

MEMORANDUM

To: City of Richmond – Urban Design Committee

From: Yongping Wang – DPW
Alysa Baird - Kimley-Horn and Associates, Inc.

Date: May 16, 2024

Subject: Boulevard – Science Museum Shared Use Path
Conceptual UDC Review – Project Narrative

Project Overview

This Department of Public Works project proposes to construct a shared use path from Broad Street to the Arthur Ashe Bridge using existing right-of-way along Terminal Place and an abandoned railroad corridor. The purpose is to provide a dedicated bicycle and pedestrian connection from the Scott's Addition neighborhood to the Pulse BRT stations at Robinson Street.

The project is funded through VDOT's SmartScale program, which means the project has fixed termini, a fixed budget, and limitations on what portions of the scope can be included or excluded. The project received \$2.99 million in funding from the grant program, which was applied for in 2018 and selected for funding in 2019. Funding became available for preliminary engineering in 2023. Right-of-way acquisition is scheduled for mid-2025 and construction is anticipated to begin in mid-2026.

This project narrative splits the project up into 4 unique segments, which are described below from south to north:

1. Terminal Place
2. Proto Path – Trail Alignment
3. Proto Path – Park Space
4. Leigh Street Crossing
5. Movieland

Concept Development and Design Charrette

The project team developed the included concept with input from a stakeholder group through an initial project meeting held in November 2023 and a design charrette in May 2024. This stakeholder group includes persons that represent the following organizations: Science Museum of Virginia, Children's Museum of Richmond, Greater Scott's Addition Associates, City of Richmond Department of Public Works, City of Richmond Department of Public Utilities, City of Richmond Department of Parks and Recreation, and City Council. The included concept represents the preferred alternatives as selected by this group of stakeholders.

Terminal Place

The project's southern terminus is at the intersection of Terminal Place and Broad Street. The Science Museum of Virginia (SMV) has recently completed "The Green" in front of the Children's Museum of Richmond (CMoR) and SMV along the Broad Street frontage, which includes wide pedestrian connections around the site and along Broad Street. This project proposes to connect to the existing "Allee" that runs parallel to Broad Street along the front of the SMV property to begin the shared use path.

The preferred concept constructs a 10' wide concrete shared use path on the east side of Terminal Place from Broad Street along the length of Terminal Place. Southbound turn lanes on Terminal Place will be consolidated into a single turn lane to provide a landscaped 8' wide buffer between the path and Terminal Place from Broad Street to the CMoR entrance. The entrance will be reconstructed to consist of a concrete curb apron that allows the pedestrians and cyclists to continue across the entrance without grade change or ramps for ease of movement and to provide path users the right-of-way.

North of the CMoR entrance curbside parking is maintained and is defined by curb extensions to allow for convenient drop-off and pick-up by parents for the Sprout School, a daycare facility within the CMoR who's main doorway opens to Terminal Place. Planter boxes will be deployed to control path users' speeds along the Sprout School's building frontage.

There are approximately 5 existing on-street parking spaces on the west side of Terminal Place just north of the alley entrance between McDonald's and the Cookie Factory Lofts. These are signed for No Parking Monday through Friday 7am to 6pm, but otherwise parking is allowed outside these hours. The proposed concept in this location would eliminate these 5 parking spots.

A raised "mixing zone" is proposed where Terminal Place terminates into the SMV rear parking lot. This area will consist of concrete raised up to curb height to control vehicle speeds and intentionally blur the separation between bicycle/pedestrian space and vehicle space. Similar to the Dutch concept of a "woonerf", this area is intentionally designed to look like pedestrian space such that motorists become the intruders and travel at very low speeds. This mixing zone area allows the shared use path to cross from the east side of Terminal Place to the west side of the SMV rear parking lot while giving the right-of-way to path users. Additionally, to alert vehicles of the change in function of the roadway, a center median is proposed to further reduce speeds by constricting the lanes for drivers as well as to serve as a gateway to the park space.

Proto Path – Trail Alignment

There is an existing crushed stone path in the abandoned railroad corridor that stretches from the rear SMV parking lot to Leigh Street called the "Proto Path." This project will utilize much of that existing alignment while paving a 10' wide asphalt path. Two different alignments were considered for the shared use path through the southern area of this segment, which varies from 60' to 160' in available width. The existing Proto Path hugs the eastern property line just to the southwest of the Bon Secours Park/training facility, whereas the existing rails followed the western side of the property. The western alignment is the proposed option to maximize the available space for a variety of

programs and uses. The western alignment hugs the western property line and therefore minimizes the need for park users to cross the shared use path and present potential conflict points between path and park users.

Proto Path – Park Space

Since the project has a fixed budget from VDOT's SmartScale grant program, the scope of park and amenities that can be funded with this project is limited. However, the project team desires to be intentional about leaving a master-planned space for future park uses. As project design progresses, the full scope of what park and amenity improvements that can fit within the project's current budget will become more known.

Following the charrette with stakeholders, the preferred program for the park space has been developed, featuring Art Nodes, Open Lawn/Green Space, Shade Structure/ Picnic Area, Seating Areas, Kids Demonstration/Educational Space, Outdoor/Lawn Games, Fitness Area, Dog Park, and Nature/Plant Walk utilizing existing plantings. An existing depression and drainage inlet structure in the space have been designated for bioretention and treatment of impervious areas on-site. Construction of the bioretention facility may require the removal and replacement of existing vegetation, predominantly black locust trees and understory pioneer species.

The charrette results indicate that aligning the shared use path through the middle of the space, following the alignment of the remnant railway tracks, is highly favored, facilitating pedestrian use, fire truck access, connections between spaces, and reducing potential conflicts. Proposed development themes of "Trailside Tranquility" and "Railway Remnants" are being combined to create a curvilinear green space with nodes referencing the old railroad along the shared use path. As the concept is refined, concerns such as infrastructure requirements and maintenance needs will continue to be coordinated with Public Works and Parks and Recreation. It's imperative to establish a clear maintenance plan in coordination with Public Works, Parks and Recreation, and/or relevant entities to ensure the park's long-term viability.

Leigh Street Crossing

The proposed path will follow the abandoned railroad corridor to cross Leigh Street approximately 250' east of Myers Street. Leigh Street today includes two westbound travel lanes, one eastbound left-turn lane into the rear Movieland parking lot, one eastbound travel lane, and one parking lane – which amounts to an 80' wide crossing. To reduce the width of the path crossing that is exposed to vehicular traffic, the project proposes to significantly choke down on the travel spaces on Leigh Street. The proposed crossing will include just one travel lane in each direction to limit the total crossing to 12' across each direction.

The crosswalks will also include user-activated rectangular rapid flashing beacons (RRFBs) to enhance trail user safety when crossing Leigh Street. RRFBs have been shown to reduce pedestrian crashes up to 47% and increase motorist yielding rates up to 98% (source: FHWA).

Leigh Street includes bicycle lanes today that begin immediately east of this proposed crossing. The project proposes to provide ramps as direct connections from these bicycle lanes in each direction to the shared use path.



Figure 1: Example of RRFBs

Movieland

The northern limits of the project will continue to follow the abandoned railroad corridor through the Movieland parking lot from Leigh Street to the Arthur Ashe Boulevard Bridge. The City of Richmond has a separate project using an FHWA grant to reconstruct the aging bridge over the CSX railroad. The bridge project will include a direct pedestrian connection under the bridge to planned shared use path segments along Patton Ave parallel to CSX right-of-way through Scott's Addition. The bridge will also include improved pedestrian connectivity over the CSX railroad to connect to the future Diamond District.

Through the Movieland parking lot the proposed alignment crosses parking lot entrances /access aisles at three separate locations. This project proposes closing two of these entrances to limit conflict points between path users and motor vehicles. At the third crossing, which is integral to site circulation, a raised crosswalk will be constructed to slow vehicles, alert drivers of crossing pedestrians and cyclists, and provide a smooth and uninterrupted movement for path users.