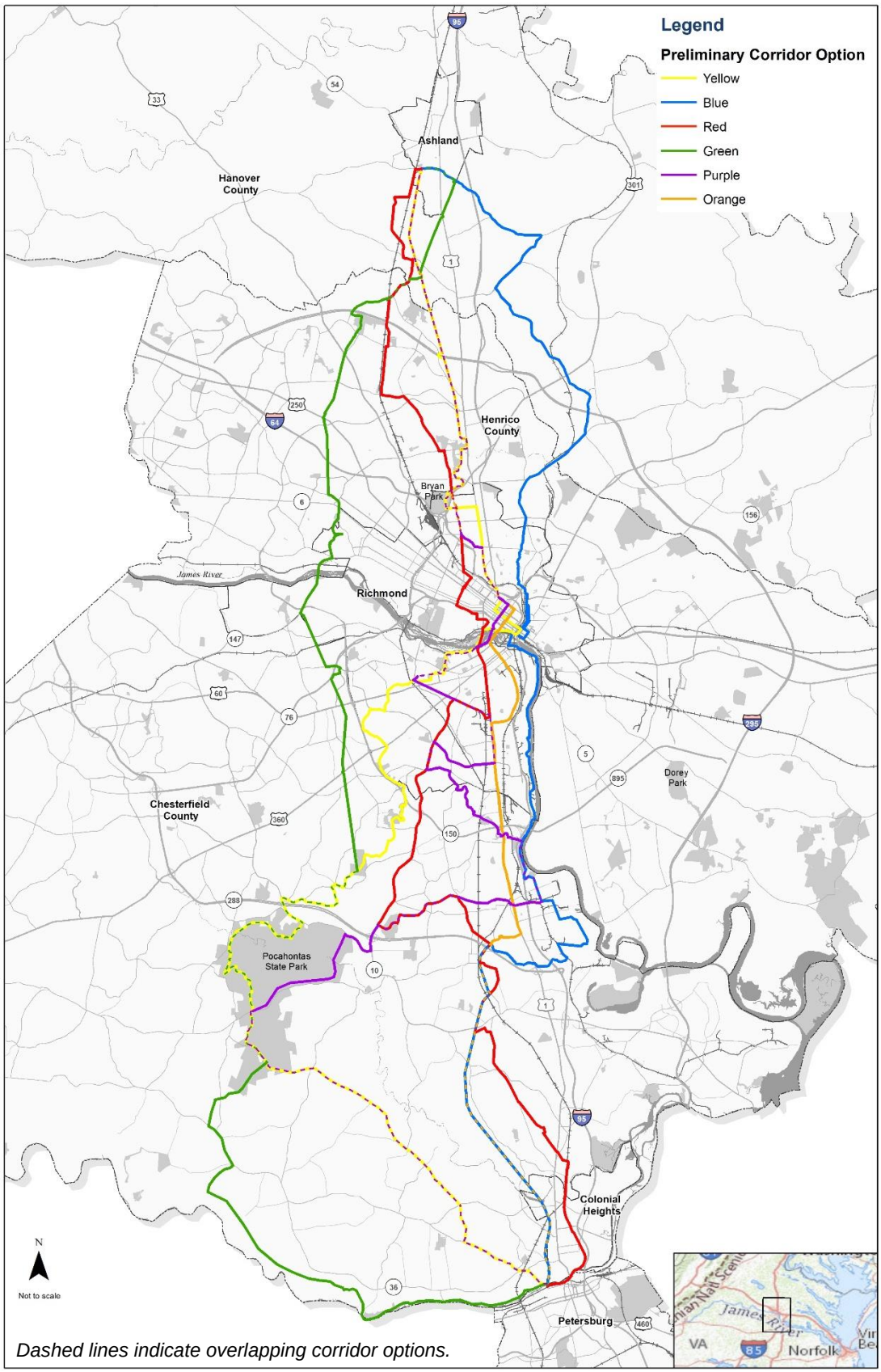
- Existing or proposed bicycle and pedestrian facilities
- Existing utility easements
- Jurisdictional crossings
- Input from STAG and public comments received
- Existing designated U.S. bicycle routes
- Local and regional planning documents
- James River crossing points
- Abandoned rail lines
- Knowledge of regional network

Virginia Capital Trail (Richmond)

Maple St (Ashland)

Five (5) preliminary corridor options (Yellow, Blue, Red, Green, and Purple) were developed in early 2019 and presented to the STAG in April of 2019. Based on the input received from the STAG following the April 2019 STAG meeting and further consideration of existing and planned active transportation facilities based on future state, regional, and local active transportation planning, an additional preliminary corridor option (Orange) was added to the initial five developed preliminary corridor options. Therefore, six preliminary corridor options were analyzed in the preliminary evaluation. State, regional, and local active transportation planning documents in which existing and proposed bicycle and pedestrian facilities were reviewed and referenced from can be found in **Table 2-7** in **Section 2: Study Purpose**. **Figure 4-1** depicts the six preliminary corridor options and **Table 4-1** provides a description of the six preliminary corridor options.

Figure 4-1. Preliminary Corridor Options



Dashed lines indicate overlapping corridor options.

Table 4-1. Preliminary Corridor Options

Preliminary Corridor Option: Yellow			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
This approximate 59-mile corridor option represented the envisioned East Coast Greenway (ECG) future route[9], with minor modifications at Lakeside Avenue in the vicinity of Belmont Golf Course. This corridor generally followed existing active transportation facilities and greenways.	Chesterfield, Hanover, Henrico, Petersburg, Richmond, Ashland	Carter Park, Bryan Park, James River, Virginia Capital Trail, Stratton Park, Pocahontas State Park	Petersburg Amtrak Station; Pocahontas State Park; Old Town Petersburg; VSU; Virginia Union University (VUU); VA Capital; Virginia Commonwealth University (VCU) Medical Center; Tredegar/Brown's Island; Ashland Trolley Line Trail; Main Street Station; Bryan Park; Appomattox River Trail; 9th Street; Brookland Parkway Bicycle Lanes; Boulevard Bridge
Preliminary Corridor Option: Blue			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
Eastern-most corridor option approximately 52 miles in length, originating at Carter Park in the Town of Ashland, that generally followed the U.S. Bicycle Route 76[10] and the Cannon Creek Greenway until providing a direct connection to the Virginia Capital Trail[11]. South of the James River, the corridor primarily paralleled the river and utilized the historic Seaboard Coast Line Railroad to reach Patton Park in the City of Petersburg.	Chesterfield; Hanover; Henrico; Colonial Heights; Petersburg; Richmond; Ashland	Carter Park, James River, Virginia Capital Trail	Ancarrow's Landing/Richmond Slave Trail; Sliding Hill Road; Old Town Petersburg; VSU; Historic Manchester; VA Capital; VCU Medical Center; Main Street Station; Appomattox River Trail; 9th Street

[9] The East Coast Greenway mapping can be found here: https://www.greenway.org/states/virginia.
[10] U.S. Bicycle Routes mapping can be found here: https://www.virginiadot.org/programs/bikeped/us_bike_routes.asp.
[11] Virginia Capital Trail mapping can be found here: https://www.virginiacapitaltrail.org/.

Preliminary Corridor Option: Red			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
This is an approximate 50-mile central corridor option that followed the existing signed U.S. Bicycle Route 1 from Carter Park, in the Town of Ashland, to the City of Richmond, following a City of Richmond suggested alignment and existing facilities to the city's southern extent. South of the City of Richmond, the corridor connected to planned shared use paths and followed existing rail or utility easements until reaching the CSX railroad line in the City of Petersburg.	Chesterfield; Hanover; Henrico; Colonial Heights; Petersburg; Richmond; Ashland	Carter Park, Crump Park, Bryan Park, James River, Downtown Petersburg	VCU; Lewis Ginter Botanical Garden; Pocahontas Island; South Park Mall; Roslyn Park; Old Town Petersburg; VSU; VUU; Tredegar/Brown's Island; Bryan Park; Appomattox River Trail; Brookland Parkway Bicycle Lanes; Boulevard Bridge

Preliminary Corridor Option: Green			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
Western-most route, extending approximately 60 miles, that primarily followed the Dominion Energy Virginia transmission line and other utility easements, until connecting with existing or planned active transportation facilities in Chesterfield County. The corridor paralleled the Appomattox River until connecting with Patton Park in the City of Petersburg.	Chesterfield; Hanover; Henrico; Petersburg; Richmond; Ashland	Carter Park, Crump Park, Pocahontas State Park	Pocahontas State Park; Old Town Petersburg; VSU; Appomattox River Trail

Preliminary Corridor Option: Purple			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
This approximate 63-mile option is similar to the Yellow corridor, following the Ashland Trolley Line Trail and generally reflecting the envisioned ECG until the City of Richmond, where the corridor followed Leigh Street to 5th Street to provide a direct central route through the City and across the James River using the T. Tyler Potterfield Memorial Bridge. South of the James River, the corridor utilized existing roadway facilities with bicycle accommodations, railroad corridors, and planned or existing shared use paths to connect to Patton Park in the City of Petersburg.	Chesterfield; Hanover; Henrico; Petersburg; Richmond; Ashland	Carter Park, James River, Pocahontas State Park	Petersburg Amtrak Station; Old Town Petersburg; VSU; VUU; VA Capital; VCU Medical Center; Tredegar/Brown's Island; Ashland Trolley Line Trail; Bryan Park; Appomattox River Trail; 9th Street; Brookland Parkway Bicycle Lanes; Boulevard Bridge

Preliminary Corridor Option: Orange			
Description	**Intersected Localities**	**Public Destinations of Interest***	**STAG Destinations of Interest***
This approximate 41-mile option followed a similar route as the Yellow corridor north of the City of Richmond. South of the City of Richmond, it incorporated Chesterfield County's North Jefferson Davis Special Use Area planned route and is proximal to U.S. Route 1, where desired opportunities for growth and redevelopment, in addition to existing bicycle and pedestrian safety issues, have been identified. South of Route 288, this option followed the historic Seaboard Coast Line Railroad, similar to the Blue corridor option.	Chesterfield; Hanover; Henrico; Colonial Heights; Petersburg; Richmond; Ashland	Carter Park, Bryan Park, James River	Old Town Petersburg; VSU; VUU; VA Capital; VCU Medical Center; Historic Manchester; Tredegar/Brown's Island; Ashland Trolley Line Trail; Main Street Station; Bryan Park; Appomattox River Trail; 9th Street; Brookland Parkway Bicycle Lanes; Boulevard Bridge

*According to AASHTO's *Guide for the Planning, Design, and Operation of Pedestrian Facilities,* the majority of pedestrian trips are between 0.25 and one mile long, therefore, the study utilized 0.5 miles as the distance to identify if a corridor option allows access to a destination of interest (AASHTO, 2012).

During the corridor development process, the type of facility and design guidelines for bicyclists, pedestrians, and other active transportation users was customized and characterized by their surrounding environment and how they fit into the community. Potential trail types are: Urban, Suburban, Rural/Riparian, and Rail, as illustrated in **Figure 4-2**. Urban trails are proposed in areas within an urban core and integrated into roadway infrastructure, likely with constrained rights-of-way. Additionally, urban trails would be a mix of facility types, including on-street facilities, and would likely include connections to numerous urban destinations. Suburban trails would be located in developed areas with less right of way constraints than in an urban setting and would likely be adjacent to parks, schools, residential neighborhoods, and community facilities. Rural or riparian trails would be more remote than an urban or suburban trail and would likely have limited connections, would be in agricultural or stream valley settings, and would offer a unique scenic experience. Relative to the location of a rural or riparian trail, there is potential for constraints associated with development and permitting. In coordination with the urban, suburban, and rural/riparian settings, a rail trail would be designated in any of these trail settings. A rail trail, along an abandoned rail corridor or a rail-with-trail adjacent to an active rail corridor, would be a candidate for a rail-to-trail project.

Figure 4-2. Trail Types

VDOT's transportation policies and RDM include provisions to allow for safe, convenient, and comfortable travel and access to persons "of all ages and abilities" regardless of their mode of transportation, including those walking, cycling, driving automobiles, riding public transportation, and delivering goods (VDOT, 2005 rev 2019). There are a number of facilities, such as sidewalks, bicycle lanes, shared roadway, or other facilities, that provide accommodations for bicyclists, pedestrians, or other active transportation modes. For the purpose of this study, a trail was considered any combination of paved facilities that would be used by both bicyclists and pedestrians and would be accessible to persons with disabilities.

Both non-separated and separated facilities from the roadway may be used. Non-separated facilities are distinct from separated on-road facilities in that they do not include a physical separation between pedestrians and bicyclists from motor vehicles. To provide opportunities for safe, low-stress active transportation, context sensitive design would be utilized. Context sensitive design aims to address the functions of the facility within the context of its setting, while considering factors, such as land use, facility users, and the environment (FHWA, 2016).

Franklin St Cycle Track – Separated with Parking (Richmond)

The non-separated facilities would be located in areas with low speed and low volume traffic with simple crossings and other contextual traffic-calming elements. The ECG considers the following potential on-road facility exceptions for potential inclusion in the greenway:

- Bicycle lanes protected by flexible delineators,
- Bicycle boulevards, or
- Historical bridges that span short distances between trail segments (ECG, 2019b).

The facilities could also be separated facilities, such as separated bicycle lanes or cycle tracks with a physical barrier protecting users from motor vehicles. These separated facilities, in combination with a sidewalk or other facility for pedestrian and wheelchair users, would provide opportunities for safe, low-stress active transportation. Physical barriers can include, but are not limited to, concrete barriers, planters, guard rail, vehicle parking, and bollards. These varying facility types were considered during the development of the preliminary corridor options as likely cost-effective solutions where similar existing or planned infrastructure was already identified or where implementation constraints, such as limited right of way, slope and topography, utilities, stormwater drainage, and traffic control device conflicts were present.

In addition to these facilities, shared use paths could accommodate all active transportation users. Shared use paths are physically separated from motorized vehicular traffic by an open space (buffer) or barrier. Users may include bicyclists, wheelchair users (both motorized and non-motorized), and pedestrians. **Figure 4-3** illustrates the different types of facilities that were considered during the preliminary corridor options development.

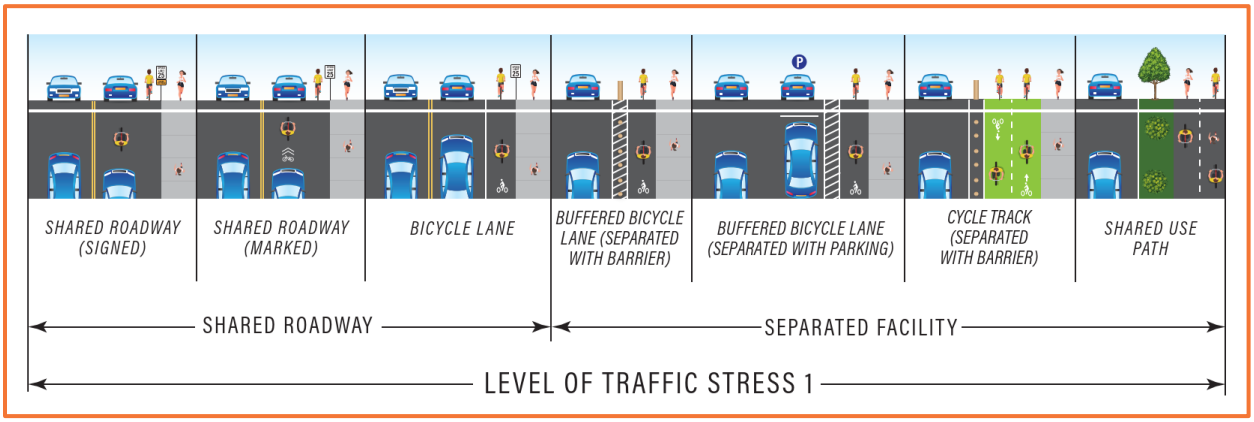



Figure 4-3. Facility Types