

TRANSMITTAL OF RULES ADOPTED

FROM: State Building Code Advisory Council
(Name of Agency)

TO: CODE REVISER
LEGISLATIVE BLDG. (Southwest Corner, Ground Floor)
OLYMPIA 98504

The enclosed rules Permanent rules , being Order No. 76-01
Emergency rules

relating to (Name of rules or description of subject matter)

WAC 51-04 General Procedures
WAC 51-06 Public Records
WAC 51-08 Uniform Procedural Rules
WAC 51-10 The American National standard specifications for making buildings and facilities accessible to, and useable by, the physically handicapped, published by American National Standards Institute, Inc., document ANSI A117 1-1961 (reaffirmed 1971). This document shall supplement Chapter 35, Laws of 1967 and Chapter 70.92 RCW with respect to public buildings.

(ALTERNATIVE A. Use only for adoption of permanent rules)

pursuant to Notice No. _____ ① filed with the code reviser on _____ ② were regularly adopted as permanent rules of this agency at _____ on _____ and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW. The effective date of such rules shall be _____ ③

(ALTERNATIVE B. Use only for adoption of emergency rules)

pursuant to its finding in the attached administrative order, that the immediate adoption of these rules is necessary for the preservation of the public health, safety, or general welfare and that observance of the requirements of notice and opportunity to present views on the proposed action would be contrary to the public interest, were regularly adopted as emergency rules of this agency at Sea Tac Airport, Green Room on June 23, 1976 and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW.

The undersigned hereby certifies that the requirements of chapter 34.04 RCW and of the Open Public Meetings Act of 1971, chapter 42.30 RCW have been fulfilled.

Dated this 23rd day of June 1976.

STATE OF WASHINGTON
FILED
JUN 28 1976
CODE REVISER'S OFFICE
DOCKET 7445 FILE # 1

State Building Code Advisory Council
(AGENCY)
Arthur E. Knutsen
By Arthur E. Knutsen
Chairman
Title

① Notice number as appears on the copy of notice returned to you by reviser's office (if proceedings were continued, use no. of last notice)
② Stamped date as appears on the copy of notice returned to you by reviser's office (if proceedings were continued, use date of last notice)
③ Unless a later date is specified in this order or is prescribed in another statute, rules are effective 30 days after filing:
RCW 34.04.040. Leave this space blank except in such special cases.
[Order 9, filed 9/25/74, eff. 10/25/74] [Form CR-2: Rev. 9/21/74]

STATE OF WASHINGTON

STATE BUILDING CODE ADVISORY COUNCIL

ADMINISTRATIVE ORDER NO. 76-01

I, Arthur E. Knutsen, Chairman of the State Building Code Advisory Council of the State of Washington, having been given authority to adopt rules and regulations for making buildings and facilities accessible to and useable by the physically handicapped or elderly persons as provided for in RCW 70.92.100 through 70.92.160, as noted in the State Building Code Act, RCW 19.27.030(5), such rules to have been in effect after July 1, 1976, and finding that additional time is needed to incorporate comments received from two public hearings into such rules and regulations; hereby find that immediate adoption of the presently effective American National Standard Specifications for making buildings and facilities accessible to, and useable by, the physically handicapped, published by American National Standards Institute, Inc., Document ANSI A117.1-1961 (reaffirmed 1971) is necessary for the preservation of the public health, safety, and general welfare. Pursuant to RCW 34.04.030, I hereby declare an emergency to exist, and by virtue of the authority vested in me under Chapter 34.04 RCW do promulgate and adopt the annexed rules and regulations, to wit:

- WAC 51-04 General Procedures
- WAC 51-06 Public Records
- WAC 51-08 Uniform Procedural Rules
- WAC 51-10 The American National Standard Specifications for making buildings and facilities accessible to, and useable by, the physically handicapped, published by American National Standards Institute, Inc., Document ANSI A117 1-1961 (reaffirmed 1971). This document shall supplement Chapter 35, Laws of 1967 and Chapter 70.92 RCW with respect to public buildings.

as emergency rules of the council.

(2) This order after being first recorded in the order register of this council shall be forwarded to the Code Reviser for filing pursuant to Chapter 34.04 RCW and Chapter 1-12 WAC.

APPROVED AND ADOPTED June 23, , 1976

By Arthur E. Knutsen
Arthur E. Knutsen, Chairman

State Building Code Advisory Council

Chapter 51-04

GENERAL PROCEDURES

WAC 51-04-010 COUNCIL PURPOSE. The State Building Code Advisory Council, hereinafter referred to as the Council, has been established by the Legislature to report annually to the Governor and the legislature on the operation and administration of RCW 19.27, the State Building Code Act; and to adopt rules and regulations establishing barrier free design standards pursuant to RCW 19.27.030(5).

WAC 51-04-020 COUNCIL MEMBERSHIP AND ORGANIZATION.

(1) The membership of the Council, is appointed by the Governor, and includes a designee from the Department of Labor and Industries, a designee from the Insurance Commissioner, and thirteen additional members broadly representative of the general public, local government, industries and professions concerned with building design and construction.

(2) At the request of the Governor, staff support to the Council is provided by the Office of Community Development, hereinafter referred to as the Office.

(3) The principal office of the Council shall be in Olympia, Washington at the Office, 400 Capitol Center Building, Olympia, 98504. The Office shall be open each day from 8:00 a.m. to 5:00 p.m. (Saturdays, Sundays, and legal holidays excepted). Submissions, requests, and communications shall be sent to the State Building Code Advisory Council, c/o Office of Community Development, 400 Capitol Center Building, Olympia, Washington 98504.

Chapter 51-06

PUBLIC RECORDS

WAC 51-06-010 PURPOSE OF CHAPTER. The purpose of this chapter shall be to ensure compliance by the State Building Code Advisory Council (hereinafter referred to as the "Council", including its members and staff, with the provisions of Ch. 42.17 RCW (Initiative 276), and in particular with RCW 42.17.250-.320 dealing with public records.

WAC 51-06-020 PUBLIC RECORDS AVAILABLE. All public records of the Council as defined in WAC 51-06-030 are deemed to be available for public inspection and copying pursuant to these rules, except as otherwise provided by RCW 42.17.310 and WAC 51-06-080.

WAC 51-06-030 DEFINITIONS. (1) "Public record", as used in this chapter means any writing containing information relating to the conduct of governmental or the performance of any governmental or proprietary function prepared, owned, used or retained by the Council regardless of physical form or characteristics.

(2) "Writing" means handwriting, typewriting, printing, photostating, photographing, and every other means of recording any form of communication or representation, including letters, words, pictures, sounds, or symbols, or combination thereof, and all papers, maps, magnetic or paper tapes, photographic films and prints, magnetic or punched cards, discs, drums and other documents

WAC 51-06-040 PUBLIC RECORDS OFFICER. The Council's public records shall be on file with the Public Records Officer designated by the chairman of the Council with the concurrence of the Director of the Office of Community Development (hereinafter referred to as the "Office"). The person so designated shall be located in the Administrative Office of the Office. The Public Records Officer shall be responsible for implementing the Council's rules and regulations regarding the release of public records, coordinating the staff of the Office in this regard, and generally ensuring compliance by the staff with the public records disclosure requirements of Ch. 42.17 RCW.

WAC 51-06-050 OFFICE HOURS. Public records shall be available for inspection and copying during the customary office hours of the Office. For the purposes of this chapter, the customary office hours shall be from 9:00 a.m. to noon and from 1:00 p.m. to 4:00 p.m., Monday through Friday, excluding legal holidays.

WAC 51-06-060 REQUESTS FOR PUBLIC RECORDS. In accordance with requirements of Ch. 42.17 RCW, that agencies prevent unreasonable invasions of privacy, protect public records from damage or disorganization, and prevent excessive interference with essential functions of the Office or the Council, public records may be inspected or copied or copies of such records may be obtained, by members of the public, upon compliance with the following procedures:

(1) A request shall be made in writing upon a form prescribed by the Office which shall be available at its Administrative Office. The form shall be presented to the Public Records Officer; or to any member of the Office's staff, if the Public Records Officer is not available, at the Administrative Office of the Office during customary office hours. The request shall include the following information:

- (a) The name of the person requesting the record;
- (b) The time of day and calendar date on which the request was made;
- (c) The nature of the request;
- (d) If the matter requested is referenced within the current index maintained by the Public Records Officer, a reference to the requested record as it is described in such current index;
- (e) If the requested matter is not identifiable by reference to the Council's current index, an appropriately specific description of the record requested.

(2) In all cases in which a member of the public is making a request, the Public Records Officer or staff member to whom the request is made will assist the member of the public in appropriately identifying the public record requested.

WAC 51-06-070 COPYING. No fee shall be charged for the inspection of public records. The Office shall charge a fee of twenty-five cents per page for providing copies of public records and for use of the Office's copy equipment. This charge is the amount necessary to reimburse the Office for its costs incident to such copying.

WAC 51-06-080 EXEMPTIONS. (1) The Council reserves the right to determine that a public record requested in accordance with the procedures outlined in WAC 51-06-060 is exempt under the provisions of RCW 42.17.310.

(2) In addition, pursuant to RCW 42.17.260, the Council reserves the right to delete identifying details when it makes available or publishes any public record, in any cases when there is reason to believe that disclosure of such details would be an invasion of personal privacy protected by Ch. 42.17 RCW. The Public Records Officer will fully justify such deletion in writing. A copy of such justification shall be immediately provided the Chairman and also will be provided the person requesting the remainder of the public record.

(3) All denials of requests for public records must be accompanied by a written statement specifying the reason for denial, including a statement of the specific exemption authorizing the withholding of the record and a brief explanation of how the exemption applies to the record withheld.

WAC 51-06-090 REVIEW OF DENIALS OF PUBLIC RECORDS

REQUESTS. (1) Any person who objects to the denial of a request for a public record may petition for prompt review of such decision by tendering a written request for review. The written request shall specifically refer to the written statement by the Public Records Officer or other staff member which constituted or accompanied the denial.

(2) Immediately after receiving a written request for review of a decision denying a public record, the Public Records Officer or other staff member denying the request shall refer it to the Chairman of the Council or his designee. The Chairman or his designee shall immediately consider the matter and either affirm or reverse such denial. The Chairman or his designee shall return the request with a final decision, within two business days following the original denial.

(3) Administrative remedies shall not be considered exhausted until the Chairman or his designee has returned the petition with a decision or until the close of the second business day following denial of inspection, whichever occurs first.

WAC 51-06-100 PROTECTION OF PUBLIC RECORDS. In order that

public records maintained on the premises of the Office may be protected from damage or disorganization as required by Ch. 42.17 RCW, the following procedures and practices are hereby instituted:

(1) Upon receipt of a request by a member of the public for a public record, the Public Records Officer or the staff member in the Office's Administrative Office receiving the request together with an appropriate office or division administrator shall review the request for a public record and the requested public record to determine whether deletions from such record should be made or the request for such record should be denied pursuant to WAC 51-06-080.

(2) Only after a determination has been made that all or such portion of a public record as is not deleted may be inspected, shall such public record or portion thereof be made available for inspection by a member of the public.

(3) Only staff members of the Office may open Council files to gain access to Council records for either Council business or to respond to a request for a public record.

(4) No public record of the Council may be taken from the premises of the Office by a member of the public.

(5) Public inspection of Council records shall be done only in such locations as are approved by the Public Records Officer, which locations must provide an opportunity for Office staff members to insure no public record of the Council is damaged, destroyed, or unreasonably disorganized or removed from its proper location or order by a member of the public.

(6) Public records of the Council may be copied only on the copying machinery of the Office unless other arrangements are authorized by the Public Records Officer.

WAC 51-06-110 RECORDS INDEX. (1) The Office has available

to all persons a current index which provides identifying information as to the following records issued, adopted or promulgated since the formation of the Council:

(a) Final opinions, including concurring and dissenting opinions, as well as others, made in the adjudication of cases;

(b) Those statements of policy and interpretations of policy, statutes, and the Constitution which have been adopted by the Council;

(c) Administrative staff manuals and instructions to staff that affect a member of the public;

(d) Planning policies and goals, and interim and final planning decisions;

(e) Factual staff reports and studies, factual consultant's reports and studies, scientific reports and studies, and any other factual information derived from tests, studies, reports or surveys, whether conducted by public employees or others; and

(f) Correspondence and materials referred to therein, by and with the Council relating to any regulatory, supervisory or enforcement responsibilities of the Council, whereby the Council determines or opines upon, or is asked to determine or opine upon, the rights of the state, the public, a subdivision of state government, or of any private party.

(2) The current index promulgated by the Council shall be available to all persons under the same rules and on the same conditions as are applied to public records available for inspection.

WAC 51-06-120 ADDRESS FOR COMMUNICATIONS. All communications with the Council including but not limited to the submission of materials pertaining to its operations and/or the administration or enforcement of Ch. 42.17 RCW, and these rules; requests for copies of the Council's rules; and other matters, shall be addressed as follows: The State Building Code Advisory Council, c/o Office of Community Development, 400 Capitol Center Building, Olympia, Washington 98504.

Chapter 51-08

UNIFORM PROCEDURAL RULES

WAC 51-08-010 UNIFORM PROCEDURAL RULES. The State Building Code Advisory Council, hereinafter referred to as the Council, adopts as its own rules of practice all those Uniform Procedural Rules promulgated by the Code Reviser now codified in the Washington Administrative Code, as WAC 1-08-005 through WAC 1-08-590, as now or hereinafter amended, subject to any additional rules the Council may add from time to time. The Council reserves the right to make whatever determination is fair and equitable should any question not covered by its rules come before the Council, said determination to be in accordance with the spirit and intent of the law.

American National Standard

specifications for making
buildings and facilities accessible to,
and usable by,
the physically handicapped



american national standards institute, inc.
1430 broadway, new york, new york 10018

**Specifications for Making
Buildings and Facilities Accessible to,
and Usable by,
The Physically Handicapped**

Secretariat

**National Society for Crippled Children and Adults
The President's Committee on Employment of the Physically Handicapped**

Approved October 31, 1961

American National Standards Institute, Inc

American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

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Foreword

(This Foreword is not a part of American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped, A117.1-1961.)

Approximately one out of seven people in our nation has a permanent physical disability. This segment of our population represents human resources of inestimable value and is of great economic significance to the entire nation.

The most common design and construction of buildings and facilities cause problems for the physically handicapped that lessen the social and economic gains now evident in the rehabilitation of these individuals. These architectural barriers make it very difficult to project the physically handicapped into normal situations of education, recreation, and employment.

In May, 1959, the ASA, acting on the request of The President's Committee on Employment of the Physically Handicapped, called a general conference of those groups vitally interested in the problem. This conference recommended the initiation of a project, and this recommendation was subsequently approved by the Construction Standards Board. The President's Committee on Employment of the Physically Handicapped and the National Society for Crippled Children and Adults were designated as co-sponsors, and the latter agreed to assume the secretariat.

This standard supplements other American Standards relating to various aspects of buildings and facilities. Its specifications, which are the result of extended and careful consideration of available knowledge and experience on this subject, are intended to present minimum requirements. They are recommended for use in the construction of all buildings and facilities and for adoption and enforcement by administrative authorities, so that those individuals with permanent physical disabilities might pursue their interests and aspirations, develop their talents, and exercise their skills.

The ASA Sectional Committee on Facilities in Public Buildings for Persons with Physical Handicaps, A117, which developed this standard, had the following personnel at the time of approval.

LEON CHATELAIN, JR, *Chairman*

T. J. NUGENT, *Secretary*

<i>Organization Represented</i>	<i>Name of Representative</i>
AFL-CIO	WALTER MASON
American Foundation for the Blind	ARTHUR VOORHEES
American Hospital Association	MARGARET E. PETERS
American Hotel Association	JAKE FASSETT
American Institute of Architects	CLINTON H. COWGILL F. CUTHBERT SALMON CHRISTINE F. SALMON (<i>Alt</i>)
American Municipal Association	BARNET LIEBERMAN LEO GOLDSTEIN (<i>Alt</i>)
American Occupational Therapy Association	MARJORIE FISH
American Physical Therapy Association	LUCY BLAIR
American Society of Landscape Architects	CAMPBELL E. MILLER
The American Society of Mechanical Engineers	JOSEPH W. DEGEN
American Society of Safety Engineers	THOMAS J. BERK
American Vocational Association	CHARLES W. SYLVESTER, M.D.
Associated General Contractors of America	WILLIAM F. LOTZ BURT L. KNOWLES (<i>Alt</i>)
Association of Casualty and Surety Companies	ROBERT HAGOPIAN JAMES C. ROUMAS (<i>Alt</i>)
Construction Specifications Institute	EDWIN A. WEED CLEMONS J. POIESZ (<i>Alt</i>)
Federal Housing Administration	WILLIAM J. O'CONNOR
General Services Administration	J. ROWLAND SNYDER
Industrial Home for the Blind	HERBERT RUSALEM, M.D. HAROLD RICHTERMAN (<i>Alt</i>)
Industrial Medical Association	KENNETH G. PEACOCK, M.D.
Indoor Sports Clubs, Inc	ARVELLA M. SANDER
Institute for the Crippled and Disabled	ROBERT MCAFEE WALTER S. NEFF, M.D. (<i>Alt</i>)

<i>Organization Represented</i>	<i>Name of Representative</i>
National Bureau of Standards	(Representation vacant)
National Congress of Organizations for the Physically Handicapped	ELMER JOSEPHS
National Council of Churches	REV. FRANCIS F. FISHER
National Council of Schoolhouse Construction	JOHN L. CAMERON E. J. BRAUN (Alt)
National Elevator Manufacturing Industry	D. J. MATHESON
National Paraplegia Foundation	EUGENE AURYANSEN
National Rehabilitation Association	EDWARD STILES
National Safety Council	ROBERT L. JENKINS
National Society for Crippled Children and Adults	LEON CHATELAIN, JR JOHN B. KEMP D. W. ROBERTS, M.D. JAYNE SHOVER THERON H. BUTTERWORTH (Alt)
Paralyzed Veterans of America, Inc	ROBERT P. MEIER ROBERT CLASSON (Alt)
Paraplegics Manufacturing Company	DWIGHT D. GUILFOIL, JR HARRY BENDSTEN (Alt)
Plumbing Fixture Manufacturers Association	RUSSELL W. SMITH
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Society of Industrial Realtors	FRANK D. CARIBALDI
Telephone Group	J. M. STANDRING, JR
United Cerebral Palsy Associations, Inc	HARRY LYONS
U. S. Conference of Mayors	HARRY R. BETTERS
U. S. Department of Health, Education and Welfare	
Bureau of State Services	HOWARD SPENCE
Children's Bureau	CLARA M. ARRINGTON GEORGIA PERKINS, M.D. (Alt)
Division of Accident Prevention	EUGENE L. LEHR
Division of Hospital and Medical Facilities	AUGUST F. HOENACK PETER N. JENSEN (Alt)
Office of Education	ROMAINE P. MACKIE
Office of Vocational Rehabilitation	PHILIP KLIEGER, M.D.
U. S. Department of Labor	
Bureau of Employment Security	HENDRICK D. MUGAAS MELVIN R. BERGSTROM (Alt)
Bureau of Labor Standards	SHELDON W. HOMAN WILLIAM G. GRIFFIN (Alt)
U. S. Veterans Administration	H. D. YORK
University of Illinois Rehabilitation Center	T. J. NUGENT

The personnel of the steering committee is as follows:

K. VERNON BANTA	PHILIP A. KLIEGER
LEON CHATELAIN, JR	T. J. NUGENT
CLINTON H. COWGILL	JAYNE SHOVER
H. DWIGHT YORK	

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Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped

1. Scope and Purpose

1.1 Scope

1.1.1 This standard applies to all buildings and facilities used by the public. It applies to temporary or emergency conditions as well as permanent conditions. It does not apply to private residences.

1.1.2 This standard is concerned with non-ambulatory disabilities, semi-ambulatory disabilities, sight disabilities, hearing disabilities, disabilities of incoordination, and aging.¹

1.2 Purpose. This standard is intended to make all buildings and facilities used by the public accessible to, and functional for, the physically handicapped, to, through, and within their doors, without loss of function, space, or facility where the general public is concerned. It supplements existing American Standards, and reflects great concern for safety of life and limb. In cases of practical difficulty, unnecessary hardship, or extreme differences, administrative authorities may grant exceptions from the literal requirements of this standard or permit the use of other methods or materials, but only when it is clearly evident that equivalent facilitation and protection are thereby secured.

2. Definitions

2.1 Non-ambulatory Disabilities. Impairments that, regardless of cause or manifestation, for all practical purposes, confine individuals to wheelchairs.

2.2 Semi-ambulatory Disabilities. Impairments that cause individuals to walk with difficulty or insecurity. Individuals using braces or crutches, amputees, arthritics, spastics, and those with pulmonary and cardiac ills may be semi-ambulatory.

2.3 Sight Disabilities. Total blindness or impairments affecting sight to the extent that the individual functioning in public areas is insecure or exposed to danger.

2.4 Hearing Disabilities. Deafness or hearing handicaps that might make an individual insecure in public areas because he is unable to communicate or hear warning signals.

2.5 Disabilities of Incoordination. Faulty coordination or palsy from brain, spinal, or peripheral nerve injury.

2.6 Aging. Those manifestations of the aging processes that significantly reduce mobility, flexibility, coordination, and perceptiveness but are not accounted for in the aforementioned categories.

2.7 Standard. When this term appears in small letters and is not preceded by the word "American," it is descriptive and does not refer to an American Standard approved by ASA; for example, a "standard" wheelchair is one characterized as standard by the manufacturers.

2.8 Fixed Turning Radius, Wheel to Wheel. The tracking of the caster wheels and large wheels of a wheelchair when pivoting on a spot.

2.9 Fixed Turning Radius, Front Structure to Rear Structure. The turning radius of a wheelchair, left front-foot platform to right rear wheel, or right front-foot platform to left rear wheel, when pivoting on a spot.

2.10 Involved (Involvement). A portion or portions of the human anatomy or physiology, or both, that have a loss or impairment of normal function as a result of genesis, trauma, disease, inflammation, or degeneration.

2.11 Ramps, Ramps with Gradients. Because the term "ramp" has a multitude of meanings and uses, its use in this text is clearly defined as ramps with gradients (or ramps with slopes) that deviate from what would otherwise be considered the normal level. An exterior ramp, as distinguished from a "walk," would be considered an appendage to a building leading to a level above or below existing ground level. As such, a ramp shall meet certain requirements similar to those imposed upon stairs.

2.12 Walk, Walks. Because the terms "walk" and "walks" have a multitude of meanings and uses, their use in this text is clearly defined as a predetermined, prepared-surface, exterior pathway leading to or from a building or facility, or from one exterior area to another, placed on the existing ground level

¹ See definitions in Section 2.

and not deviating from the level of the existing ground immediately adjacent.

2.13 Appropriate Number. As used in this text, appropriate number means the number of a specific item that would be necessary, in accord with the purpose and function of a building or facility, to accommodate individuals with specific disabilities in proportion to the anticipated number of individuals with disabilities who would use a particular building or facility.

EXAMPLE: Although these specifications shall apply to all buildings and facilities used by the public, the numerical need for a specific item would differ, for example, between a major transportation terminal, where many individuals with diverse disabilities would be continually coming and going, an office building or factory, where varying numbers of individuals with disabilities of varying manifestations (in many instances, very large numbers) might be employed or have reason for frequent visits, a school or church, where the number of individuals may be fixed and activities more definitive, and the many other buildings and facilities dedicated to specific functions and purposes.

NOTE: Disabilities are specific and where the individual has been properly evaluated and properly oriented and where architectural barriers have been eliminated, a specific disability does not constitute a handicap. It should be emphasized that more and more of those physically disabled are becoming *participants*, rather than spectators, in the fullest meaning of the word.

3. General Principles and Considerations

3.1 Wheelchair Specifications. The collapsible-model wheelchair of tubular metal construction with plastic upholstery for back and seat is most commonly used. The standard model of all manufacturers falls within the following limits, which were used as the basis of consideration:

- (1) Length: 42 inches
- (2) Width, when open: 25 inches
- (3) Height of seat from floor: 19½ inches
- (4) Height of armrest from floor: 29 inches
- (5) Height of pusher handles (rear) from floor: 36 inches
- (6) Width, when collapsed: 11 inches

3.2 The Functioning of a Wheelchair

3.2.1 The fixed turning radius of a standard wheelchair, wheel to wheel, is 18 inches. The fixed turning radius, front structure to rear structure, is 31.5 inches.

3.2.2 The average turning space required (180 and 360 degrees) is 60 x 60 inches.

NOTE: Actually, a turning space that is longer than it is

wide, specifically, 63 x 56 inches, is more workable and desirable. In an area with two open ends, such as might be the case in a corridor, a minimum of 54 inches between two walls would permit a 360-degree turn.

3.2.3 A minimum width of 60 inches is required for two individuals in wheelchairs to pass each other.

3.3 The Adult Individual Functioning in a Wheelchair²

3.3.1 The average unilateral vertical reach is 60 inches and ranges from 54 inches to 78 inches.

3.3.2 The average horizontal working (table) reach is 30.8 inches and ranges from 28.5 inches to 33.2 inches.

3.3.3 The bilateral horizontal reach, both arms extended to each side, shoulder high, ranges from 54 inches to 71 inches and averages 64.5 inches.

3.3.4 An individual reaching diagonally, as would be required in using a wall-mounted dial telephone or towel dispenser, would make the average reach (on the wall) 48 inches from the floor.

3.4 The Individual Functioning on Crutches³

3.4.1 On the average, individuals 5 feet 6 inches tall require an average of 31 inches between crutch tips in the normally accepted gaits.⁴

3.4.2 On the average, individuals 6 feet 0 inches tall require an average of 32.5 inches between crutch tips in the normally accepted gaits.⁴

4. Site Development⁵

4.1 Grading. The grading of ground, even contrary to existing topography, so that it attains a level with a normal entrance will make a facility accessible to individuals with physical disabilities.

²Extremely small, large, strong, or weak and involved individuals could fall outside the ranges in 3.3.1, 3.3.2, 3.3.3, and their reach could differ from the figure given in 3.3.4. However, these reaches were determined using a large number of individuals who were functionally trained, with a wide range in individual size and involvement.

³Most individuals ambulating on braces or crutches, or both, or on canes are able to manipulate within the specifications prescribed for wheelchairs, although doors present quite a problem at times. However, attention is called to the fact that a crutch tip extending laterally from an individual is not obvious to others in heavily trafficked areas, certainly not as obvious or protective as a wheelchair and is, therefore, a source of vulnerability.

⁴Some cerebral palsied individuals, and some severe arthritics, would be extreme exceptions to 3.4.1 and 3.4.2.

⁵Site development is the most effective means to resolve the problems created by topography, definitive architectural designs or concepts, water table, existing streets, and atypical problems, singularly or collectively, so that ingress, egress, and access to buildings by physically disabled can be facilitated while preserving the desired design and effect of the architecture.

4.2 Walks

4.2.1 Public walks should be at least 48 inches wide and should have a gradient not greater than 5 percent.⁶

4.2.2 Such walks shall be of a continuing common surface, not interrupted by steps or abrupt changes in level.

4.2.3 Wherever walks cross other walks, drive-ways, or parking lots they should blend to a common level.⁷

NOTE: 4.1 and 4.2, separately or collectively, are greatly aided by terracing, retaining walls, and winding walks allowing for more gradual incline, thereby making almost any building accessible to individuals with permanent physical disabilities, while contributing to its esthetic qualities.

4.2.4 A walk shall have a level platform at the top which is at least 5 feet by 5 feet, if a door swings out onto the platform or toward the walk. This platform shall extend at least 1 foot beyond each side of the doorway.

4.2.5 A walk shall have a level platform at least 3 feet deep and 5 feet wide, if the door does not swing onto the platform or toward the walk. This platform shall extend at least 1 foot beyond each side of the doorway.

4.3 Parking Lots

4.3.1 Spaces that are accessible and approximate to the facility should be set aside and identified for use by individuals with physical disabilities.

4.3.2 A parking space open on one side, allowing room for individuals in wheelchairs or individuals on braces and crutches to get in and out of an automobile onto a level surface, suitable for wheeling and walking, is adequate.

4.3.3 Parking spaces for individuals with physical disabilities when placed between two conventional

⁶It is essential that the gradient of walks and driveways be less than that prescribed for ramps, since walks would be void of handrails and curbs and would be considerably longer and more vulnerable to the elements. Walks of near maximum grade and considerable length should have level areas at intervals for purposes of rest and safety. Walks or driveways should have a nonslip surface.

⁷This specification does not require the elimination of curbs, which, particularly if they occur at regular intersections, are a distinct safety feature for all of the handicapped, particularly the blind. The preferred method of meeting the specification is to have the walk incline to the level of the street. However, at principal intersections, it is vitally important that the curb run parallel to the street, up to the point where the walk is inclined, at which point the curb would turn in and gradually meet the level of the walk at its highest point. A less preferred method would be to gradually bring the surface of the driveway or street to the level of the walk. The disadvantage of this method is that a blind person would not know when he has left the protection of a walk and entered the hazards of a street or driveway.

diagonal or head-on parking spaces should be 12 feet wide.

4.3.4 Care in planning should be exercised so that individuals in wheelchairs and individuals using braces and crutches are not compelled to wheel or walk behind parked cars.

4.3.5 Consideration should be given the distribution of spaces for use by the disabled in accordance with the frequency and persistency of parking needs.

4.3.6 Walks shall be in conformity with 4.2.

5. Buildings

5.1 Ramps with Gradients. Where ramps with gradients are necessary or desired, they shall conform to the following specifications:

5.1.1 A ramp shall not have a slope greater than 1 foot rise in 12 feet, or 8.33 percent, or 4 degrees 50 minutes.

5.1.2 A ramp shall have handrails on at least one side, and preferably two sides, that are 32 inches in height, measured from the surface of the ramp, that are smooth, that extend 1 foot beyond the top and bottom of the ramp, and that otherwise conform with American Standard Safety Code for Floor and Wall Openings, Railings, and Toe Boards, A12-1932.

NOTE 1: Where codes specify handrails to be of heights other than 32 inches, it is recommended that two sets of handrails be installed to serve all people. Where major traffic is predominantly children, particularly physically disabled children, extra care should be exercised in the placement of handrails, in accordance with the nature of the facility and the age group or groups being serviced.

NOTE 2: Care should be taken that the extension of the handrail is not in itself a hazard. The extension may be made on the side of a continuing wall.

5.1.3 A ramp shall have a surface that is non-slip.

5.1.4 A ramp shall have a level platform at the top which is at least 5 feet by 5 feet, if a door swings out onto the platform or toward the ramp. This platform shall extend at least 1 foot beyond each side of the doorway.

5.1.5 A ramp shall have a level platform at least 3 feet deep and 5 feet wide, if the door does not swing onto the platform or toward the ramp. This platform shall extend at least 1 foot beyond each side of the doorway.

5.1.6 Each ramp shall have at least 6 feet of straight clearance at the bottom.

5.1.7 Ramps shall have level platforms at 30-foot intervals for purposes of rest and safety and shall have level platforms wherever they turn.

5.2 Entrances

5.2.1 At least one primary entrance to each building shall be usable by individuals in wheelchairs.

NOTE: Because entrances also serve as exits, some being particularly important in case of an emergency, and because the proximity of such exits to all parts of buildings and facilities, in accordance with their design and function, is essential (see 112 and 2000 through 2031 of American Standard Building Exits Code, A9.1-1953) it is preferable that all or most entrances (exits) should be accessible to, and usable by, individuals in wheelchairs and individuals with other forms of physical disability herein applicable.

5.2.2 At least one entrance usable by individuals in wheelchairs shall be on a level that would make the elevators accessible.

5.3 Doors and Doorways

5.3.1 Doors shall have a clear opening of no less than 32 inches when open and shall be operable by a single effort.

NOTE 1: Two-leaf doors are not usable by those with disabilities defined in 2.1, 2.2, and 2.5 unless they operate by a single effort, or unless one of the two leaves meets the requirement of 5.3.1.

NOTE 2: It is recommended that all doors have kick plates extending from the bottom of the door to at least 16 inches from the floor, or be made of a material and finish that would safely withstand the abuse they might receive from canes, crutches, wheelchair foot-platforms, or wheelchair wheels.

5.3.2 The floor on the inside and outside of each doorway shall be level for a distance of 5 feet from the door in the direction the door swings and shall extend 1 foot beyond each side of the door.

5.3.3 Sharp inclines and abrupt changes in level shall be avoided at doorsills. As much as possible, thresholds shall be flush with the floor.

NOTE 1: Care should be taken in the selection, placement, and setting of door closers so that they do not prevent the use of doors by the physically disabled. Time-delay door closers are recommended.

NOTE 2: Automatic doors that otherwise conform to 5.3.1, 5.3.2, and 5.3.3 are very satisfactory.

NOTE 3: These specifications apply both to exterior and interior doors and doorways.

5.4 Stairs. Stairs shall conform to American Standard A9.1-1953, with the following additional considerations:

5.4.1 Steps in stairs that might require use by those with disabilities defined in 2.2 and 2.5 or by the aged shall not have abrupt (square) nosing. (See Fig. 1.)

NOTE: Individuals with restrictions in the knee, ankle, or hip, with artificial legs, long leg braces, or comparable conditions cannot, without great difficulty and hazard, use steps with nosing as illustrated in Fig. 1a, but can safely and with minimum difficulty use steps with nosing as illustrated in Fig. 1b.



Fig. 1
Steps

5.4.2 Stairs shall have handrails 32 inches high as measured from the tread at the face of the riser.

NOTE: Where codes specify handrails to be at heights other than 32 inches, it is recommended that two sets of handrails be installed to serve all people. Where traffic is predominantly children, particularly physically disabled children, extra care should be exercised in the placement of handrails in accordance with the nature of the facility and the age group or groups being serviced. Dual handrails may be necessary.

5.4.3 Stairs shall have at least one handrail that extends at least 18 inches beyond the top step and beyond the bottom step.

NOTE: Care should be taken that the extension of the handrails is not in itself a hazard. The extension may be made on the side of a continuing wall.

5.4.4 Steps should, wherever possible, and in conformation with existing step formulas, have risers that do not exceed 7 inches.

5.5 Floors

5.5.1 Floors shall have a surface that is nonslip.

5.5.2 Floors on a given story shall be of a common level throughout or be connected by a ramp in accord with 5.1.1 through 5.1.6, inclusive.

EXAMPLE 1: There shall not be a difference between the level of the floor of a corridor and the level of the floor of the toilet rooms.

EXAMPLE 2: There should not be a difference between the level of the floor of a corridor and the level of a meeting room, dining room, or any other room, unless proper ramps are provided.

5.6 Toilet Rooms. It is essential that an appropriate number⁸ of toilet rooms, in accordance with the nature and use of a specific building or facility, be made accessible to, and usable by, the physically handicapped.

5.6.1 Toilet rooms shall have space to allow traffic of individuals in wheelchairs, in accordance with 3.1, 3.2, and 3.3.

5.6.2 Toilet rooms shall have at least one toilet stall that—

- (1) Is 3 feet wide
- (2) Is at least 4 feet 8 inches, preferably 5 feet, deep
- (3) Has a door (where doors are used) that is 32 inches wide and swings out
- (4) Has handrails on each side, 33 inches high and parallel to the floor, 1½ inches in outside diameter, with 1½ inches clearance between rail and wall, and fastened securely at ends and center
- (5) Has a water closet with the seat 20 inches from the floor

NOTE: The design and mounting of the water closet is of considerable importance. A wall-mounted water closet with a narrow understructure that recedes sharply is most desirable. If a floor-mounted water closet must be used, it should not have a front that is wide and perpendicular to the floor at the front of the seat. The bowl should be shallow at the front of the seat and turn backward more than downward to allow the individual in a wheelchair to get close to the water closet with the seat of the wheelchair.

5.6.3 Toilet rooms shall have lavatories with narrow aprons, which when mounted at standard height are usable by individuals in wheelchairs; or shall have lavatories mounted higher, when particular designs demand, so that they are usable by individuals in wheelchairs.

NOTE: It is important that drain pipes and hot-water pipes under a lavatory be covered or insulated so that a wheelchair individual without sensation will not burn himself.

5.6.4 Some mirrors and shelves shall be provided above lavatories at a height as low as possible and no higher than 40 inches above the floor, measured from the top of the shelf and the bottom of the mirror.

5.6.5 Toilet rooms for men shall have wall-mounted urinals with the opening of the basin 19 inches from the floor, or shall have floor-mounted urinals that are on level with the main floor of the toilet room.

5.6.6 Toilet rooms shall have an appropriate number⁸ of towel racks, towel dispensers, and other dispensers and disposal units mounted no higher than 40 inches from the floor,

5.7 Water Fountains. An appropriate number⁸ of water fountains or other water-dispensing means shall be accessible to, and usable by, the physically disabled.

5.7.1 Water fountains or coolers shall have up-front spouts and controls.

5.7.2 Water fountains or coolers shall be hand-operated or hand- and foot-operated. (See also American Standard Specifications for Drinking Fountains, Z4.2-1942.)

NOTE 1: Conventional floor-mounted water coolers can be serviceable to individuals in wheelchairs if a small fountain is mounted on the side of the cooler 30 inches above the floor.

NOTE 2: Wall-mounted, hand-operated coolers of the latest design, manufactured by many companies, can serve the able-bodied and the physically disabled equally well when the cooler is mounted with the basin 36 inches from the floor.

NOTE 3: Fully recessed water fountains are not recommended.

NOTE 4: Water fountains should not be set into an alcove unless the alcove is wider than a wheelchair. (See 3.1.)

5.8 Public Telephones. An appropriate number⁸ of public telephones should be made accessible to, and usable by, the physically disabled.

NOTE: The conventional public telephone booth is not usable by most physically disabled individuals. There are many ways in which public telephones can be made accessible and usable. It is recommended that architects and builders confer with the telephone company in the planning of the building or facility.

5.8.1 Such telephones should be placed so that the dial and the handset can be reached by individuals in wheelchairs, in accordance with 3.3.

5.8.2 An appropriate number⁸ of public telephones should be equipped for those with hearing disabilities and so identified with instructions for use.

NOTE: Such telephones can be used by everyone.

5.9 Elevators. In a multiple-story building, elevators are essential to the successful functioning of physically disabled individuals. They shall conform to the following requirements:

5.9.1 Elevators shall be accessible to, and usable by, the physically disabled on the level that they use to enter the building, and at all levels normally used by the general public.

5.9.2 Elevators shall allow for traffic by wheelchairs, in accordance with 3.1, 3.2, 3.3 and 5.3.

5.10 Controls. Switches and controls for light, heat, ventilation, windows, draperies, fire alarms, and all similar controls of frequent or essential use, shall be placed within the reach of individuals in wheelchairs. (See 3.3.)

⁸ See 2.13.

5.11 Identification. Appropriate identification of specific facilities within a building used by the public is particularly essential to the blind.

5.11.1 Raised letters or numbers shall be used to identify rooms or offices.

5.11.2 Such identification should be placed on the wall, to the right or left of the door, at a height between 4 feet 6 inches and 5 feet 6 inches, measured from the floor, and preferably at 5 feet.

5.11.3 Doors that are not intended for normal use, and that might prove dangerous if a blind person were to exit or enter by them, should be made quickly identifiable to the touch by knurling the door handle or knob. Knurling may also be accomplished by the use of an acceptable plastic, abrasive coating. (See Fig. 2.)

EXAMPLE: Such doors might lead to loading platforms, boiler rooms, stages, fire escapes, etc.

5.12 Warning Signals

5.12.1 Audible warning signals shall be accompanied by simultaneous visual signals for the benefit of those with hearing disabilities.

5.12.2 Visual signals shall be accompanied by simultaneous audible signals for the benefit of the blind.

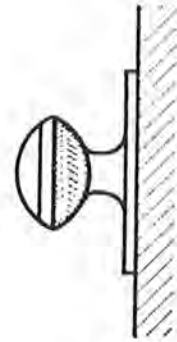
5.13 Hazards. Every effort shall be exercised to obviate hazards to individuals with physical disabilities.

5.13.1 Access panels or manholes in floors, walks, and walls can be extremely hazardous, particularly when in use, and should be avoided.

5.13.2 When manholes or access panels are open and in use, or when an open excavation exists on a site, particularly when it is approximate to normal pedestrian traffic, barricades shall be placed on all open sides, at least 8 feet from the hazard, and warning devices shall be installed in accord with 5.12.2.

5.13.3 Low-hanging door closers that remain within the opening of a doorway when the door is open, or that protrude hazardously into regular corridors or traffic ways when the door is closed, shall be avoided.

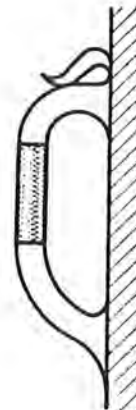
5.13.4 Low-hanging signs, ceiling lights, and similar objects or signs and fixtures that protrude into regular corridors or traffic ways shall be avoided. A minimum height of 7 feet, measured from the floor, is recommended.



a



b



c

Fig. 2

Knurled Door Handles and Knobs

5.13.5 Lighting on ramps shall be in accord with 1201, 1202, 1203, and 1204 of American Standard A9.1-1953.

5.13.6 Exit signs shall be in accord with 1205 of American Standard A9.1-1953, except as modified by 5.11 of this standard.

American National Standards

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