UNIVERSAL DESIGN

Accessibility and the Americans with Disabilities Act

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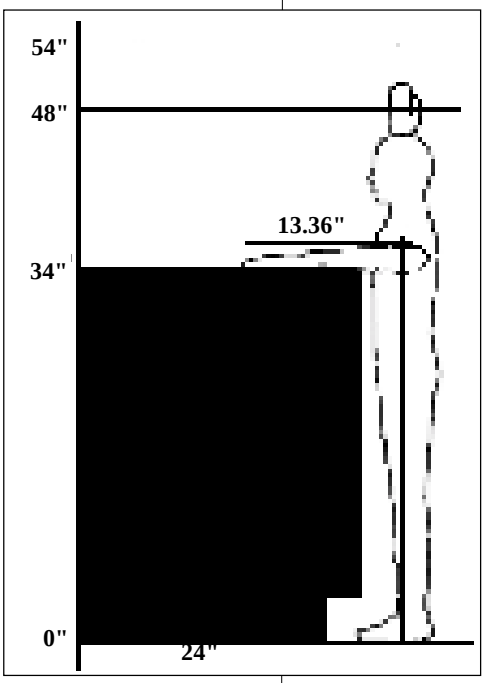
Moving Within Reach

ANSI & ADAAG Committees Propose a Lower Reach Range

In simultaneous moves that represent the first steps toward reducing maximum reach heights, the American National Standards Institute (ANSI) A117 and the Americans with Disabilities Act Accessibility Guidelines (ADAAG) Review committees have accepted a proposal to reduce the maximum reach height from 54 inches to 48 inches.



Graph Courtesy of Dr. Edward Steinfeld, AIA

Twenty-five percent of the little people studied can not reach beyond this range.

At a February meeting, the ANSI A117 committee which is responsible for developing the CABO/ANSI A117.1 Standard for Accessible and Usable Buildings and Facilities, met to review the existing 1992 version of the standard and to adopt modifications proposed by the public. During the three-day meeting, the committee accepted a proposal from the Little People of America (LPA) to reduce the maximum reach height by 6 inches. This is a significant change to Section 4.2 Space Allowances & Reach Ranges of the standard because it effects the mounting heights for all accessible objects that are expected to be used by the general public, such as telephones, elevator controls, thermostats, light switches, door locks and window latches.

See Within Reach, **page 5**

It's in the Cards

Japanese Effort Promotes Access for All

by Takeshi Nagai

The E&C Project, a Tokyo-based nonprofit organization established in 1991 to promote the development and dissemination of products and services for people with and without disabilities, has come up with an idea that allows people with visual impairments to identify and use prepaid cards.

Prepaid, magnetically encoded cards are widely used in Japan for everything from public telephones to transportation to making purchases on shopping expeditions. More than 400 million prepaid telephone cards are issued every year.

In 1993, the E&C Project published a report entitled "Research on Inconveniences in the Daily Life of People with Visual Impairments." The report showed that 75 percent of people with visual impairments had one or more prepaid cards, and that complications in using the cards included the following two problems: 1)

See It's in the Cards, **page 6**

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Population Aging and Universal Design: An International Look

by Ishi Masaaki Shiraishi

There are only about 800 working days to the turn of the century! As this milestone approaches, we are enjoying an increase in longevity -- an average of 80 years of life is now expected by people in many industrialized countries. The 21st century will see a flood of people 65 years old and older occupying more than 20 percent of each nation's population. This unprecedented phenomenon calls for a look at how our social systems and structures will cope.

A typical example is the social welfare system. The World Bank warned that the number of people over 80 would nearly double to 47 million in 2025 from 24 million in 1985. Medical costs will go up sharply and other problems will be generated. Can the younger generations bear this heavy burden? Obviously, the answer is "no." Then, what can we do? A practicable answer is to help older people stay healthy and active in the later years. To realize this, universal design can play a vital role. People-friendly environments and equipment can help everyone lead a safe, healthy and dignified life.

One important element of environments is social contact. Studies have shown that people who have more social contacts are healthier and live longer than those who don't. To increase social contact, mobility has to be enhanced at both personal and social levels. Thus, both homes and infrastructure should be universally designed.

North America

It is encouraging to observe the emerging trend toward universal design in North America and Europe. In the US, the National Endowment of the Arts-funded "Search for Excellence in Universal Design" is a great milestone in the field of design.

In Canada, the minister of transportation declared his intent to close the "accessibility gap," enabling 4.2 million Canadians with a disability and their families to enjoy convenient, dignified and barrier-free trips. One hotel changed the design of its reception area. Instead of a high counter, several islands of low, round desks welcome the guests. Another developed environmentally friendly rooms for travelers with allergies and sensitivities.

Europe

In Europe, two-thirds of the 60 to 80 million people with reduced mobility are older people. Actions have been taken to improve access to transportation and buildings, including providing low-floor buses. In 1993, a European design competition, "Design for All Ages," sponsored by the European Platform of Seniors' Organization, was a big success. The focal point of these movements is the European Union (EU) and its two key programs -- Handicapped people in the European Community Living Independently in an Open Society (HELIOS) and Technology Initiative for Disabled and Elderly People (TIDE). Assisted by a team of experts, they provide forums, information, funding and other resources. The European Institute for Design and Disability (EIDD) and the Design for Aging Network (DAN) are typical networks working with the EU.

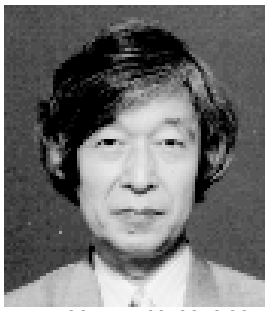
Japan

There has recently been a series of new movements in Japan. The E&C Project (See "It's In the Cards," Page 1) has been actively studying the needs of people with disabilities and organizing an exhibition. Last year the Barrier Free Association launched a new project called "Ideas to Barrier Free Society."

A 54-minute TV program, aired in November, for the first time provided viewers good examples of universal design in Scandinavia and the United Kingdom. From the US, Patricia Moore and Hal Norvell of the American Association of Retired People, explained universal design.

An epoch-making symposium, "Toward Barrier Free Towns for All," was held in January. It was sponsored jointly by the ministries of construction, transportation, and health and welfare -- an unprecedented occurrence. It is hoped that barriers between the ministries will be lifted step-by-step to make effective use of resources in society.

The United Nations designated 1999 as the International Year of Older Persons and in preparation has been working with agencies and organizations in aging. In closing, may I suggest that design promotion organizations participate in this movement and that Universal Designers & Consultants establish an official tie with the UN as the focal point in the field of design.



Ishi Masaaki Shiraishi

Ishi Masaaki Shirashi is president of the Japan Productive Aging Research Centre and former executive director of the Japan Well-Aging Assoc. He is currently serving as national correspondent of the AARP International Network on Aging.

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FEDWATCH

The Access Board to Establish Regulatory Negotiation Committee

The US Architectural and Transportation Barriers Compliance Board (Access Board) plans to establish a regulatory negotiation committee to develop a proposed rule on accessibility guidelines for newly constructed and altered play facilities covered by the Americans with Disabilities Act and the Architectural Barriers Act. The committee will be composed of representatives from organizations who represent the interests affected by the accessibility guidelines for play facilities.

Following a Clinton administration push to use negotiation to reach consensus for writing regulations, the Access Board developed a plan in July which included the formation of regulatory negotiation committees.

However, discussions of issues surrounding the design of accessible play facilities has been going on for years. The formation of the regulatory negotiation committee will give various groups the opportunity to bring their concerns to the table in the hope that the resulting regulations will adequately address all of the issues. Parents, school administration officials, and playground surface manufacturers are among the groups who are expected to participate on the committee.

Some of the issues to be considered during this process are: the use and type of accessible surfaces; requirements for school play facilities; requirements for commercial play for pay facilities; access to elevated play areas; ramped access versus transfer access; the number, type and placement of accessible play structures; and soft surface contained play areas.

The committee is expected to complete the process of developing consensus language on the proposed rule by late 1996.

Extension of Curb Ramp Deadline Proposed

Last November, the US Department of Justice (DOJ) issued a Notice of Proposed Rule Making signaling its intent to revise the Americans with Disabilities Act (ADA) requirement for installation of curb ramps at existing pedestrian walkways.

The proposed rule, which would amend Title II, extends the time period for compliance from Jan. 26, 1995 to Jan. 26, 2000, for curb ramps serving state and local government facilities, transportation, places of public accommodation, other places of employment, and residences of individuals with disabilities. It would extend the time period for providing curb ramps at existing pedestrian walkways in other areas until Jan. 26, 2005, and it would require public entities to include a schedule for the implementation of these requirements in their transition plans.

The proposed change was spurred by a request from a group of senators who indicated that due to the high costs involved in installing curb ramps, state and local governments needed more time to meet the requirements.

The proposed rule change would revise the program accessibility requirements to incorporate specific guidance on the installation of curb ramps at intersections where the street is being repaired but where the curbs are not otherwise planned to be altered. There are no suggested changes in the requirements for newly constructed or altered street curbs.

Among the proposed changes in the rule are:

- A requirement that after Jan. 26, 2000, if a public entity receives a request from an individual with a disability for a curb ramp serving that individual's place of residence, installing a curb ramp in response to that request should take precedence over the installation of other curb ramps serving other residential or non-commercial areas. This is meant to encourage public entities to make installing curb ramps serving residents with disabilities a priority over other residential and non-commercial installations.
- A requirement that public entities with 50 or more employees that choose to take advantage of the extension of time would have to amend their transition plans to establish specific schedules for providing access to public pedestrian walkways to comply with the deadlines established by the new rule.

DOJ/Access Board to Issue Joint Final Rule

The US Department of Justice (DOJ) and the US Architectural and Transportation Barriers Compliance Board (Access Board) are expected to issue a joint final rule covering requirements for state and local governments in September. The writing of this joint rule will involve adding two sections and updating the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

...DOJ and the Access Board are expected to issue a joint final rule covering requirements for state and local governments in September.

An Accessible City

Futuristic Technology Available Now

Because my eyesight is so poor, I previously relied on the sounds and smells of the city to help guide me from my work to my home. But I recently started using my "box," a talking signage receiver. Now the world has changed around me. As I exit my office building, I travel downstairs to enter the mass transit station. The complex pathway to my train from the pay turnstiles involves two escalators before reaching the train platform. I keep pace with the bustling crowd by relying on my "box" which provides directions to the various transmitters strategically located throughout the subway system. After leaving the subway station, I pass three busses before finding my connection. My "box" tells me the route information each bus broadcasts, so I can board the one I need.

I step off the bus near my bank branch where I stop at the automatic teller machine (ATM) to withdraw money for my date tonight. With the assistance of my "box," the ATM tells me which buttons to push to withdraw the cash I need and my closing balance before wishing me a good evening.

Walking to my condominium, my "box" listens for the traffic signal transmitter and tells me when to cross. I stop to buy flowers and after discussing the Super Bowl with the salesperson realize that I am running late. I must notify my date. I haven't used a pay phone in this area before, so I use my "box" to locate the transmitter on the nearest telephone.

After dinner, we have tickets for a performance at the newly renovated Opera House. My "box" helps me locate the ticket office, practice rooms, business offices, performance spaces, restaurants, and the restrooms.

A woman uses a "box" to operate an ATM.

Although this scenario may seem futuristic, the technology is currently available. The "box" is the personal receiver of an audible direction guidance system. And the accessible city is the goal of many visionaries, including Bill Loughborough, a researcher at the Smith-Kettlewell Eye Research Institute on the Campus of Pacific Medical Center and inventor of Talking Signs.

The Technology

Remote infra-red signage, available from Talking Signs of Baton Rouge, La., is a system that uses directional labels transmitted via invisible infra-red light from signs with special transmitters to handheld receivers carried by people with low vision or anyone who may be unfamiliar with an environment.

The system provides audible labels and directions mounted on objects and along pathways in the environment. It can theoretically broadcast information in any language. The receiver is about the size of two cigarette packages laid on top of one another. By scanning an area with the receiver, one can easily pick up messages. The user must press a button to activate the system, thus eliminating extraneous noise and unwanted information.

The receiver will only provide clear, strong sound when the receiver is pointing directly at the transmit-

See An Accessible City, **page 10**

Users Demand Technology to Meet Their Needs

San Francisco Experiments with Audible Signs

A combination of targeted advocacy and the clear identification of the needs of people with visual impairments has resulted in the installation of advanced technology in San Francisco. Richard Skaff, disability access coordinator for the Department of Public Works, has been instrumental in the experimental installation of Talking Signs throughout the city.

Skaff is working with city and government officials, including Mayor Willie Brown and a group of downtown business people, to integrate the transmitters into the cityscape. The mayor has proposed each streetfront property place one transmitter at its location to identify the business name and the street address. The proposal also calls for business owners to pool funds to buy 500 to 1,000 receivers to donate to users.

"The concept of creating an accessible city is a project supported by a cross-section of the community to make San Francisco available to all levels of abilities," said Ward Bond, president of Talking Signs.

San Francisco has already installed transmitters throughout the city. At the Department of Public Works, Skaff noted eight signs within the building that identify exit doors, receptionist areas, restrooms, and conference rooms. Two are outside to identify the building. His

See Users Demand, **page 10**

Moving Within Reach from Page 1

The CABO/ANSI A117.1 is used as the basis to determine accessibility in new building construction for most of the building codes around the country. It is very similar to, and was used in the development of, the ADAAG. This cycle of review for the CABO/ANSI A117.1 coincides with a review of the ADAAG presently underway by a federal advisory committee appointed to give recommendations on how the ADAAG can be improved to the US Architectural and Transportation Barriers Compliance Board. The ADAAG Review Committee has agreed with the ANSI committee to compare both draft documents this spring and attempt to remove any technical differences.

A Long Time Coming

"We've been working towards this harmonization for almost 20 years," stated John P.S. Salmen, AIA, who represents the American Institute of Architects on the ADAAG Review Committee. "A single set of criteria would make accessibility compliance much easier for everyone," he said. The validity of LPA's proposal and this spirit of harmony moved the ADAAG Review Committee to adopt the proposal (pending a review of its impact) at their meeting at the end of February.

Reaction

Reaction to the meeting results were mixed. Larry Perry, ANSI representative of the Building Owners & Managers Association International, said, "We are concerned about the far reaching impact of this change."

While Marilyn Golden, representative of the Disability Rights and Education Defense Fund noted,"Little People of America, on behalf of the many thousands of people it represents, presented comprehensive and compelling evidence that the criteria found in present accessibility standards inadvertently creates an environment in which people of short stature cannot function." For years, the legitimate complaints of people of short stature about out-of-reach lavatory faucets, telephone coin slots, or elevator call buttons have remained unaddressed. "We are delighted that the ANSI committee has responded so well to the legitimate needs of people with disabilities by reducing the height of reach ranges," said Golden.

In the past, it was assumed that people who use wheelchairs had the most restricted reach capabilities. Measurements of their capabilities in the 1970s showed that most people could reach an object mounted on a wall at a height of 54 inches above the floor if they could position their wheelchair parallel to the face of the wall. The same research found that a 48-inch height was the maximum that could be reached if a perpendicular approach was necessary.

The Research

Last year, LPA, which represents the interests of individuals shorter than 4 feet 10 inches in height, conducted detailed human factors research on 163 people of short stature and correlated its findings against existing functional health surveys of more than 900 individuals. The results showed that 25 percent of the respondents could not reach an object higher than 48 inches even when they were standing right next to it.

The research submitted by LPA representative Angela Van Etten also demonstrated that a person of short stature's reach over an obstruction is much less than either CABO/ANSI A117.1 or ADAAG presently allow.

The ANSI committee did not come to consensus on a recommendation for a change to the obstructed reach range, and so made a superficial change to the criteria so that it could be commented upon by the public in the next round of revisions which is scheduled for this summer. The ADAAG Review Committee's recommendations will probably go out for public review later this year as part of the federal rulemaking process. It is expected that comments will be submitted and hotly debated in upcoming reviews.

Even during the February ANSI committee meeting, exceptions to the 48-inch maximum height rule were approved for elevator control panels in high rise buildings. There could possibly be other such exceptions especially for equipment such as automatic teller machines (ATMs), vending machines, and existing telephones if such proposals were accepted.

"LPA celebrates the provision in the draft revision document which reduces the reach range. Although we look forward to independent use of public facilities, such as ATMs, public telephones and elevators in new construction and alterations, our enthusiasm is tempered by the understanding that the 54-inch maximum will continue in elevators with more than 16 stops and in existing facilities. A milestone victory has definitely been won; our first on the road to independent access of people of short stature," said Van Etten.

"A milestone victory has definitely been won; our first on the road to independent access of people of short stature."

Angela Van Etten, Little People of America

It's in the Cards from Page 1

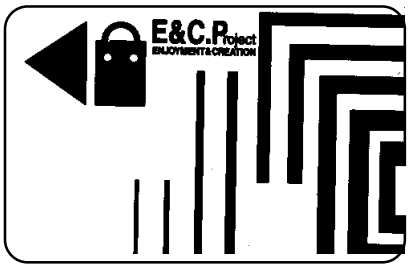
distinguishing the type and the front and back of the cards for proper insertion; and 2) knowing the balance or amount used after or during a transaction. Stamping braille or other tactile signs on prepaid cards was not practical because some existing Japanese card readers in widespread use have trouble with raised characters.

After developing several university-designed prototype prepaid cards in collaboration with people who have visual impairments, the E&C Project concluded that the most practical solutions were to:

- classify all prepaid cards into three groups: telephone, transportation and shopping, with corresponding shapes cut on the edges to identify the card type.
- design prepaid cards with areas where users can make their own identification marks that don't affect the function of the card readers.

A combination of three different distinguishing cuts and self-made marks enables users with visual impairments to differentiate between the types of prepaid cards and because the cuts are always made at the same location (the left side of the back edge when they are face up), users can distinguish the card face for proper insertion.

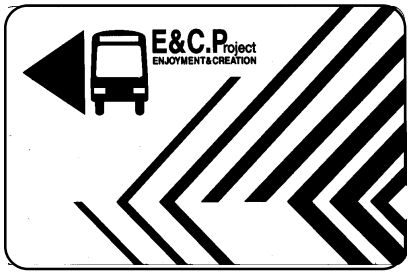
The E&C Project's activities have been attracting a great deal of attention from all fields and enhanced the growth of interest in universally designed products, services and society.



Shopping card

The E&C Project's proposal for these standards was enthusiastically received by the Industrial Standard Committee of the Ministry of International Trade and Industry. The Japanese Industrial Standard will adopt them this year, although the self-marking system is pending because of potential magnetic and security problems.

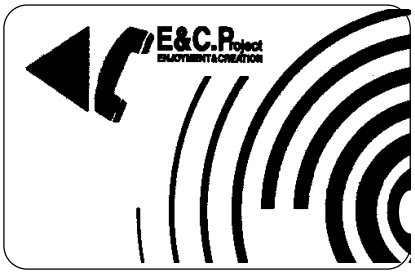
The E&C Project is comprised of about 150 industrial designers, social service workers, public servants, and other professionals who usually enroll individually and are not necessarily sponsored by their employers. E&C stands for "Enjoyment and Creation," meaning that members enjoy creating products and services which enable people with disabilities to live together with people without disabilities using the same products and services.



Transportation card

The E&C Project is committed to working on research and development; issuing reports, books and videotapes; holding exhibits and seminars; and establishing standards funded by government agencies or companies. Research and development has been conducted by eight working groups within the E&C Project covering such topics as: age-free issues, appliance operation, wayfinding, basic research and the "Kyoyohin."

The project has defined its original concept "Kyoyohin" as: 1) Products and services that can be used by people with and without disabilities; 2) Not special for special people; 3) Available to anyone, anywhere and anytime; 4) Appropriately priced as compared with general products and services; and 5) To be produced, sold and available continuously.



Telephone card

About 250 examples of "Kyoyohin" are on the market, including toys, appliances and other devices which were displayed along with extensive studies at the E&C project's industry and government supported exhibition held in Tokyo last October.

At minimal cost to manufacturers, commonly used products can be easily changed to accommodate people with disabilities. Simple and inexpensive design changes make products and services accessible to everyone. The distinguishing cuts on prepaid cards, for instance, can be used by everyone in poorly lighted locations where public telephones are often located.

The E&C Project's next effort, which is in collaboration with the Japan Milk Industry Association, is to develop standards for applying tactile designs to beverage cartons to distinguish contents, e.g., milk, juice, or tea. The E&C Project's primary activities were originally focused on needs of people with visual impairments. Now, the special needs of people with hearing impairments, wheelchair users, or pregnant women are also being studied.

The Japanese population aged 65 and older exceeded 14 percent in 1994 and is expected to increase to 25 percent by the year 2020--a rate of increase no other country has ever experienced. As a result, the interest in universal design is growing tremendously in Japan and has become a kind of business trend. The project's activities have been attracting attention from all fields and have enhanced the growth of interest in universally designed products, services and society.

Takeshi Nagai is chairman of the E&C Project's Card Working Group.

The ADA Quiz Book

The ADA Quiz Book, copyright 1995 by Meeting the Challenge Inc., is an enjoyable, yet serious tool for educating employers, designers, business owners, and people with disabilities on the concepts and requirements of the Americans with Disabilities Act (ADA). This 60-page guide begins with a general overview of the landmark legislation with explanations of its five titles: employment; public services; public accommodations; telecommunications; and miscellaneous provisions.

The overview is followed by a series of tests, puzzles, and exercises which probe the reader's understanding of the material. Throughout the text, there is mention of prominent historic and present-day people with disabilities. It is recommended for disability awareness seminars and symposia and is available in alternate formats. Copies are available from **Meeting the Challenge Inc.**, 3630 Sinton Rd., Colorado Springs, CO 80907, phone 800.864.4264

Strategies for Teaching Universal Design

Strategies for Teaching Universal Design, edited by Polly Welch, is co-published by Adaptive Environments of Boston and MIG Communications of Berkeley, Calif. The well illustrated book discusses the work and findings of the Universal Design Education Project (UDEP) which was first funded by the National Endowment for the Arts in January 1991. The pilot project consisted of 22 national collegiate design programs representing four disciplines: architecture, landscape architecture, interior design, and industrial design. Its mission was to "challenge existing values in design education and to stimulate innovation in design curricula that will lead to the development of products and environments which incorporate universal design concepts." The faculty and advisors' challenge was to discourage students from subscribing to traditional thought that universal design is the equivalent of code compliance. The majority of the text consists of case studies which detail the work of each faculty team and students.

The first chapter defines universal design as "an approach to creating environments and products that are usable to all people to the greatest extent possible." A distinction is made between the terms "accessible" and "universal." The former has resulted in structures and items intended exclusively for use by persons with disabilities which tend to be unattractive, costly, institutional in nature, and which perpetuate separatism. To the contrary, "universal," as the word implies, is inclusive and the goal of universal design is to develop places and things with consideration for the changes people experience at various points through their lifespan.

Another chapter discusses the history of disability rights legislation in the U.S. up to passage of the 1990 Americans with Disabilities Act. It is followed by a chapter examining precedents for developing strategies to teach universal design.

The final chapter highlights the lessons learned through the pilot project. It notes that isolated courses are not as effective as when universal design is infused in the studio, related to, and reinforced in other courses. Also, the use of consultants with disabilities proved invaluable. Group leaders noted, however, that empathetic exercises, i.e. putting oneself in the position of someone with a disability, did not always bring about positive results. The appendix includes faculty contacts as well as advisor and staff biographies and an extensive bibliography.

Strategies for Teaching Universal Design is available in alternate formats. For more information, contact **Adaptive Environments Center** at 617.695.1225 (v/tty) ext. 0.

...isolated courses are not as effective as when universal design is infused in the studio, related to, and reinforced in other courses.

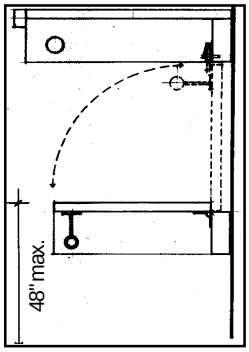
"Strategies for Teaching Universal Design"

?

PROBLEM: How do you provide clothes rod storage at an accessible height (48-inch maximum) in an existing closet?

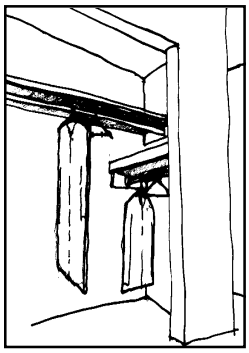
TIP: Two hotel designers have come up with innovative solutions:

Nicholas Bunning of the Washington Hilton & Towers developed a hinged shelf assembly that folds back against the rear wall of the closet when not in use.



Hinged shelf assembly

Bob Barbee of the Ashford Financial Group, installed secondary rods along the sides of his hotel's guestroom closets allowing a guest who uses a wheelchair to reach in from the front of the closet.


Secondary rods

Universal Design Newsletter provides a free one-year subscription for any Tip which we publish. We look forward to receiving and publishing your tips.

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PROBLEM: Water from a roll-in shower will often splash out onto the bathroom floor. How can you minimize the splash condition for people who do not need the roll-in shower.

TIP: Swanstone has developed a snap on channel that acts like a curb to help keep the water in the shower area when an accessible hotel guestroom is not rented out to a person who needs the roll-in shower feature.


Snap into place channel

The last issue of UDN misprinted the phone number for the Window Ease Force Guage. The correct phone number is 505.256.0115

Accessible Trails: Consistency Still a Question

While researchers continue to develop and study soil stabilizers for accessible trails, many architects and recreational area developers are relying on an old standby -- asphalt. "There are variables that make it hard to determine why something works and [why] sometimes it doesn't," said Brian Kermeen, project coordinator and landscape architect for the Stanislaw National Forest in Sonora.

Defining the cost of accessibility is a challenge developers face, Kermeen said. While surfaces such as crushed fines (pulverized stone) and fine gravel are options for trails which might present up-front savings, continuous maintenance of trails could eliminate those savings, he said. Presented with issues such as aesthetics, costs, maintenance and accessibility, Kermeen said he is sticking with asphalt in developing recreational trails.

Soil stabilizers that are available for man-made and natural trails have not had strong success records, according to the US Department of Agriculture's Forest Service. A report from the service's Technology and Development Program presents some stabilizers as options -- not wonder products. "Which stabilizer you select has a lot to do with how you want to use the trail and its characteristics," said Dexter Meadows, program leader for recreation at the Forest Service's San Dimas, Calif. Technology & Development Center. Native material and physical dimensions must also be considered.

For now, the Forest Service suggests using pine resin emulsions for accessible trails. This stabilizer is a by-product from the distillation of turpentine. When water evaporates, the treated surface becomes harder than asphalt. Other soil stabilizers include:

Flyash: A by-product of power plants that burn coal, available in a variety of classes. This inexpensive product works quickly and helps cement the aggregate particles together.

Bentonite: A natural clay material, it is inexpensive and bonds aggregate materials. However, too much bentonite can cause trails to become slippery when wet.

Ground seed hulls: A patented, organic and nontoxic product from plantego seed hulls, an Arizona-native plant. This stabilizer softens somewhat when moist but rehardens when dry. It has been used successfully in different climatic situations, including snow and freezing temperatures.

Latex polymers: This by-product of the paint industry has been used in several locations by the Forest Service with limited success. When a seal coat is applied, its life span can be increased to two to three years.

See Accessible Trails, **page 11**

Lavatory Enclosures Introduced

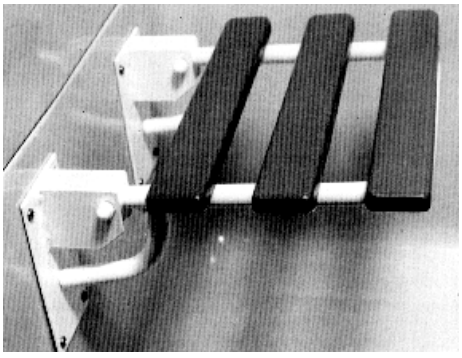
Lav Shield by **Truebro Inc.** is an enclosure designed to protect persons who use wheelchairs from sharp edges and hot pipes under a lavatory as required by the Americans with Disabilities Act. This enclosure provides the necessary knee and toe clearances and the china-white vinyl covering is aesthetically pleasing and resists scuffing and scratching. The one-size, single-piece configuration provides ease of installation.

The Basin Guard product offers similar features for kitchen and lavatory sinks, designed with sidewalls and counter tops. It features a front shield design and is available in 36- and 42-inch single-piece configurations.

Padded Fold-Down Shower Seat Available

The Zenith Padded Fold-Down Shower Seat by **Silcraft** is a heavy-duty shower chair constructed of tubular coated steel for corrosion resistance.

The Zenith offers a variety of options, including a fully padded seat; open or closed padded aperture seats; and a molded plastic commode seat.



All seats are interchangeable, 16 by 16 inches, and have a weight carrying capacity of 450 pounds. The standard seat is equipped with a padded back and arms that fold up for transfers.

Manual Fire Pull Station Extension Kit

The Helping Hand™ manual fire alarm pull stations by **MITEC Controls Inc.** puts fire alarms within reach of wheelchair users and people of short stature in compliance with the Americans with Disabilities Act (ADA) without relocating the entire station. The extension features a coated steel cable for durability and easy resetting once an alarm has been activated. It attaches to any manual alarm pull station using universal clips and two screws; no electrical wiring or interface is required. Its Braille markings meet ADA signage requirements and the easy-grasp handle is designed for use by people with physical disabilities.

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.

Truebro Inc.
P.O. Box 440
7 Main Street
Ellington, CT 06029
800.340.5969
860.875.2868 (in CT)

Silcraft Corporation
528 Hughes Drive
Traverse City, MI
49686
800.678.7100 or
616.946.4221

MITEC Controls Inc.
3040 F Business Park
Drive
Norcross, GA 30071
770.662.0094

Does DOJ Have the Authority to Change or Amend Its Rules?

The Americans with Disabilities Act (ADA) clearly states that the US Department of Justice (DOJ) has the authority and responsibility to promulgate regulations for the enforcement of the ADA. However, nowhere in the act is it stated that the DOJ also has the authority to make changes or amendments to those regulations.

This situation was recently called to the attention of Universal Designers & Consultants Inc. by a concerned architect. So began the hunt. The DOJ's ADA Technical Assistance Line was unable to find any reference to the authority, nor could any of the lawyers at DOJ. A dogged search continued with calls to no less than eight congressional offices -- a two week exercise in waiting for phone calls to be returned. The result -- no answer. Finally, Morton Rosenberg, was reached in the American Law Division of the Library of Congress. Rosenberg says, that according to Title V of the Administrative Procedures Act, [5 US Code Section 533 (e)] within the definition of "rule" in 551(S) the law states that "rule making encompasses the formulating, amending and repealing of a rule." Implicit within DOJ's responsibility to promulgate the rule, is the authority to amend, revise, and repeal it.

The Accessible City from Page 4

ter. The message repeats itself, so the user can continue to receive information about the goal as he/she moves toward it. The user then travels in the direction of the transmitter to reach the intended destination.

The manufacturer stresses that the system is informational only and not intended to ensure safety; it is used to supplement other traveling skills.

Recent developments in signal modulation allow Talking Signs to be sucessfully installed outdoors.

The Cost

The technology is not inexpensive. Each receiver costs approximately $250 and each transmitter approximately $150. The cost of the transmitter is usually paid by the building owner. The receiver is purchased by or donated to the user. The receiver is powered by a standard 9-volt battery. Physical barriers between the transmitter and receiver can block the infra-read signal. Therefore, transmitters are usually installed above head height to improve the accessibility of the signal. Transmitters can be placed on walls, ceilings, light posts, traffic signals, telephone signs, and above doorways.

Improvements

Early attempts to install infra-red transmission systems such as assistive listening systems found that sunlight interferred with the infra-red signal. Recent developments in signal modulation allow Talking Signs to be sucessfully installed outdoors. Weather does not affect the transmission or reception of the signal. The signs have been placed on busses and traffic lights in San Francisco. Specifically, the bus transmitters have been installed in the interior of busses, near the front electronic scrolling sign. This protects them from the weather. In addition, the surface of the electronic sign is kept clean to allow a clear signal from the infrared transmitter.

Bill Geary,uses his Talking Signs invention at Powell Station, San Francisco.

Universal Use

The system can be useful not only for people with visual impairments, but also for foreign travelers, young children and illiterate individuals. Although the technology was developed to assist the print impaired population, discussions are underway to use the technology to assist the general population.

By using additional frequencies or transmitters, messages can be transmitted in French, German, Arabic, Italian, Japanese, or any language. For example, a receiver may receive the messages in Spanish, if that is the language choosen by the user.

Whether in London, Sweden, or anywhere else in the world where the Talking Signs transmitter is installed, a person would be able to access transportation, banking, restaurants, theaters, entertainment complexes, and telephones/restrooms in their native tongue.

Imagine, no more embarrassing conversations in Anglo-Spanish asking for the location of the horse stall when looking for a restroom!

Users Demand Technology to Meet Their Needs, from Page 4

only suggestion to improve the system is to "add more signs." Skaff contended the signs are cost effective (once installed there is no additional cost to change messages) and virtually maintenance free. Unless there is a power failure, the transmitters do their jobs. And they can easily be wired into a backup power system if necessary. Messages can easily be updated to note such things as tenant changes. There are no visual negatives for the building owners since the standard transmitter is a 4-inch square box, which is generally out of sight.

Talking Signs allow the user to get information without searching, is personal, and gives specific directions. For example, at a crosswalk the receiver may tell users which direction they are heading, their specific street corner location, and whether the light is green or red. A prototype crosswalk is to be activated this month at the new City Library.

"Wayfinding technology in San Francisco has been installed because of a combination of the will of the visually impaired community and the attitude of public building and transit agencies," said Bond. Users in San Francisco also benefit from having Gannet, the advertising agency who owns the bus shelters, install Talking Signs. Gannet and the Municipal Transportation Board have donated receivers to the Rose Resnick Lighthouse.

Accessible Trails, from Page 8

Enzymes: A bacterial culture is the active ingredient in this stabilizer. Since bacteria multiplies very rapidly when exposed to air, a small quantity can go a long way. Enzyme products have worked well in stabilizing roads that have high clay content.

The lack of national guidelines has caused disagreements on what constitutes an accessible trail. The US Architectural and Transportation Barriers Compliance Board (Access Board) convened a Recreation Access Advisory Committee in 1993 to recommend guidelines for outdoor environments and discussed trail accessibility issues. The toughest issue in addressing trail accessibility was consistency, one subcommittee member said.[See "Opening Up the Great Outdoors," *UDN*, July 1995, Vol. 2, No. 3]

"The specificity is not there," said Dave Park, chief of the Office of Accessibility for the National Park Service. "At this point, we're maintaining the 'firm, stable and slip-resistant trail,'" he said, which is included in the Americans with Disability Act Accessibility Guidelines (ADAAG).

According to Park, the three most stable surfaces are asphalt, wooden boardwalk and concrete. While there are some commercial soil hardeners and stabilizers available, more research is needed before anyone decides what is an accessible surface, he said. No government or private entity has stepped forward to initiate such an endeavor, he said.

The Access Board anticipates convening a regulatory negotiation committee on outdoor developed areas within the next year, according to Ola, the Access Board's public affairs specialist. (See FedWatch, page 3.) The Forest Service has had limited communications with the Access Board about the surfacing issue, said Meadows of the Forest Service. However, as standards reach a more formal stage, he expects the two agencies to have more in-depth discussions about surfaces.

The difference between natural and man-made environments is another consideration in trail accessibility. According to ADAAG, there are different requirements for each situation. For example, uncontrolable elements such as tree roots and natural slopes often make it harder for natural environments to be accessible, said Ray Bloomer, director of technical assistance for the National Center on Accessibility. An accessible trail must be designed to accommodate the wide range of potential users including people with visual as well as physical impairments, Bloomer said. "We also need to make sure we're presenting the full range of experiences in an outdoor setting and not just looking at 'the' accessible trail," he said. "We may need to have several accessible trails to give people with disabilities different opportunities."

A worker applies asphalt on to a trail surface.

CALENDAR

Printed on recycled paper with vegetable inks.

Events to be placed in the UDN Calendar must be submitted to the Editor four months before the event.

April 15-17: Trail Accessibility Symposium will be conducted by the National Center on Accessibility (NCA) at its headquarters at Bradford Woods, in Martinsville, IN. The 2½-day workshop will address research findings, assessment processes, design and maintenance issues of accessible trails. For more information contact NCA at 800.424.1877.

April 21-24: Assisted Living Facilities Association of America National Conference: Moving Beyond the Basics Toward the Next Millennium will be held at the Broadmoor Hotel, Colorado Springs, CO. Sessions will include discussions of the latest design ideas for assisted living. For more information, contact ALFAA at 703.691.8100.

May 6-8: The Principles of Access will be presented by the National Center on Accessibility (NCA) at its headquarters at Bradford Woods, in Martinsville, IN. The 2½-day workshop will educate professionals at all management levels on the fundamentals of programmatic and physical access to recreation facilities. For more information contact NCA at 800.424.1877

May 12-15: ErgoCon '96 is the Silicon Valley Ergonomics Institute's conference and exhibition held in Palo Alto, CA. It is an interdisciplinary event that allows attendees to examine and discuss state-of-the-art ergonomic technologies and workplace innovations. For more information, contact Abbas Moallem at 408.924.4132

May 14-15 and June 9-10: The US Architectural and Transportation Barriers Compliance Board will meet in Washington, DC to discuss its programs and rulemaking process. For more information, contact 202.272.5434.

July 29-30: The **Fourth Annual Association of Disabled American Golfers National Tournament** will be conducted at Fox Hollow at Lakewood Golf Course in Lakewood, CO. Sponsored jointly by Electric Mobility Inc. and the Association of Disabled American Golfers (ADAG), interested parties are encouraged to contact ADAG at 303.843.9284.

Sept. 16-20: Equality through Participation - 2000 and Beyond, the 18th World Congress of Rehabilitation International, will be held in Aukland, New Zealand. The congress will present activities aimed toward building environments which enable people with disabilities to have the same freedom of choice and action as the rest of their community. For more information, contact Mrs. Bice Awan in Aukland, New Zealand at +64.4.473.8487 (fax).

Oct. 28 - Nov. 1: Retrofitting for Accessibility will be conducted by the National Center on Accessibility (NCA) in Martinsville, IN. This course is designed to educate maintenance professionals, facility managers, site access coordinators and planners on the needs of people with disabilities and the barriers that can be eliminated to promote full access to recreation facilities. For more information, call NCA at 800.424.1877.

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