

SHARED USE PATHS



Whether traveling by foot, wheelchair, bicycle, skateboard, or other ways, well-designed shared use paths can provide direct and comfortable routes to places of employment, recreation, education, and other destinations. They can enhance the efficiency of transit systems by making transit stops more accessible. They can also provide a way to engage in physical activity.

As paths attract a wide range of user types, multimodal conflicts can occur. Conflicts on shared use paths most often derive from 1) high volumes of users, 2) path users traveling at different speeds, 3) path users overtaking other users, 4) sharp curves, 5) vertical objects near the path, and 6) surface defects that effectively narrow the usable width.

Increasing use of paths should be expected over time as more people become aware of them and walking and bicycling rates grow. The design of a path should follow best practices and industry standards and consider future growth patterns.

Through careful planning and design, shared use paths can be built to reduce conflicts between users of different types and speeds for current and future path volumes.

COMMON USERS IN CONFLICT AND TYPICAL CRASH TYPES



Insufficient path width can contribute to crashes associated with overtaking and passing maneuvers.



Surface defects can cause bicyclists to become unstable or lose control.



Insufficient path width can contribute to crashes with objects adjacent to path.

GUIDING PRINCIPLES TO REDUCE CONFLICTS

SAFETY

The path width should be designed to accommodate the peak volume of users with proper maintenance to ensure the path is usable throughout the year.

ACCOMMODATION AND COMFORT

Separation of bicyclists and pedestrians should be considered where high volumes of pedestrians are anticipated.

COHERENCE

It should be clear to each mode where and how they are to use the path.

PREDICTABILITY

The design should encourage predictable behaviors of path users throughout and clearly identify where and when users are intended to be separated.

CONTEXT-SENSITIVITY

The path should support the natural environment, adjacent land uses, community health, economic, and livability goals.

EXPERIMENTATION

Path lighting, user education, maintenance operations, and segregation techniques may be warranted to address conflicts.

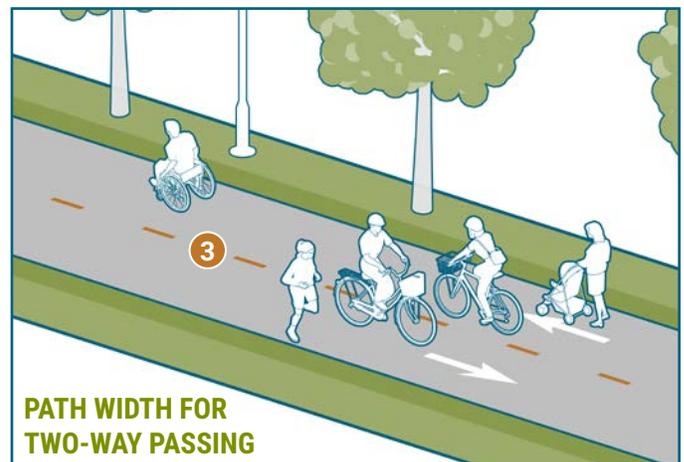
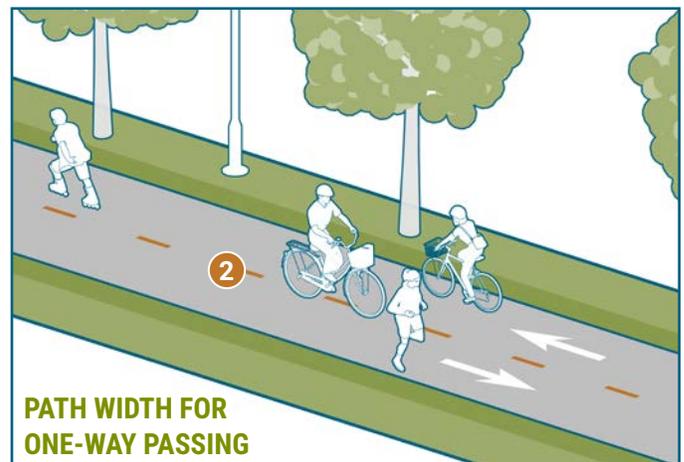
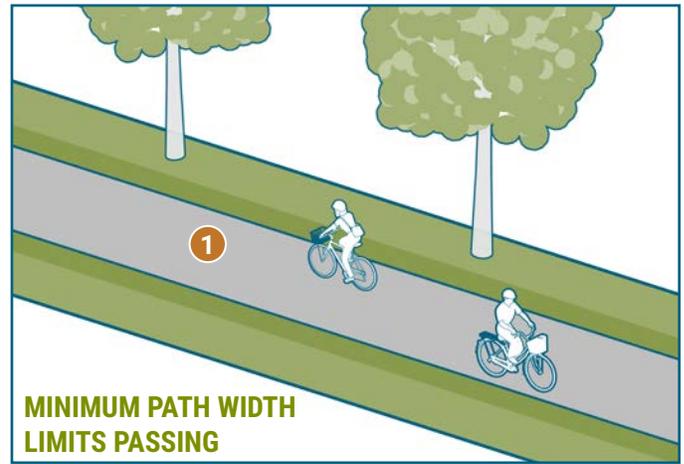
DESIGN STRATEGIES

PATH WIDTH

Path width should be determined based on three main characteristics: the number of users, the types of users, and the differences in their speeds. For example, a path that is used by higher-speed bicyclists and children walking to school may experience conflicts due to their differences in speeds. By widening the path to provide space to accommodate passing movements, conflicts can be reduced.

CONSIDERATIONS

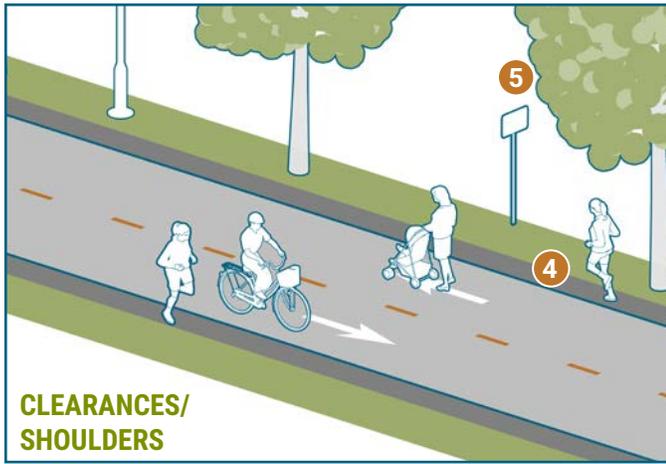
- Design path widths based on anticipated user types, speeds, and volumes.
- Use the **FHWA Shared Use Path Level of Service Calculator**, which recommends path widths based on the predicted number and types of path users.
- A minimum path width of 10 feet is recommended. A width of 8 feet may be used where path volumes are expected to be low and predominantly one user type. **1** (**AASHTO Bike Guide 2012, p. 5-3**)
- Depending on path volume and user types, consider a path width of 11 feet to allow one person to overtake another while avoiding a path user traveling in the opposite direction. **2** (**AASHTO Bike Guide 2012, p. 5-3**)
- Wider pathways are recommended in areas with higher user volumes and where a high percentage of pedestrians are expected. **3** (**AASHTO Bike Guide 2012, p. 5-3**)
- In urban areas where high use is anticipated, the desired path width is a minimum of 14 feet.



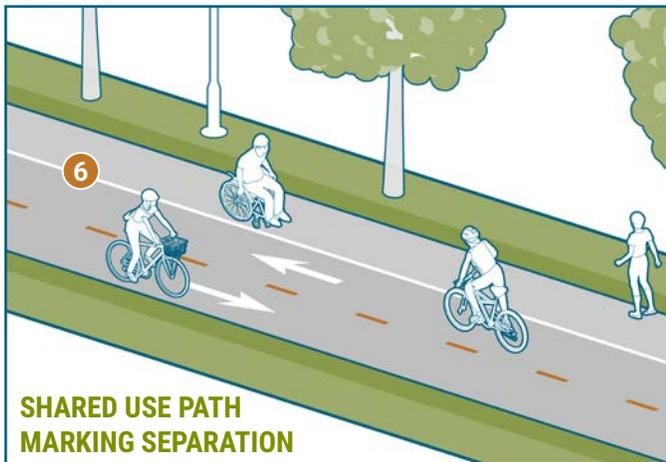
EDUCATION AND ETIQUETTE

Reminding users of proper path etiquette, such as announcing when passing someone, may further assist in reducing conflicts between users. Strategies may include additional signs such as etiquette reminders, providing the path rules on maps, and conducting outreach campaigns to path users.

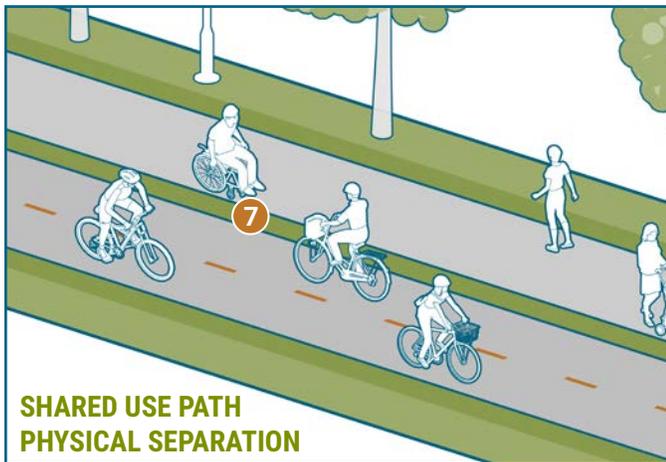




**CLEARANCES/
SHOULDERS**



**SHARED USE PATH
MARKING SEPARATION**



**SHARED USE PATH
PHYSICAL SEPARATION**

CLEARANCES/SHOULDERS

On hard surface paths (asphalt or concrete), it can be useful to include soft surface parallel paths (crushed stone), which are preferred by some users, such as runners. **4** When including parallel running paths, be sure to consider clearance recommendations as highlighted below.

Path clearances are an important element in path design and reducing user conflicts. Vertical objects close to the path edge risk endangering users and reducing the comfortable usable width of the path. **5** Along the path, vertical objects should be set back at least two feet from the edge of the path. Path shoulders may also reduce conflicts by providing space for users who step off the path to rest, allow users to pass one another, or offer a viewing area at scenic vistas ([AASHTO Bike Guide 2012, p. 5-5](#)).

SEPARATION

A path may benefit from the separation of users by user speed, type, or direction. Common separators include line markings **6**, pavement variations, and landscaping. **7** Separation by user type and speed is typically accomplished by separating bicyclists and pedestrians. When separating users by speed, consider the path width and paving material preferred by each user. A minimum pedestrian path of 6 feet is recommended to allow pedestrians to walk side-by-side and to allow passing.

TURNING MOVEMENTS

Designing paths with sharp turns can also increase conflicts. Sharp turns (typically less than a 30-foot radius) lead users to encroach on other users' path of travel, increasing the potential for conflicts. If a larger radius is not possible, the path should be widened at turn locations to minimize conflicts.

([AASHTO Bike Guide 2012, p. 5-14](#))

INTERSECTIONS

Additional shared use path conflicts occur where paths and roadways intersect. For more information, refer to the design topic on [Midblock Path Intersections](#).

LIGHTING AND MAINTENANCE



Lighting increases the transportation utility of paths, reduces risk of falls and crashes, and improves users' personal security. Paths used for transportation purposes should be open and lit at all times.

A smooth path surface is essential to year-round path user safety. Routine and seasonal maintenance should be performed to eliminate uneven and slippery surfaces due to tree roots, potholes, ponding, snow, and ice. Maintain sight lines along the path and at intersections by routinely trimming vegetation.

CASE STUDIES

SEPARATED PATHS PINELLAS TRAIL, FL

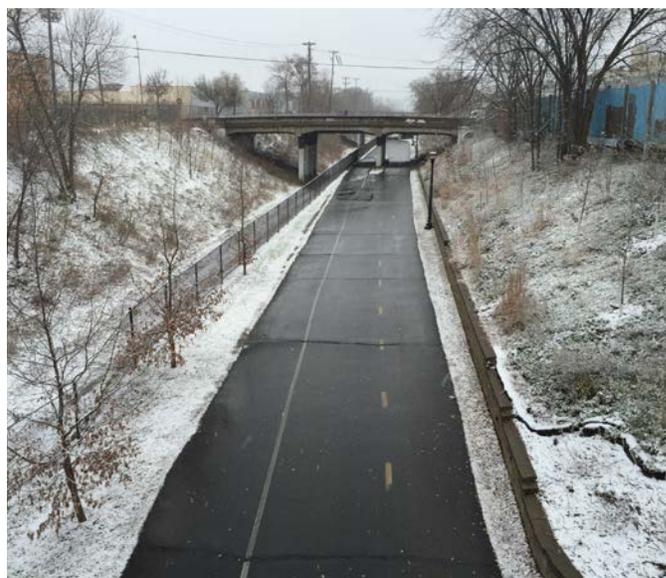
The 47-mile Pinellas Trail in Pinellas County, FL includes separate paths for users where space exists within the former railroad right-of-way. One pathway is wider and a hard surface. The other pathway is narrower and predominately crushed stone. Of the 70,000 monthly users, people on bicycles typically use the hard surface trail while people walking use the crushed stone, decreasing conflicts along the path. However, groups of users, whether pedestrians or bicyclists, typically prefer the wider path as it allows socializing. In addition, some pedestrians prefer hard surfaces for walking. Separated paths can mitigate user conflicts, but it is important to recognize the unique needs of each trail user type.



Source: Pinellas Trail, Inc.

MARKED SEPARATION MINNEAPOLIS, MN

The Midtown Greenway is a 5.7-mile separated trail in the heart of Minneapolis. The trail runs east-west on a former sunken railroad corridor, providing a direct and uninterrupted path for bicyclists to traverse the city. The majority of the trail is below grade, passing underneath bridges and allowing users a traffic-free route. The Greenway features two one-way bike lanes and one two-way walking path. A dashed yellow line separates the two bike lanes, allowing passing for bicyclists. A solid white line separates the walking path from the bike lanes. In some areas, the paths narrow due to space constrictions. The Greenway is well-lit at night, and is open 24 hours per day. Several thousand trail users enjoy the Greenway every day. During the winter, the Greenway is cleared of snow and ice.



FOR MORE INFORMATION

American Association of State Highway and Transportation Officials. *Guide for the Development of Bicycle Facilities*. 2012.

American Association of State Highway and Transportation Officials. *Guide for the Planning, Design, and Operation of Pedestrian Facilities*. 2004.

Federal Highway Administration. *Manual on Uniform Traffic Control Devices*. 2009.

Federal Highway Administration. "Shared-Use Path Level of Service Calculator." Last modified April 4, 2012. <https://www.fhwa.dot.gov/publications/research/safety/pedbike/05138>

United States Access Board. *Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way*. 2011.

United States Access Board. *Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way: Shared Use Paths*. 2013.