

SAFE ROUTES TO TRANSIT

West Trenton Station

SHARED USE PATH RESEARCH MEMORANDUM | MAY 2019

MEMO PURPOSE

The purpose of this memo is to summarize information and identify resources related to the planning and design of a shared use path that will connect Silvia Street to the West Trenton Station in Ewing Township. This memo was compiled in collaboration with Ewing Township as part of DVRPC's Safe Routes to Transit Program.

DVRPC & SAFE ROUTES TO TRANSIT BACKGROUND

The Delaware Valley Regional Planning Commission (DVRPC) is the federally designated Metropolitan Planning Organization for the bi-state, nine-county Greater Philadelphia Region. DVRPC works with a variety of stakeholders, including municipal, county, and state representatives, to address issues of transportation, land use, environmental protection, and economic development.

DVRPC's Safe Routes to Transit Program is a technical assistance program being offered to municipalities and counties interested in enhancing pedestrian and bicycle access to transit stations. In the second round of this competitive program, Ewing Township is one of three municipalities selected to partner with DVRPC. Through this program, DVRPC staff will be working with local stakeholders to identify and evaluate strategies to provide safer and more convenient pedestrian and bicycle access between SEPTA's West Trenton Regional Rail Station and existing residential neighborhoods and employment destinations, as well as the future Ewing Town Center.

MEMO OVERVIEW

The Silvia Street Connection is a shared use path that is part of a conceptual station area network of bicycle and shared use facilities designed to enable nonmotorized access between the West Trenton Regional Rail Station and the surrounding neighborhoods (see Figure 1). In conjunction with sidewalks and bicycle lanes being constructed on Silvia Street, this path will provide a direct connection to the station for pedestrians and cyclists traveling to and from destinations along Silvia Street. Ultimately, this path will be used by residents, employees, and visitors traveling on foot or by bicycle between the station and the Ewing Town Center.

The proposed alignment of the Silvia Street path, shown in Figure 2, uses a combination of new and existing facilities. Between Silvia Street and the station, the path travels through phases one and two of the Heritage Court apartments and a commercial property located at 420 Silvia Street (Block 341.01 Lot 3.01). In order to reach the SEPTA Regional Rail train platform, transit riders will need to use the tunnel connecting the east and west side of the railroad tracks.

This memo is divided into three sections:

- 1. Elements of Design:** Summarizes key design and implementation considerations for shared use paths.
- 2. Planning and Liability Concerns:** Discusses issues of liability related to shared use paths.
- 3. Design Examples:** Provides hyperlinks to examples of shared use facilities that may serve as useful precedents.

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Figure 1: Proposed West Trenton Station Area Bicycle and Shared Use Facilities

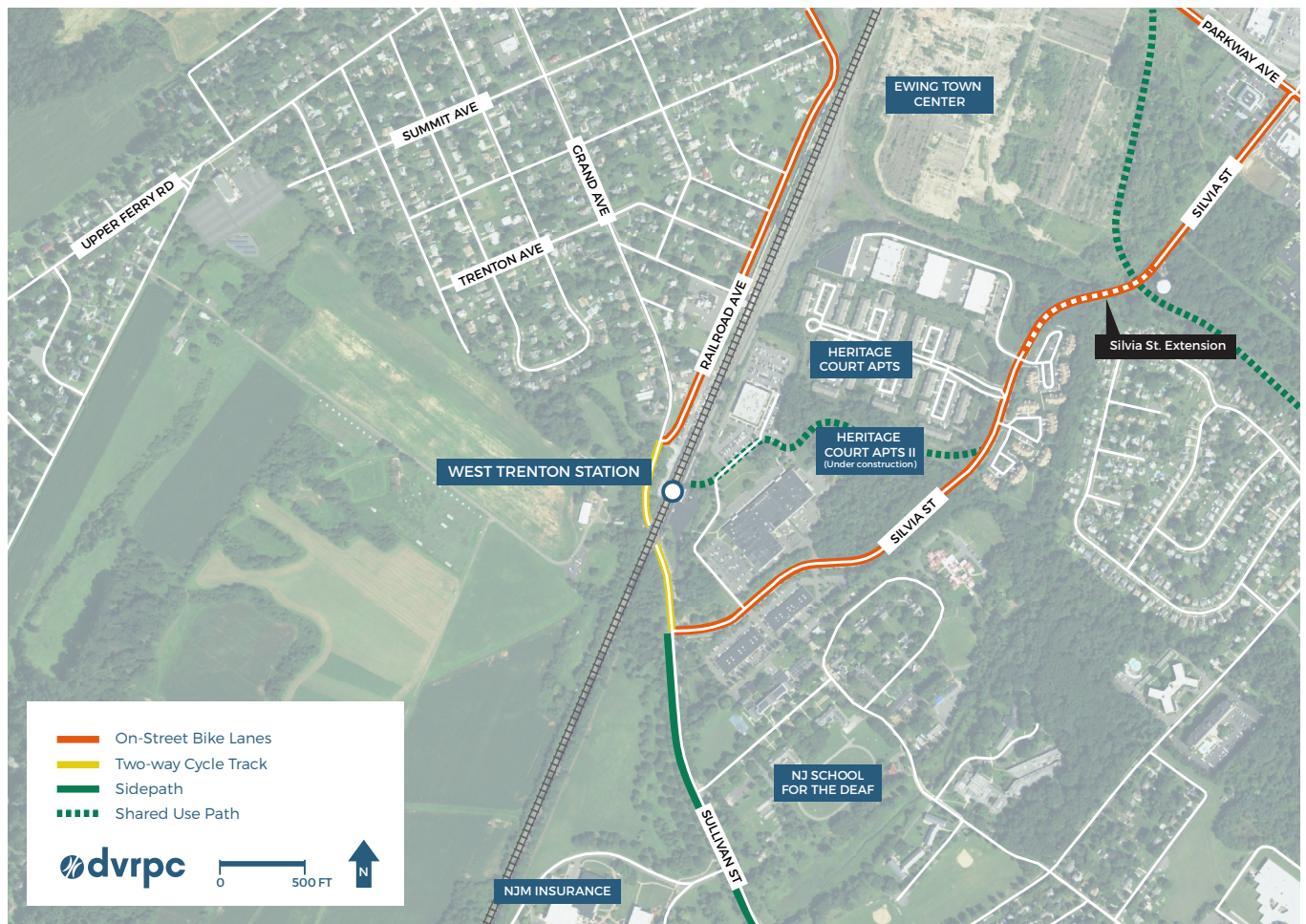


Figure 2: Silvia Street Shared Use Path



Source: Ewing Township, Merer County Planning Commission | Aerial Image: Nearmap

ELEMENTS OF DESIGN

Shared use paths are nonmotorized transportation facilities that can accommodate cyclists and pedestrians. These paths are physically separated from motorized vehicular traffic by an open space or barrier within the roadway right-of-way or within an independent right-of-way. Shared use paths are sometimes referred to as “trails.” However, the word trail is often used to refer to an unimproved recreational facility. Care should be taken not to use these terms interchangeably because they have distinctly different design guidelines.

Paths are most commonly designed for two-way travel and they can serve both recreation and transportation purposes. For example, they can provide users with a shortcut through a residential neighborhood (e.g., a connection between two cul-de-sac streets) or access to schools. Alternatively, they can provide a commuting route between residential areas and transit stations or job centers. Shared use paths can also provide bicycle access to areas that are otherwise served only by limited-access highways. Shared use paths that run adjacent to a roadway are called sidepaths.

Shared use paths should be thought of as a system of off-road transportation routes for bicyclists and other users that extends and complements the roadway network. Shared use paths should not be used to preclude on-road bicycle facilities, but rather to supplement a network of on-road bike lanes, shared roadways, bicycle boulevards, and paved shoulders.

Due to the fact that nearly all shared use paths are used by pedestrians, they fall under the accessibility requirements of the Americans with Disabilities Act (ADA).

Design Resources

There are a number of resources that provide guidance on the design and construction of shared use paths. This memo summarizes design considerations that appear in the following documents:

- [Guide for the Development of Bicycle Facilities](#), American Association of State Highway and Transportation Officials (AASHTO): see Chapter 5 Design of Shared Use Paths.
- [2017 State of New Jersey Complete Street Design Guide](#), NJDOT and FHWA: see page 102 for information about Shared Use Paths.
- [Small Town and Rural Multimodal Networks](#), FHWA: see Chapter 4 Physically Separated Facilities.

Width and Clearance

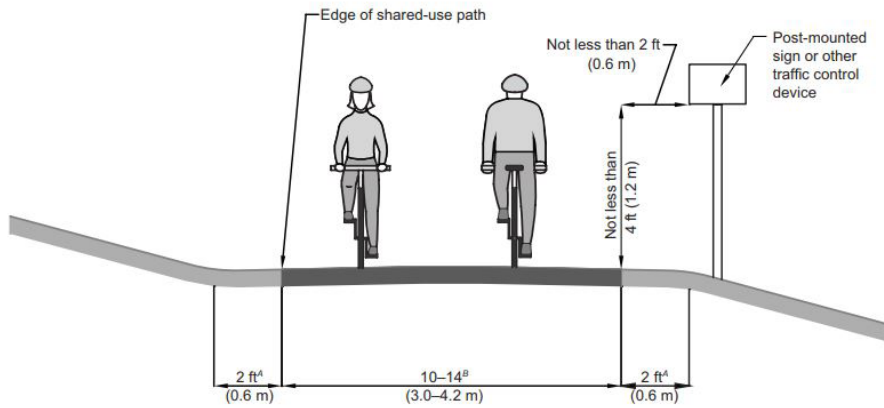
The appropriate paved width for a shared use path is dependent on the context, volume, and mix of users. The minimum paved width for a two-directional shared use path is typically 10 ft. Paths often range from 10 to 14 ft. (see Figure 3), with the wider values applicable to areas with a higher percentage of pedestrians and/or overall higher user volumes. In rare circumstances, a reduced width of 8 ft may be used.

Passing

Under most conditions, there is no need to segregate pedestrians and bicyclists on a shared use path. These users can typically coexist, even in areas with high user volumes. Path users customarily keep right except to pass. Signs may be used to remind bicyclists to pass on the left and to give an audible warning prior to passing other slower users. Part 9 of the Manual on Uniform Traffic Control Devices (MUTCD) provides a variety of regulatory signs that can be used for this purpose.

On pathways with heavy peak hour and/or seasonal volumes, or other operational challenges such as sight distance constraints, the use of a centerline stripe on the path can help clarify the direction of travel and organize pathway traffic. A solid yellow centerline stripe may be used to separate two directions of travel where passing is not permitted, and a broken yellow line may be used where passing is permitted. The centerline can either be continuous along the entire length of the path, or may be used only in locations where operational challenges exist. Per the MUTCD, all markings used on bikeways shall be retroreflective.

Figure 3: Typical Cross Section of a Two-Way, Shared Use Path on Independent Right-of-Way



Source: Guide for the Development of Bicycle Facilities, AASHTO

Surface Materials

Hard, all-weather pavement surfaces are generally preferred over those of crushed aggregate, sand, clay, or stabilized earth. Asphalt or Portland cement concrete provides good quality, all-weather pavement structures.

Advantages of Portland cement concrete include longer service life, reduced susceptibility to cracking and deformation from roots and weeds, and a more consistent riding surface after years of use and exposure to the elements. On Portland cement concrete pavements, transverse joints can be cut with a saw to provide a smooth ride. A disadvantage of Portland cement concrete pavements is that pavement markings (such as centerlines) can have a lower contrast against the concrete surface; markings typically have a higher contrast on an asphalt surface, particularly at night. Advantages of asphalt include a smooth rolled surface when new, and lower construction costs than with concrete. Asphalt surfaces are softer and are therefore preferred by runners and walkers over concrete. However, asphalt pavement is less durable (typical life expectancy is 15-20 years) and needs more interim maintenance.

Shoulder

Ideally, a graded shoulder area at least 3 to 5 ft. wide with a maximum cross-slope of 1V:6H should be maintained on each side of the pathway. At a minimum, a 2 ft. graded area with a maximum 1V:6H slope should be provided for clearance from lateral obstructions such as bushes, large rocks, bridge piers, abutments, and poles.

Lighting

Fixed-source lighting is integral to the safety and security of the Sylvia Street Connection because its use is partially linked to transit activity at the West Trenton Station. Pedestrian-scale lighting is preferred to tall, highway-style lamps. Pedestrian-scale lighting is characterized by shorter light poles (standards about 15 ft., lower levels of illumination (except at crossings), closer spacing of standards (to avoid dark zones between luminaires), and high pressure sodium vapor or metal halide lamps. Metal halide lamps produce better color rendition ("white light") than sodium vapor lamps and can facilitate user recognition in areas with high volumes of night use. Depending on the location, average maintained horizontal illumination levels of 0.5 to 2-foot candles should be considered. For personal safety, higher lighting levels may be needed in some locations.

Pavement Markings

Marked crosswalks are recommended at intersections between shared use paths and roadways. They delineate the crossing location and can help alert roadway users to the potential conflict ahead. Where crosswalks are marked at shared use path crossings, the use of high visibility (i.e., ladder or zebra) markings are recommended as these are more visible to approaching roadway users.

Figure 4: Advance Warning Assembly Example

Signage

The combined bicycle-pedestrian warning sign (W11-15) or bicycle warning sign (W11-1) may be used in advance of shared use path crossings of roadways. This warning sign should not be used in advance of locations where the roadway is stop-, yield-, or signal-controlled.



Source: Guide for the Development of Bicycle Facilities, AASHTO

PLANNING AND LIABILITY CONCERNS

The New Jersey Landowners' Liability Act (N.J.S.A. 2A:42A) specifies that landowners who permit a person to enter their property for recreational activities or purposes do not assume responsibility for or incur liability for injuries caused by an act of that person. Though it does not mention walking or biking on its list of recreational activities, the law defines the concept rather broadly, citing "any... outdoor sport, game and recreational activity including practice and instruction in any thereof." It is reasonable to believe that a pedestrian or cyclist taking an active route to transit on a shared use path might constitute recreational activity as defined here.

The NJ LLA further limits liability for landowners who allow public access via a pathway or trail easement held by a local government. Given Ewing Township's intent to hold the public shared use path by easement, this suggests that the owners of the property—Hilton Realty—could be held liable for injury only in the following circumstances:

- (1) willful or malicious failure to guard, or to warn against, a dangerous condition, use structure or activity...
- (2) injury caused by acts of negligence on the part of the owner... of the premises to any person where permission to engage in sport or recreational activity on the premises was granted for a consideration other than the consideration, if any, paid to the landowner by the... local unit...
- (3) injury caused by acts of gross negligence on the part of the owner... to any person entering or using the land for a use or purpose unrelated to public access purposes.

An owner also maintains immunity from liability whether or not their land is "improved or maintained in a natural condition, or used as part of a commercial enterprise." The statute covers any land in the State "regardless of location or characterization or classification of location," explicitly referencing suburban, populous, developed, residential, commercial, and industrial areas, all of which might be used to describe the land through which the conceptual shared use path to West Trenton Station has been proposed.

In their review of recreational use statutes and the liability aspects of bikeways, the guidance from attorneys and transportation experts working on behalf of TRB's National Cooperative Highway Research Program is as follows:

A public entity in a state in which the state's recreational use statute applies or has been held to apply to bicycles will want to determine whether its courts follow what appears to be the majority view that a bikeway does not have to be exclusively or even primarily for recreational use for a public entity to have recreational use immunity. Even the minority

view appears to be that as long as a recreational use is more than merely incidental, a public entity may be protected from liability under a recreational use statute regardless of whether a plaintiff alleges faulty design or maintenance as the proximate cause of a bikeway accident.¹

However, it is important to note that upon its original passage in the 1960s, the New Jersey Landowners' Liability Act was intended to protect owners of rural, agricultural, or wooded lands. Though the language was later broadened, New Jersey courts have not always interpreted the updated terminology to include an enlarged class of protected landowners. In Hilton Realty's case, other aspects of sidewalk and premises liability law may also apply since the path will partially incorporate existing and planned sidewalks in the Heritage Court apartment community and the Scudder Falls business park. Some of the relevant rulings are summarized below.

- **Commercial property owners can be held liable for sidewalk injuries:** Since the 1981 ruling on *Stewart v. 104 Wallace Street Inc.*, commercial property owners have been held liable for injuries sustained on public sidewalks, while residential property owners have retained immunity.²
- **Liability is limited during a recreational visit, even if the injured party was not engaged in recreational activity during the incident:** The court's 2010 decision in *Vaxter v. Liberty State Park* extended immunity to the owner of recreational land despite the plaintiff's claim that an injury occurred when she was not engaged in recreational activity. Vaxter had finished a work out and stepped into a hole while disposing of a water bottle, but because she had entered the park for fitness activity, the court upheld the protections provided by LLA.³
- **Some commercial properties that contain residential uses have immunity:** The issue of sidewalk immunity was revisited in the 2011 decision for *Luchejko v. the City of Hoboken*, when the court ruled in favor of a mostly owner-occupied condominium community, where a pedestrian injury occurred on a sidewalk adjacent to the high-rise building and along a city-owned street.⁴
- **Some improved, suburban land qualifies for immunity:** A 2013 case involved an injury at a public golf course that was closed for the season. In *Lareau v. Somerset County Park Commission*, the plaintiff slipped and became injured while crossing a footbridge through the course, which was adjacent to a developed residential area. The court noted that the LLA affords immunity to open tracts of land where guarding against public access would be challenging.⁵
- **Biking can be a recreational activity, but also non-recreational, and the injured party's purpose matters:** Another decision in 2013 left open the possibility that landowners may not be immune from liability for injury to cyclists riding for transportation purposes rather than recreational purposes. In *Cosh v. United States*, the court agreed that cycling fits within the statutory definition of recreational activity, but disagreed with the defendant's claim that the plaintiff's purpose was immaterial to the case.⁶
- **Sidewalks must abut a public roadway for immunity from liability:** In 2015, the court expanded on their sidewalk immunity jurisprudence in *Qian v. Toll Brothers, Inc.* In this case, the plaintiff was injured on a sidewalk in a condo community's internal network of streets. Because it was considered a private roadway and no easement for public right of way existed, the homeowners' association was held liable despite the residential use. Furthermore, the association had a self-imposed duty to clear the sidewalk of ice and snow written into its bylaws, and collected fees from condo owners to pay for this maintenance, which was not the case in the earlier *Luchejko* decision.⁷
- **Immunity extends to private landowners with mandated public access:** In 2016, a judge ruled in *Niiya v. Grand Cove Master Association, Inc.* that a Hudson County condo association was not liable for the plaintiff's injury on its public riverfront sidewalk, because the pathway was mandated by the state due to the property's location on a coastal waterway. The LLA shields any "premises upon which public access has been required as a condition of a regulatory approval of, or by agreement with, the Department of Environmental Protection," as was the case for *Grand Cove*.⁸

Since Hilton Realty's property is classified as commercial, it may not benefit from sidewalk immunity. It will thus be important for the Township and Hilton Realty to distinguish between the segments of the shared use path that are held and maintained by the Township and those that qualify as commercially-owned sidewalks subject to liability. Furthermore, the lack of any bright-line rule on how the Landowners' Liability Act applies to biking and walking for non-recreational purposes leaves liability for injury on a shared use path open to interpretation. The Township should rely on its legal counsel to determine how best to classify the path, as well as how to approach and word the easement to ensure that no undue liability would fall on Hilton Realty. Once the path is constructed, Township officials should also be prepared to assume responsibility for all maintenance and repair to ensure that users are safe from or adequately warned of any dangerous conditions, thereby protecting itself from legal recourse.

REGIONAL PRECEDENTS

Fort Washington

<https://goo.gl/maps/H1dDxhUW9H4q2yfb8>

Location: Whitemarsh Township, Montgomery County

Description: A path connects the station platform to commercial properties on Pennsylvania Avenue, including a Holiday Inn Express hotel and Audi dealership.

Glenolden

<https://goo.gl/maps/phqBSRJxfKU8jrYH6>

Location: Glenolden Borough, Delaware County

Description: A path provides direct access to the station parking lot from the Contemporary Village Apartments, connecting to internal sidewalks and Willow Way.

Melrose Park

<https://goo.gl/maps/iRaG5tKqPKiyEbTp6>

Location: Cheltenham Township, Montgomery County

Description: A small stairway and pedestrian path connects the station platform to the Melrose Station Apartments, eventually linking to the sidewalks on an unnamed road through the multifamily development between Valley Road and Cheltenham Avenue.

St. Davids

<https://goo.gl/maps/D8dUGwFdKHaWpSz2A>

Location: Radnor Township, Delaware County

Description: A path connects the station parking lot to an adjacent neighborhood on Hilaire Road, passing between two single-family homes.

Wallingford

<https://goo.gl/maps/jMXpEbuV671onQTW7>

Location: Nether Providence Township, Delaware County

Description: A path connects the station parking lot to an adjacent neighborhood on Blackthorn Road, passing between two single-family homes.

Warminster

<https://goo.gl/maps/ZVqieL5b58v3MHY89>

Location: Warminster Township, Bucks County

Description: A ramp and plaza connect the station platform to the Station at Bucks County apartments. The community's internal sidewalk network connects to other paths and a small shopping center on Jacksonville Road.

Wynnewood

<https://goo.gl/maps/ZAnePM4LjAcYuUvb7>

Location: Lower Merion Township, Montgomery County

Description: As a condition for approval of the conversion of a former estate property to the Maybrook Apartments, trails were built for public pedestrian and bicycle access between Penn Road and North Wynnewood Avenue, linking to the station platform and parking lot.

Other Examples

Burke Center (VRE service) – Fairfax County, Virginia:

<https://goo.gl/maps/FWF4eb6sUA2xP9YS6>

BWI Airport (MARC/Amtrak service) – Anne Arundel County, Maryland:

<https://goo.gl/maps/cdXCBCsn462Z9CkdA>

Manassas Park (VRE service) – Manassas Park, Virginia:

<https://goo.gl/maps/Jx4N12rrXzbxJm857>

Metropolitan Grove (MARC service) – Gaithersburg, Maryland:

<https://goo.gl/maps/VbTaGD4jLkSSoQ4L6>

Windsor Gardens (MBTA service) – Norwood, Massachusetts:

<https://goo.gl/maps/jw9wyEZBiGnFbRza6>

ENDNOTES

¹ Legal Research Digest 53: Liability Aspects of Bikeways,” National Cooperative Highway Research Program, Transportation Research Board. April 2010.

² [“Attempt to Expand Sidewalk Liability in NJ Falls Flat,”](#) JGS Insurance.

³ Block, Christopher & Elizabeth Chang, [“Playing Outside: N.J. Landowners’ Liability Act Protects PI Defendants,”](#) New Jersey Law Journal

⁴ [“Luchejko v. City of Hoboken,”](#) Meislik & Meislik.

⁵ Ramos, Betsy G., [“County Park Commission Immune under Landowner’s Liability Act for Fall on Golf Course Footbridge,”](#) New Jersey Public Entity Law Monthly – Vol. II, Issue 10

⁶ Block & Chang

⁷ Speier, Gregory D., [“A Concrete Decision: ‘Qian’ and the Evolution of Sidewalk Liability,”](#) New Jersey Law Journal. December 2015.

⁸ [“Condo Association Not Liable for Plaintiff’s Accident,”](#) Deutchman & Drews, LLC.