

as alerts, airspeed, attitude, altitude and direction, approach guidance, windshear guidance, TCAS resolution advisories, or unusual-attitude recovery cues.

e. The SVS image and the HUD symbols, which are spatially referenced to the pitch scale, outside view, and image, must be scaled and aligned (*i.e.*, conformal) to the external scene. In addition, the SVS image and the HUD symbols—when considered singly or in combination—must not be misleading, cause pilot confusion, or increase workload. Airplane attitudes or cross-wind conditions may cause certain symbols (*e.g.*, the zero-pitch line or flight-path vector) to reach field-of-view limits, such that they cannot be positioned conformally with the image and external scene. In such cases, these symbols may be displayed but with an altered appearance that makes the pilot aware that they are no longer displayed conformally (for example, “ghosting”). The combined use of symbology and runway image may not be used for path monitoring when path symbology is no longer conformal.

f. A HUD system used to display SVS images must, if previously certified, continue to meet all of the requirements of the original approval.

3. The safety and performance of the pilot tasks associated with the use of the pilot-compartment view must not be degraded by the display of the SVS image. These tasks include the following:

a. Detection, accurate identification and maneuvering, as necessary, to avoid traffic, terrain, obstacles, and other flight hazards.

b. Accurate identification and utilization of visual references required for every task relevant to the phase of flight.

4. Appropriate limitations must be stated in the Operating Limitations section of the Airplane Flight Manual to prohibit the use of the SVS for functions that have not been found to be acceptable.

Issued in Renton, Washington, on March 18, 2011.

K.C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

36 CFR Chapter XI

[Docket No. 2011-02]

RIN 3014-AA41

Shared Use Path Accessibility Guidelines

AGENCY: Architectural and Transportation Barriers Compliance Board.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: The Architectural and Transportation Barriers Compliance Board (Access Board) is issuing this Advance Notice of Proposed Rulemaking (ANPRM) to develop accessibility guidelines for shared use paths. Shared use paths are designed for both transportation and recreation purposes and are used by pedestrians, bicyclists, skaters, equestrians, and other users. The guidelines will include technical provisions for making newly constructed and altered shared use paths covered by the Americans with Disabilities Act of 1990 (ADA) and the Architectural Barriers Act of 1968 (ABA) accessible to persons with disabilities.

DATES: Submit comments by June 27, 2011.

ADDRESSES: Submit comments by any of the following methods:

- *Federal eRulemaking Portal* <http://www.regulations.gov>. Follow the instructions for submitting comments. Regulations.gov ID for this docket is ATBCB-2011-0002.

- *E-mail:* sharedusepathrule@access-board.gov. Include docket number 2011-02 or RIN number 3014-AA41 in the subject line of the message.

- *Fax:* 202-272-0081.

- *Mail or Hand Delivery/Courier:*

Office of Technical and Informational Services, U.S. Access Board, 1331 F Street, NW., Suite 1000, Washington, DC 20004-1111.

All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

FOR FURTHER INFORMATION CONTACT:

Peggy H. Greenwell, Office of Technical and Informational Services, Access Board, 1331 F Street, NW., Suite 1000, Washington, DC 20004-1111.

Telephone number: 202-272-0017 (voice); 202-272-0082 (TTY). Electronic mail address: greenwell@access-board.gov.

SUPPLEMENTARY INFORMATION:

Background

The Architectural and Transportation Barriers Compliance Board (Access Board) is responsible for developing accessibility guidelines to ensure that new construction and alterations of facilities subject to the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 *et seq.*) and the Architectural Barriers Act (ABA) of 1968 (42 U.S.C. 4151 *et seq.*) are readily accessible to and usable by individuals with disabilities. The ADA applies to state and local governments, places of public accommodation, and commercial facilities. The ABA applies to facilities designed, built, altered, or leased with Federal funds.

In separate rulemakings, the Board is developing accessibility guidelines for outdoor developed areas, including trails, and accessibility guidelines for pedestrian facilities in the public right-of-way, including sidewalks.

The Board issued a Notice of Proposed Rulemaking (NPRM) for the outdoor developed areas accessibility guidelines, including trails, under the ABA in 2007. 72 FR 34074 (June 20, 2007). The NPRM was based on a consensus report containing recommended accessibility guidelines for trails and other outdoor elements from the Board's Regulatory Negotiation Committee on Outdoor Developed Areas. The Board made available for public review a draft of the final outdoor developed areas accessibility guidelines in 2009. The NPRM and draft of the final outdoor developed areas accessibility guidelines included technical provisions for trails. References in this notice to the “Trails Guidelines” refer to the 2009 draft of the final outdoor developed areas accessibility guidelines (*see* <http://www.access-board.gov/outdoor/draft-final.htm>).

The Board will issue a Notice of Proposed Rulemaking (NPRM) for pedestrian facilities in the public rights-of-way accessibility guidelines, including sidewalks, in the summer of 2011. The Board made available for public review drafts of the proposed public rights-of-way accessibility guidelines in 2002 and 2005. The drafts of the proposed public rights-of-way accessibility guidelines included technical provisions for pedestrian access routes within sidewalks. References in this notice to the “Pedestrian Access Route—Sidewalk Guidelines” refer to the 2005 draft of the proposed public rights-of-way accessibility guidelines (*see* <http://www.access-board.gov/outdoor/draft-final.htm>).

www.access-board.gov/prowac/draft.htm.

Public comments received during these rulemakings raised questions about applying the technical provisions for trails and pedestrian access routes within sidewalks to shared use paths. Commenters recommended that the Board develop specific accessibility guidelines for shared use paths that address their unique characteristics. The Board agrees that shared use paths differ sufficiently from trails and sidewalks to warrant specific guidelines for making them accessible.

Applicability

Like all of the Board's accessibility guidelines, the guidelines for shared use paths will apply to newly constructed and altered facilities. When the Board's final guidelines are adopted by other Federal agencies authorized to issue ADA or ABA standards, they will be enforceable.¹ The Board's guidelines do not address existing facilities unless the facilities are included in the scope of an alteration undertaken at the discretion of a covered entity. The Department of Justice has issued separate regulations on program accessibility for State and local governments and on barrier removal for places of public accommodation owned or operated by private entities that address existing facilities that are not altered. 28 CFR 35.150 and 28 CFR 36.304. When the Department of Justice initiates rulemaking to adopt the shared use path accessibility guidelines as accessibility standards, the Department of Justice will address how program accessibility and barrier removal apply to existing shared use paths that are not altered. Comments concerning shared use paths that are not altered should be directed to the Department of Justice when it initiates rulemaking to adopt the shared use path accessibility guidelines as accessibility standards.

Key Differences Between Shared Use Paths, Trails, Sidewalks, and Accessible Routes

Shared use paths are a type of trail designed to be part of a transportation system, providing off-road routes for a variety of users. The primary users of shared use paths are bicyclists and pedestrians, including pedestrians using mobility devices such as manual or

motorized wheelchairs. While they may coincidentally provide a recreational experience, shared use paths differ from other types of trails with their transportation focus and serving as a supplement to on-road bike lanes, shared roadways, bike boulevards, and paved shoulders. They may extend or complement a roadway network. Shared use path design is similar to roadway design but on a smaller scale and for lower speeds. Whether located within a highway right-of-way, provided along a riverbank, or established over natural terrain within an independent right-of-way, shared use paths differ from sidewalks and trails in that they are primarily designed for bicyclists and others for transportation purposes such as commuting to work.

Trails, on the other hand, are designed primarily for recreational purposes. Since they are not designed with a transportation focus, they are typically not parallel to a roadway. Trails are pedestrian routes developed primarily for outdoor recreational purposes and do not connect elements, spaces, or facilities within a site. Trails are largely designed for pedestrians and other users to "experience" the outdoors and may be used by a variety of users, but they are not designed for transportation purposes.

Sidewalks are located in a public right-of-way and typically are parallel to a roadway. Consequently, sidewalk grades (running slopes) must be generally consistent with roadway grades so that they fit into the right-of-way. Sidewalks are designed for pedestrians and are not designed for bicycles or other recreational purposes.

American Association of State Highway and Transportation Officials (AASHTO) Guide on Bicycle Facilities and Shared Use Paths

The American Association of State Highway and Transportation Officials (AASHTO) advocates transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods. AASHTO develops and publishes more than 125 volumes of standards and guidelines that are used worldwide in the design, construction, maintenance, operation, and administration of highways, bridges, and other transportation facilities.

AASHTO is considered a leading source of information related to the design and construction of pedestrian and bicycle facilities. The Board has worked closely with AASHTO over the years in developing accessibility criteria for pedestrian facilities and shared use paths. AASHTO developed the "Guide

for the Planning, Design, and Operation of Pedestrian Facilities" (July 2004) and the "Guide for the Development of Bicycle Facilities" (1999). Although compliance with these AASHTO documents is voluntary, many states adopt these AASHTO documents as standards.

In February 2010, AASHTO made available draft revisions to the 1999 "Guide for the Development of Bicycle Facilities." The February 2010 draft is named the "Guide for Planning, Design, and Operation of Bicycle Facilities." References in this notice to the

AASHTO Bicycle Facilities Guide refer to the February 2010 draft of the "Guide for Guide for Planning, Design, and Operation of Bicycle Facilities." Chapter 5 of the AASHTO Bicycle Facilities Guide contains technical provisions for shared use paths. Chapter 5 applies a combination of the technical provisions in Board's Trails Guidelines and Pedestrian Access Route—Sidewalk Guidelines to shared use paths. The Board's rulemaking on shared use paths is timely given AASHTO's current plan to revise its guide for bicycle facilities and shared use paths. This rulemaking presents an opportunity for AASHTO and the Board to coordinate their efforts. AASHTO and the Board share a common interest in providing clear and consistent technical provisions for designers, owners and operators of shared use paths. The Board welcomes this opportunity.

Information Meeting on Shared Use Paths

On September 13, 2010, the Board held a public information meeting in conjunction with the ProWalk/ProBike 2010 Conference convened by the National Center for Bicycling and Walking. This was an opportunity for individuals with disabilities, designers of shared use paths, and other interested parties to provide information to assist the Access Board to consider how best to approach the development of accessibility guidelines for shared use paths. The meeting featured representatives from the State of Washington Department of Transportation, Florida Department of Transportation, AASHTO, and the Federal Highway Administration (FHWA). Meeting participants addressed major issues, including how to define shared use paths and possible technical provisions. Input from this meeting is reflected in this notice.

Request for Public Comment

The Board seeks input from the public, including individuals with disabilities, and from representatives of

¹ The Department of Justice and Department of Transportation are authorized to issue enforceable accessibility standards for the ADA. The General Services Administration, Department of Defense, Department of Housing and Urban Development, and United States Postal Service are authorized to issue enforceable accessibility standards for the ABA.

Federal, State, or local governments, public transportation organizations, and industry professionals regarding matters covered in this notice. In particular, the Board invites comments on the draft definition of “shared use path” and draft technical provisions in this document. Please provide responses to the specific questions included in the notice and provide any additional information that

may assist the Board to further refine the draft definition and technical provisions.

Shared Use Path Definition

Given the similarity between exterior pedestrian routes, including shared use paths, sidewalks, trails, and accessible routes, it is important to define the term “shared use path” used in this document in order to minimize any potential

confusion regarding applicable accessibility criteria.

To accomplish this, the Board has developed a draft definition for “shared use path”. AASHTO and several city, state, and Federal agencies have developed definitions; however, currently there is no universally accepted definition. The table below includes some of those definitions.

Source	Definition: Shared use path
AASHTO Bicycle Facilities Guide http://design.transportation.org/Documents/DraftBikeGuideFeb2010.pdf .	A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other nonmotorized users.
U.S. Department of Transportation, Federal Highway Administration http://www.fhwa.dot.gov/environment/bikeped/freeways.htm .	The term “shared use path” means a multi-use trail or other path, physically separated from motorized vehicular traffic by an open space or barrier, either within a highway right-of-way or within an independent right-of-way, and usable for transportation purposes. Shared use paths may be used by pedestrians, bicyclists, skaters, equestrians, and other nonmotorized users.
State of Washington, Department of Transportation http://www.wsdot.wa.gov/Publications/Manuals/M22-01.htm .	A facility physically separated from motorized vehicular traffic within the highway right-of-way or on an exclusive right of way with minimal crossflow by motor vehicles. Primarily used by pedestrians and bicyclists, shared use paths are also used by joggers, skaters, wheelchair users (both nonmotorized and motorized), equestrians, and other nonmotorized users.

In related rulemaking, the Board developed a definition for “trails” in the Trails Guidelines and will reference the 2009 Manual of Uniform Traffic Control Devices (MUTCD) definition of “sidewalks” in the Pedestrian Access Route—Sidewalk Guidelines. These definitions are provided below for comparison to the above definitions of “shared use path.”

Trail. A pedestrian route developed primarily for outdoor recreational purposes. A pedestrian route developed primarily to connect elements, spaces, or facilities within a site is not a trail. (Trails Guidelines, Section F106.5)

Sidewalk. That portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians. (2009 MUTCD Section 1A.13.192)

Participants attending the information meeting in September 2010 held in conjunction with the ProWalk/ProBike meeting noted the need for a definition of “shared use path.” They identified the key characteristics of a shared use path. The focus on a “transportation” purpose and “multi-use” were found to be primary factors distinguishing shared use paths from sidewalks and trails. Shared use paths are designed primarily for bicycles and pedestrians. The Board has used this input to develop the draft definition below.

Shared Use Path. A shared use path is a multi-use path designed for both transportation and recreation purposes. Shared use paths typically are separated from motorized vehicular traffic by an open space or barrier, either within a highway right-of-way or within an independent right-of-way.

Shared use paths are used by pedestrians and bicyclists, joggers, skaters, wheelchair users (both nonmotorized and motorized), equestrians, and other nonmotorized users. The draft definition does not include a list of all the groups that may use a shared use path. The purpose of the definition is to clarify when to apply the scoping and technical provisions for these paths. Local jurisdictions have authority to establish permissible uses on shared use paths. The Department of Justice (DOJ) ADA regulations require local jurisdictions to permit individuals with mobility disabilities to use manually-operated and power-driven wheelchairs in any areas open to the public. See 28 CFR 35.137 (a) as amended on September 15, 2010 (75 FR 56178). The DOJ ADA regulations further require local jurisdictions to establish policies regarding the use of other power-driven mobility devices by individuals with mobility disabilities subject to legitimate safety requirements. See 28 CFR 35.137 (b) as amended on September 15, 2010 (75 FR 56178). FHWA has issued similar

guidance regarding use of other power-driven mobility devices by individuals with mobility disabilities on pedestrian routes funded with Federal-aid highway funds. See <http://www.fhwa.dot.gov/environment/bikeped/framework.htm>.

Question 1. Does the draft definition of “shared use path” sufficiently distinguish these paths from trails and sidewalks? If not, please provide any recommendations that would strengthen this distinction.

Draft Technical Provisions for Shared Use Paths

Based on input at the information meeting in September 2010 and other sources, the Board has developed draft technical provisions for shared use paths and invites public comment. Discussion follows each of the draft technical provisions. For some of the draft provisions, we have provided tables showing corresponding provisions for sidewalks in the Pedestrian Access Route—Sidewalk Guidelines; trails in the Trails Guidelines; and shared use paths in the February 2010 draft AASHTO Bicycle Facilities Guide. The draft technical provisions establish criteria for the following components of a shared use path: surface; changes in level (vertical alignment and surface discontinuities); horizontal openings; width; grade and cross slope; protruding objects; gates

and barriers; and intersections and curb ramps.

Question 2. What technical provisions, if any, should apply where separate unpaved paths are provided for equestrian use? Additional information and guidance on this issue is welcomed.

1. Surface

Surface. The surface of the shared use path shall be firm, stable, and slip resistant.

A firm, stable, and slip resistant surface is necessary for persons with disabilities using wheeled mobility devices. Bicyclists with narrow-tired bicycles and in-line skaters also need a hard, durable surface. Shared use paths

typically are comprised of asphalt or concrete and these surfaces are generally accessible for people with disabilities. These surfaces perform well in inclement weather and require minimal maintenance. Unpaved surfaces that are firm, stable, and slip resistant may be used; however, they may erode over time requiring regular maintenance.

Surface	Provisions
Access Board Pedestrian Access Route—Sidewalk Guidelines	Firm, stable, and slip resistant.
Access Board Trail Guidelines	Firm and stable.
AASHTO Bicycle Facilities Guide	Hard, durable surface such as asphalt or Portland cement concrete recommended.

2. Changes in Level

Vertical Alignment. Vertical alignment shall be planar within curb ramp runs, blended transitions, landings, and gutter areas within the shared use path. Grade breaks shall be flush. Where the shared use path crosses rail tracks at grade, the surface of the shared use path shall be level and flush with the top of the rail at the outer edges of the rail. The surface between the rails shall be aligned with the top of the rail.

Surface Discontinuities. Surface discontinuities shall not exceed 0.50 inch (13 mm) maximum. Vertical discontinuities between 0.25 inch (6.4 mm) and 0.5 inch (13 mm) maximum shall be beveled at 1:2 maximum. The bevel shall be applied across the entire level change.

In addition to firm, stable, and slip resistant surfaces, smooth surfaces are also necessary for the safe use of wheeled mobility devices, as well as bicycles and in-line skaters. The draft technical provisions allow vertical changes in level up to $\frac{1}{4}$ inch without treatment and other vertical changes in level from $\frac{1}{4}$ to $\frac{1}{2}$ inch if they are beveled with a slope no greater than 1:2. Surfaces with individual units laid out of plane and those that are heavily textured, rough, or chamfered, will greatly increase rolling resistance and will subject pedestrians who use wheelchairs, scooters, and rolling walkers to the stressful (and often painful) effects of vibration. Surface discontinuities are also dangerous for bicyclists and in-line skaters. It is highly desirable to minimize surface discontinuities. However, when

discontinuities are unavoidable, they should be widely separated.

3. Horizontal Openings

Joints and Gratings. Openings shall not permit passage of a sphere more than 0.5 inch (13 mm) in diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

Flangeway Gaps at Non-Freight Rail Crossings. Openings for wheel flanges at pedestrian crossings of non-freight rail track shall be 2.5 inches (64 mm) maximum.

Flangeway Gaps at Freight Rail Crossings. Openings for wheel flanges at pedestrian crossings of freight rail track shall be 3 inches (75 mm) maximum.

Surface openings or gaps must be minimized in order to ensure a smooth surface on shared-use paths. Utility covers and drainage grates can be hazards and, for the safety of all users, must be treated. Special treatment is necessary where shared use paths cross railroad crossings, both freight and non-freight for the safe passage of wheeled mobility devices, as well as bicycles and other users. The AASHTO Bicycle Facilities Guide recommends that railroad crossings be smooth and be designed at an angle between 60 and 90 degrees to the direction of travel in order to minimize the danger of falls.

The draft technical provisions for surface gaps in shared use paths are consistent with the draft provisions in the Pedestrian Access Route—Sidewalk Guidelines. In most cases, the guidelines will require surface gaps or

openings on shared use paths to be no wider than $\frac{1}{2}$ inch. However, this specification is not practicable at rail tracks where gaps must be at least $2\frac{1}{2}$ inches to safely accommodate rail car wheel flanges. Due to variations in load and wheel play, the gap must be even larger (3 inches) to accommodate heavy freight trains. The Board is aware that such a gap can trap wheelchair caster wheels which are prone to turning sideways against vertical displacements, even slight ones but is unaware of a way to resolve this conflict.

4. Width

Width. The clear width of shared use paths shall be 5 feet (1.5 m) minimum.

The AASHTO Bicycle Facilities Guide recommends the paved width for a shared use path to be 10 feet minimum. Typically, widths range from 10 to 14 feet with the wider ranges in areas with high use or when planning for a wider variety of user groups. In very rare circumstances, a reduced width of 8 feet may be used. Wider shared use paths also are recommended where the path is used by larger maintenance vehicles; on steep grades to provide additional passing area; or through curves to provide more operating space.

The Board is considering requiring accessible shared use paths to provide at least 5 feet minimum width to address those rare circumstances where the AASHTO Bicycle Facilities Guide is not applied so that sufficient space is provided for wheelchair turning and to allow wheelchair users and others to pass one another.

Width	Provisions
Access Board Pedestrian Access Route—Sidewalk Guidelines	4 feet minimum.
Access Board Trail Guidelines	3 feet minimum.
AASHTO Bicycle Facilities Guide	10 feet minimum (in rare cases, 8 feet minimum).

5. Grade and Cross Slope

Grade. The maximum grade of a shared use path shall be 5 percent.

Exception: Where the shared use path is contained within a street or highway border, its grade shall not exceed the general grade established for the adjacent street or highway.

Individuals with disabilities using wheeled mobility devices generally need less steep slopes in order to

conserve energy and to better maintain control of the wheeled mobility device. For these reasons, the Board is considering a 5 percent maximum grade on newly constructed and altered shared paths that are not contained within a street or highway border. The AASHTO Bicycle Facilities Guide recommends that grades greater than 5 percent are undesirable for a variety of reasons. Bicyclists may find ascents over-taxing and descents uncomfortable

where speed is likely to build. Steep grades affect the safety of all users, particularly where multiple types of users are on the path at the same time. For example, pedestrians with disabilities may have difficulty avoiding faster moving bicycles. More importantly, however, pedestrians with disabilities are likely to experience greater difficulty traveling on steeper slopes than others.

Grade (running slope)	Provisions		
Access Board Pedestrian Access Route—Sidewalk Guidelines	Where pedestrian access route within a sidewalk is contained within a street or highway border, its grade shall not exceed the general grade established for the adjacent street or highway.		
Access Board Trail Guidelines	Running Slope of Trail Segment	Maximum Length of Segment	
	Steeper than		
	1:20	1:12	200 feet (61 m).
	1:12	1:10	30 feet (9 m).
AASHTO Bicycle Facilities Guide	1:10	1:8	10 feet (3050 mm).
	* No more than 30 percent of the total length of a trail shall have a running slope steeper than 1:12.		
AASHTO Bicycle Facilities Guide	Grades greater than 5 percent are undesirable.		

Question 3. Are there conditions where a 5 percent maximum grade cannot be achieved on a newly constructed shared use path? If so, the Board is interested in a description of the specific conditions that might prevent compliance. The Board will consider providing additional exceptions where it may be difficult or impossible to meet the 5 percent maximum grade.

Question 4. Should the Board provide guidance on how to address steeper segments of shared use paths when they cannot be avoided? For example, would providing space for bicyclists or wheelchair users to move off of the shared use path in order to avoid conflict with other traffic be helpful?

Where the shared use path is contained within a street or highway border, the grade may not exceed the general grade established for the adjacent street or highway. This is consistent with the grade provisions for sidewalks.

Question 5. What would be considered a sufficient separation between a shared use path and a roadway, or outside border of a roadway, where it may not be necessary for the shared use path to follow the grade of the roadway?

Cross Slope. The maximum cross slope shall be 2 percent.

Excessive cross slope (exceeding 2 percent) is a major barrier to travel along shared use paths for individuals using wheeled mobility devices and can

significantly impede forward progress on an uphill slope and compromise control and balance in downhill travel and on turns. Cross slope also negatively affects pedestrians who have braces or lower-limb prostheses and may use walkers or crutches, and those with gait, balance, and stamina impairments. Energy that might otherwise be used in forward travel must be expended to resist the perpendicular force of a cross slope along a route of travel. The AASHTO Bicycle Facilities Guide recommends a one percent cross slope, particularly at turns where bicyclists tend to lean to one side while turning. A one percent cross slope also provides sufficient slope to convey surface drainage in most situations.

Cross Slope	Provisions
Access Board Pedestrian Access Route—Sidewalk Guidelines	The cross slope of the pedestrian access route within a sidewalk shall be 2 percent maximum.
Access Board Trail Guidelines	Where the surface is concrete, asphalt, or boards, the cross slope shall not be steeper than 2 percent.
AASHTO Bicycle Facilities Guide	Where the surface is other than concrete, asphalt, or boards, the cross slope shall not be steeper than 5 percent. 1 percent recommended where possible.

Question 6. Are there conditions where cross slope steeper than 2 percent

is necessary in new construction? If so, the Board is interested in a description

of these specific conditions and

recommendations for appropriate allowances.

6. Protruding Objects

Protruding Objects. Protruding objects along or overhanging any portion of the shared use path shall not reduce the clear width of the shared use paths.

Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2 m) above the finish surface or ground shall not protrude more than 4 inches (100 mm) horizontally into shared use paths.

Post-Mounted Objects. Where objects are mounted on free-standing posts or pylons and the objects are 27 inches (685 mm) minimum and 80 inches (2030 mm) maximum above the finish surface or ground, the objects shall not overhang shared use paths more than 4 inches (100 mm) beyond the post or pylon base measured 6 inches (150 mm) minimum above the finish surface or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm) the lowest edge of sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2 m) minimum above the finish surface or ground.

The draft technical provisions for protruding objects are derived from the Board's ADA and ABA Accessibility Guidelines and Pedestrian Access Route—Sidewalk Guidelines. The provisions addresses objects that may project into shared use paths in a manner hazardous to people with vision impairments. Any protrusion on a shared use path is considered hazardous for all users, including individuals with disabilities. These technical provisions would apply to the full width of the shared use path. Objects mounted on walls or posts with leading edges above the standard sweep of canes (27 inches) and below the standard head room clearance (80 inches) would be limited to a 4 inch protrusion.

7. Gates and Barriers

Clear Width. Where gates or other barriers are provided, openings in gates and barriers shall provide a clear width of 32 inches (815 mm) minimum.

Gate Hardware. Gate hardware shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish surface or ground.

The draft technical provisions for gates and barriers are based on the Board's ADA and ABA Accessibility Guidelines and Trails Guidelines. Gates or barriers often are wider than 32 inches to allow for the safe passage of bicycles and other authorized users of shared use paths. The Board is proposing to require a 32 inch minimum clearance to address the rare circumstance where gate or barrier openings are deliberately narrow and could restrict access by wheelchair users unless a minimum width applies. A 32 inch wide clear opening provides the minimum clearance necessary to allow passage of an occupied wheelchair or other mobility device. The operation and location provisions for gate hardware are necessary to ensure that individuals with disabilities can operate the hardware.

8. Intersections and Curb Ramps

Curb Ramps and Blended Transitions

Curb Ramps. Curb ramps shall have a running slope that cuts through or is built up to the curb at right angles or meets the gutter grade break at right angles.

Running Slope. The running slope of curb ramps shall be 5 percent minimum and 8.3 percent maximum but shall not require the ramp length to exceed 15 ft. (4.5 m).

Cross Slope. The cross slope of a curb ramp at intersections shall be 2 percent maximum. The cross slope of a curb ramp at midblock crossings shall be permitted to be equal to the street or highway grade.

Landing. A landing 4 feet (1.2 m) minimum by 4 feet (1.2 m) minimum shall be provided at the top of the curb ramp and shall be permitted to overlap other landings and clear space. The running and cross slope of a curb ramp at midblock crossings shall be permitted to be equal to the street or highway grade.

Blended Transitions. Where blended transitions are provided, the running slope shall be 5 percent maximum and cross slope shall be 2 percent maximum.

Common Technical Provisions for Curb Ramps and Blended Transitions

Width. The clear width of blended transitions and curb ramps, excluding flares, shall be at least as wide as the shared use path.

Detectable Warning Surfaces. Detectable warning surfaces shall be provided where a shared use path connects to or crosses a roadway or railway crossing.

Grade Breaks. Grade breaks at the top and bottom of curb ramps shall be

perpendicular to the direction of the ramp run. At least one end of the bottom grade break shall be at the back of curb. Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the shared use path. Surface slopes that meet at grade breaks shall be flush.

Counter Slopes. The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transition shall be 5 percent maximum.

Clear Space. Beyond the curb face, a clear space of 4 feet (1.2 m) minimum by 4 feet. (1.2 m) minimum shall be provided within the width of the crossing.

Detectable Warning Surfaces

Truncated Domes. Detectable warning surfaces shall consist of truncated domes aligned in a square or radial grid pattern.

Dome Size. Truncated domes in detectable warning surfaces shall have a base diameter of 0.9 inch (23 mm) minimum to 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5 mm).

Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inches (17 mm) minimum, measured between the most adjacent domes.

Contrast. Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or shared use path surfaces, either light-on-dark or dark-on-light.

Size. Detectable warning surfaces shall extend 24 inches (610 mm) minimum in the direction of travel and the full width of the curb ramp or the blended transition.

Location and Alignment of Detectable Warning Surfaces

Curb Ramps. Where both ends of the bottom grade break are 5.0 feet (1.5 m) or less from the back of curb, the detectable warning surfaces shall be located on the ramp surface at the bottom grade break. Where either end of the bottom grade break is more than 5.0 feet (1.5 m) from the back of curb, the detectable warning surfaces shall be located on the lower landing.

Blended Transitions. The detectable warning surfaces shall be located on the blended transition at the back of curb.

Rail Crossings. The detectable warning surfaces shall be located so that the edge nearest the rail crossing is 6

feet (1.8 m) minimum and 15 feet (4.6 m) maximum from the centerline of the nearest rail. The rows of truncated domes in a detectable warning surface shall be aligned to be parallel with the direction of pedestrian travel.

Treatment of elevation changes, such as at curbs, and controlling cross slope are key factors in ensuring accessibility, particularly where shared use paths and roadways intersect. The draft technical provisions for curb ramps, blended transitions, and detectable warnings are based on the Board's Pedestrian Access Route—Sidewalk Guidelines. In general, the draft provisions for shared use paths require the following.

- The opening of a shared use path at a roadway must be at least as wide as the shared use path itself;
- A curb ramp or blended transition must be provided, and must be the full width of the shared use path;
- The running slope of the curb ramp must not exceed 8.3 percent and blended transition must not exceed 5 percent;
- The cross slope must be the same as the running slope of the roadway at midblock crossings; and
- Where the shared use path crosses a roadway or railway, detectable warnings must be provided the full width of the curb ramp or blended transition for a depth of 2 feet.

Markings at crossings of shared use paths and roadways must also comply with the provisions of Part 3—Markings of the 2009 Manual on Uniform Traffic Control Devices (MUTCD).

The Board has limited the requirement for detectable warnings to locations where a shared use path crosses a roadway or a railway. The Board has not included a requirement for detectable warnings where shared use paths cross other paths or pedestrian facilities. Where pedestrians and bicyclists share a pathway, established bicycle and pedestrian “rules of the road” should provide sufficient guidance for safe use.

Question 7. Is there a need to provide additional warnings or information to bicyclists regarding potential conflicts with other shared use paths users, including pedestrians with disabilities?

9. Other Issues

Overlap of Trails, Sidewalks, and Shared Use Paths

In some locations, a shared use path may be part of a sidewalk, or part of a trail. Guidance is needed to clarify which set of guidelines should be applied where there is overlap since the technical provisions are different in some areas. For example, Pedestrian

Access Route—Sidewalk Guidelines permit the grade to follow the slope of the roadway and Trails Guidelines specify a maximum grade. The Board is interested in suggestions for ways to treat areas of shared use paths that overlap sidewalks and trails that will provide an acceptable level of accessibility while taking into consideration any unique conditions or situations that may occur where these routes overlap.

Question 8. What technical provisions should apply where the shared use path overlaps a trail or sidewalk?

Shared Use Path Connections

The draft technical provisions in this ANPRM apply to the newly constructed and altered shared use paths. Shared use paths may be constructed over many miles and connected with other pedestrian routes, creating a network for transportation purposes. The Board is interested in more information regarding connections between shared use paths and other parts of a transportation network.

Question 9. Are different technical provisions needed when applying the draft technical provisions for shared use paths that “connect” shared use paths together or with other pedestrian routes (e.g., sidewalks, trails, accessible routes)? If so, please provide any additional information or recommendations.

Where should the accessibility guidelines for shared use paths be located?

The Board is considering including the accessibility guidelines for shared use paths in the same document as the accessibility guidelines for pedestrian facilities in the public right-of-way. State and local government departments of transportation appear to be the principal entities that design and construct shared use paths since these facilities are an extension of the transportation network, and having the accessibility guidelines for shared use paths in the same document as pedestrian facilities in the public right-of-way appears to be a logical choice. In addition, many of the draft technical provisions for shared use paths (i.e., intersection and curb ramps/blended transitions, detectable warning surfaces, 4 inch limit on post-mounted protruding objects (signs), and rail flangeway gaps) are the same as those in draft guidelines for pedestrian facilities in the public-right-of-way.

Question 10. Should the accessibility guidelines for shared use paths be included in the same document as the

accessibility guidelines for pedestrian facilities in the public right-of-way?

Question 11. Are there other issues that need to be addressed by the accessibility guidelines for shared use paths? If so, please provide specific information on any additional areas that should be addressed in the guidelines.

Regulatory Process Matters

The Board will prepare regulatory assessments required by Executive Orders 12866 and 13563, and the Regulatory Flexibility Act as a part of a Notice of Proposed Rulemaking (NPRM), the next step in this rulemaking.

Question 12. The Board requests commenters to provide information for the regulatory assessments, including:

- Number of existing and planned shared-use paths at the state or national level;
- Number of shared-use paths constructed each year (on average) within your jurisdiction;
- Typical cost for a new shared-use path on a per-mile basis;
- Sources of funding for the construction of shared-use paths (e.g., Federal highway funds, other Federal grant programs, state funds, local funds);
- The extent to which the AASHTO Bicycle Facilities Guide, or other design guides and standards are used for shared use paths;
- Whether any of the draft technical provisions would result in additional costs for design work, materials, earthmoving, retaining structures, or other items compared to current construction practices or design guides and standards currently followed;
- What, if any, unintended consequences (positive or negative) could result from an agency adopting the guidelines, and
- What impacts will the draft technical provisions have on small entities and are there alternatives that would minimize those impacts?

Nancy Starnes,

Chair, Architectural and Transportation Barriers Compliance Board.

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