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for Subscription
Information

**Complimentary
Issue**

Sound Architectural Design

Acoustic Accessibility

If you've ever been at a conference when the speaker's voice was drowned out by the buzz of an overhead projector or been in an apartment when a neighbor bangs on the wall and suggests you turn down the volume on your stereo, you know firsthand the problems caused by poor acoustical design.

The fact is that good acoustical design is an often overlooked but critically important aspect of accessibility. "Acoustical accessibility makes a huge difference to people with hearing loss but it's really an issue for everyone," says Brenda Battat, deputy executive director, Self Help for Hard of Hearing People (SHHH) in Bethesda, Md. "Acoustical design is not something architects usually take into consideration because they have so many other issues to consider -- it's just one more thing."

Acoustical Consultant David Lubman agrees there is a lack of "considerate design" when it comes to acoustical environments. He cites the practice in apartment buildings of putting the cable TV connection on a common wall. While it may be a

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Accessibility of amusement facilities allows families and friends to enjoy vacations together.

Access to Places of Amusement

By John Paul Scott, AIA

This is the fourth in a series of articles in Universal Design Newsletter on the new recreation recommendations now under review by the Access Board.

Amusement parks can be a lot of fun for people with disabilities and their families when creative ideas are applied to the design of accessibility of amusement rides and attractions. This is the foundation and focus of the design recommendations by the Subcommittee on Places of Amusement, US Architectural and Transportation Barriers Compliance Board (Access Board) Recreation Access Advisory Committee.

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Editorial

by James A. DiLuigi, AIA

Is Congress On a Collision Course With the ADA?

Will the regulation and enforcement of the Americans with Disabilities Act (ADA) building accessibility requirements be questioned by the newly elected Congress?

Perhaps of major concern to many people is the issue of unfunded mandates being addressed by the new Congress. While it has been reported that civil rights are not included at this time, is it possible that the current methods of regulation and enforcement of the ADA building requirements could be impacted?

Also, what effect will the proposed freeze on new federal regulations have on the final adoption of the Title II regulations for state and local governmental agencies, the Recreation Access Advisory Committee Report, the proposed Children's Accessibility Standards, and the work of the new Federal Advisory Committee for the review of the Americans with Disabilities Act Accessibility Guidelines (ADAAG)?

The Department of Justice (DOJ) has

made numerous laudatory efforts to provide technical assistance and to educate businesses and government agencies on the requirements of the ADA. However, a concern recently expressed by a number of our clients is that in some of its enforcement efforts the DOJ is making interpretations of the technical regulations which seem to conflict with their previous verbal and published information. Some of these interpretations are confusing and frustrating to building owners, and could easily serve to negatively impact progress in enforcing the ADA. They also can be used to send the wrong type of message to Congress.

During this new congressional year it seems prudent to make every effort possible to follow the intentions of the authors of the ADA by being reasonable, realistic and cost conscious in the development, enforcement and implementation of ADA building

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Mail subscription rates: One year \$75.00 (US). Second Class Postage paid at Rockville, MD. Postmaster send address changes to **Universal Design Newsletter**, 1700 Rockville Pike, Suite 110, Rockville, MD. 20852. For information on advertising rates or obtaining alternative accessible formats, please call or write the **Universal Design Newsletter** Editor.

LETTERS to the EDITOR

Dear Editor

Your recent article on unisex toilets ("Unisex Toilets Under Review," January 1995 *UDN*), recalled to me our own struggles with the Americans with Disabilities Accessibility Guidelines (ADAAG) and the codes, as we under-

took the development of unisex toilets as part of an overall Americans with Disabilities Act (ADA) compliance program for a major US airport. The demand for unisex or companion toilets is definitely not limited to people with disabilities. But the further one goes toward universal design for such facilities, the more one deviates from, if not the strict letter of ADAAG, then certainly the narrow *interpretation* given the regulations by many code officials. On the other hand, it is already well established that adhering to ADAAG does not guarantee that one will come up with an effective design solution, whether for people with disabilities or anyone else.

ADAAG makes specific recommendations concerning grab rail size and placement, for example, but does not allow adequate flexibility in designing the restroom to accommodate both right- and left-handed transfers from a wheelchair. Nor does it ad-

equately consider the needs of persons who may need the extra stability a grab rail affords, but who are not making a transfer from a wheelchair. When we developed some grab rail designs that were strong, stable, but adaptable to a wide variety of needs, we were told that the grab rail length was less than that required under ADAAG, and, therefore, could not be used in a designated "accessible restroom." So much for "equivalent facilitation."

Another feature that will assuredly be needed in a unisex toilet—especially in shopping centers, airports, and other travel facilities—is a package shelf or bench.

These few examples underscore the need for serious discussion on design issues relating to the unisex toilet. I feel your newsletter might provide an excellent forum for this discussion. A broad-based exchange of viewpoints is the cornerstone of universal design development. I, for one, would support such an exchange, and I am sure many other designers and human-factors professionals would too.

Joseph A. Maxwell, IDSA
Burnsville, NC

DOJ Interpretations

Public Accommodation vs. Commercial Facility

While places of public accommodation and commercial facilities are subject to the same Americans with Disabilities Act (ADA) Title III requirements for new construction and alterations, there is a substantial difference in requirements for existing facilities.

Places of public accommodation (businesses which provide services directly to the public) have a broader range of responsibility under Title III than do commercial facilities. Public accommodations must provide auxiliary aids and remove barriers in existing facilities when it is "readily achievable" to do so.

The Department of Justice (DOJ) has written a policy letter on whether visits to manufacturing-type facilities by vendors or outside salespersons changes them from commercial facilities into places of public accommodation.

DOJ stated that an entity is not a place of public accommodation unless it falls within at least one of the twelve categories of public accommodation listed in the law. The DOJ also said that visits by vendors or salespersons to a commercial facility do not make it a public accommodation under the statute.

In the same letter, DOJ stated that commercial facilities which accept employment applications do not constitute a public accommodation. However, the letter went on to explain that a commercial facility might need to remove barriers under Title I, where reasonable accommodations for disabled employees is required.

"Readily Achievable" Hasn't Changed

As the debate over what is or is not "readily achievable" continues, a DOJ official has restated that the DOJ definition of the ADA "readily achievable" standard is the same as it was three years ago.

"The interpretation hasn't changed. Readily achievable is a flexible standard," says Liz Savage, special assistant to the assistant attorney general, Civil Rights Division. "Our evaluations are on a case-by-case basis. If it's a 'mom and pop' business, the requirements would be minimal. It becomes an issue of resources and space."

She says, for example, in a case where there are steps at an entrance, a portable ramp might be sufficient. "With a larger enterprise it's not an issue of space and resources. We would want something more."

People who have ignored the law and made no 'good faith effort' may be subject to higher scrutiny. According to Savage, "We're looking at readily achievable three years after the law went into effect. If someone has done nothing -- we will assess three years' worth of enforcement."

Stadium Accessibility Sight Lines

In a letter last fall to the Yakima County Public Works Department, the DOJ responded to a complaint outlining inaccessible elements of the newly constructed Yakima County Stadium which were found during its site inspection last May. Among the items addressed in the letter was the stadium's "lines of sight" for spectators using wheelchairs. The letter calls for additional wheelchair seating locations that provide lines of sight comparable to those for members of the general public. To accomplish this, the wheelchair seating locations "must provide to people seated in wheelchairs, in all or substantially all of the wheelchair seating locations, a line of sight over standing spectators equivalent to that afforded to the general public."

The letter pointed out that the existing accessible seats met the line of sight requirement because they were "set apart from the rest in such a way that no spectators are located in front of those locations. However, if any new wheelchair locations are added within the general seating area in order to comply with the standards, all or substantially all of them must have a line of sight over standing spectators."

According to Ron Zirkle, chief county civil deputy prosecutor in Yakima, county officials were surprised at DOJ's position regarding sight lines. "[DOJ's] position would wipe out substantial seating in the stadium to make triangles in front of the wheelchair seating," he says. "They have taken the position that you have to make it completely clear under all conditions. The space can't be obstructed if someone stands up."

The situation highlights the differences in the two philosophies of accessible stadium seating. In this case, DOJ has taken the position of requiring a totally unobstructed view for all wheelchair locations. Another school of thought suggests that seating locations for wheelchairs should be mixed in and among non-wheelchair seating so that all spectators feel a part of the crowd.

Zirkle says county officials were also surprised at the laundry list of items detailed in the DOJ letter. "We knew something was coming after they came in to do a survey, but we didn't apprehend the extent of the list. It was longer than we anticipated."

Yakima County has asked for a six-month extension to determine how it will address the issues. Some of the stadium's minor problems have already been corrected, says Zirkle. Other items will be corrected within six months.

Editor's Note: *The boom in stadium construction has surfaced a number of access problems in new construction. Universal Design Newsletter will follow developments in subsequent issues.* ■

"The interpretation hasn't changed.

Readily achievable is a flexible standard."

Liz Savage
Civil Rights Division,
US Dept. of Justice

Access to Amusement Parks, from page 1

In 1993, the Access Board convened a 27 member Federal Advisory Committee, which was divided into six major subcommittees. The Places of Amusement Subcommittee had five members with help from Access Board staff, many public participants and other Advisory Committee members. The public participants included individuals with disabilities; representatives of amusement parks, theme parks and carnival operations; amusement attractions, fairs and exhibition associations; recreational rehabilitation specialists; and amusement ride manufacturers.

The subcommittee looked at amusement parks, theme parks, water parks, zoos, family fun centers, discovery centers, carnivals, fairs, aquariums, exploratoriums, dinner theaters, entertainment shows, specialty theaters, interactive play environments, exhibitions, and wild animal parks. The subcommittee concentrated on making ADAAG-compatible technical recommendations for new and permanent construction. Alterations; historic places; programmatic accommodation; removal of existing barriers; Title I work area employment issues; and Title III program issues for policies and procedures; and the provision of auxiliary aids and services were not reviewed.

The subcommittee made recommendations on those facility elements and issues that tended to be unique to places of amusement.

Facilities in Places of Amusement

Non-public areas and areas primarily used by animals should be exempted from the requirements of accessibility. This includes: scenery displays; display cases; stages used by performers only; audio/video equipment and props; and animal displays, cages, pens and runs.

Accessible routes should allow for themed paving materials and variations on metal grates. Examples include cobblestones and stone paths with an adjacent accessible route; stamped concrete; and diamond-mesh metal plates on amusement ride platforms.

Designated parking and signage should allow for lots to be designated for accessible parking with signs only at the entry, or sharing of signs between two accessible parking spaces. Examples include large facilities such as state fair sites, amusement parks and stadium lots. Parking may be directed by an attendant if pole signage would restrict traffic flow.

Wheelchair spaces and route provisions in specialty theaters should include design criteria for wheelchair locations, transfer and companion seating, use of dual sloped floors and sight lines.

Assistive listening systems and auxiliary aids recommendations include centralizing the distribution

of assistive listening systems in multi-theater or building facilities, and provision for informational signage at multiple-entry facilities. There is a reduction in the percentage requirements for assistive listening devices when a user could carry one assistive listening device to multiple locations.

Interactive play attractions should not be subject to the provisions of the Play Area Settings Subcommittee, whose recommendations are based on play activity as social interaction.

Temporary and Mobile Places of Amusement

The subcommittee had difficulty in making recommendations in this area because mobile carnival rides on truck beds and game booths do not fall into categories of structures fixed to the site. Carnivals, community art fairs and the like are public accommodations that should be subject to the law. The subcommittee was not able to apply accessible route criteria for an event of short duration when the operator or sponsor does not control development of the site. Temporary matting was found to be unable to withstand pedestrian and wheelchair traffic and soil binders were determined to require subsurface preparation and create a negative environmental impact.

The assembly and disassembly of a mobile amusement ride or device does not constitute new construction or alteration of a site.

An accessible route would not be required when it would alter the topography of surface conditions inconsistent with the primary purpose of the site. Paving grass lawns in city parks or a corn field to serve a temporary event such as a 3 day fair or carnival would not be required.

Accessible parking and passenger loading zones, where provided, should comply with facilities recommendations, where feasible. Temporary barriers and signage may be used to define the parking area and passenger loading zones.

Amusement Devices, Attractions and Specialty Theaters

These recommendations focused on technical criteria for access to and into an amusement device or attraction. Since few amusement rides or devices are similar, the guidelines had to be specific to the user's abilities, such as side transfer or direct wheelchair access, rather than restrict potentially unique conditions of a ride.

In addition, since there are no standards within the amusement ride manufacturing community as to whether wheelchair or transfer access is appropriate to a particular ride or class of rides or amusements, situations need to be determined on a ride-by-ride basis, according to the ride's fundamental nature as an amusement, its mechanical forces and engineering criteria. The lack of reliable standards on wheelchairs, and information on biodynamics of

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Paving grass lawns in city parks or a corn field to serve a temporary event such as a 3 day fair or carnival would not be required.

Hand Anthropometrics

Hand sizes and abilities shouldn't be overlooked when accessibility is an issue, according to Professor Robert Anders, IDSA.

Anders, head of the Design Management Program at Pratt Institute, Brooklyn, NY says, "All products usually entail hand operation and all hands are different. Older people have small hands, with little strength. People with arthritis have trouble manipulating some products. Designers need to consider hand sizes and abilities so that people will be able to use their products."

A common problem that people with little physical strength or dexterity face is opening jars and jugs. "Manufacturers are creating products that not everyone can use," says Anders.

Understanding how the hand works can lead to a greater awareness of related accessibility issues. Anders lists the six common hand grips ranking them by which muscle group each uses, from largest to smallest. The power or cylinder grip is the strongest grip; the thumb faces or opposes the other fingers. In this grip you would hold a can of soda or a hammer. The gross or ball grasp which uses the thumb and all the fingers together; The hook grip is the one you might use to pick up a shopping bag--your fingers curl to form a hook so you can pull or lift something. The lateral pinch is the key grip. The thumb presses down on the side of the index finger. Next is the chuck or pencil grip where the thumb, index, and long fingers work together. Finally is the finger tip pinch where the tips of the thumb and one other finger are used to pick up small objects such as a needle. To improve accessibility he suggest always using the largest muscle group possible.

Anders cautions that handles that are too large or too small or that force users to put their hands in uncomfortable positions are not universally accessible. A product that only requires the use of one hand instead of two is more universal.

An example of such a product was an innovative electrical plug designed by one of his students. The plug featured a large hole in which the user could insert his or her fingers. An alternative to the usual pinch grip, the plug allows the user to engage the entire arm to manipulate the plug and does not require finger strength.

In the quest for developing products that are more universal, easy hand operation should be a key design determinant.

Guest Editorial, from page 2

regulations. We should work towards achieving compliance that meets the intent of the law, while creating an atmosphere of empathy towards those who have not understood it well enough in the past and who may have unintentionally not complied with every aspect of the regulations.

We have come a long way in developing and complying with accessibility regulations in the nearly five years since the signing of the ADA. People, businesses, and state and local governments are becoming more aware of accessibility issues and are making genuine efforts to comply. Those of us who have been involved all along in developing regulations are now working on new issues such as recreation and children's standards. However, many of the people and businesses impacted by the first issues of the ADA are still in the initial learning curve. We need to be understanding of this reality when it comes to enforcement. It would be a disaster of major magnitude if at this point there is a collision between the 'smaller government' objectives of the new Congress and the civil rights efforts of those who have been developing and enforcing ADA regulations.

The ADA can benefit our entire society in many ways if it is implemented in a positive, sensitive and cost-effective manner. Instead of heading towards a collision, we should all strive to educate each other and join hands to build a more universally accessible environment for all.



James A. DiLuigi, AIA is the Vice President of Universal Designers & Consultants, Inc., Rockville, MD.

Disabilities Causing Lawsuits

According to statistics from the Equal Employment Opportunity Commission (EEOC), back injuries are the leading type of disability mentioned in ADA Title I charges filed with the commission. Back injuries were mentioned in 19.5 percent of the charges filed from July 1992 to December 1994, according to a recent report. Neurological and emotional/psychiatric impairments accounted for 12.1 and 11.4 percent of the charges filed, respectively. Blood disorders, which includes HIV, were mentioned in 1.8 percent of the cases, the least often.

Wrongful discharge was the most often cited violation received by the EEOC. It accounted for 50.5 percent of the total violations. Failure to provide reasonable accommodation was the second most cited violation, with 25.7 percent of the total, and hiring was the third with 10.7 percent violations.

Fire Safety & Accessibility

This spring interested people will have a chance to play a part in the complex workings of elevator, fire and accessibility related code revisions as participants in a symposium sponsored, in part, by the American Society of Mechanical Engineers (ASME).

The Second Symposium on Elevators, Fire and Accessibility, co-sponsored by 17 organizations, will be held April 19-21 at the Stouffer Harborplace Hotel in Baltimore. Organized by the ASME A17 Elevator and Escalator Committee, the symposium provides an opportunity for interested people to present and discuss views about fire safety issues. The focus of the meeting will be to develop consensus on issues to be presented to all code writing groups.

"Symposium participants will have a say in the development of proposed revisions to the codes which will be submitted to code organizations," says Edward Donoghue, CPCA, chairman of the ASME A17 Code Coordinating Committee.

Organizers hope to build on the success of the first symposium held in February 1991. Donoghue says that several advances in fire safety were made because of the first symposium. Participants there were better able to understand the philosophies of other code organizations and that awareness helped eliminate differences among some of the codes.

Among the revisions to emerge from the last symposium was a recommendation that all elevator equipment be required to be in a rated fire-resistive elevator machine room and that no other building equipment or storage of non-elevator material be allowed in the rooms. Following the symposium, an ASME rule was changed. Now, only equipment necessary for the operation of elevators is allowed. This requirement will lessen the chance of sprinkler activation unless absolutely necessary, which would shut down the equipment.

Another recommendation that surfaced at the last conference questioned the need for sprinklers in elevator pits. In response, the National Fire Protection Association (NFPA) 13 Standard will now permit the elimination of sprinklers at the bottom of the elevator shaft when the shaft is enclosed with non-combustible materials and combustible hydraulic fluids are not present.

The impact of the event is far-reaching, according to Donoghue. The changes made to the NFPA fire alarm code and sprinkler code following the last

symposium were quickly picked up by other code organizations.


One of the issues participants will tackle at this year's meeting is the role of elevators in fire emergencies. "In many fire emergencies elevators are taken out of commission. Symposium participants will propose schemes to make elevators available to people with disabilities and firefighters," according to Donoghue, who is also president of Edward A. Donoghue Associates Inc., Code and Safety Consultants, Salem, NY.

Raising awareness of issues is one of the most significant functions of the upcoming meeting. "We hope certain issues will be brought to light," says Donoghue. "One organization may be aware of an issue but have no responsibility. The symposium is a way to get that issue to the attention of the appropriate code organization." For example, he says, often the first thing firefighters do in a fire emergency is to turn off the air conditioning in a building. This can cause the temperature in the elevator machine room to rise dramatically which leads to an elevator shut down. Once the elevator is lost, firefighters can't use it to evacuate people and can't use it to fight the fire. He says that the A17 committee knows about the problem but doesn't have responsibility to regulate machine room heating and cooling. The symposium offers an opportunity to bring the issue to the attention of the responsible organization.

Following the meeting, every proposed revision will be processed and sent to the appropriate organization. Some of the proposals presented may be endorsed by the A17 Committee.

The symposium has a more subtle impact, as well, according to Donoghue. The meeting offers participants a sounding board for their ideas. "People come and see if there is support for their ideas. If there is, it helps build momentum for when they take the proposed change back to their own organizations. Or they hear the objections and may rethink their idea."

This year's meeting is especially timely as the Council of American Building Officials/American National Standards Institute and the Architectural and Transportation Barriers Compliance Board, both principal co-sponsors of the symposium, are reviewing related codes now.

For more information and a registration packet, contact ASME's Marcy Weinstock at 212.705.8526. 

"Symposium participants will have a say in the development of proposed revisions to the codes which will be submitted to code organizations."

Edward Donoghue,
Salem, NY

Comparative Analysis

The **ADA Accessibility Guidelines and CABO/ANSI A117.1-1992: A Comparative Analysis**, published by the Eastern Paralyzed Veterans Association (EPVA), provides a section-by-section comparison of the *Americans With Disabilities Act Accessibility Guidelines (ADAAG)* and the *CABO/ANSI A117.1 (1992) American National Standard for Accessible and Useable Buildings and Facilities*. Prepared by Brian Black, EPVA's assistant director of building codes and standards, this document's unique three-column format allows the reader to see each section of the standard matched against the corresponding section of the guidelines, accompanied by a narrative highlighting their differences or similarities.

To order the comparative analysis, contact EPVA at 11 West Huron Street, Buffalo, NY 14202; telephone 716.856.6582.

Wheelchair Lifts

The Eastern Paralyzed Veterans Association (EPVA) has also published **Wheelchair Lifts, Building Codes, and the ADA**, a paper on how the Americans with Disabilities Act (ADA), building codes and technical standards together dictate where and how wheelchair lifts may be used in commercial facilities. The paper, written by EPVA's Brian Black, includes a description of the accessibility requirements for lifts in the ADAAG, ANSI A117.1-1986 and CABO/ANSI A117.1-1992. It describes the use of wheelchair lifts as components of accessible routes, inclined and vertical lifts, and keyed operation of lifts.

For more information on ordering, contact EPVA at 11 West Huron Street, Buffalo, NY 14202; telephone 716.856.6582.

Children's Play Environments

Getting in Touch with Play: Creating Play Environments for Children with Visual Impairments is a publication by Lighthouse, Inc., that offers ideas for designing more creative and satisfying play experiences for children who are blind or visually impaired, as well as children with full vision. The manual "addresses specific design principles that empower children with visual impairments to play with the same freedom and spontaneity as sighted children," according to the manual's authors. The manual stresses the need for spontaneous play ex-

periences or play that is child initiated and child controlled.

"Play is a complex and challenging activity for children of all ages, sexes, and abilities, which helps them cope with the demands of an ever-changing world. It is important, therefore, to design play environments that encourage children to utilize all their abilities and develop to their fullest potential," according to the authors.

Included in the 44-page manual are chapters on: physical movement and play; fine motor activity and construction play with toys and loose materials; sensory play; socio-dramatic play; general design considerations; design considerations for younger children; and examples of play environments. The cost of the manual is \$8, which includes shipping and handling. For more information, contact Lighthouse, Inc., National Center for Vision and Child Development, 800 Second Ave., New York, NY 10017, telephone 212.821.9200.

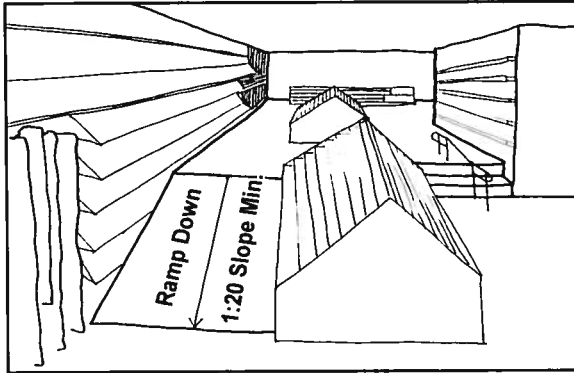
Universal Design Video Series

A new series of videos has been developed to teach designers the universal design philosophy. The three-part ***Universal Design Series***, by San Luis Video Publishing, includes: **Introduction to Universal Design, Universal Design in the Landscape, and Universal Design in Architecture**. The first video presents a brief history of the emergence of universal design. While highlighting the basics of universal design, the video shows designers how they can meet the requirements of the ADA. The video features an explanation of path-of-travel, ADA's influence on universal design, and universal design criteria.

The second video provides examples of good accessible design in landscapes. It includes design of new landscapes and the retrofitting of existing landscapes. The third video shows examples of accessible design involving the path-of-travel through buildings. It shows a universally designed recreation center, shopping center, library, and residences, and features a general review of ADA specifications. Examples of both new construction and alterations to existing buildings are included.

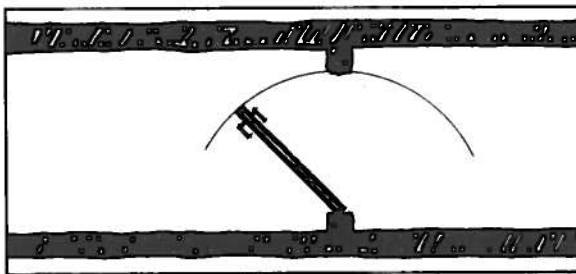
The cost of the series is \$234. If purchased separately, the first video is \$69, the second and third are \$95 each. To order, contact San Luis Video Publishing at PO Box 6715, Los Osos, CA 93412; telephone 805.528.8322; fax 805.528.7227. ■

? **PROBLEM:** How do you provide ramp access between two shopping levels in small retail stores located in existing buildings without losing much merchandising space?



TIP: Construct ramps between the two levels at slopes that are shallower than 1:20. At this slope, inclined surfaces do not require railings or landings and can be used as aisles with merchandise displayed on both sides.

? **PROBLEM:** How do you provide the necessary pull clearances on doors in existing or new construction when the door is situated in a minimum-width hallway?



TIP: Install a double swinging door which can be pushed from either side.

? **PROBLEM:** How can you retrofit an existing public pay telephone with a text telephone (TTY)?

TIP: If there is an electrical outlet within 3 feet of the phone and a desk or table surface within reach of the telephone hand receiver, a text telephone can be located at a central service or registration desk and checked out on an as-needed basis. Signage at the pay telephone should indicate the availability of the checkout service. ■

Gasoline Pumps To Provide Credit Card Reader Accessibility

The development of gasoline pumps that take credit cards has made trips to the gas station a quick and easy process. In California, state officials, advocates for people with disabilities and petroleum companies are taking the next step and are drafting changes to the state code that will make the pumps accessible for people with disabilities.

The proposed changes would require that new gas stations and ones undergoing a certain level of remodeling make pumps and at least one credit card reader accessible. Stations can comply with the standard by installing pumps with card slots and keys that are no higher than 54 inches or free-standing card readers on poles.

In effect, the requirements would lead to the elimination of the islands on which gas pumps have usually been placed.

"The main thing is that for the first time we will have a code that promotes getting rid of the islands," says Michael Mankin, AIA, lead staff for policy and code development for the state architect's office. Originally, islands were intended to protect pumps from cars and against gas spilling back into and around the pump, says Mankin. They are obsolete now because newer pumps have features to handle spilled gas. In addition to limiting access, islands today are a safety hazard. "Without islands people have access to the pump handle and can reach the card reader on their own," he says. "Even able-bodied people won't have to look for the different levels and can watch for traffic."

Richard Skaff, disability access coordinator for the San Francisco Department of Public Works, agrees the proposed standard will be good for everyone. "It will help people with difficulty reaching things, people with arthritis, and people who have trouble stepping up," he says.

Mankin maintains that such an effort demonstrates that code requirements should not be looked at as special access for special groups but as universal design that everyone can use. "We have to change infrastructure so that everyone benefits," he says. "The secret to longevity (in accessibility codes) is to look at them as general infrastructure and safety issues."

The proposed revisions are expected to be approved by the commission in late February and will most likely go into effect January, 1996. ■

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Omega Optical Turnstile



These computer-monitored turnstiles are designed for ease of access by wheelchair users and pedestrians alike (up to 1800 per hour) while providing a means of securing a building or office from unauthorized visitors. Barrier free, with no mechanical parts, the turnstiles can be used with any card-access system. A card sensor mounted on the turnstile verifies card holders and both lights and chimes indicate the person may pass. When they pass through an infrared beam, the unit resets. Passing through the sensor and beam without an access card trips an alarm.

Each table in this series adjusts to the most convenient height for the user at standing and sitting levels. Height adjustments are made manually by loosening or tightening a knob. Optional easy-grasp large knobs are available. The cylinder pressure in the table leg(s) is matched to the weight of the table top to facilitate height adjustments without back strain. Folding, cutout, and tilt-top table options are offered, as well as custom height selections for hospitals, nursing homes, and other specialized facilities.

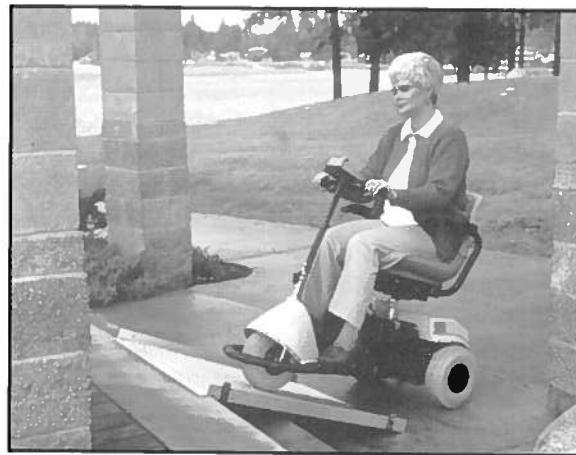
Redco E-Z Glide Series Tables

Each table in this series adjusts to the most convenient height for the user at standing and sitting levels. Height adjustments are made manually by loosening or tightening a knob. Optional easy-grasp large knobs are available. The cylinder pressure in the table leg(s) is matched to the weight of the table top to facilitate height adjustments without back strain. Folding, cutout, and tilt-top table options are offered, as well as custom height selections for hospitals, nursing homes, and other specialized facilities.




EZ Access Roll-Up Ramp

Made of extruded aluminum for strength and durability, Homecare Products, Inc. has developed this portable ramp for scooters and wheelchairs. It rolls up for transport or storage and fits into a carrying case which may be stowed on the back of the mobility unit.



By rolling out the non-skid track and latching on the two side rails, a driving surface for bridging steps and gaps is created. Available in ramp lengths of 3 to 10 feet with holding capacities of 600 to 650 pounds.

The Invisible Lift

A solution to inaccessible jury boxes and witness stands, as well as other building uses with specialized accessibility requirements, has been developed by T.L. Shield & Associates, Inc. This vertical lift is designed to promote compliance with the ADA Standards for Accessible Design without unduly altering the appearance of a room, because the entire lift mechanism is concealed. This custom-manufactured, wheelchair platform lifting device can be used indoors and outdoors. Additional custom features include colors, materials, and finishes to blend into existing surroundings. 

The New Products column was provided by the ABLEDATA project, a computerized database of information on assistive equipment which is funded by the National Institute on Disability and Rehabilitation Research and is administered by Macro International, Inc., Silver Spring, MD.

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Access to Amusement Parks, from page 4

people with various disabilities in wheelchairs and on ride devices, was noted as an issue that limits the development of standards.

The accessible route to an amusement device, attraction or specialty theater should coincide with that of the general public to the maximum extent feasible. For example, conditions may occur where a person using a wheelchair must load on the unload side of the amusement ride in order to have their mobility aid on the correct side of the track at the end of the ride. Also, loading and unloading on moving walkways or rotating turntables is permitted.

At least one wheelchair space should be provided on an amusement device within a ride system where it will not fundamentally alter the nature of the amusement ride system or experience. Technical criteria is provided on ride device wheelchair space envelopes; clear width of boarding lanes and maneuvering space; fold-down seats, sight lines, companion seating; and accommodation of other mobility aids. Extensive technical and design criteria is provided for the design of lifts, bridge plate devices and ramps that provide access to the ride device. Operator-assisted wheelchair access, opera-

tion of bridge plate and lifts, and operation of securement devices is permitted.

At least one transfer seat on one amusement device within a ride system should be provided where it will not fundamentally alter the nature of the amusement ride system or experience. A transfer seat may be a special seat, a standard amusement device seat or a fold-down seat. Technical criteria is provided for transfer seat heights, bridging over gaps, transfer floor space, and transfer grips. Use of assistive transfer devices is permitted.

Water Parks and Aquatic Amusement Devices and Attractions

Four categories of aquatic attractions were identified: kiddy water play attractions; passive water attractions; interactive and challenging water attractions and water slide and thrill devices.

Recommendations for access into swimming pools, lazy rivers and wading pools include providing at least one method of access into the water in addition to the pool edge. These methods may include, but should not be limited to: ladders, transfer steps, transfer levels, ramps, lifts and zero-depth entry. Technical and design criteria for each method was provided within the report.

The side-wall height for spa pools should accommodate wheelchair transfer.


Aquatic amusement devices and attractions that involve floating, climbing, sliding, dropping, diving or swimming are not limited by the recommendations and are exempt from the accessible route criteria.

Elevators and lifts are not required for aquatic amusements such as water slides or diving platforms.

Summary

The subcommittees' recommendations were published in the *Federal Register* on September 21, 1994, as part of an Advanced Notice for Proposed Rule Making. The Access Board will review the public comments from the notice with the intent of developing and issuing a Notice of Proposed Rule Making in the *Federal Register*. When issued, the public will again have an opportunity to provide comment and to attend public hearings.

The scope of the whole committee's assignment was very large and there are still many unresolved issues. Unlike a retail store or a bank lobby, it seems that few rules can be written that broadly apply to all the various conditions that may occur in an amusement park or attraction.

Individuals interested in receiving more information or obtaining a copy of the Recreation Access Advisory Committee Report should contact Ms. Peggy Greenwell at 202.272.5434 (V). 



John Paul Scott is a practicing architect for an entertainment design company in California. He co-chaired the Plaes of Amusement Subcommittee within the Recreation Access Advisory Committee to the US Access Board. In commercial practice, he has been designing for accessibility within public accommodations for 16 years.

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Acoustic Accessibility, from page 1

money saver in the building phase, once the unit is occupied it forces people to endure the noise of the neighbor's TV. "Even many hotel facilities are acoustically inadequate for people with normal hearing. Imagine the problems 'special listeners' have," adds Lubman, who is based in Westminster, CA. The special listeners Lubman describes are people who are not considered to have hearing loss but have special needs, such as non-native listeners and the elderly.

Good acoustical design becomes even more necessary when delicate discussions are occurring such as in personnel or labor negotiations, says Lubman.


SHHH is especially concerned about children in classrooms. "Bad acoustics have a bigger effect on children with hearing loss. Hearing aids are susceptible to picking up background noise and perform badly in spaces that aren't well designed. We need buildings designed that are sensitive to these acoustic issues," says Battat.

There are several efforts underway to improve acoustical accessibility in residential and commercial structures. Included among those are:

The Residential Task Force of the American National Standards Institute (ANSI) A117 Committee has drafted criteria for dwelling units for persons who are deaf or hard of hearing. Its proposed provisions include a requirement that, where provided,

a smoke detection system include both audible and visible notification. Also included is a provision that would require each unit to have a hard-wired electric doorbell that can initiate an audible tone and be capable of activating a visual alert device. A means for visually identifying a visitor without opening the unit's entry door would also be required.

In December, SHHH submitted comments to the Architectural and Transportation Barriers Compliance Board recommending the inclusion of architectural acoustics in Title II of the Americans with Disabilities Act Accessibility Guidelines. SHHH, with five other organizations, urged that "technical studies be reviewed and/or, if needed, authorized to provide the appropriate technical support for the inclusion of minimum architectural acoustics criteria for Title II..."

Three Acoustical Society of America (ASA) technical committees are sponsoring a special session on acoustical accessibility of public facilities for persons with hearing and vision disabilities at ASA's spring meeting in Washington. The sessions will feature panel discussions and demonstrations. The ASA meeting will be May 30 - June 3. For more information, contact David Lubman at 714.898.9099 or on the Internet at dlubman@IX.netcom.com. 



"Acoustical accessibility makes a huge difference to people with hearing loss but it's really an issue for everyone."

Brenda Battat,
Self Help for Hard of Hearing People

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April 19-21 (Atlanta, GA); **May 2-3** (Cincinnati, OH); and **May 4-5** (New Orleans, LA) are the sites of the spring conferences and workshops of the Association of ADA Coordinators. For more information contact AADAC at 800.722.4232.

April 19-21: Second Symposium on Elevators, Fire and Accessibility will be held in Baltimore, MD. Sponsors include numerous federal and national organizations and associations. Contact Marcy Weinstock at 212.705.8526 for more information.

April 21: National Technology Transfer Center Forum on Commercialization of Disability Technologies. NTTC is holding a one-day forum in Washington, DC to discuss the potential of marketing products to consumers with and without disabilities. Contact NTTC at 304.243.2535 for more information.

April 26-29: ADAAG Review Federal Advisory Committee and its five subcommittees, (Communication & Equipment, Accessible Route, Plumbing, Special Occupancies, Editorial & Format), convened by the Access Board will meet in Washington DC to discuss and revise the technical provisions of the ADA Accessibility Guidelines. Public involvement is welcome in all subcommittee meetings. For information contact Ms. Marsha Mazz at 202.272.5434 (V).

May 9-10: US Architectural & Transportation Barriers Compliance Board meeting to discuss and review the research and regulatory activities of the Access Board. The meetings are held in Washington, DC. For more information contact 202.272.5434.


May 22-24: ErgoCon '95 - Silicon Valley Ergonomics Conference & Exposition is sponsored by the Silicon Valley Ergonomics Institute. The conference will include presentations that highlight accommodation, safety, comfort and productivity. San Jose, CA. For information contact the ErgoCon '95 coordinator at 714.752.7866.

May 30 - June 3: Acoustical Accessibility for the Hearing and Visually Disabled is a special session planned for the spring meeting of the Acoustical Society of America in Washington, DC. The session is intended to show potential solutions to problems relating to acoustical communication in public spaces such as restaurants, offices, schools, theaters, etc. This session aims to provide a forum for acousticians, audiologists, designers and people with disabilities to exchange ideas and share relevant experiences. To submit an abstract, or for more information, contact David Lubman at 714.898.9099.

June 21-23: ANSI A117 Committee will meet in Washington, DC to discuss and revise the CABO/ANSI A117.1 Standard which is used as the basis of the accessibility provisions in building codes throughout the US. For more information call 703.931.4533.

July 11-12: US Architectural & Transportation Barriers Compliance Board meeting to discuss and review the research and regulatory activities of the Access Board. The meetings are held in Washington, DC. For more information contact 202.272.5434.

July 19-22: "The Responsive Campus" is the theme of the Association on Higher Education and Disability's 18th International Conference in San Jose, CA. This year's conference will focus on the responsibilities shared among various campus staff members to provide ADA compliance, new curricula and appropriate accommodations for people with disabilities. To submit a program proposal, contact program chair Ward Newmeyer at 510.643.5116 (V/TTY).

October 30 - November 3: Retrofitting for Access is another in the continuing series of educational seminars conducted by the National Center on Accessibility. This session will be held in Martinsville, IN and will focus on the responsibilities and issues faced by maintenance personnel. For more information call 800.424.1877. 

Events to be placed in the UDN Calendar must be submitted to the Editor two months before the publication date.

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