

Toolbox for Making Intersections More Accessible for Pedestrians who are Blind or Visually Impaired

In 1997, the Institute of Transportation Engineers' (ITE) Traffic Engineering Council formed the Committee on Accessible Intersections for Pedestrians who are Blind or Visually Impaired (TENC-97-09). The Committee includes ITE members and representatives of advocacy and professional organizations active in the blindness field. The Committee is chaired by Herman F. Huang of the University of North Carolina's Highway Safety Research Center. The objective of the Committee is to identify the characteristics of an "accessible intersection," produce a toolbox for making intersections more accessible, and to identify research needs for the tools discussed in the toolbox to form the basis for a future recommended practice.

The *Toolbox for Making Intersections More Accessible for Pedestrians Who are Blind or Visually Impaired* includes information either developed by the Committee or identified by the Committee as useful to creating intersections that are more accessible to pedestrians who are blind or visually impaired.

DEFINITION OF AN ACCESSIBLE INTERSECTION

An accessible intersection is a street crossing that is usable by pedestrians who have mobility, cognitive, and/or sensory impairments. Intersection accessibility can be evaluated in a new or altered facility by a comparison to accessibility standards for new construction and alterations promulgated under several Federal statutes or adopted by a State or local government. The Americans with Disabilities Act permits existing pedestrian facilities to be measured more flexibly, as part of an overall pedestrian circulation program that may not achieve individual facility or feature compliance but can provide general pedestrian access to locations served by the pedestrian circulation system.

Standards implemented under the Architectural Barriers Act (ABA) of 1968, the Rehabilitation Act of 1973 (often referred to as '504') and the Americans with Disabilities Act (ADA) of 1990 include scoping and technical provisions for newly constructed and altered pedestrian walkways. They include criteria for protruding objects; surfaces; ramps and curb ramps; and parking that can be broadly applied to the public right-of-way. Recommendations published in January 2001 by the Public Rights-of-Way Access Advisory Committee (PROWAAC) will be developed into new guidelines specific to public sidewalks, street crossings, and related pedestrian facilities by the U.S. Access Board in 2002. PROWAAC recommendations refine current guidelines for application to the public right-of-way and suggest new signaling, information, and wayfinding provisions for pedestrians who have vision impairments.

POTENTIAL FUNDING SOURCES FOR IMPROVING INTERSECTIONS

www.ite.org/library/accessibleped.htm

The combined funding of Federal, State and local government on surface transportation is one of this county's largest domestic spending programs. The funding for pedestrian issues has increased dramatically since 1991. This increase was spurred by transportation legislation, grassroots support, and accessibility policies. Pedestrian projects and programs are eligible for funding in almost every major Federal-aid surface transportation category. Transportation legislation, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Transportation Equity Act for the 21st Century

(TEA-21) of 1998, call for mainstreaming pedestrian (and bicycle) projects into planning, design, and operation of our Nation's transportation system.

RESOURCES

Building a True Community - Final Report (January 2001)

www.access-board.gov/prowac/commrept/index.htm

This report is a recommendation for a new set of Federal guidelines (to be implemented as standards under the Americans with Disabilities Act) that define the details necessary to make the streetscapes in public rights-of-way accessible to all users. This report has been prepared by the [Public Rights-of-Way Access Advisory Committee \(PROWAAC\)](#), convened by the U.S. Architectural and Transportation Barriers Compliance Board (the Access Board) to address access to public rights-of-way for people with disabilities. The members of the PROWAAC were selected to represent a broad cross-section of design professionals, transportation industry professionals, implementing agencies, and a diverse range of advocates and users groups. See Part III: Recommended Standards, Scoping, and Technical Provisions, in particular X02.4 Sidewalk /Street Transitions and X02.5 Pedestrian Street Crossings.

Detectable Warnings: Synthesis of U.S. and International Practices (May 2000)

www.access-board.gov/publications/DW_Synthesis/report.htm

This synthesis summarizes the state-of-the-art regarding the design, installation and effectiveness of detectable warning surfaces used in the U.S. and abroad. The need for a warning surface is documented. U.S. and international research on detectable warnings is reviewed. U.S. and international standards and guidelines for detectable warnings are presented. Use of detectable warnings in the U.S. and abroad is described, with illustrative case studies. Information is provided on U.S. detectable warning products and manufacturers. Jurisdictional recommendations for the use of truncated dome detectable warnings are summarized and illustrated. The synthesis was developed under contract to the U.S. Access Board. It will be helpful to transportation engineers, planners, and other interested persons working to make public rights-of-way more accessible to people who have visual impairments.

Addressing Barriers to Blind Pedestrians at Signalized Intersections (September 2000)

HTML version: www.ite.org/library/JIB00A32.htm

Adobe PDF: www.ite.org/library/JIB00A32.pdf

An *ITE Journal* article presents the results of a survey of Orientation and Mobility Specialists regarding the problems students with visual impairments experience at signalized intersections. Orientation and Mobility Specialists are individuals who are professionally trained to teach people who are blind or visually impaired to travel independently. In the practice of their profession, they regularly provide instruction in crossing streets at signalized intersections.

Accessible Rights-of-Way: A Design Guide (November 1999)

www.access-board.gov/publications/PROW_Guide/PROWGuide.htm

In 1994, the Access Board proposed more specific rights-of-way guidelines as part of an interim final rule containing special application sections for certain State and local government facilities. Section 14 of the interim rule adapted basic ADA Accessibility Guidelines (ADAAG) 1-10 provisions for application to

public rights-of-way, but was not adopted as part of the DOJ Standard for Accessible Design. In November 1999, the Board established a Federal advisory committee to develop final rights-of-way provisions from section 14 proposals. DOJ action to include rights-of-way Standards in the title II regulation is expected in 2001. This design guide has been developed to provide uniform guidance to State and local governments on how to design and construct accessible public pedestrian facilities until such time as the Access Board, DOJ, and DOT issue final requirements. This document does not mean that the ADA does not cover public rights-of-way. Title II requires non-discrimination in all programs, services, and activities of public entities. The construction, alteration, or maintenance of the public rights-of-way is an activity of a public entity and is therefore subject to the nondiscrimination requirements.

Accessible Pedestrian Signals (August 1998)

www.access-board.gov/research&training/pedsignals/pedestrian.htm

Accessible pedestrian signals (APS) that provide audible and/or vibrotactile information coinciding with visual pedestrian signals let pedestrians who are blind know precisely when the WALK interval begins. This information is useful in analyzing an intersection and preparing to cross. Pedestrians who know when the crossing interval begins will be able to start a crossing before turning cars enter the intersection and can complete a crossing with less delay. Audible signals can also provide directional guidance, which is particularly useful at non-perpendicular intersections and at wide multi-lane crossings. The report, produced on behalf of the U.S. Access Board, provides an information on requirements at intersections; accessible traffic signal technologies; characteristics of accessible pedestrian signals; determining when to install accessible pedestrian signals; specifying accessible pedestrian signals; installing accessible pedestrian signals; pedestrian detection technology; APS functional characteristics; and APS product sources.

USEFUL LINKS www.access-board.gov/indexes/linksindex.htm

The U.S. Access Board maintains a list of a variety of organizations in the public and private sectors that provide information on accessibility and accessible design. These links are provided for information purposes only; neither ITE nor the Access Board makes any warranty, expressed or implied, that the information obtained from these sources is accurate or correct.