



UNITED STATES ACCESS BOARD

FY 2003 Annual Report



January 2004

A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN

UNITED STATES ACCESS BOARD

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F Y 2 0 0 3 A N N U A L R E P O R T

The Access Board is an independent Federal agency committed to design that is accessible to persons with disabilities. Created over 30 years ago to ensure access to federally funded facilities, the Board is now a leading source of information on accessible design. The Board is structured to function as a coordinating body among Federal agencies and to directly represent the public, particularly people with disabilities. Half of its members are representatives from most of the Federal departments. The other half is comprised of members of the public appointed by the President, a majority of whom must have a disability.

ACCESSIBILITY GUIDELINES AND STANDARDS

The Board's primary mission is developing and maintaining design criteria for accessibility. Written in the form of guidelines or standards, these requirements ensure access to the built environment, transit vehicles, telecommunications, and electronic and information technology as required by several different laws, including the landmark Americans with Disabilities Act (ADA). Over the years, the Board has gained new responsibilities for developing accessibility criteria while maintaining a varied agenda updating or supplementing its existing guidelines and standards. In FY 2003, the Board made progress on several rulemaking initiatives, among them an extensive update of its guidelines for facilities and development of new guidelines for public rights-of-way and passenger vessels.

Update of Facility Guidelines

The Board maintains guidelines covering a wide range of facilities in the private and public sectors. These include places of public accommodation, commercial facilities, and state and local government facilities subject to the ADA, as well as federally funded buildings covered by the Architectural Barriers Act (ABA). Both the ADA guidelines and the ABA guidelines specify access in new construction and alterations and provide detailed provisions for various building elements, including ramps, elevators, restrooms, parking, and signage, among others.

The Board is jointly updating the ADA and ABA guidelines to bring them up to date and to make both documents more consistent. The Board began this process by establishing an advisory committee charged with reviewing the original ADA Accessibility Guidelines (ADAAG) and recommending changes. Based on this committee's work, the Board published in FY 2000 a proposal for a new set of ADA and ABA guidelines that featured a host of updated provisions and clarifying revisions, as well as a new look and format. This proposal, which was made available for public comment for six months, attracted over 2,500 comments. Considerable input was received from designers and architects, code officials, people with disabilities and organizations representing them, trade and industry groups, and others. The Board finalized its proposal according to its review of these comments and completed its deliberations at the end of FY 2002. In FY 2003, the Board conducted a comprehensive assessment of the costs and benefits of the new guidelines, as Federal regulations of their scope require such an analysis before they can be cleared for publication. The Board anticipates publishing the new ADA and ABA guidelines in final form in 2004.

Coordination with Private Sector Organizations

A key goal of the Board's update of its facility guidelines has been to make them more consistent with model building codes and industry standards. While finalizing its ADA and ABA guidelines, the Board coordinated extensively with model code groups and standard-setting bodies so that differences could be reconciled. In particular, the Board coordinated its work with updates of the International Building Code (IBC) and voluntary consensus standards issued by the American National Standards Institute (ANSI).

The IBC represents the successful partnership of three of the primary model code organizations in the U.S. in establishing a single model building code. Used by a growing number of states and local jurisdictions, the IBC contains provisions for accessibility. Since making its guidelines and the IBC more consistent will greatly facilitate compliance with both documents, the Board revised many provisions in its guidelines for consistency with corresponding requirements in the IBC. However, in some cases, the Board opted for different specifications and worked with the International Code Council (ICC), which maintains the IBC, to harmonize remaining differences. The Board recommended various changes to the IBC which were taken up at public hearings the ICC held on its update of the IBC. Most of these proposals were approved. As a result, differences between the Board's guidelines and scoping provisions in the 2003 edition of the IBC have been minimized.

Similarly, the Board worked with the ANSI A117 Committee, which has maintained voluntary consensus standards for accessible buildings and facilities for over 40 years. The A117.1 standard is referenced by the IBC and various state codes, among others. While the Board's guidelines derive from earlier versions of the ANSI standard, significant differences between the documents have remained. From the outset of its update, the Board sought to reconcile these differences. As the A117 Committee updated its standard, the Board proposed changes for consistency with its revised guidelines to further bring both documents into alignment.

Public Rights-of-Way

In FY 2003, the Board continued work on new guidelines covering access to public rights-of-ways. Sidewalks, street crossings, and other elements of the public rights-of-ways present unique challenges to accessibility for which specific guidance is considered essential. Some of the issues to be addressed in this rulemaking include access for blind pedestrians at street crossings, wheelchair access to on-street parking, and various constraints posed by space limitations, roadway design practices, slope, and terrain. The new guidelines will cover pedestrian access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.



The Board had developed a draft set of guidelines based on recommendations from an advisory committee it had chartered. The Public Rights-of-Way Access Advisory Committee was comprised of representatives from disability organizations, public works departments, transportation and traffic engineering groups, the design and civil engineering professions, government agencies, and standards-setting bodies. The draft was made available for public comment until the end of October 2002. During the comment period, the Board held a public meeting on the draft in Portland, Oregon. The event enabled interested persons and organizations to provide input on the draft requirements. By the close of the comment period, the Board had received over 1,400 comments from interested persons and organizations. The Board spent most of the fiscal year analyzing the comments received and deliberating on major

issues they raised. Most comments came from individuals and organizations representing people with disabilities and addressed provisions in the guidelines concerning access for people with vision impairments at street crossings. Civil engineers, public works departments, state highway divisions and transportation departments, and leading industry organizations, such as the American Association of State Highway and Transportation Officials (AASHTO), also provided detailed input on the guidelines. Concerns and recommendations addressed provisions for traffic roundabouts, criteria for crosswalks, construction tolerances, the cost impact of various requirements, the application of requirements in alterations and public improvement projects, and differences between defined terms and industry terminology. A revised version of the guidelines based on the Board's review of the comments will be published and made available for public comment before finalization.

Guidance and Outreach on Public Rights-of-Ways

While work proceeded on the public rights-of-way guidelines, the Board maintained on a separate track a complementary program of coordination and outreach with various interested groups. These efforts included the development of guidance material that will supplement the new guidelines, chief among them a guide on addressing access in alterations to public rights-of-ways. A team of members from the Public Rights-of-Way Access Advisory Committee worked with the Board in drafting the alterations guide. This group held meetings across the country over a 2-year period to gather information and resources, including case studies. The group's final meeting took place in Chicago in May. Previous meetings were held in Columbus (OH), San Antonio, Portland (OR), Las Vegas, and Atlanta. The guide is expected to be published in 2004.

Throughout the year, the Board also participated in a number of meetings and events across the country concerning various aspects of accessible public rights-of-way. These included meetings with U.S. Department of Transportation researchers on railway crossing safety in Cambridge, the National Committee on Uniform Traffic Control Devices in Savannah, the Western Association of State Highway Transportation Officials and the Utah Department of Transportation in Salt Lake City, the AASHTO Design Committee in Boston, and the Association of Pedestrian and Bicycle Professionals Conference in Cambridge. The Board also took part in a symposium on urban streets in Anaheim and a conference by the Institute of Transportation Engineers Conference in Seattle.

Passenger Vessels

In addition to its guidelines for facilities, the Board also maintains design criteria for transportation vehicles required to be accessible by the ADA. The Board's vehicle guidelines cover various modes of public transportation, including buses, vans, and rail vehicles, among others. In FY 2003, the Board advanced work on new guidelines covering various types of water craft, such as ferries, gaming boats, cruise ships, and sightseeing boats. The Board's work during the year focused on the preparation of a draft set of guidelines which will be made available for public comment. The draft guidelines will be based on a report submitted to the Board by the Passenger Vessel Access Advisory Committee which the Board had created to develop recommendations on the guidelines. This committee investigated various issues concerning access to different types of vessels and included representation from vessel operators and designers, naval architects, and disability groups, among others.



Standard methods of boarding vessels and the dynamic interplay between vessels and shoreside facilities present unique challenges to accessibility. During the year, the Board collected additional information on viable access solutions that will allow persons with disabilities independent access onto and off of large vessels such as cruise ships, dinner boats, ferries, and gaming boats. In August and September, the Board traveled to the ports of New Orleans and Seattle to gather information and to hold public meetings on gangways and other means of boarding large vessels. The Board toured various types of vessels and boarding facilities at each port to assess access issues first-hand and held public meetings that enabled those with an interest in the subject to discuss and provide input on possible access solutions and their impacts. Vessel designers and operators, pier operators, persons with disabilities, and others attended the meetings. The Board refined its draft of the vessel guidelines based on the information collected. The Board will publish the guidelines in draft form and make them available for public comment.

TECHNICAL ASSISTANCE AND TRAINING

The Board provides technical assistance on its design requirements and accessible design through its toll-free telephone line, by fax, and by e-mail. Guidance is available on accessibility as it pertains to the design of facilities, transit vehicles, telecommunications, and electronic and information technology. Most inquiries concern the Board's guidelines for facility design, particularly ADAAG, and come from architects, contactors, code officials, and other members of the building profession. A significant portion also concern the Board's standards for electronic and information technology. These standards, which the Board issued in 2000, cover computer hardware and software, websites, phone systems, fax machines, copiers, and similar technologies. They were developed under Section 508 of the Rehabilitation Act which requires access to such technologies where procured by Federal agencies. In FY 2003, the Board responded to approximately 12,200 technical inquiries.



The Board provides training on its guidelines and standards and routinely participates in programs and conferences throughout the country sponsored by other organizations. Last year, the Board conducted 90 training sessions across the country, reaching more than 8,400 people through its training program.

ENFORCEMENT

The Board was originally created to develop and enforce design requirements for facilities covered by the Architectural Barriers Act (ABA) of 1968. The ABA requires access to facilities designed, built or altered with Federal dollars. The law covers a wide range of facilities, including post offices, social security offices, and national parks. It also applies to non-government facilities that have received Federal funding, such as certain schools, public housing, and mass transit systems.

The Board enforces the ABA through the investigation of complaints it receives concerning particular facilities. The first step of an investigation is to determine whether the facility is covered by the law. If so, the Board's next step is to verify whether the facility meets the applicable access standards. If it does not, then the Board will work with the responsible entities to develop a plan to bring the facility into compliance. Cases are closed only after the necessary corrective action is completed.

The Board opened 83 investigations in FY 2003, in addition to 87 cases that were active at the beginning of the fiscal year. Some of these complaints concerned post offices, courthouses and town halls, schools, parks, veterans medical centers, and office buildings, among others. Over the course of the year, the Board completed 64 investigations. Corrective action was achieved in more than half of the cases (36). In addition, corrective action was voluntarily undertaken in six other cases where the Board did not have jurisdiction. In the remaining cases (22), the Board determined that the ABA did not apply or that the facility did not violate the appropriate access standard.

PUBLICATIONS AND ON-LINE GUIDANCE

The Board maintains a variety of publications and materials which it makes available free to the public upon request and through its website. This information includes copies of all of its guidelines and standards and related guidance materials, such as technical bulletins, design guides, and manuals. More than 30 such publications are available. In FY 2003, the Board sent out over 1,800 packets of information to its customers. More than a third included copies of ADAAG. The Board also developed a series of guides on new design criteria for recreation facilities and on-line guidance on its standards for electronic and information technology.

The Board also uses its website at www.access-board.gov to disseminate published material and guidance on its design criteria and accessible design, including on-line tutorials and answers to frequently asked questions. Throughout the fiscal year, the number of visitors to the Board's website continued to climb. The site totaled more than 1.4 million user sessions and 12.6 million hits over the course of the year.

Guides on Access to Recreation Facilities

The Board's facility guidelines cover access to many types of buildings and facilities but originally did not address recreation facilities in detail. Determining that specific guidance was needed on how to achieve access at certain types of recreation facilities, the Board developed a supplement to ADAAG on recreation facilities that was published in 2002. These guidelines specify access to amusement rides, boating facilities, fishing piers and platforms, golf courses, miniature golf courses, sports facilities, swimming and wading pools, and spas. They are one of the first of their kind in detailing access to these environments.

To help users become familiar with the new guidelines, including the meaning and intent of specific provisions, the Board published in FY 2003 supplementary guides on each of the seven facility types covered. The Board widely distributed the guides in print form and also made them available on its website.



Standards for Electronic and Information Technology

Recognizing the international interest in access to information technology, the Board translated its Section 508 standards for electronic and information technology into Spanish and Japanese. The Board also enhanced the range of available alternate formats by posting a text-to-speech version of the standards on its website. Known as a Digital Talking Book, this format runs on software that uses synchronized speech and marked-up text files to provide audible output. This format also offers advanced navigational features. In addition, the Board posted a version of the standards that is formatted for Braille printing. Users can download a copy to their computer for use with a Braille printer.

Since issuing its Section 508 standards, the Board has maintained a program of continuing on-line guidance and training on the requirements of the standards. Under this program, the Board developed a series of interactive web-based tutorials on different sections of the standards. The tutorials supplement previously released material and provide advanced guidance on how products can conform to the standards. In FY 2003, the Board completed work on several new courses covering requirements for software applications and operating systems; desktop and portable computers; and self contained, closed products, such as information kiosks, calculators, and fax machines. Work also progressed on a course addressing telecommunications products which was completed later in the year. The completed course series, which includes previously released modules on accessible websites and accessible video and multimedia, covers all technology types addressed by the Section 508 standards.

RESEARCH

Each year, the Board funds research on various aspects of accessibility relating to architecture, communications, and transportation. These projects gather information that is useful to the Board in developing guidelines and providing technical assistance. In FY 2003, the Board oversaw research being conducted through several projects initiated the previous year. These projects address indoor air quality, wheeled mobility, and playground surfacing. In addition, the Board funded a report that provides guidance on audible pedestrian signals. In order to maximize limited resources, the Board continuously works to coordinate its research program with those of other organizations having similar interests and goals. Many projects are undertaken in partnership with other agencies. During the year, the Board worked to gain support for needed research on access at railroad crossings.

By year's end, the Board established research priorities for 2004. The FY 2004 agenda includes a research project on transfer devices for amusement rides, an industry workshop on field tolerances in construction, and a study on how static electricity generated at slides and similar play equipment impacts children with cochlear implants.

Indoor Air Quality

In developing and updating its guidelines, the Board has received numerous comments from individuals with an acute sensitivity to various chemicals in the environment, known as multiple chemical sensitivities, and to electromagnetic sensitivities. They report that chemicals released from products and materials used in the construction, renovation, and maintenance of buildings, as well as electromagnetic fields and inadequate ventilation, are barriers that deny them access to buildings. Many of these comments identify indoor air quality as a primary concern in causing a range of debilitating physical reactions, some even life-threatening.

In response to these concerns, the Board is sponsoring research to examine ways of improving indoor air quality. The project is being carried out by the National Institute of Building Sciences and will build upon the Board's history of working cooperatively with model code and standard setting organizations. The aim of the project is to bring together various stakeholders in a collaborative process to examine possible actions that can be taken to improve the accessibility of indoor environments. As part of the project, a committee was established that includes architects and designers, manufacturers of building products and materials, building owners and operators, model code and standard setting organizations, environmental and health professionals, government agencies, organizations representing people with multiple chemical or electromagnetic sensitivities, and others. The committee is scheduled to hold its first meeting in early 2004.

Mobility Aids and Human Measures

The design and functional characteristics of mobility aids have become increasingly diverse over the past few decades. This growing diversity among both mobility aids and people who use them brings into question existing data upon which existing accessibility criteria, particularly design specifications for facilities and vehicles, can be assessed. Reliable data on powered devices and their users is particularly lacking. To fill this knowledge gap, the Board is sponsoring a multi-year project to help develop a database on human measures that takes into account the various types of mobility aids now in use. Initiated in 2002, this project will further work underway by the Rehabilitation Engineering Research Center (RERC) on Universal Design at the State University of New York, Buffalo.

The Center has developed and tested protocols for collecting static and dynamic measurements of people who use various types of wheelchairs and scooters. The aim of the project is to establish a database on mobility aids and user sizes and functional task performance that will support the development of three-dimensional digital models of wheelchair and scooter users. The Board's funding broadens the scope of the Center's project by expanding the type of data to be collected. The Board is particularly interested in data on space requirements, maneuvering parameters, reach ranges, and other key measures and dimensions.

In laying the ground work for the project, the Center organized an international workshop on space requirements for wheeled mobility aids that was held in October 2003 at the State University of New York at Buffalo. The conference centered on discussion and assessment of methods for collecting data most appropriate for the project. Specifically, the Center used the conference to validate and refine its research plan and measurement protocols with input from experts in the fields of human factors research, data analysis and demographic studies, disability research, and the design of mobility aids. Over 60 such experts and stakeholders participated in the conference, including researchers from Canada, the United Kingdom, and Australia. Papers presented at the workshop included a critical review of recent anthropometry research of wheeled mobility users and assessments of trends and issues in wheeled mobility technologies, disability data and demographics, and lift and ramp technologies.

In the next phases of the project, researchers will prepare a synthesis of international space requirement standards and recommendations for the classification of devices and demographic data. An initiative to establish the study protocols as an approved standard for international research will follow. Subsequent phases of the project will involve collecting and organizing data in cooperation with several participating research centers in different geographic locations.

Accessible Play Surfacing

A key consideration in the design of accessible play areas is the type of surfacing to use. It is important that play surface materials be suitable for cushioning falls, yet firm and stable enough for accessibility. Surfacing is addressed by guidelines for play areas the Board developed under the Americans with Disabilities Act which reference standards developed by the American Society for Testing and Materials (ASTM) for impact attenuation and wheelchair maneuverability. The Board sponsored research on the suitability of engineered wood fiber, a popular surfacing material, and various binding agents that can enhance its usability. This project was conducted by the U.S. Forest Service's Forest Products Laboratory in Madison, Wisconsin.

In the first phase of the project, which was completed early FY 2003, researchers analyzed various surface treatments on different types of engineered wood fiber. Based on this analysis, different test configurations were selected for field evaluations and performance testing. The study tested various types of binders (latex, silicone, and polyurethane) that can enhance surface firmness and stability of engineered wood fiber. The study included seven surface treatments and one untreated control surface installed in a series of outdoor test beds which were evaluated over a six-month period. Researchers exposed the surfaces to a wide range of climatic conditions, including freeze-thaw cycles, rain, and heat. The results are summarized in a report, "Improved Engineered Wood Fiber Surfaces for Accessible Playgrounds." Follow-up testing was conducted in the spring to measure 12-month field exposure. A subsequent phase was initiated which will further assess those treatments that ranked highest in the completed study.

Audible Pedestrian Signals

The Board's draft guidelines for public rights-of-way provide criteria for audible pedestrian signals. New technologies are available that enable audible signals to be incorporated into standard pedestrian signal systems. These products have improvements over older technologies, such as voice features and signals that automatically adjust to the ambient noise level. However, there has been confusion over their installation criteria and compatibility with existing signal controllers. Proper installation involves important considerations concerning sound adjustment and wiring, among others. In FY 2003, the Board released a report from a project it sponsored to develop guidance on available audible pedestrian signal products and the interface with traffic signal controllers. The report, "Interfacing Audible Pedestrian Signals and Traffic Signal Controllers," provides detailed descriptions of available technologies and current and upcoming traffic controllers in the U.S., wiring and power requirements, and lessons learned from existing installations.

Rail Crossings

Gaps in route surfaces can pose a hazard to persons with disabilities, particularly those who use mobility devices. Design requirements, such as the Board's ADA Accessibility Guidelines, generally limit the size of surface gaps to a maximum half inch width since wider gaps can trap the front wheels of wheelchairs. However, a significantly wider gap (2½ to 3 inches) is typically needed along rail lines to accommodate the flanges of railcar wheels. This large gap presents an entrapment hazard at pedestrian crossings. The danger is further aggravated where pedestrian and rail surfaces are uneven since wheelchair front casters are prone to turning sideways against vertical displacements, even slight ones. There have been a number of reports of persons using wheelchairs being caught at rail crossings because of the flangeway gap. Some of these incidents were fatal.

The Board has prepared information on this subject in an effort to gain government funding for a major study on the issue that will help develop successful design solutions. Research is needed on successful means of filling or bridging the gap at pedestrian crossings in a manner that accommodates railcar wheel flanges. Solutions developed to date have not withstood the weights and speeds of travel common on freight systems. In June, the Board participated in a workshop organized by the Federal Railroad Administration on research needs related to rail crossings. The Board also presented information on the need for research on this subject at a meeting of the National Highway-Rail Grade Crossing Safety Program held later in the year.