CHAPTER

1 INTRODUCTION

Introduction

This guidebook is the second part of a two-phase project focused on designing sidewalks and trails for access. It was created to provide planners, designers, and transportation engineers with a better understanding of how sidewalks and trails should be developed to promote pedestrian access for all users, including people with disabilities. Part I, *A Review of Existing Guidelines and Practices*, is a compilation of data and designs gathered during a comprehensive literature search and site visits conducted throughout the United States (Axelson et al., 1998). Many of the recommendations provided in this guidebook are based on research gathered during Phase I.

Figure 1-1. *Designing sidewalks for access enhances the overall quality of the pedestrian experience and improves the mobility of people with disabilities.*

The information presented in this guidebook is meant to be used as guidance only and should not be construed as requirements or regulations. The strategies presented cannot always be reproduced in real-world situations exactly as recommended; instead, the general design principles should be applied in the most appropriate manner for each situation. These recommendations are not meant to supersede or challenge existing standards, but to supplement and provide guidance where standards have yet to be adopted.

1.1 Guidebook overview

The Guidebook has been divided into four distinct segments:

- Understanding the User
- Sidewalk Development

- Trail Development
- Appendices

Understanding the User (Chapters 1 and 2) addresses the general benefits of sidewalks and trails, the history behind disability rights legislation, and the needs and abilities of sidewalk and trail users. Sidewalk Development (Chapters 3 through 11) provides a comprehensive approach to creating accessible sidewalk networks. It addresses a broad array of sidewalk topics including planning, design, and maintenance. Chapters 12 through 18 are contained within Trail Development, which provides planning, assessment, and design guidance for trails. For the purposes of this guidebook, a trail is defined as a path of travel for recreation and/or transportation within a park, natural environment, or designated corridor that is not classified as a highway, road, street, or sidewalk. In Chapter 12 (planning) and Chapter 13 (assessment), recreation trails and shared-use paths are discussed as one unified topic. However, in the design chapters (Chapters 14 and 15), shared-use paths and recreation trails are discussed separately. Chapter 19 (research recommendations) identifies recommended research topics and provides several appendices containing supplemental information.

Although this guidebook emphasizes design for pedestrian access, the needs of all potential user groups should be addressed during the design process. For example, if a summer hiking trail will be utilized by cross country skiers in the winter, the needs of both groups should be considered in the construction and maintenance plans for the trail. In addition, because off-highway vehicle (OHV) riders, equestrians, and others may have disabilities, all facilities — such as toilets — provided along a trail should be accessible. The Americans with Disabilities Act requires that all new construction be designed and constructed to be accessible; thus it is not necessary to determine the possible needs of trail users with respect to access.

1.2 Metric versus English units

Many of the current accessibility standards were established in English units because they are based on architectural standards. However, the transportation industry often uses metric units. This is problematic because the accessibility requirements are very precise and in some instances, converting units and rounding can alter the original requirement by almost 2 inches. For example, both 915 mm and 945 mm round to 0.9 m, even though 945 mm is over an inch longer than 915 mm. To avoid misrepresenting the accessibility standards, dimensions less than 10 feet but greater than 12 inches are rounded to the nearest 5 millimeters; dimensions less than 12 inches are rounded to the nearest millimeter in this manual. All recommendations in this guidebook are provided in metric units with English units in parentheses.

1.3 Benefits of sidewalks and trails

Sidewalks and trails serve as critical links in the transportation network providing pedestrian access to commercial districts, schools, businesses, government offices, and recreation areas. Because sidewalks and trails provide such fundamental services to the public, they should be designed to meet the needs of the maximum number of potential users. Unfortunately, many sidewalks and trails do not adequately meet the needs of people with disabilities, who constitute nearly one-fifth of the American population (U.S. Census Bureau, 1994). People with disabilities who live in areas without accessible pedestrian networks and do not have access to automobiles face a greater risk of becoming isolated from the community and unnecessarily dependent upon others to perform routine activities such as grocery shopping. An all-inclusive approach to sidewalk and trail design will ensure that the needs of all potential users are addressed, including people with disabilities.

Accessibility improvements to sidewalks and trails can enrich the livability of a community. Sidewalks and trails with pedestrian-friendly elements, such as curb ramps and benches, create inviting strolling and shopping areas while providing access to people with limited transportation options. Commercial districts with accessibility improvements will have a larger customer base that includes people with disabilities. In addition, people with disabilities will be able to participate more easily in the community if well-placed access improvements are available because they can reach their desired destinations more easily. People with temporary disabilities, such as a broken leg or foot, will also be able to continue their daily functions with less inconvenience. An increase of accessible sidewalks and trails also mean better pedestrian facilities for everyone. Neighborhoods that are pedestrian friendly encourage people to walk and become safer because there are more people on the street. A broader range of consumer, social, and recreational opportunities are available in areas that are usable by pedestrians.

Access to sidewalks and trails must not be denied to people with disabilities. Unfortunately, accessibility is often seen as a "you have to," rather than a desirable component of the planning, project development, design, and construction processes. This attitude is limiting and does not consider the many human and economic benefits that accessible environments bring to a community. When the environment meets the needs of the most vulnerable users, the system is better for everyone. In addition to people with disabilities, many other people benefit from accessible sidewalks and trails. For example:

- Pedestrians have an easier time pushing or pulling shopping carts, luggage, and other wheeled devices;
- All pedestrians are able to choose trail experiences that best suit their

needs, skill level, and desired experience;

- Parents are able to more easily push children in strollers on sidewalks and trails with accessible surfaces;
- Young children can use curb ramps when riding their bicycles;
- Children, parents, and school systems benefit from sidewalk networks with visible pedestrian crossings and other safety features;
- Children learn independence by having a safer place to travel;
- A good system of sidewalks may allow older pedestrians who no longer drive to walk to services and socialize in their community, while offering a continued independent lifestyle;
- Businesses can load and unload goods more easily;
- Wide sidewalks can be gathering places in neighborhoods and business districts, and offer space for families and friends to walk and socialize together;
- Wide sidewalks in business communities offer an opportunity for trees, landscaping, and other amenities that create an inviting place for customers to shop and do business; and
- Well-maintained sidewalks and trails encourage exercise and provide the benefits of a healthy lifestyle.

Sidewalk and trail projects should be selected carefully to maximize their usefulness to the community. All potential users, including people with disabilities, should be included in the public involvement planning process. Pedestrian facilities should be developed that are safe, attractive, convenient, and easy to use. Facilities that are inadequate or inappropriate to a community's needs discourage use and waste money and resources (OR DOT, 1995).

1.4 Legislation and standards

The Americans with Disabilities Act of 1990 (ADA) is a landmark law that recognizes and protects the civil rights of people with disabilities. The ADA prohibits discrimination on the basis of disability by covered entities. Title I of the ADA prohibits discrimination in employment on the basis of disability by covered entities. Title II of the ADA prohibits discrimination on the basis of disability in the provision of services, programs, and activities by State and local governments. Title III of the ADA prohibits discrimination on the basis of disability in the provision of goods, services, facilities, and accommodations by private entities that provide public accommodations or operate commercial facilities. Under the ADA, services and facilities must be accessible to be nondiscriminatory, and the requirements for new construction and alterations are much more stringent than those for existing facilities. Sidewalks and trails associated with covered services, whether new or existing, are subject to the requirements of the ADA. A more detailed description of the scope and requirements of the ADA is contained in Section 1.2 of Chapter 1 of Part I of this report, A Review of Existing Guidelines & Practices. The Americans with Disabilities Act is enforced by the U.S. Department of Justice.

Newly constructed and altered sidewalks and trails should be accessible and usable by people with disabilities. In addition, covered entities are responsible for developing transition plans and implementing accessibility improvements, where needed, to existing facilities. High priority should be given to the accessibility of sidewalks and trails during long-range planning and site development.

Agencies and private organizations who use Federal funds are also obligated to address accessibility by the Architectural Barriers Act (ABA) of 1968 and the Rehabilitation Act of 1973. The ABA requires that buildings and facilities designed, constructed, altered with Federal funds, or leased by a Federal agency comply with standards for physical accessibility. The Rehabilitation Act requires all federally conducted or assisted programs to be available to people with disabilities. Each Federal funding agency applies and enforces a unique set of regulations for the Rehabilitation Act. The U.S. Architectural and Transportation Barriers Compliance Board, also known as the U.S. Access Board, was created under the Rehabilitation Act of 1973 to enforce the ABA.

1.4.1 Accessibility standards for new construction and alterations

The U.S. Access Board first published Sections 1 through 9 of the ADA Accessibility Guidelines (ADAAG) in 1991. These guidelines were subsequently adopted by the Department of Justice (DOJ) as the ADA Standards for Accessible Design, which made them enforceable by law. ADAAG provides specific scoping information and technical requirements for new construction and alterations. Modifications that affect usability are considered alterations under the ADA. For example, according to the US DOJ Technical Assistance Manual, resurfacing of a roadway beyond normal maintenance is an alteration. However, construction limited in scope to a spot repair, such as repainting markings or patching potholes, is considered routine maintenance and does not trigger additional access retrofit requirements (U.S. Department of Justice, 1994a).

The first nine sections of ADAAG are specific to the built environment, which includes building sites and university campuses. Guidelines for designing sidewalks and trails are not specifically addressed in the 1991 ADA Accessibility Guidelines. However, public and private entities who design and construct sidewalks and trails are still obligated under ADA to make them accessible to and usable by people with disabilities. Until specific standards are adopted as part of ADAAG, some of the existing scoping and technical provisions for new construction and alterations can be applied to the design of pedestrian facilities, such as:

- Accessible routes (ADAAG 4.3);
- Parking (ADAAG 4.6);
- Curb ramps (ADAAG 4.7); and
- Ramps (ADAAG 4.8).

1.4.2 Developing accessibility standards for sidewalks

In 1994, the U.S. Access Board published an Interim Final Rule that contained proposed guidelines for public rights-of-way (proposed Section 14 of ADAAG, now reserved). However, after receiving public comments, they decided to withdraw the guidelines and focus on a public awareness campaign aimed at the transportation industry. As part of this effort, the U.S. Access Board recently published a design guide entitled, *Accessible Rights-of-Way: A Design Guide*, to promote accessible sidewalk development (U.S. Access Board, 1999a). In addition, the U.S. Access Board has convened a committee of transportation and disability experts to readdress the issue of sidewalk guidelines and recommend design and technical provisions that can be adopted under the ADA.

The specifications in ADAAG are based on the needs of the majority of pedestrians with disabilities. However, no environment will ever be accessible to everyone because people with disabilities have a broad spectrum of abilities. The term “accessible” is used in this guidebook to refer to environments that meet the specifications defined by the U.S. Access Board. Specifications which define “accessible” environments include the current version of ADAAG, as well as the report of the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas and the U.S. Access Board’s recommendations for sidewalks contained in *Accessible Rights-of-Way: A Design Guide* (U.S. Access Board, 1999a).

1.4.3 Developing accessibility standards for trails

Many people with disabilities and others with circumstances limiting their mobility enjoy traveling through natural environments. The U.S. Access Board created the Recreation Access Advisory Committee in 1993 to discuss accessibility guidelines needed for recreation facilities, including trails and other outdoor developed areas. The U.S. Access Board issued the Committee’s work as an Advanced Notice of Proposed Rulemaking. Based on the feedback received, the U.S. Access Board created a Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas. The Committee represented various interest groups, including organizations representing trail builders and people with disabilities. The authors of this guidebook participated in both the Recreation Access Advisory Committee and the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas. Many of the recommendations in the Trail Development chapters of this guidebook are based on the work of the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas. The U.S. Access Board will use the Committee’s report to develop a proposed rule that will be published for public comment and will become a special application section within ADAAG.

Many people with disabilities do not have the functional mobility to negotiate environments that meet “accessible” specifications without the aid of assistive technology, such as powered wheelchairs. However, most people with disabilities have the functional mobility to negotiate environments that meet “accessible” specifications with appropriate assistive technologies.