

521 CMR: ARCHITECTURAL ACCESS BOARD

521 CMR 1.00: **AUTHORITY**

- 1.1 521 CMR is promulgated by the Architectural Access Board pursuant to authority granted by M.G.L. c. 22, § 13A.
- 1.2 Under the provisions of St. 1974, c. 528, § 2, all orders, rules and regulations duly granted by the Board to Facilitate The Use Of Public Buildings By The Physically Handicapped, which were in force immediately prior to the effective date of St. 1974, c. 528, § 2 shall continue to be in force, and the provisions thereof to be enforced until superseded, revised, rescinded or canceled in accordance with the law by the Architectural Access Board.
- 1.3 521 CMR supersedes and revises the Rules and Regulations of the Architectural Access Board, designated as 521 CMR 1.00 *et seq.*

Enabling Legislation

Effective Date of Regulations

St. 1974, c. 528

June 10, 1975

Complete revision: March 3, 1977

Complete revision: April 1, 1982

Complete revision: September 1, 1996

St. 1986, c. 642

Amendments to Sections 5, 10, 11 and 23:
July 10, 1987

Amendments to Sections 2, 3, 7, 8, 9, 10, 11, 12, 14, 15, 19, 21, 23 24, 26, 27, 28, 30, 31, 32, 37, 40, 41, 42, 44, and 45:
March 6, 1998

Amendments to Sections 5, 8, 9, 14, 18, 21, 26, 27, 28, 30, 31, 37, 39, 40, 42:
February 1, 2002

St. 1989, c. 722

(Housing Bill of Rights)

N/A

Amendments to Section 18:
September 28, 1990

Emergency Regulations

Amendments to Sections 30.5.2 and 35.9:
January 1, 1992

- 1.3.1 521 CMR will become effective on July 27, 2006. In the interim, one has the option of complying with either the previous regulations in their entirety or these regulations in its entirety, not a combination of both. The decision of which regulations will be followed must be made before applying for a building permit.

NON-TEXT PAGE

521 CMR 2.00: **PURPOSE AND SCOPE**

2.1 PURPOSE

521 CMR is designed to make *public buildings* and facilities *accessible* to, functional for, and safe for use by *persons with disabilities*.

2.2 INTENT

It is the intent of 521 CMR to provide *persons with disabilities* full, free and safe use of all *buildings* and facilities so that all such persons may have the educational, living and recreational opportunities necessary to be as self-sufficient as possible and to assume full responsibilities as citizens.

2.3 VIOLATIONS

521 CMR is deemed to be a specialized code as referred to in M.G.L. c. 143, § 96, the violation of which shall constitute gross negligence for the purpose of M.G.L. c. 112, § 60G, clause (d), and shall be subject to the additional powers granted to the *Board* by M.G.L. c. 22, § 13A.

2.3.1 The *Board* shall receive complaints of non-compliance with any rule or regulation from any person or may receive complaints initiated by its own staff. If the *Board* finds, after notice and opportunity for a hearing, that any person is not in compliance with any rule or regulation, it may issue an order to compel such compliance. Such order may specify the date and the manner by which such person shall cure the noncompliance found by the Board and may require that pending the cure of such noncompliance a performance bond be furnished, payable to the Commonwealth, in such penal sum as the *Board* finds reasonable.

2.3.2 In the event that a person fails to cure such noncompliance by the date specified in the *Board's* order, the *Board* shall be empowered, after further hearing, to impose a fine payable to the Commonwealth not to exceed \$1,000 per day per violation for each day of noncompliance that the *Board* finds was without justification.

2.3.3 The *Board* shall also have the power, if it determines that such failure to cure noncompliance is without justification, to bring a complaint before any appropriate licensing or permit granting authority against the license or permit of such person.

2.3.4 The *Board* shall have the authority to issue subpoenas.

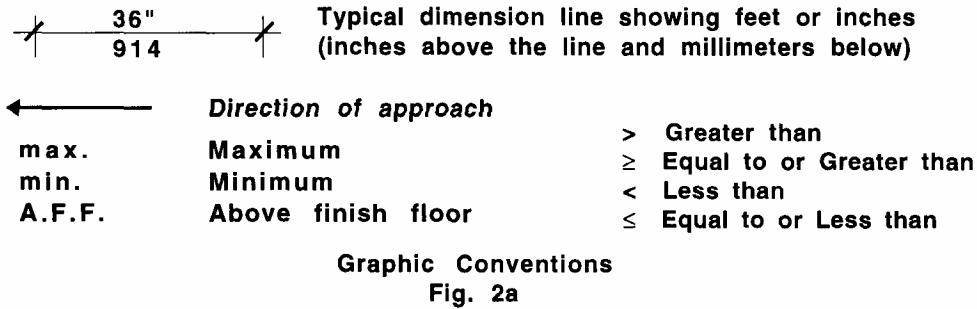
2.4 GENERAL CONVENTIONS

The following conventions apply when using 521 CMR:

2.4.1 Graphic and other illustrations are provided in 521 CMR to illustrate a solution only. They are not to be taken as the best solution or the only solution, but are provided to clarify the intent of the written regulations. The written word always prevails.

2.00: **PURPOSE AND SCOPE**

2.4.2 Graphic conventions are shown in **Figure 2a**. Dimensions that are not marked minimum or maximum shall comply with **521 CMR 2.4.4**, unless otherwise noted in the text or captions.



2.4.3 Words italicized in the text indicate that a definition of that word is provided in **521 CMR 5.00: DEFINITIONS**.

2.4.4 Tolerances on all dimensions, unless otherwise noted, shall not exceed the following:

- a. Dimensions between zero and two inches, (0" and 2" = 0mm and 51mm) inclusive, shall have a maximum tolerance of plus or minus one-eighth inch (1/8" = 3mm).
- b. Dimensions more than two inches and less than 36 inches (>2" and <36" =>51mm and <914mm) shall have a maximum tolerance of plus or minus one-half inch (1/2" =13mm).
- c. Dimensions 36 inches or greater (36" or > = 914mm or >) shall have a maximum tolerance of plus or minus one inch (1" = 25mm).
- d. Slopes may not exceed maximums. Slopes shall be measured in two-foot increments.

Note: Tolerances do not apply to minimums or maximums.

2.4.5 When a percentage is calculated to determine the number of *accessible elements* , if the number ends in a fraction of five-tenths (.5) or more, the number shall be rounded up to the next whole number. If the number ends in a fraction less than five-tenths (.5), the number shall be rounded down.

2.4.6 When calculating the conversion from inches to millimeters (using 1"=25.4mm), if the number ends in a fraction of five-tenths (.5) or more, the number shall be rounded up to the next whole number. If the number ends in a fraction less than five-tenths (.5), the number shall be rounded down.

2.5 REASONABLE MODIFICATIONS

Reasonable modifications to public use and *common use* spaces in a *multiple dwelling* must comply with 521 CMR. *Reasonable modifications* to an individual unit do not need to comply with 521 CMR.

2.5.1 Departures from particular technical and scoping requirements of 521 CMR by the use of other designs and technologies are permitted without a variance, where the alternative designs and technologies used will provide substantially equivalent or greater access and usability of the facility.

2.00: PURPOSE AND SCOPE

2.6 MAINTENANCE OF ACCESS FEATURES

At all times, accessibility features must be maintained and fully operational. (*i.e.* access aisles kept clear at all times, mechanical devices be kept in operating condition, *etc.*).

521 CMR: ARCHITECTURAL ACCESS BOARD

521 CMR 3.00: JURISDICTION

3.1 SCOPE

All work performed on *public buildings or facilities* (see **521 CMR 5.00: DEFINITIONS**), including *construction, reconstruction, alterations, remodeling, additions, and changes of use* shall conform to 521 CMR.

- 3.1.1 To determine the scope of compliance, refer to **521 CMR 3.2, New Construction** and **521 CMR 3.3, Existing Buildings**. In the absence of jurisdiction by 521 CMR, 780 CMR: the State Building Code may apply.

3.2 NEW CONSTRUCTION

All new construction of *public buildings/facilities* shall comply fully with 521 CMR.

3.3 EXISTING BUILDINGS

All *additions to, reconstruction, remodeling, and alterations or repairs* of existing *public buildings or facilities*, which require a building permit or which are so defined by a state or local inspector, shall be governed by all applicable subsections in **521 CMR 3.00: JURISDICTION**.

For specific applicability of 521 CMR to existing multiple dwellings undergoing renovations, see **521 CMR 9.2.1**.

- 3.3.1 If the work being performed amounts to less than 30% of the *full and fair cash value* of the *building* and
- a. if the work costs less than \$100,000, then only the work being performed is required to comply with 521 CMR
- or
- b. if the work costs \$100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an *accessible public entrance* and an *accessible* toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

Exception: General maintenance and on-going upkeep of existing, underground transit facilities will not trigger the requirement for an *accessible entrance* and toilet unless the cost of the work exceeds \$500,000 or unless work is being performed on the *entrance* or toilet.

Exception: Whether performed alone or in combination with each other, the following types of *alterations* are not subject to **521 CMR 3.3.1**, unless the cost of the work exceeds \$500,000 or unless work is being performed on the entrance or toilet. (When performing exempted work, a memo stating the exempted work and its costs must be filed with the permit application or a separate building permit must be obtained.)

- a. Curb Cuts: The construction of *curb cuts* shall comply with **521 CMR 21.00: CURB CUTS**.
 - b. *Alteration* work which is limited solely to electrical mechanical, or plumbing systems; to abatement of hazardous materials; or retrofit of automatic sprinklers **and** does not involve the *alteration* of any *elements* or *spaces* required to be *accessible* under 521 CMR. Where electrical outlets and controls are altered, they must comply with 521 CMR.
 - c. Roof repair or replacement, window repair or replacement, repointing and masonry repair work.
 - d. Work relating to septic system repairs, (including Title V, 310 CMR 15.00, improvements) site utilities and landscaping.
- 3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the *full and fair cash value* (see **521 CMR 5.38**) of the *building* the entire *building* is required to comply with 521 CMR.

3.00: continued

- a. Where the cost of constructing an *addition* to a building amounts to 30% or more of the *full and fair cash value* of the existing *building*, both the *addition* and the existing *building* must be fully *accessible*.

3.3.3 Alterations by a tenant do not trigger the requirements of **521 CMR 3.3.1b and 3.3.2** for other tenants. However, *alterations, reconstruction, remodeling, repairs, construction, and changes in use* falling within **521 CMR 3.3.1b and 3.3.2**, will trigger compliance with **521 CMR** in areas of *public use*, for the owner of the *building*.

3.3.4 No *alteration* shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a *building* or *facility* below the requirements for new *construction*.

3.3.5 If *alterations* of single *elements*, when considered together, amount to an alteration of a room or *space* in a *building* or *facility*, that *space* shall be made *accessible*.

3.3.6 No *alteration* of an existing *element*, space, or area of a *building* or *facility* shall impose a requirement for greater accessibility than that which would be required for new *construction*.

3.4 CHANGE IN USE

When the use of a *building* changes from a private use to one that is open to and used by the public, an *accessible entrance* must be provided, even if no work is being performed. When a portion of a *building* changes use from a private use to one that is open to an used by the public, then an *accessible route* must be provided from an *accessible entrance* even if no work is being performed.

3.4.1 RESERVED FOR FUTURE ACTION: Changes in use, from private to public, in private residential homes where no work is being performed.

3.5 WORK PERFORMED OVER TIME

When the work performed on a *building* is divided into separate phases or projects or is under separate *building* permits, the total cost of such work in any 36 month period shall be added together in applying **521 CMR 3.3, Existing Buildings**.

3.6 MULTIPLE USES

When a *building* is occupied by two or more uses, the Regulations which apply to each use shall apply to such parts of the *building* within that *use*.

3.6.1 **521 CMR 3.3, Existing Buildings** shall apply based upon each *use* and not on the entire *building*.

Example: If a three story *building* valued at \$300,000 has one floor of retail *use* and two floors of residential *use*, the *full and fair cash value* of the retail portion shall be $\frac{1}{3}$ of the total value which would be \$100,000.

3.7 PARTIAL APPLICATION

When only a portion of a *building* is subject to 521 CMR, the *full and fair cash value* shall be prorated by the ratio of the square footage of that portion to the square footage of the whole *building*.

Example: Where the whole *building* is 100,000 square feet, the *full and fair cash value* is \$1,000,000, and the part subject to 521 CMR is 10,000 square feet (one-tenth of the total), then the *full and fair cash value* of the part subject to 521 CMR would be one-tenth of \$1,000,000 or \$100,000.

3.7.1 If the *Board* determines that such proration would cause an inequitable result, the *Board* may otherwise calculate the *full and fair cash value* of the portion of the *building*.

3.8 OUTDOOR FACILITIES

For facilities where the *primary function areas* are outdoors, including but not limited to beaches, parks, picnic areas, playgrounds, and campsites, the *full and fair cash value* shall include the value of the land as well as any *buildings* or *facilities* on the land.

3.00: continued

3.9 HISTORIC BUILDINGS

An historic *building* or *facility* that is listed or is eligible for listing in the National or State Register of Historic Places or is designated as historic under appropriate state or local laws may be granted a *variance* by the *Board* to allow alternate accessibility. If a variance is requested on the basis of historical significance, then consultation with the Massachusetts Historical Commission is required in order to determine whether a building or facility is eligible for listing or listed in the National or State Register of Historic Places. The Massachusetts Historical Commission may request a copy of the proposed variance request and supporting documentation to substantiate the variance request and its effect on historic resources. A written statement from the Massachusetts Historical Commission is required with the application for variance.

3.10 TEMPORARY STRUCTURES

Temporary *buildings* or *facilities*, including but not limited to reviewing stands, temporary classrooms, bleacher areas, exhibit areas, temporary banking facilities, temporary health screening services, or temporary pedestrian passageways around a *construction site*, shall comply with 521 CMR. Structures, *sites* and equipment directly associated with the actual processes of *construction*, such as scaffolding, bridging, materials hoists, or *construction* trailers, need not apply.

3.10.1 Effective February 15, 2012, temporary overnight shelters, as defined in 780 CMR: *The Massachusetts State Building Code*, shall provide at a minimum an *accessible entrance* and an *accessible* toilet room in compliance with 521 CMR 25.00: *Entrances* and 30.00: *Public Toilet Rooms*, regardless of whether other work is performed or change of use occurs.

3.11 SECURITY STRUCTURES

Accessibility is not required to observation galleries used primarily for security purposes.

3.12 NON-OCCUPIABLE SPACES

Spaces accessed only by ladders, catwalks, crawl spaces, or freight (non-passenger) elevators, and frequented only by service personnel for repair purposes, are exempt. Such spaces may include, but are not limited to, elevator pits, elevator penthouses, piping or equipment catwalks.

NON-TEXT PAGE

521 CMR 4.00: **APPEAL AND VARIANCE**

4.1 VARIANCES

Application: An owner or an owner's representative or tenant who thinks that full compliance with 521 CMR is *impracticable* may apply to the *Board* for a *variance* from 521 CMR. Application for a *variance* shall be made on a form provided by the *Board* for this purpose, shall contain such information as is required by the *Board*, and shall be signed by the applicant.

4.1.1 **Board Action:** Upon receipt of an application for *variance*, the *Board* shall send a copy of the application to the local building inspector, the local disability commission and the independent living center for their input. The *Board* shall also investigate the matter and may:

- a. grant the application with whatever conditions it deems appropriate or deny the application without a hearing. Any person aggrieved by the Board's action under 521 CMR may request an adjudicatory hearing within 30 days of the decision;
- b. schedule a conference to consider the simplification or clarification of the issues and/or the possibility of an agreement disposing of all or any matters as may aid in the disposition of an adjudicatory proceeding. Those matters agreed upon by the parties shall be electronically recorded and/or reduced to writing and shall be signed by the parties, and shall thereafter constitute a part of the record;
- c. commence an adjudicatory hearing in accordance with the provisions of M.G.L. c. 30A and 801 CMR 1.01 or 1.02: *Standard Adjudicatory Rules of Practice and Procedure*, as stated in the hearing notice.

4.2 COMPLAINTS

Initiating a Complaint: Any person who has knowledge or evidence that any other person or entity has not complied or is not complying with 521 CMR, may complain in writing to the *Board* on a special form available from the *Board*.

4.2.1 **Board Action:** Upon receipt of a complaint, the *Board* shall investigate the complaint, and may:

- a. issue a stipulated order indicating the date compliance must be achieved.
- b. schedule a conference to consider the simplification or clarification of the issues, the possibility of obtaining stipulations and agreements, the possibility of an agreement disposing of all or any of the issues in dispute, and any other matters as may aid in the disposition of an adjudicatory proceeding. Those matters agreed upon by the parties shall be electronically recorded and/or included in a written document and shall be signed by the parties, and shall thereafter constitute a part of the record.
- c. commence an adjudicatory hearing in accordance with the provisions of M.G.L. c. 30A and 801 CMR 1.01 or 1.02: *Standard Adjudicatory Rules of Practice and Procedure*, as stated in the hearing notice.
- d. dismiss a complaint at any time after notification to the complainant.

4.00: **APPEAL AND VARIANCE**

4.3 HEARINGS

All adjudicatory hearings shall be conducted in accordance with the provisions of M.G.L. c. 30A and 801 CMR 1.01 or 1.02: *Standard Adjudicatory Rules of Practice and Procedure*, as stated in the hearing notice.

4.3.1 Hearings will be scheduled within 60 days of the receipt of a request for an adjudicatory hearing unless the *Board* in its discretion extends such time for good cause shown. The *Board* will schedule hearings on two weeks notice unless it deems a shorter period necessary.

4.3.2 In proceedings under 801 CMR 1.02, the *Board* may provide for mandatory discovery.

4.3.3 The *Board* will issue a decision within 21 days of the hearing unless the *Board* in its discretion extends such time.

4.3.4 When the *Board* deems it necessary and subject to appropriation, the services of an independent expert may be sought.

4.4 REOPENING HEARING, MOTION FOR RECONSIDERATION

The *Board* on its own motion, or on motion of any applicant, complainant or aggrieved person, may reopen the hearing in order to receive additional evidence which was not reasonably available at the time of the hearing. The request for reopening shall summarize such evidence to be presented.

4.4.1 The *Board* shall notify all persons who testified at or received formal notice of an initial hearing of a decision to reopen a hearing to take further testimony or receive further evidence.

4.4.2 Within ten days from the date the *final decision* is received by the applicant or complainant, an applicant, complainant, or aggrieved person may file a motion for reconsideration, setting forth the grounds or statutory provisions relied upon to sustain the motion.

4.5 APPEALS

Any party aggrieved by the *final decision* of the *Board* may appeal such decision to State Superior Court in accordance with the provisions of M.G.L. c. 30A, § 14.

4.6 ADVISORY OPINIONS

Upon the written request, the *Board* may issue advisory opinions concerning the interpretation or applicability of 521 CMR. Advisory opinions issued by the *Board* may be relied upon by the persons requesting them, as well as by any agency, or official of a city, town, or region.

4.00: **APPEAL AND VARIANCE**

4.7 PETITION FOR THE ADOPTION OF REGULATIONS

Petition: Any interested person or such person's attorney may at any time petition the *Board* to adopt, amend or repeal any regulation. The petition shall be addressed to the *Board* and sent by mail or delivered in person during normal business hours. All petitions shall be signed by the petitioner or the petitioner's attorney, contain the petitioner's address or the address of the petitioner's attorney, and set forth clearly and concisely the text of the proposed regulation. The petition may be accompanied by any supporting data, views or arguments. A member of the *Board* may make a written recommendation that a regulation be adopted, amended or repealed.

4.7.1 Initial Procedure: Within 60 days of the receipt of a petition or recommendation, the *Board* shall hold a meeting to determine whether or not to schedule the petition or recommendation for further proceedings in accordance with M.G.L. c. 30A. If the regulation has been presented by petition, the *Board* shall notify the petitioner within ten days after making such a determination.

4.7.2 Procedure for the Adoption, Amendment or Repeal of Regulations:

- a. The procedures for the adoption, amendment or repeal of any regulation shall comply with M.G.L. c. 30A.
- b. Where no public hearing is required, the *Board* may afford any interested person or his duly authorized representative, or both, an opportunity to present data, views or arguments orally before the *Board* during the meeting at which the proposed action is to be considered. If the *Board* finds that such oral presentation is unnecessary or impracticable, it may require written presentation.
- c. Where a public hearing is required, the *Board* shall afford any interested person or his duly authorized representative, or both, an opportunity to present statements and arguments orally. In its discretion, the *Board* may limit the length of oral presentation.

4.7.3 Filing of Regulations: Upon the adoption of a regulation, an attested copy shall be filed with the Secretary of the Commonwealth together with a citation of the statutory authority under which the regulation has been promulgated. The regulation shall take effect upon filing unless a later date is required by law or is specified by the *Board* in the Regulation.

NON-TEXT PAGE

521 CMR 5.00: **DEFINITIONS**

5.1 GENERAL

As used in 521 CMR, the following words shall have the meaning set forth in 521 CMR 5.00 unless the context otherwise requires.

ACCESS AISLE: An *accessible* pedestrian space between elements such as parking spaces, seating, or desks that provides clearances complying with 521 CMR.

ACCESSIBLE: A *site, building, facility* or portion thereof that complies with 521 CMR and that can be approached, entered, and used *by persons with disabilities*. When the term "*accessible*" is used, it shall mean both physical and communication accessible unless otherwise noted in 521 CMR.

ACCESSIBLE ELEMENT: An element complying with 521 CMR that can be used by *persons with disabilities* (for example, telephone, controls, appliances, equipment and the like).

ACCESSIBLE ROUTE: A continuous, unobstructed path connecting all *accessible* elements and spaces within or between *buildings* or *facilities*. Interior *accessible routes* may include corridors, floors, *ramps*, elevators, lifts, and *clear floor space* at fixtures. Exterior *accessible routes* may include parking, *access aisles, curb cuts*, crosswalks at vehicular ways, *walks, ramps*, and lifts.

ACCESSIBLE SPACE: Space that complies with 521 CMR and that can be used by *persons with disabilities*.

ADAPTABILITY: The ability of certain *building* spaces and elements, such as kitchen counters, sinks, and grab bars, to be added or altered so as to accommodate the needs of persons with or without disabilities or with different types or degrees of disability.

ADAPTABLE: Can readily be made *accessible* to, functional for, and safe for use by *persons with disabilities* without *structural change*.

ADDITION: An extension or increase in floor area or height of a *building* or structure.

ADMINISTRATIVE AUTHORITY: A governmental agency that adopts or enforces regulations for the design, construction, or alteration of *buildings* and *facilities*.

ALTERATIONS: A change or modification of a *building* or structure, or portion thereof, that requires a building permit. Alterations shall include but not be limited to: *remodeling*, renovation, rehabilitation, *reconstruction*, historic restoration, changes or rearrangements in the plan configuration of walls and full height partitions, and any *repairs* which require a building permit. Ordinary *repairs* as defined in 780 CMR: The State Building Code are not alterations.

AREA OF RESCUE ASSISTANCE: An area, which has direct access to an exit or an area adjacent to an exit discharge, where people who are unable to use stairs or are unable to travel more than 100 feet to a public way may remain temporarily in safety to await further instructions or assistance during emergency evacuation.

5.00: **DEFINITIONS**

ASSEMBLY AREA: A room or space accommodating a group of individuals for recreational, educational, political, social, or amusement purposes or for the consumption of food and drink.

ASSISTIVE LISTENING SYSTEM: An *assistive listening system* picks up sound at or close to its source, amplifies it, and delivers it to the listener's ear without extraneous sound, reverberation and distortion via a telecoil on the individual's hearing aid and through earphones. An *assistive listening system* may stand alone or augment a conventional public address or audio address system, depending on the requirements of the room. The type of *assistive listening system* appropriate for a particular application depends on the characteristics of the setting, the nature of the program, and the intended audience. Magnetic induction loops, infra-red and radio frequency systems are types of listening systems that are appropriate for various applications.

AUTOMATIC DOOR: A door equipped with a power-operated mechanism and controls which open and close the door automatically. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch (see *power-assisted door*).

BATHROOM: A space or a series of interconnected spaces that contain a toilet, sink, and bathtub or shower.

BOARD: The Architectural Access Board within the Executive Office of Public Safety, Commonwealth of Massachusetts.

BRAILLE: A standardized system for communicating in writing with persons who are blind. Grade II Braille is standard literary Braille. Standard dimensions for literary Braille are as follows: Dot diameter: .059 inches; Inter-dot spacing: .090 inches; Horizontal separation between cells: .241 inches; and Vertical separation between cells: .395 inches.

BRIDGE PLATE: An element which makes the final transition between a fixed or floating platform and a vehicle or vessel.

BUILDING: A structure enclosed within exterior walls or fire walls (as defined in 780 CMR), built, erected and framed in a combination of any materials, whether portable or fixed having a roof, to form a structure for the shelter of persons, animals or property. For the purposes of this definition, "roof" shall include an awning or similar covering, whether or not permanent in nature. The word "*building*" shall be construed where the context requires, as though followed by the words "or part or parts thereof". For application of 521 CMR, each portion of a *building* which is separated from other portions by fire walls (as defined in 780 CMR) and are not dependent on the existing *building* for *accessible* elements shall be considered as a separate *building*.

CHANGE OF USE: Varying the use of a *building* from a private use to one that is open to and used by the public.

CLEAR: Unobstructed.

5.00: **DEFINITIONS**

CLEAR FLOOR SPACE: The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant. Unless otherwise stated, the dimensions of *clear floor space* shall be 30 inches by 48 inches (30" by 48" = 762mm by 1219mm) and shall be *level*.

CLOSED CIRCUIT TELEPHONE: A telephone with dedicated line(s), such as a house phone, courtesy phone, or security gates with intercoms, that require voice communication to obtain clearance to enter a *facility* or *project*.

COMMON USE: Refers to those interior and exterior rooms, spaces, or elements that are made available for the use of a restricted group of people (for example, occupants of homeless shelters, office buildings, residences or the guests of such occupants).

COMMUTER RAIL: Short-haul passenger service operating in metropolitan and suburban areas, whether within or across geographical boundaries of a state, usually characterized by reduced fare, multiple ride, and commutation tickets, and by morning and afternoon peak period operations. This term does not include light or rapid rail transportation.

COMPLEX: Multiple housing developed on one or more sites by a single entity.

For complexes currently owned or financed by public agencies, including local housing authorities, Massachusetts Housing Finance Agency, or Housing and Urban Development, the *complex* means the whole of one or more residential structures and appurtenant structures, equipment, roads, walks, and parking lots which a single entity owns, within a municipality, and is or will be covered by a single mortgage contract for permanent financing or was originally constructed or acquired under one contract for financial assistance for new construction or acquisition

CONSTRUCTION: Work for which a building permit is required, work determined to be *construction* by a state or local building inspector, or work for which a certificate of occupancy is necessary upon completion.

CROSS SLOPE: The slope that is perpendicular to the *running slope* and the direction of travel.

CURB CUT: A short ramp cutting through a curb.

DETECTABLE WARNING: A standardized surface feature built in or applied to walking surfaces or other elements to give warning of hazards on a circulation path.

DWELLING UNIT: A unit providing living facilities for one or more persons. (See **521 CMR 8.00: TRANSIENT LODGING FACILITIES** for more detailed information.)

5.00: **DEFINITIONS**

EGRESS, MEANS OF: A continuous and unobstructed path of travel from any point in a *building* or structure to a public way and consisting of three separate and distinct parts: (a) the exit access, (b) the exit, and (c) the exit discharge. A *means of egress* comprises the vertical and horizontal means of travel and shall include intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, horizontal exits, courts and yards.

An *accessible means of egress* is one that complies with 521 CMR and does not include stairs, steps, or escalators. *Areas of rescue assistance* or evacuation elevators may be included as part of *accessible means of egress*.

ELEMENT: An architectural or mechanical component of a *building, facility, space* or *site*, e.g., telephone, curb cut, door, drinking fountain, seating, or water closet.

ENTRANCE: Any access point to a *building* or portion of a *building* or *facility* used for the purpose of entering. An *entrance* includes the approach *walk*, stairs, lifts, ramp or other vertical access leading to the entrance platform; the entrance platform itself; vestibules, if provided; the entry door(s) or gate(s); and the hardware of the entry door(s) or gate(s).

FACILITY: All or any portion of *buildings*, structures, *site* improvements, *complexes*, equipment, roads, *walks*, passageways, parking lots, or other real or personal property located on a *site*.

FINAL DECISION: Determination of the *Board*, arrived at after consideration of the facts brought to its attention in accordance with 521 CMR.

FULL AND FAIR CASH VALUE OF THE BUILDING: The assessed valuation of a *building* (not including the land) as recorded in the Assessor's Office of the municipality at the time the *building* permit is issued as equalized at 100% valuation. The 100% equalized assessed value shall be based upon Massachusetts Department of Revenue's determination of the particular city's or town's assessment ratio.

EXAMPLE: Town X has an assessment ratio of 40%, the particular *building* in question is assessed at \$200,000.00. To determine the equalized assessed value of this *building*, divide \$200,000.00 by 0.4. The equalized assessed value equals \$500,000.00.

EXCEPTIONS:

- a. If no assessed value exists, or the assessed value is more than three years old, a request to substitute the appraised value may be submitted to the *Board*. The request to use the appraised value must be submitted by a certified appraiser or for transit facilities, either a certified appraiser or an independent registered professional engineer and must be submitted prior to obtaining a *building* permit for the project.
- b. The value of *multiple dwellings* owned or financed by public sector agencies, local housing authorities, Massachusetts Housing Finance Agency, or the Department of Housing and Urban Development shall be determined by *replacement cost*.
- c. The value of buildings owned, constructed, or renovated by the Commonwealth of Massachusetts shall be determined by the *replacement cost*.

5.00: **DEFINITIONS**

When part of a *building* is subject to 521 CMR, the *full and fair cash value* shall be based on the percentage of the *full and fair cash value* of the whole which equals the ratio of the square footage of the part of the *building* to the square footage of the whole *building*; if the *Board* determines the application of this formula to cause an inequitable result, the *Board* may otherwise calculate the *full and fair cash value* of the part of a *building* at issue.

EXAMPLE: Where the whole *building* is 100,000 square feet, the part in question is 10,000 square feet, and the equalized value of the whole is \$1,000,000.00, the *full and fair cash value* of the part is \$100,000.00

GROUND FLOOR: The floor of a *building* closest to the level of the exterior grade and any floor within 36 inches (36" = 914mm) of an exterior grade at some or all of its perimeter. *Buildings* on sloped *sites* may have more than one *ground floor*. For *multiple dwellings* with a garage or commercial space at grade level, the first floor of *dwelling units* above the garage or commercial space shall be considered the *ground floor*.

GROUP 1: Applies to *dwelling units* that have features that can be modified without *structural change* to meet the specific functional needs of an occupant with a disability.

GROUP 2A: Applies to *dwelling units* that have features similar to Group 1, but have the additional feature of greater floor space to accommodate the needs of occupants who need such space due to their disability.

GROUP 2B: Applies to *dwelling units* that contain features that provide, at the time of initial construction, full accessibility without need for further modification.

HALF BATHROOM: A space with a toilet and a sink.

IMPRACTICABLE/IMPRACTICABILITY:

- (a) Compliance with 521 CMR would be technologically unfeasible; or
- (b) compliance with 521 CMR would result in excessive and unreasonable costs without any substantial benefit to persons with disabilities.

LEVEL: Sloped no more than 1:50 or 2%

LIGHT RAIL: A *light rail* vehicle is a streetcar type vehicle operated on city streets, semi-exclusive rights of way, or exclusive rights of way.

LODGING HOUSE: A building where lodgings are let to four or more persons not within second degree of kindred to the persons operating the facility, including fraternity houses and dormitories of educational institutions.

LOFT: An intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

5.00: **DEFINITIONS**

MARINE FACILITIES: *Marine facilities* shall include, but not be limited to, piers, docks, wharves, bulkheads, seawalls, and any other fixed manmade structures at the land/water interface, and floating structures including barges, floating docks, and rafts which provide access from the water's edge to floating vessels including, but not limited to, boats, ships, ferries, or any other form of waterborne transportation.

MARINE RAMPS: *Marine ramps* are ramps, gangways, or walkways with a maximum slope of 1:12, or with any slope that is less steep than 1:12, under nominal marine conditions, and which span from land or a fixed pier to a floating vessel or dock, or which are fixed to a floating structure.

MARKED CROSSING: A crosswalk or other identified path intended for pedestrian use in crossing a *vehicular way*.

MEZZANINE OR MEZZANINE FLOOR: An intermediate level between the floor and ceiling of any story with an aggregate floor area of not more than 33% of the floor area of the story in which the level is located.

MULTIFAMILY DWELLING: Any *building* containing more than two dwelling units.

MULTIPLE DWELLING: A lodging or residential facility for hire, rent, lease, or sale, containing three or more *dwelling units*.

NOMINAL MARINE CONDITIONS: Denotes a condition in the marine environment where physical facilities are unremoved by the effects of wind, waves, wakes, currents, and weather conditions.

OCCUPIABLE: A room or enclosed space designed for human occupancy in which individuals congregate for amusement, education or similar purposes, or in which occupants are engaged in labor, and which is equipped with *means of egress*, light, and ventilation.

OPERABLE PART: A part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example, coin slot, pushbutton, handle).

ORDINARY REPAIRS: Any maintenance which does not affect structure, egress, fire protection systems, fire ratings, energy conservation provisions, plumbing, sanitary, gas, electrical or other utilities.

PERSONS WITH DISABILITIES: Individuals who experience substantial limitations in one or more major life activities, including but not limited to such functions as performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working. *Persons with disabilities* shall include but not be limited to those who have the inability to walk, difficulty walking, hearing disabilities, lack of coordination, reaching and manipulation disabilities stamina, difficulty interpreting and reacting to sensory information and extremes in physical size.

5.00: **DEFINITIONS**

POWER-ASSISTED DOOR: A door with a mechanism that helps to open the door or that reduces the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.

PRIMARY FUNCTION AREA: A major activity for which the *facility* is intended. Areas that contain a primary function include, but are not limited to: the customer services lobby of a bank, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and all other work areas in which the activities of the public are carried out.

PROJECT: *See 521 CMR 5.00: Complex*

PROPRIETOR: One with title to the establishment who owns the entire fee or portion of the entire fee and the consequent right to dispose of the establishment or such fee portion as vested in him or her.

PUBLIC BUILDING:

- a. A *building* privately or publicly financed that is open to and used by the public, including but not limited to transportation terminals, institutional buildings, educational buildings, commercial buildings, buildings having places of assembly, hotels, motels, dormitories, *multiple dwellings* consisting of three or more units, 5% of the units in lodging or residential facilities for rent, hire or lease containing 20 or more units, public use and common use areas of apartment buildings and condominiums, parking lots of 15 or more automobiles, public sidewalks and ways, funeral homes, and public rest rooms, and public areas of shopping centers and restaurants.
- b. A *building* constructed by the Commonwealth or any political subdivision thereof with public funds and open to public use, including but not limited to those constructed by public housing authorities, the Massachusetts Port Authority, the Massachusetts Parking Authority, the Massachusetts Turnpike Authority, the Massachusetts Bay Transportation Authority, and building authorities of any public educational institution or their successors.

PUBLIC USE: Describes interior or exterior rooms or spaces that are made available to the general public. Public use may be provided at a *building* or *facility* that is privately or publicly owned.

RAMP: A walking surface that has a running slope greater than 1:20 but no greater than or equal to 1:12.

RAPID RAIL: A subway type transit vehicle railway operated on exclusive private rights of way with high level platforms. Rapid rail may be operated on elevated or at grade level track separated from other traffic.

REASONABLE MODIFICATION: Physical changes to *multiple dwellings* requested by *persons with disabilities* or their agents to enable full use and enjoyment thereof, as described in M.G.L., c. 151B, § 4(a), or St. 1989, c. 722.

5.00: **DEFINITIONS**

RECONSTRUCTION: The tearing down, removal, demolition or replacement of a *public building* or part of a *public building*.

REMODELING: Modification beyond an interior decoration or involving any *structural changes*, or the redecorating of a *public building* for which the cost of such refurbishing, updating or redecorating equals or exceeds 5% of the *full and fair cash value of the building*.

REPAIR: The *reconstruction* or renewal of any part of an existing *building* for the purpose of its maintenance.

REPLACEMENT COST: Current cost of construction and equipment for a newly constructed *building*.

- a. For multiple dwellings, *replacement cost* shall be determined by \$73.32 per square foot.
- b. For courthouses, correctional facilities, educational facilities and other buildings (other than multiple dwellings) owned, constructed, or renovated by the Commonwealth of Massachusetts, the *replacement cost* shall be determined by and reflected in the Commonwealth's Capital Asset Management Information System (CAMIS) survey and data base, for state owned buildings. The Division of Capital Asset Management (DCAM) shall file the CAMIS database, containing the replacement costs, with the *Board*. DCAM shall update the replacement costs annually as of the first day of January each year, based on the inflation rate determined by R.S. Means, including appropriate adjustments for location and other factors. For buildings that are not included in the CAMIS database, but may be renovated by DCAM such as county-owned facilities, the replacement costs shall be calculated by DCAM based on the replacement costs for comparable facilities that are included in the CAMIS database. DCAM shall supplement the CAMIS database on file with the *Board*, for any such building, by preparing and filing documentation identifying the replacement cost for the building and how it was calculated.

RUNNING SLOPE: The slope that is parallel to the direction of travel and perpendicular to the *cross slope*.

SERVICE ENTRANCE: An entrance intended primarily for delivery of goods or services.

SIDEWALK: A prepared *walk* within a street right of way.

SIGNAGE: Displayed verbal, symbolic, tactile, and/or pictorial information.

SITE: A parcel of land bounded by a property line, or a designated portion of a public right-of-way.

SITE IMPROVEMENT: Landscaping, paving for pedestrian and vehicular ways, outdoor lighting, recreational facilities, and the like, added to a *site*.

SLEEPING ACCOMMODATIONS: Rooms in which people sleep; for example, dormitory and hotel or motel guest rooms or suites.

5.00: **DEFINITIONS**

SPACE: A definable area, *e.g.*, room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard, or lobby.

SPRING TIDE RANGE: The *spring tide range* for coastal communities in Massachusetts shall be that number published in "Table 2 - Tidal Difference and other Constants" of the current: *Tide Tables - High and Low Tide Predictions East Coast of North America and South America including Greenland* as published by the U.S. Department of Commerce, National Oceanographic and Atmospheric Administration, National Ocean Service.

STORY: That portion of a *building* included between the upper surface of a floor and upper surface of the floor or roof next above. If such portion of a *building* does not include occupiable space, it is not considered a *story* for the purposes of 521 CMR. There may be more than one floor level within a *story* as in the case of a *mezzanine* or *mezzanines*.

STRUCTURAL CHANGE: *Structural change* includes major *reconstruction* of walls or partitions or relocation of bearing walls or partitions. Minor alterations including the opening of sections of walls and/or the relocation of equipment or fixtures is not considered a *structural change*.

STRUCTURAL FRAME: The *structural frame* shall be considered to be the columns and the girders, beams, trusses, foundation and spandrels having direct connections to the columns and all other members that are essential to the stability of the *building* as a whole.

STRUCTURAL STRENGTH: *Structural strength* of grab bars, shower seats, fasteners and mounting devices shall be as follows:

- a. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of 250 lbs. shall be less than the allowable stress for the material of the grab bar or seat.
- b. Shear stress induced in a grab bar or seat by the application of 250 lbs. shall be less than the allowable shear stress for the material of the grab bar or seat. If the connection between the grab bar or seat and its mounting bracket or other supports is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.
- c. Shear force induced in a fastener or mounting device from the application of 250 lbs. shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
- d. Tensile force induced in a fastener by direct tension force of 250 lbs. plus the maximum moment from the application of 250 lbs. shall be less than the allowable withdrawal load between the fastener and the supporting structure
- e. Grab bars shall not rotate within their fittings.

TACTILE: Describes an object that can be perceived using the sense of touch.

5.00: **DEFINITIONS**

TACTILE WARNING: A surface texture applied to or built into walking surfaces or other elements to warn visually impaired persons of hazards in the path of travel.

TEMPORARY: Temporary buildings and facilities that are used by the public for a period of time not to exceed 90 days within any calendar year. Examples include, but are not limited to: reviewing stands, temporary classrooms, exhibit areas, street festivals, crafts fairs, music events, state and county fairs, sports events, dances, and temporary safe pedestrian passageways around a construction site.

TEMPORARY ACCESSIBLE PARKING: Where there are an insufficient number of accessible parking spaces or when permanent accessible parking spaces cannot be provided in time for an event, temporary accessible parking spaces can be created in permanent paved lots, as well as in dirt lots or fields.

TEMPORARY CURB RAMP: When temporary modifications are utilized to overcome level changes created by curbs.

TEMPORARY MODIFICATIONS: When changes to a site are anticipated to be in place for less than 90 days, temporary modifications compliant with 521 CMR must be made.

TEXT TELEPHONE (TTY): Technology which employs interactive graphic (*i.e.* typed) communications through the transmission of coded signals across the standard telephone network. These devices are also known as TDD's.

TIER I: *Tier I* marine facilities are docks and/or piers that service scheduled, waterborne passenger vessels with a vessel length of 40 feet (40' = 12m) or greater. These facilities will provide persons with disabilities unassisted access under nominal marine conditions.

TOWNHOUSE: A *dwelling unit* with finished living space on more than one *story*.

TRANSIENT LODGING: A *building, facility*, or portion thereof, excluding inpatient medical care facilities, that contains one or more *dwelling units* or sleeping accommodations not intended for permanent residence. Transient lodging may include but is not limited to resorts, group homes, hotels, motels, and dormitories.

TRANSIT FACILITY: A physical structure whose primary function is to facilitate access to and from a transportation system which has scheduled stops at the structure.

TRANSIT PLATFORM: A boarding area for rail transit vehicles.

TRANSITION PLATE: A *transition plate* is that element connected to the end of a moving *marine ramp* which provides access from the end of the *marine ramp* to a *level* platform.

5.00: **DEFINITIONS**

UNASSISTED ACCESS: *Unassisted access* enables a *person with a disability* to obtain information about and to maneuver a path of travel without the assistance of another person, except at those points and under those conditions under which individuals without disabilities would be in need of assistance from another person. This definition does not restrict the right of a *person with a disability* to request and receive assistance.

USE: Purpose for which the *building* is designed, used or intended to be used.

VEHICULAR WAY: A route intended for vehicular traffic, such as a street, driveway, or parking lot.

VESSEL LENGTH: *Vessel length* means the straight line horizontal measurement of the overall length from the foremost part of the boat to the aftermost part of the boat, measured from end to end over the deck, excluding sheer, and measured parallel to the centerline. Bow sprits, bumpkins, rudders, outboard motor brackets, handles, and other similar fittings, attachments, and extensions are not included in the measurement.

WALK (WALKWAY): An interior or exterior pathway with a prepared surface intended for pedestrian use, including but not limited to general pedestrian areas such as plazas, courts and crosswalks.

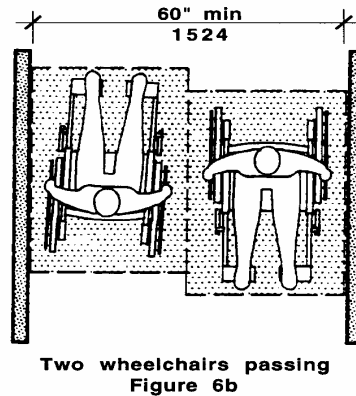
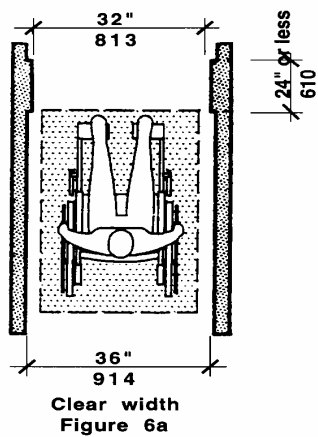
VARIANCE: Modification of or substitution for a Rule or Regulation.

ZONE OF REACH: An operable mechanism is within reach if it meets either criteria outlined in **521 CMR 6.5, Forward Reach** or **521 CMR 6.6, Side Reach**.

521 CMR 6.00: **SPACE ALLOWANCE AND REACH RANGES**

6.1 WHEELCHAIR PASSAGE WIDTH

The minimum *clear* width for single wheelchair passage shall be 36 inches (36" = 914mm) except for a reduction to 32 inches (32" = 813mm) and that reduction shall not exceed a lineal distance of 24 inches (24" = 610mm). See Fig. 6a.

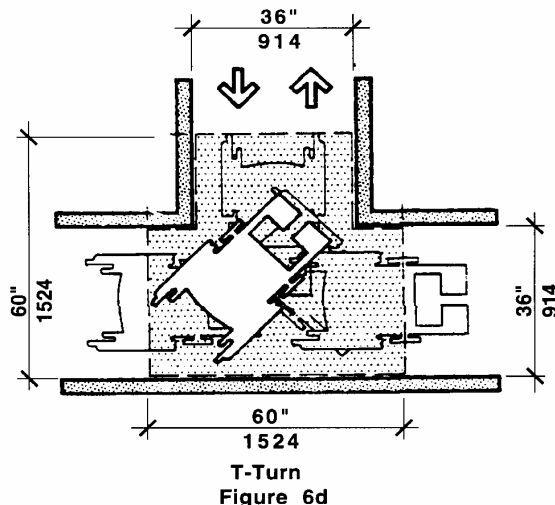
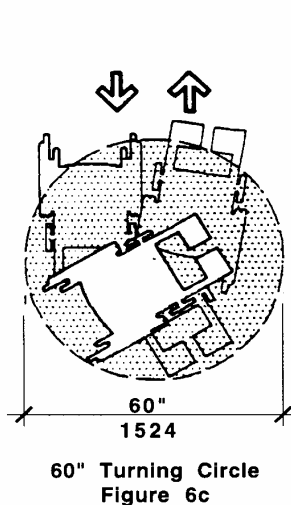


6.2 WIDTH FOR WHEELCHAIR PASSING

The minimum width for two wheelchairs to pass is 60 inches (60" = 1524mm) See Fig. 6b.

6.3 WHEELCHAIR TURNING SPACE

The space required for a wheelchair to make a 180-degree turn is a *clear space* of 60 inches (60" = 1524mm) diameter (See Fig. 6c) or a T-shaped space. See Fig. 6d.

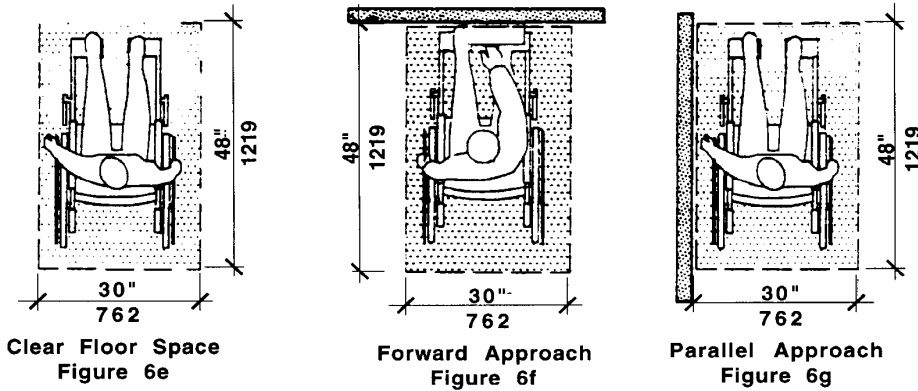


6.4 CLEAR FLOOR OR GROUND SPACE FOR WHEELCHAIRS

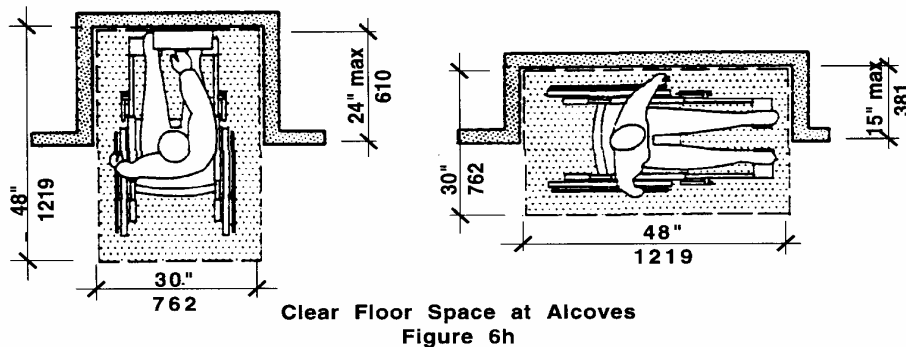
shall comply with the following:

6.00: SPACE ALLOWANCE AND REACH RANGES

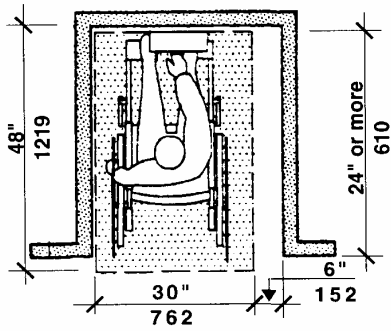
6.4.1 Size and Approach: The minimum *clear floor* or *ground space* required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches (30" x 48" = 762mm x 1219mm) (See Fig. 6e). The minimum *clear floor* or *ground space* for wheelchairs may be positioned for forward or parallel approach to an object (See Fig. 6f and 6g). *Clear floor* or *ground space* for wheelchairs may be part of the knee space required under objects.



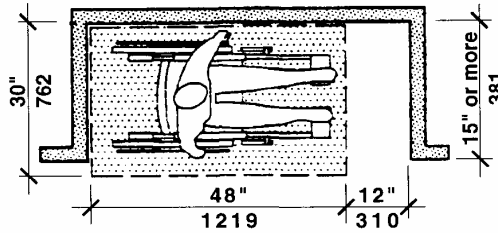
6.4.2 Relationship of Maneuvering Clearance to Wheelchair Spaces: One full unobstructed side of the *clear floor* or *ground space* for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair *clear floor space*. If a *clear floor space* is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided as shown in Fig. 6h and 6j.



6.00: SPACE ALLOWANCE AND REACH RANGES



Maneuvering Space
Figure 6i

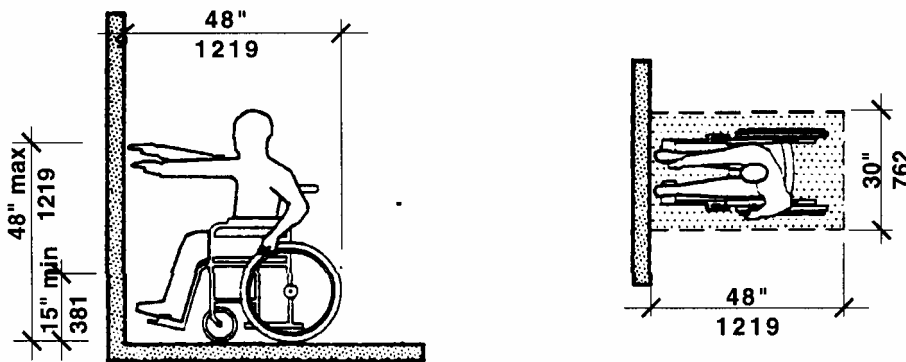


Maneuvering Space
Figure 6j

6.4.3 Surfaces for Wheelchair Spaces: *Clear floor space* for wheelchairs shall comply with **521 CMR 29, Floor Surfaces**.

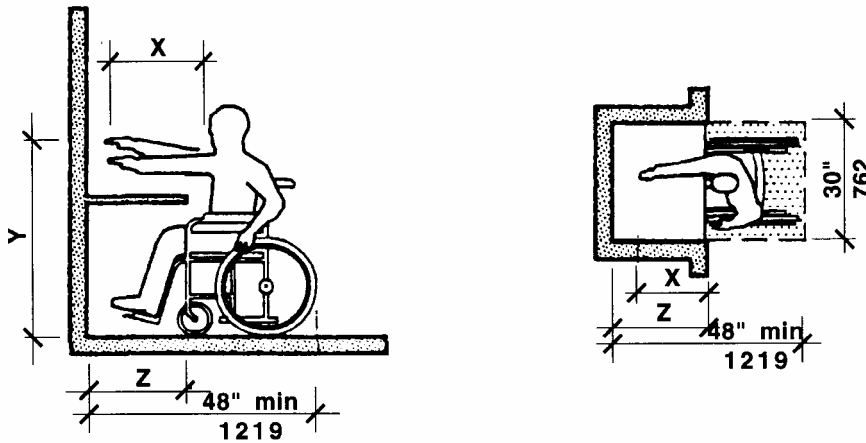
6.5 FORWARD REACH

If the *clear floor space* only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches (48" = 1219mm) (See Fig. 6k). The minimum low forward reach is 15 inches (15" = 381mm). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 6l.



High Forward Reach Limit
Figure 6k

6.00: SPACE ALLOWANCE AND REACH RANGES

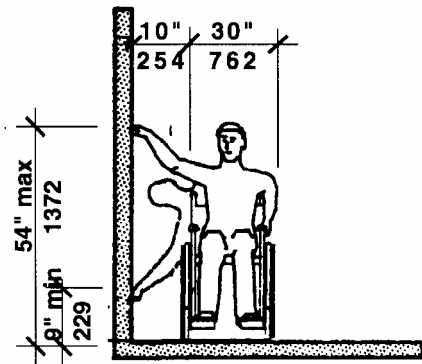


NOTE: X shall be less than or equal to 25" (635 mm). Z shall be greater than X.
 When X is less than 20" (508 mm), then Y shall be 48" (1219 mm) max.
 When X is 20" to 25" (508 to 635 mm), then Y shall be 44" (1118 mm) max.

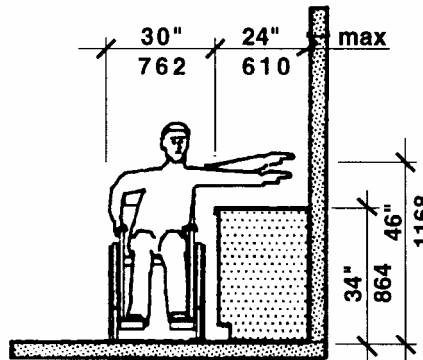
Maximum Forward Reach over an Obstruction
 Figure 6l

6.6 SIDE REACH

If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (54" = 1372mm) and the low side reach shall be no less than nine inches (9" = 229mm) above the floor (See Fig. 6m). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6n.



High and Low Side Reach
 Figure 6m



Maximum Side Reach over Obstruction
 Figure 6n

6.00: SPACE ALLOWANCE AND REACH RANGES

NON-TEXT PAGE

521 CMR 7.00: **RETAIL ESTABLISHMENTS**

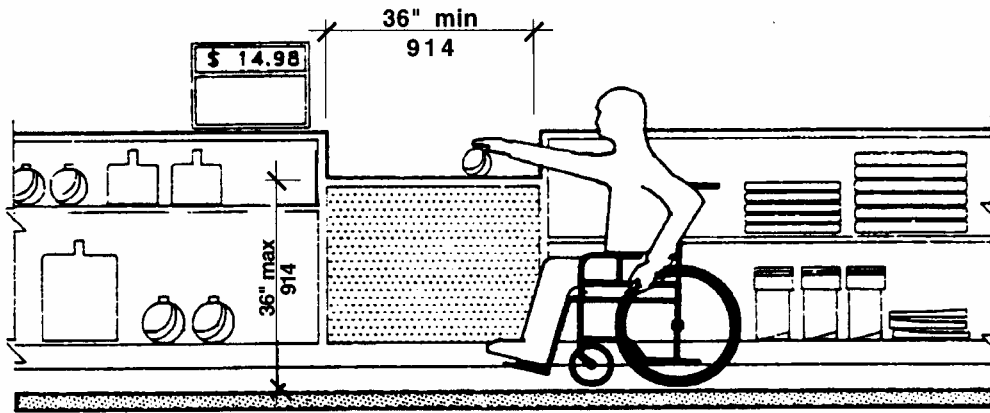
7.1 GENERAL

All retail establishments shall comply with 521 CMR, except as specified or modified in 521 CMR 7.00. Retail establishments shall include but not be limited to: banks, beauty shops, pharmacies, dry cleaners, clothing stores, grocery stores and supermarkets. Areas that must be *accessible* include but are not limited to the areas where the service or product of the establishment is offered to the public, dressing rooms, and public toilet rooms provided for clientele.

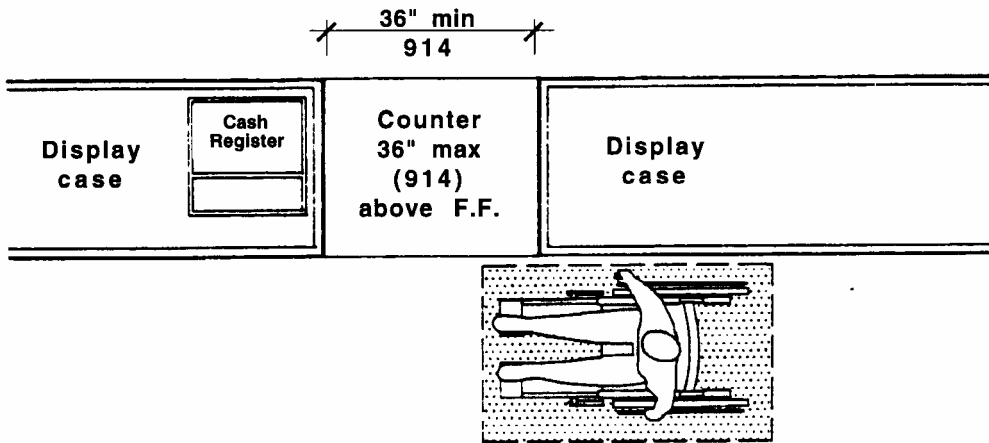
7.2 SALES SERVICE AND INFORMATION, OR TELLER WINDOWS

Shall comply with the following:

7.2.1 Cash register transactions: In department stores and retail stores where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall comply with the following. See Fig. 7a and 7b.



Elevation of Counter
Figure 7a



Plan of Counter
Figure 7b

7.00: **RETAIL ESTABLISHMENTS**

- a. Location: The counter shall be on an *accessible route* complying with **521 CMR 20.00: ACCESSIBLE ROUTE**.
- b. Length: A portion of the counter shall be at least 36 inches (36" = 914mm) in length and be located closest or nearest the cash register.
- c. Height: That portion of the counter shall not exceed 36 inches (36" = 914mm) above the finish floor.
- d. Distribution: The accessible counters must be dispersed throughout the *building or facility*.

7.2.2 Other Transactions: Ticketing counters, teller stations in a bank, registration counters in hotels and motels, box office ticket counters, and other counters that may not have a cash register but at which goods or services are sold or distributed, shall comply with the following. **See Fig. 7a and 7b.**

- a. Location: The counter shall be on an accessible route complying with **521 CMR 20.00: ACCESSIBLE ROUTE**.
- b. Length: The *accessible* portion of the counter or an auxiliary counter shall be at least 36 inches (36" = 914mm) in length.
- c. Height: The counter shall not exceed 36 inches (36" = 914mm) above the finish floor.

7.3 AISLES

All aisles in retail establishments shall have a minimum *clear* width of 36 inches (36" = 914mm). Such aisles shall be maintained at all times to provide a *clear* width of 36 (36" = 914mm) inches.

7.4 CHECK-OUT AISLES

Shall comply with the following:

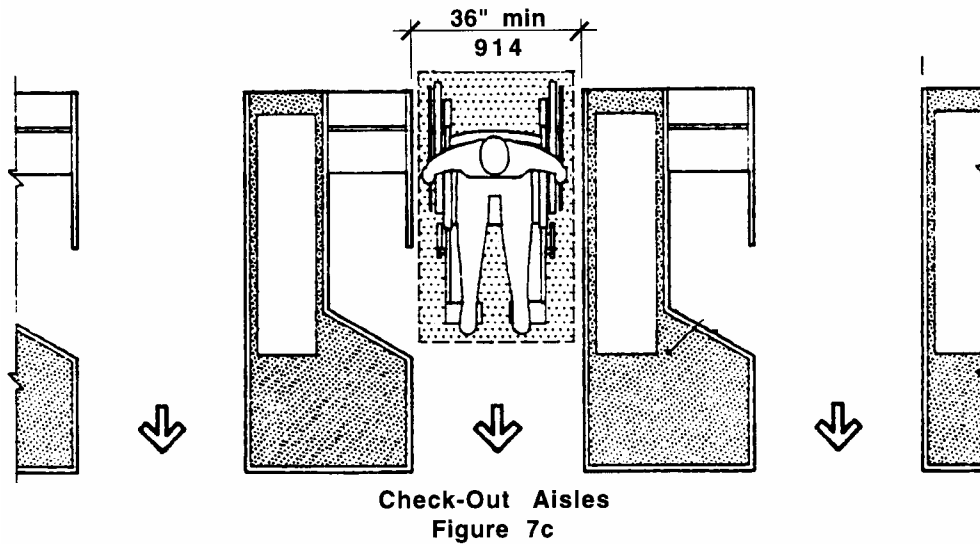
<u>Total check-out aisles of each design</u>	<u>Minimum number of Accessible check-out aisles</u>
1 - 4	1
5 - 8	2
9 - 15	3
over 15	3, plus 20% of additional aisles

Examples of check-out aisles of different "design" include those which are specifically designed to serve different functions. Different "design" shall include but is not limited to the following features: length of belt or no belt; or permanent signage designating the aisle as an express lane.

7.4.1 *Accessible* check-out aisles shall always be open.

7.4.2 Width: *Clear* aisle width for accessible check-out aisles shall be a minimum of 36 inches (36" = 914 mm). **See Fig. 7c.**

7.00: **RETAIL ESTABLISHMENTS**



7.4.3 Height: Maximum adjoining counter height shall not exceed 38 inches (38" = 965mm) above the finish floor. The top of the lip shall not exceed 40 inches (40" = 1016mm) above the finish floor.

7.4.4 Identification: *Signage* identifying accessible check-out aisles shall use the international symbol of accessibility and shall be mounted above the check-out aisle in the same location that the check-out number or type of check-out is displayed.

7.5 TURNSTILES, SECURITY CONTROL DEVICES AND SHOPPING CART BARRIERS

Wherever barriers are provided to prevent the removal of shopping carts from store premises including but not limited to turnstiles, an adjacent, alternate unlocked gate or door that is equally convenient to that provided for the ambulatory population shall be provided. It shall have a minimum clear opening of 32 inches (32" = 813mm).

7.6 DRESSING ROOMS

Where provided, dressing rooms shall comply with **521 CMR 33.00: DRESSING, FITTING AND CHANGING ROOMS**

7.7 SHELVING AND DISPLAY UNITS

In retail establishments shelving and display units shall be located on an *accessible route*. The requirements of **521 CMR 6.5, Forward Reach** and **521 CMR 6.6, Side Reach** shall apply to those display units encouraging interactive participation including but not limited to, devices such as headphones in stores which sell music tapes and compact disks.

7.8 PUBLIC TOILET ROOMS

When public toilets are provided, they shall be *accessible*, on an *accessible route*, and in compliance with **521 CMR 30.00: PUBLIC TOILET ROOMS**.

7.00: **RETAIL ESTABLISHMENTS**

NON-TEXT PAGE

521 CMR 10.00: **PUBLIC USE AND COMMON USE SPACES IN MULTIPLE DWELLINGS**

10.1 **GENERAL**

The *public use* and *common use* spaces of *multiple dwellings* in existing *buildings* consisting of 12 or more units in a *building*, shall be *accessible* and shall comply with **521 CMR**. The public use and *common use* spaces of *multiple dwellings* in new *construction* consisting of three or more units shall comply with **521 CMR**. *Public* and *common use* spaces are those spaces inside or outside a *building* that are used by residents and/or visitors. *Public use* and *common use* spaces shall include but not be limited to community facilities, meeting rooms, restaurants, recreation spaces, health facilities, pools, public toilet rooms, laundry areas, trash areas, storage areas, mailboxes, walks, sidewalks, parking lots and garages, entrances, elevators, lobbies and foyers, as well as corridors and stairways leading to *dwelling units*.

10.2 **ACCESSIBLE ROUTES**

There shall be an *accessible route* at least 36 inches (36" = 914mm) wide connecting *accessible* parking, *accessible* entrances, *public* and *common use* spaces, and *dwelling units*. Wherever possible, the *accessible route* shall be the shortest possible route, see **521 CMR 20.00: ACCESSIBLE ROUTE**

10.3 **PARKING SPACES FOR DWELLING UNIT OCCUPANTS**

Where parking is provided, it shall comply or be capable of complying with the provisions of **521 CMR 23.2, Number** through **521 CMR 23.8, Valet Parking**. The number of *accessible* spaces shall not be limited in number by **521 CMR 23.2.1, Number** but shall be provided in sufficient numbers to meet the needs of the *dwelling unit* occupants. If parking spaces are assigned to individual units, those spaces designated for *accessible* units shall have *signage* reserving said space. An international symbol of accessibility need not be used.

10.3.1 Visitor Parking Spaces: Where parking is provided for visitors, it shall comply fully with the requirements of **521 CMR 23.00: PARKING AND PASSENGER LOADING ZONES**.

10.4 **DOORS**

All doorways and openings located in *common use* and *public use* spaces and along *accessible routes* shall comply with **521 CMR 26.2, Revolving Doors** through **521 CMR 26.11, Door Hardware**.

10.5 **STORAGE**

If remote storage is available to residents, equivalent *accessible* storage shall be provided to residents.

10.6 **ALARMS**

Where a fire alarm is provided, it shall comply with **521 CMR 40.00: ALARMS**.

10.00: PUBLIC USE AND COMMON USE SPACES IN MULTIPLE DWELLINGS

10.7 HEIGHT OF CONTROLS

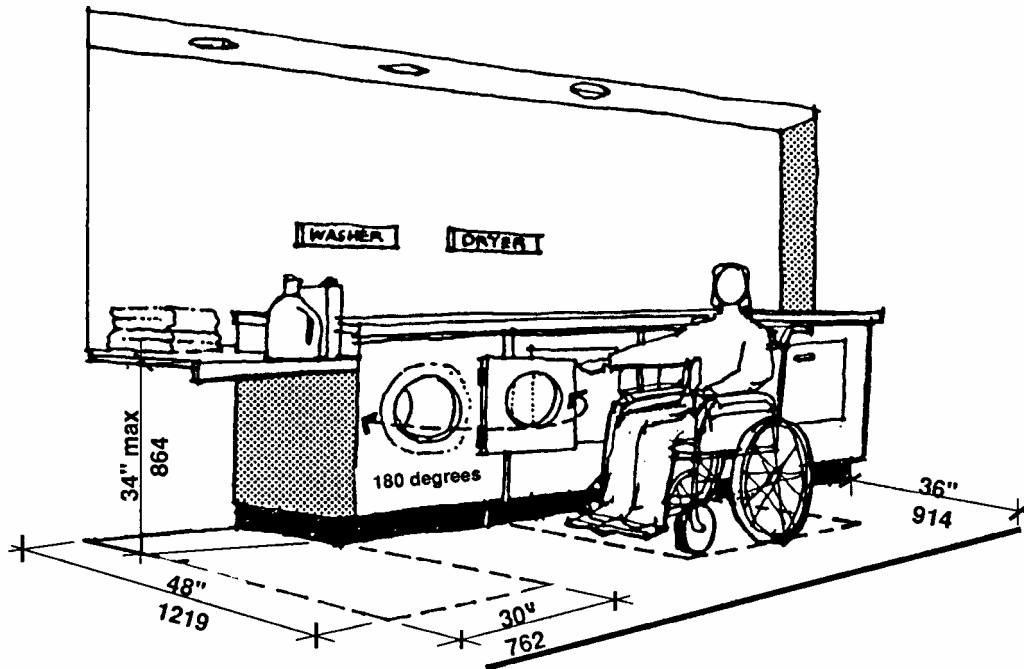
The highest position of the *operable parts* of any control, dispenser, receptacle, or other operable equipment shall be located within the *zone of reach* as defined in **521 CMR 5.00: DEFINITIONS**.

10.8 LAUNDRY FACILITIES

If laundry facilities are provided in *Multiple dwellings*, then equivalent, *accessible* laundry facilities shall be provided.

10.8.1 Location: Laundry facilities shall be on an *accessible* level and on an *accessible route*.

10.8.2 At least one washing machine and at least one clothes dryer shall be front loading, shall have a side hinged door, and shall be located so that the door can be opened 180°. See **Fig. 10a**.



Laundry Facilities
Figure 10a

10.8.3 Where laundry work space, such as a folding table, is provided, it shall comply with **521 CMR 35.00: TABLES AND SEATING**.

10.8.4 Controls, including the payment mechanism, shall fall within the *zone of reach* as defined in **521 CMR 5.00: DEFINITIONS**.

10.00: **PUBLIC USE AND COMMON USE SPACES IN MULTIPLE DWELLINGS**

10.9 **KITCHEN FACILITIES**

Sinks, counters, and cooking facilities provided in *common use* spaces shall comply with **521 CMR 32.00: KITCHENS**.

521 CMR: ARCHITECTURAL ACCESS BOARD

521 CMR 14.00: **PLACES OF ASSEMBLY**

14.1 **GENERAL**

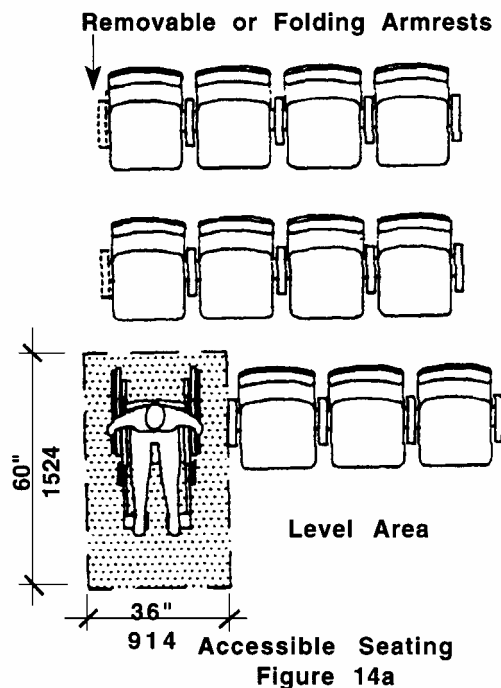
Places of assembly shall comply with all parts of 521 CMR, except as specified or modified in 521 CMR 14.00. Places of assembly shall include but not be limited to theaters, auditoriums, armories, lecture halls, arenas, stadiums, banquet rooms and conference rooms. Associated, support, or related areas, including but not limited to press boxes, lobbies, ticket offices, seating, stages, backstage areas, dressing rooms, toilet rooms, showers and green rooms, shall also be *accessible*.

14.2 **NUMBER OF ACCESSIBLE SEATS**

Wheelchair spaces: In places of assembly with fixed seating, the minimum number of *accessible spaces* shall be computed in accordance with the following table:

<u>Total Seating</u>	<u>Wheelchair Spaces</u>
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6, one additional space for each total seating capacity increase of 100.

14.2.1 Armless seats: In addition to wheelchair seating locations, 1% of all fixed seats, but not less than one seat, shall be aisle seats with no armrests on the aisle side, or shall have removable or folding armrests on the aisle side. Each such seat shall be identified by a sign or marker. *Signage* notifying patrons of the availability of such seats shall be posted at the ticket office. Aisle seats are not required to be on a *level* surface. **See Fig. 14a.**



14.00: **PLACES OF ASSEMBLY**

14.3 **ACCESSIBLE SPACE**

Each wheelchair *space* shall be 60 inches (60" = 1524mm) long and 36 inches (36" = 914mm) wide, shall be level, and shall comply with **521 CMR 29.00: FLOOR SURFACES**.

14.4 **PLACEMENT OF WHEELCHAIR SPACES**

Wheelchair *spaces* shall be an integral part of any fixed seating plan.

14.4.1 **Distribution:** Whenever more than 150 seats are provided, wheelchair seating locations must be provided in more than one location. Wheelchair seating locations shall be dispersed throughout all seating areas so as to provide a choice of admission prices and views comparable to those for the general public. Wheelchair seating locations shall also be provided in all areas including sky boxes and specialty areas. Where 150 or less seats are provided, wheelchair spaces may be provided in one location. In movie theaters, accessible seating locations shall not be located in the front third of the theater.

Exception: *Accessible* viewing positions may be clustered for bleachers, balconies, and other areas having sight lines that require slopes of greater than 5%. Equivalent *accessible* viewing positions may be located on levels having *accessible egress*.

14.4.2 **Accessible Route:** *Accessible* seats shall adjoin, but in no way interfere with, an *accessible route* that also serves as a *means of egress* in case of emergency.

14.4.3 **Companion seats:** At least one companion fixed seat or portable seat, shall be provided next to each wheelchair seating *space*, for designated used by a companion. Companion seats must be comparable to the seats for the general public, *i.e.*, comfort, cup holders, etc. Companion seats must have signage installed indicating that the seats are reserved as companion seating for the *accessible* seating areas.

14.4.4 **Placement of Accessible Seats:** Readily removable seats may be installed in wheelchair *spaces* when the *spaces* are not required to accommodate wheelchair users. See **Fig. 14a**.

14.5 **ASSISTIVE LISTENING SYSTEMS**

In *spaces* such as concert and lecture halls, playhouses, movie theaters, and meeting rooms, *assembly areas* shall comply with the following:

14.5.1 An *assembly area* shall have a permanently installed assistive listening system if:

- a. the *assembly area* accommodates at least 50 persons, or
- b. if it has an audio-amplification system, and fixed seating.

14.5.2 For other assembly areas, a permanently installed *assistive listening system*, or other supplementary wiring necessary to support a portable *assistive listening system* shall be provided. The minimum number of receivers to be provided shall be equal to 4% of the total number of seats, but not less than two receivers.

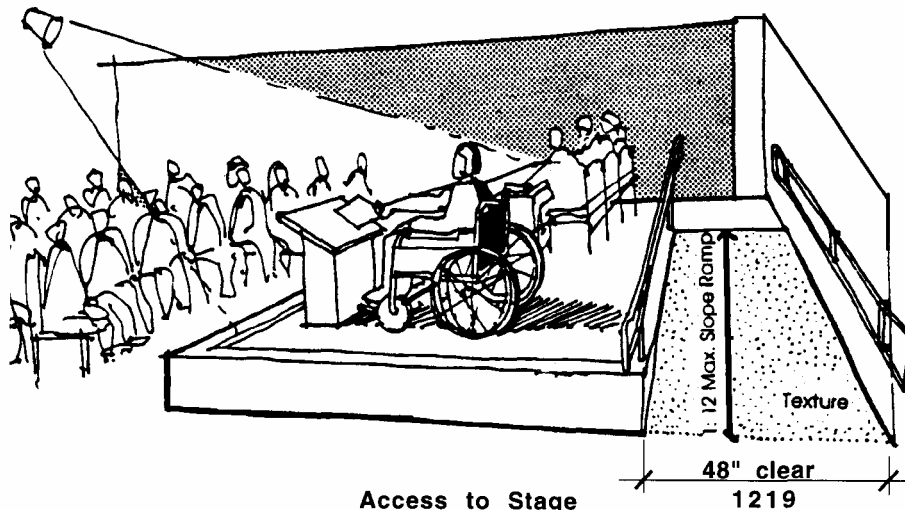
14.00: **PLACES OF ASSEMBLY**

14.5.3 Placement of Listening Systems: If the listening system serves individual fixed seats, then such seats shall be located within a 50 foot (50' = 15m) viewing distance of, and including the stage or playing area, and shall have a complete view of the stage or playing area.

14.5.4 *Signage* shall be installed to notify patrons of the availability of a listening system and shall comply with **521 CMR 41.00: SIGNAGE**.

14.6 **ACCESS TO PERFORMING AREAS**

Where access is provided to the stage from within the place of assembly, an *accessible route*, within the place of assembly, from the wheelchair seating locations, to the stage/performing area must be provided. See **Fig. 14b**. In addition, an *accessible route* that coincides with the route for performers must be provided to the backstage area.



14.6.1 Access to the stage may be by the following:

- a. a *ramp* complying with **521 CMR 24.00: RAMPS**
- b. a wheelchair lift complying with **521 CMR 28.12, Wheelchair Lifts**

14.7 **BOX OFFICE TICKET COUNTERS AND CONCESSION STANDS**

Shall comply with the following:

- a. Location: The counter shall be on an *accessible route*.
- b. Length: A portion of the counter or an auxiliary counter shall be at least 36 inches (36" = 914mm) in length.
- c. Height: The counter shall not exceed 36 inches (36" = 914mm) above the finish floor.
- d. *Clear Floor Area*: Provide *clear floor area* as defined in **521 CMR 5.00: DEFINITIONS**.
- e. Space Allowance and Reach Ranges: See **521 CMR 6.5, Forward Reach** and **512 CMR 6.6, Side Reach**.

521 CMR: ARCHITECTURAL ACCESS BOARD

14.00: **PLACES OF ASSEMBLY**

14.8 **DRESSING ROOMS**

Where provided, shall comply with **521 CMR 33.00: DRESSING, FITTING AND CHANGING ROOMS**

14.9 **SLOPE IN AUDITORIUMS/ASSEMBLY AREAS** (Reserved)

521 CMR 19.00: RECREATIONAL FACILITIES

19.1 GENERAL

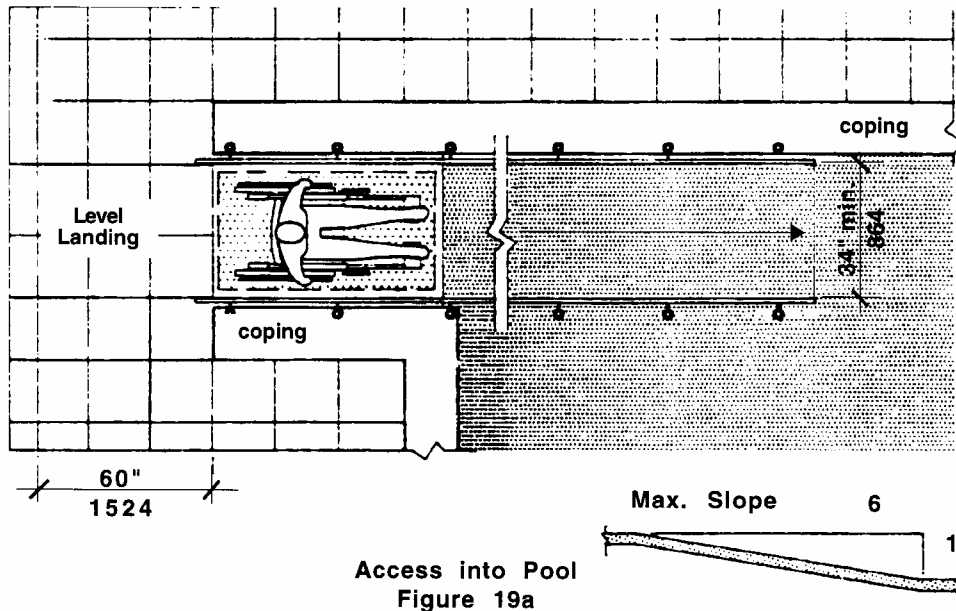
Recreational *facilities* shall comply with 521 CMR, except as specified or modified in 521 CMR 19.00. Recreational *facilities* shall include but not be limited to courts, rinks, swimming pools, gymnasiums, stadiums, health and sports clubs, radio control facilities, whirlpools, jacuzzis, gyms, weightlifting areas, playgrounds, zoos, fairgrounds, beaches, piers, docks, bandstands, gazebos, parks, bowling alleys, picnic areas, video arcades and campsites. All areas open to and used by the public, including but not limited to locker rooms, shower *facilities*, saunas, steam rooms, suntanning rooms, weight rooms, aerobics and dance rooms, tennis, racquet and squash courts and spectator areas in recreation *facilities* shall be *accessible*.

19.2 WATER FACILITIES

Swimming pools, lap pools, wading pools, diving pools used for scuba or general swimming, and whirlpools and jacuzzis in all locations subject to 521 CMR shall be *accessible*.

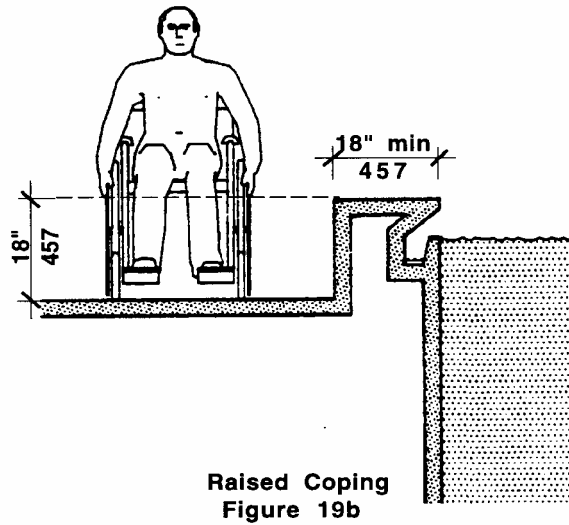
19.2.1 Access Devices: *Accessibility* to water *facilities* shall be by means of any of the following:

- a. A 34 inch (34" = 864mm) wide *ramp* with a slip resistant surface extending into the shallow end of the pool. Such *ramps* shall have a slope not exceeding one-in-six (1:6), and shall have handrails on both sides. See Fig. 19a.



- b. A lifting device.
- c. When the water level of the pool is above the level of the path of travel, a raised coping may be utilized as a transfer area, if it is 18 inches (18" = 457mm) above the path of travel and is a minimum of 18 inches wide (18" = 457mm). See Fig. 19b.

19.00: RECREATIONAL FACILITIES



19.2.2 Path of travel: There shall be an *accessible route* not less than 48 inches (48" = 1219mm) wide around such pools. These paths shall have a surface that is slip resistant.

19.3 BOWLING ALLEYS

Shall provide an *accessible route* to at least two adjacent lanes.

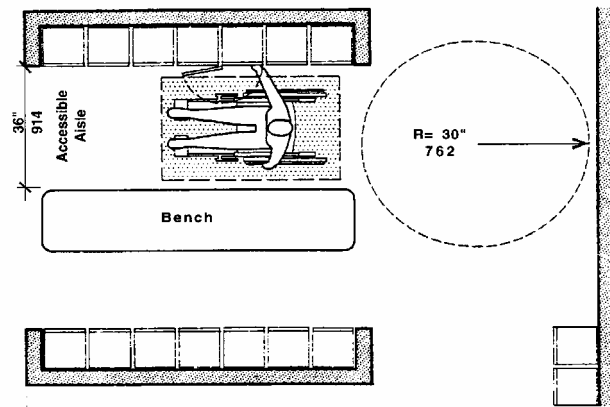
19.4 LOCKER ROOMS

Shall have a 36 inch (36" = 914mm) wide *accessible route* around all lockers.

19.4.1 Lockers: At least 5% of the lockers, but not less than one, shall be *accessible* and shall have locking/opening devices that are operable with a closed fist and mounted no higher than 42 inches (42" = 1067mm) from the floor.

19.4.2 Seating: If benches are provided, there shall be a 36 inch (36" = 914mm) wide aisle between benches and lockers and a five foot turning diameter near the *accessible* lockers. **See Fig. 19c.**

19.00: RECREATIONAL FACILITIES



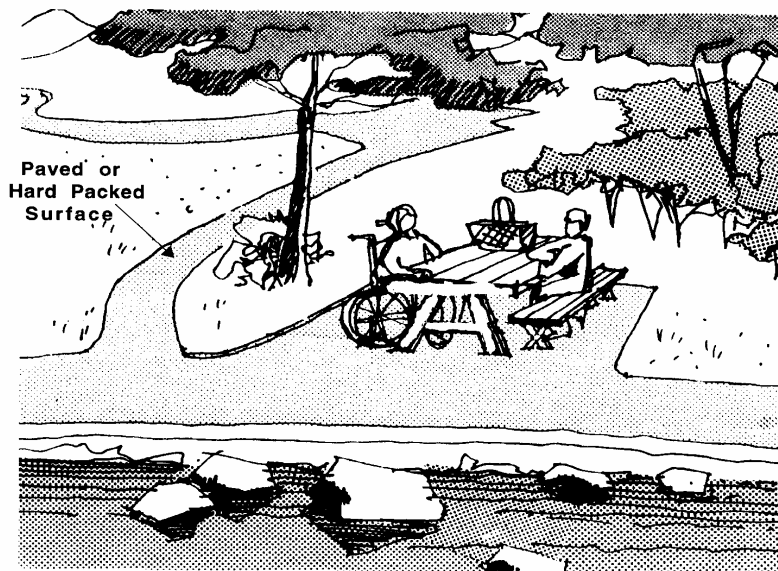
Locker Facilities
Figure 19c

19.5 CAMPSITES

Shall comply with the following:

19.5.1 Campsite Access: At least 5% of campsites shall be *accessible* and dispersed among those campsites that could be reached from an *accessible route*. Areas leading into such *sites* should be paved or hard packed.

19.5.2 Tables: At least 5% of tables shall be *accessible*. Tables for the *accessible sites* shall provide *clear space* under the table top not less than 30 inches wide (30" = 762mm) and 19 inches (19" = 483mm) deep per seating space and not less than 27 inches (27" = 686mm) *clear* from the ground to the underside of the table. See Fig. 19d.



Picnic Area
Figure 19d

19.00: **RECREATIONAL FACILITIES**

19.5.3 Public restrooms and shower *facilities*, where provided, shall comply with **521 CMR 30.00: PUBLIC TOILET ROOMS** and **521 CMR 31.00: BATHING ROOMS**.

19.6 PICNIC AREAS AND HIGHWAY REST AREAS

Shall comply with the following:

19.6.1 Access: All *facilities* shall be *accessible* and shall be on an *accessible route* that is paved or hard packed. If *curb cuts* are provided, they shall comply with **521 CMR 21.00: CURB CUTS**.

19.6.2 Tables: At least 5% of tables, where provided shall be *accessible* and shall comply with **521 CMR 19.5.2**.

19.6.3 Public restrooms, where provided, shall comply with **521 CMR 30.00: PUBLIC TOILET ROOMS** and **521 CMR 31.00: BATHING ROOMS**.

19.6.4 Public telephones, where provided, shall comply with **521 CMR 37.00: PUBLIC TELEPHONES**.

19.7 PLAYGROUNDS

An *accessible route*, complying with **521 CMR 20.00: ACCESSIBLE ROUTE** shall be provided to reach playground equipment and around the playground.

19.8 MARINE FACILITIES:

Marine facilities are docks and/or piers that service waterborne passenger vessels with a vessel length of 40 feet (40' = 12m) or greater. These *facilities* shall provide persons with disabilities unassisted access measured under nominal marine conditions throughout spring tide range or 9½ feet (9½' = 2996mm) whichever is less. *Marine facilities* shall comply with the following:

19.8.1 *Unassisted Access* between the land or fixed *facility* and a floating vessel, with or without an intervening floating structure, shall be provided.

19.9 MARINE RAMPS

shall comply with the following:

19.9.1 Handrails: *Marine ramps* shall be equipped with handrails which comply with **521 CMR 24.5 Handrails**.

Exception: At the top and bottom of the *marine ramp* the upper and lower rails shall be connected with a circular return extending a minimum of 12 inches (12" = 305mm) beyond the edge of the *ramp*. It is not intended that handrail extensions be horizontal during all tidal or weather conditions.

19.00: **RECREATIONAL FACILITIES**

19.9.2 Width: The *clear* width of the *marine ramp* shall be a minimum of 36 inches (36" = 914mm) measured between the handrails.

19.9.3 Platforms: *Marine ramps* shall terminate in level platforms that are a minimum of 48 inches (48" = 1219mm) by 48 inches (48" = 1219mm), *clear* and unobstructed by handrails, door swings, *entrances*, or other projections. Such platforms shall occur at the top and bottom of each *ramp* and at intervals not exceeding the maximum *ramp* length as described in Table 1:

Table 1

<u>RAMPS</u>	MAXIMUM RAMP LENGTH (excluding transition plates)
1:12 but less than 1:14	Not to exceed 30 feet (9m)
1:14 but less than 1:16	Not to exceed 35 feet (11m)
1:16 but less than 1:18	Not to exceed 40 feet (12m)
1:18 but less than 1:20	Not to exceed 45 feet (14m)
1:20 and over	Unlimited length

19.9.4 *Transition Plates* shall be a maximum of eight feet (8' = 2438mm) in length and shall have slopes less than or equal to 1:12. *Transition plates* longer than 18 inches (18" = 457mm) shall be equipped with handrails complying with **521 CMR 19.9.1**. These handrails must be parallel to the handrails on the *marine ramp(s)*, but may not necessarily be continuous with them. *Transition plates* shall be at least as wide as the *ramp*. The change in level between the end of the *transition plate* and the adjoining level surface shall be no greater than ½ an inch (½" = 13mm).

19.10 BRIDGE PLATES

Vessels using *bridge plates* to provide access at boarding and disembarking areas shall comply with the following:

19.10.1 A maximum slope of 1:8 to 1:10 is allowed for a maximum rise of three inches (3" = 76mm). A maximum slope that is less steep than 1:10 and no steeper than 1:12 is allowed for a maximum rise of six inches (6" = 152mm).

19.10.2 *Bridge plates* shall have a minimum clear width of at least 36 inches (36" = 914mm).

19.10.3 *Bridge Plates* longer than six feet (6' = 1829mm) are *marine ramps* and shall comply with **521 CMR 19.9, Marine Ramps**.

19.11 FLOATING AND FIXED DOCKS

The edge of all floating and fixed docks shall provide at least one of the following:

- a. Handrails that comply with **521 CMR 24.5, Handrails**;
- b. Curbs that are at least four inches (4" = 102mm) high and are preceded by *detectable warnings* that comply with 521 CMR; or
- c. *Detectable warnings* that comply with 521 CMR.

19.00: **RECREATIONAL FACILITIES**

19.12 ACCESSIBLE ROUTE

There shall be an *accessible route* to and throughout the *marine facility* that connects the vessels boarding area with all other areas and services available to the public within the *marine facility*. The *accessible route* shall comply with **521 CMR 20.00: ACCESSIBLE ROUTE**.

19.13 ANCILLARY FACILITIES

Where provided within the *marine facility*, ancillary *facilities* such are fare transaction areas, public toilets, public telephones, vendor(s) stands, etc., shall comply with 521 CMR.

19.14 MARINE FACILITIES THAT SERVICE WATERBORNE PASSENGER VESSELS WITH A VESSEL LENGTH OF LESS THAN 40 FEET (40' = 12m) - Reserved.

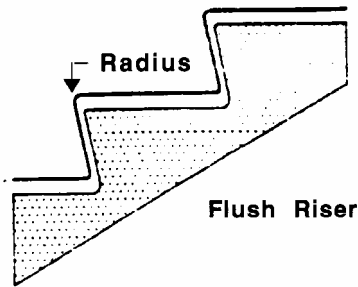
521 CMR 27.00: **STAIRS**

27.1 **GENERAL**

All stairs are required to comply with the following:

27.2 **TREADS AND RISERS**

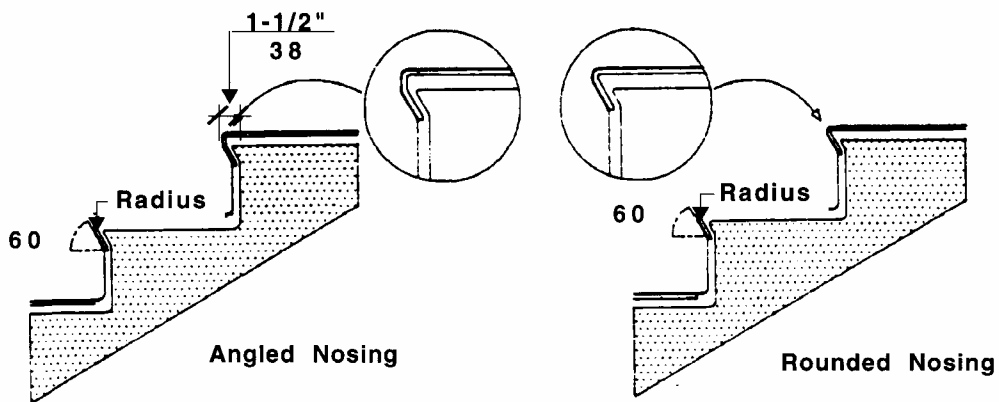
On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Open risers are not permitted. See **Fig. 27a**.



**Treads and Risers
Figure 27a**

27.3 **NOSINGS**

The undersides of nosings shall not be abrupt. The radius of curvature at the leading edge of the tread shall be no greater than 1/2 inch (1/2" = 13mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degree from the horizontal. Nosings shall project no more than 1 1/2 inches (1 1/2" = 38mm). See **Fig. 27b**.



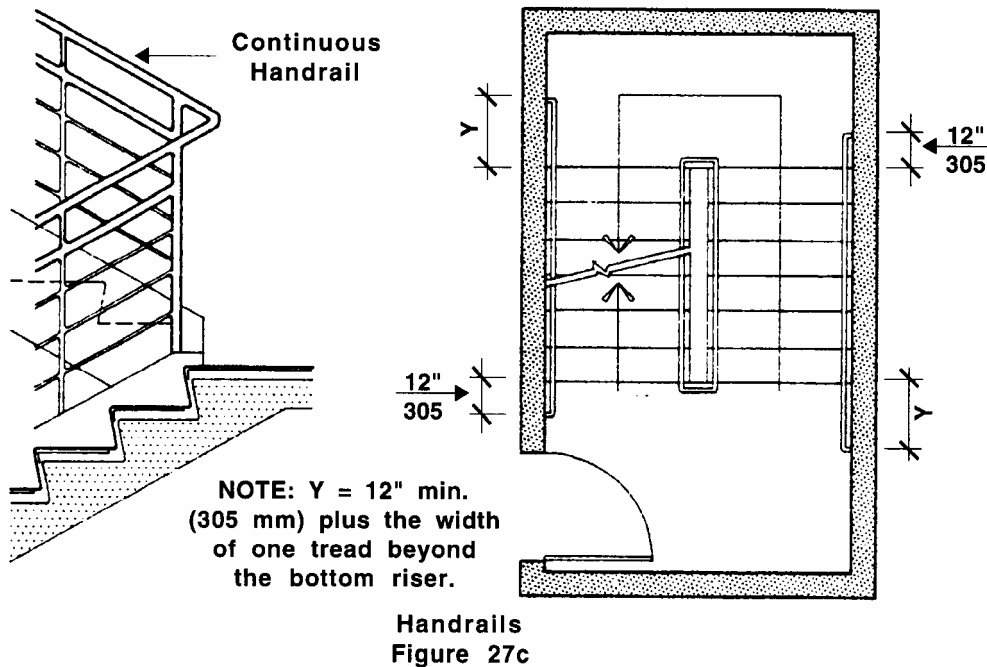
**Nosings
Figure 27b**

27.00: STAIRS

27.4 HANDRAILS

Handrails shall have the following features:

27.4.1 Location: Stairways shall have continuous handrails at both sides of all stairs. The inside handrail on switchback or dogleg stairs shall always be continuous. See **Fig. 27c**.

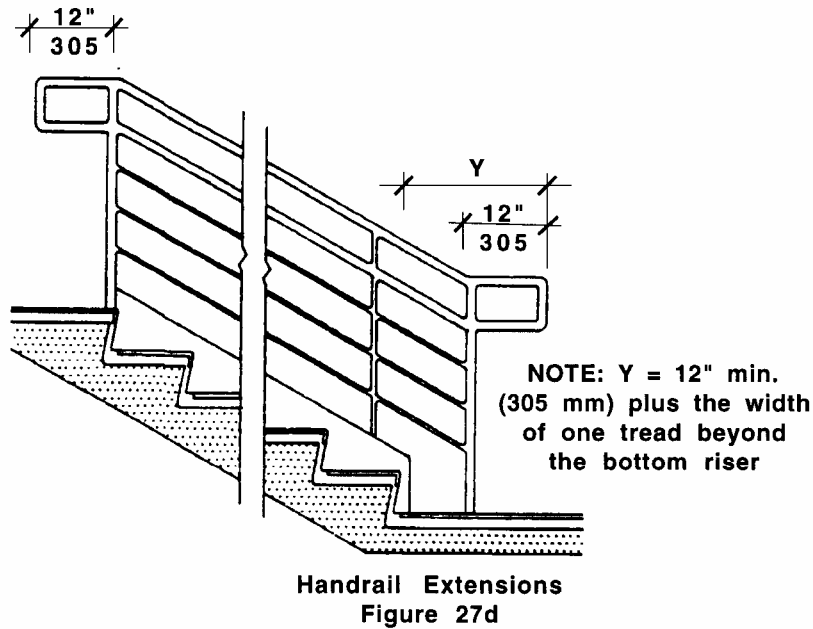


27.4.2 Height: Top of handrail gripping surface shall be mounted between 34 inches (34" = 864mm) and 38 inches (38" = 965mm) above stair nosings. Handrails shall be measured vertically from the top of the gripping surface of the handrails to the stair nosing.

27.4.3 Extensions: Where handrails terminate at the top and bottom of a stair run, they shall have extensions that comply with the following:

- a. At the top, extend at least 12 inches (12" = 305mm) beyond the top riser and parallel with the floor or ground surface. See **Fig. 27d**.

27.00: STAIRS

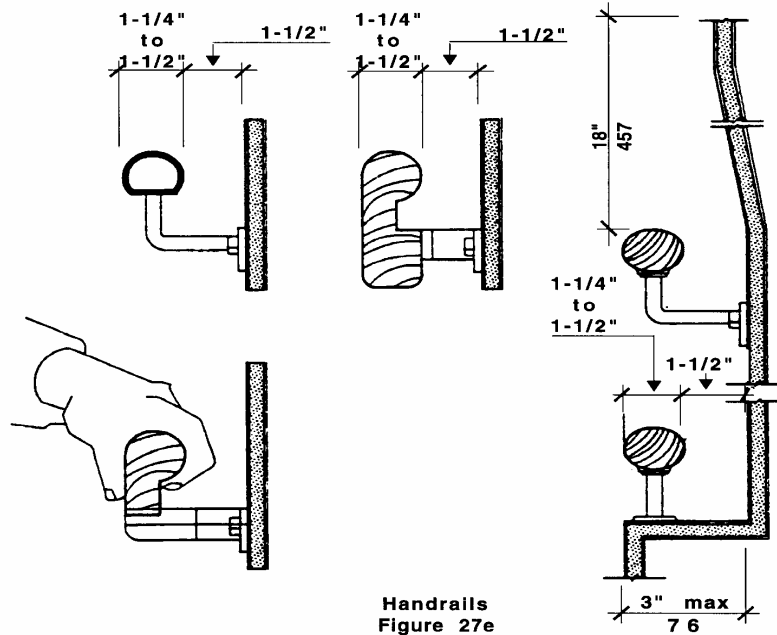


- b. At the bottom, extend at least 12 inches (12" = 305mm) plus the width of one tread beyond the bottom riser. The handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal. *See Fig. 27d.*
- c. Handrail extensions need not extend if it would cause a safety hazard or if *space* does not permit. Extensions shall comply with **521 CMR 20.6, Protruding Objects.**

27.4.4 Size: Handrails shall have a circular cross section with an outside diameter of 1¼ inches (32mm) minimum and two inches (51mm) maximum.

27.4.5 Shape: The handgrip portion of the handrail shall be round or oval in cross-section. *See Fig. 27e.*

27.00: STAIRS



27.4.6 Surface: The gripping surface shall be continuous so that a hand can move from end to end without interruption by newel posts or other obstructions, and shall be free of any sharp or abrasive *elements*.

27.4.7 Clearance: When a handrail is mounted adjacent to a wall, the *clear space* between the handrail and the wall shall be 1½ inches (1½" = 38mm). Handrails may be located in a wall recess if the recess is a maximum of three inches (3" = 76mm) deep and extends at least 18 inches (18" = 457mm) above the top of the rail.

27.4.8 End condition: Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post. Extensions on handrails which are not attached to walls shall be returned smoothly to the floor or a post.

27.4.9 Handrails shall not rotate within their fittings.

27.5 **DETECTABLE WARNINGS AT STAIRS:** Reserved until further notice.

27.6 **OUTDOOR CONDITIONS**

Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.

521 CMR: ARCHITECTURAL ACCESS BOARD

521 CMR 40.00: **ALARMS**

40.1 **GENERAL**

If emergency warning systems are provided, then they shall include both audible alarms and visual alarms.

40.1.1 *Sleeping accommodations* for persons with hearing impairments (*See 521 CMR 8.4.5*) shall have an alarm system that complies with **521 CMR 40.4**.

40.1.2 Emergency warning systems in medical care *facilities* may be modified to suit standard health care alarm design practice.

40.2 **AUDIBLE ALARMS**

If provided, audible emergency alarms shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by at least 15 dbA or exceeds any maximum sound level with a duration of 60 seconds by 5 dbA, whichever is louder. If an audible alarm in an adjacent space provides the proper decibel level within a room, then only the visual alarm is needed. Sound levels for alarm signals shall not exceed 120 dbA.

40.3 **VISUAL ALARMS**

At a minimum, visual signal appliances, if provided, shall be provided in *buildings* and *facilities* in each of the following areas: restrooms, meeting rooms, hallways, lobbies, classrooms, and any general usage areas open to the public.

40.3.1 Visual alarm signal appliances shall be integrated into the *building* or *facility* alarm system. If single station audible alarms are provided, then single station visual alarm signals shall be provided.

40.3.2 Visual alarm signals shall have photometric features in accordance with NFPA 72, Section 7.5, 2002.

40.3.3 Visual alarm signals shall be located in accordance with NFPA 72, Section 7.5, 2002.

40.4 **AUXILIARY ALARMS**

Units and *sleeping accommodations* shall have a visual alarm connected to the *building* emergency alarm system or shall have a standard 110-volt electrical receptacle into which such an alarm can be connected and a means by which a signal from the *building* emergency alarm system can trigger such an auxiliary alarm.

40.4.1 When visual alarms are in place the signal shall be visible in all areas of the unit or room.

40.4.2 Instructions for use of the auxiliary alarm or receptacle shall be provided.

521 CMR 41.00: **SIGNAGE**

41.1 **GENERAL**

The following types of *signage* shall be provided:

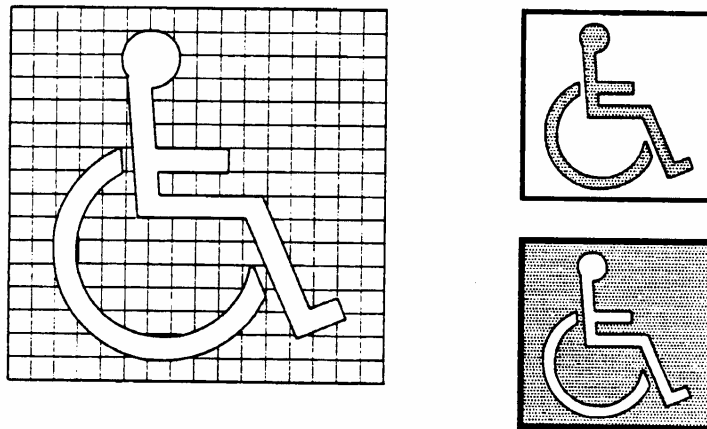
41.1.1 Signs that designate permanent rooms and *spaces* shall comply with **521 CMR 41.2, 41.5** and **41.6**. These include toilet room signs, room numbers, stair signs, etc.

Exception: *Building* directories, menus, and all other signs that are temporary are not required to comply.

41.1.2 Other signs that provide direction to, or information about, functional *spaces* of the *building* shall comply with **521 CMR 41.3, 41.4,** and **41.6**.

41.1.3 Elements and *spaces* of *accessible facilities* which shall be identified by the International Symbol of *Accessibility* (See **Fig. 41a**) and which shall comply with **521 CMR 41.7, Symbols of Accessibility** are:

- a. Parking *spaces* designated as reserved for individuals with disabilities;
- b. *Accessible* passenger loading zones;
- c. *Accessible entrances* when not all are *accessible* (*inaccessible entrances* shall have directional *signage* to indicate the route to the nearest *accessible entrance*);
- d. *Accessible* toilet and bathing facilities when not all are *accessible*.
- e. *Emergency egress* signs, which are required to be illuminated.



International Symbol of Accessibility
Figure 41a

41.2 **MOUNTING LOCATION AND HEIGHT**

Where permanent identification is provided for rooms and *spaces*, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall *space* to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall.

41.00: **SIGNAGE**

41.2.1 Mounting location shall allow a person to approach within three inches (3" = 76mm) of *signage* without encountering protruding objects or standing within the swing of a door.

41.2.2 Mounting height shall be 60 inches (60" = 1524mm) above the finish floor to the centerline of the sign.

41.3 **CHARACTER PROPORTION**

Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1, and a stroke-width-to-height ratio between 1:5 and 1:10.

41.4 **CHARACTER HEIGHT**

Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read.

41.4.1 The minimum height of suspended or overhead characters is three inches (3" = 76mm) and is measured using an upper case X.

41.4.2 Lower case characters are permitted.

41.5 **RAISED AND BRAILLED CHARACTERS AND PICTORIAL SYMBOL SIGNS**

Shall comply with the following:

41.5.1 Letters and numerals shall be raised one thirty-second of an inch (1/32" = 0.8mm), upper case, sans serif or simple serif type.

41.5.2 Letters and/or numerals shall be accompanied with Grade 2 *Braille*.

41.5.3 Raised characters shall be at least 5/8" of an inch (5/8" = 16mm) high, but no higher than two inches (2" = 51mm).

41.5.4 Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be six inches (6" = 152mm) minimum in height.

41.6 **FINISH AND CONTRAST**

The characters and background of signs shall be eggshell, matte, or other non-glare finish. Characters and symbols shall contrast with their background: either light characters on a dark background or dark characters on a light background.

41.7 **SYMBOLS OF ACCESSIBILITY**

Facilities and elements required to be identified as *accessible* by 521 CMR 41.1.3 shall use the international symbol of *accessibility*. The symbol shall be displayed as shown in Fig. 41a.

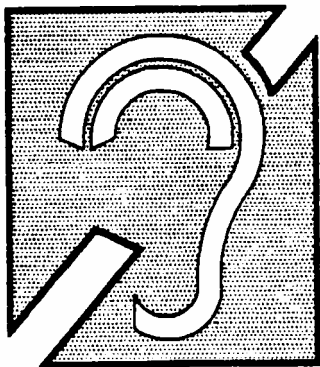
41.00: **SIGNAGE**

41.8 **VOLUME CONTROL TELEPHONES**

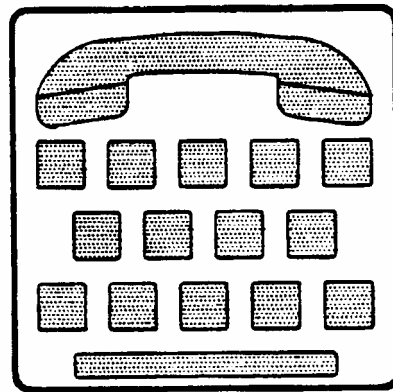
Telephones required to have a volume control under **521 CMR 37.5**, shall be identified by a sign containing a depiction of a telephone handset with radiating sound waves.

41.9 **TEXT TELEPHONES (TTY)**

Text telephones (TTY) required by **521 CMR 37.8, Text Telephones** shall be identified by the international *TTY* symbol (See **Fig. 41c**). In addition, if a facility has a public *text telephone (TTY)*, directional *signage* indicating the location of the nearest *text telephone (TTY)* shall be placed adjacent to all banks of telephones that do not contain a *text telephone (TTY)*. Such directional *signage* shall include the international *TTY* symbol. If a *facility* has no banks of telephones but a public *text telephone (TTY)* is available, the directional signage shall be provided at the entrance (e.g., in a *building directory*).



**International Symbol of Access
for Hearing Loss
Figure 41b**



**International TTY Symbol
Figure 41c**

41.10 **ASSISTIVE LISTENING SYSTEMS**

In *assembly areas* where permanently installed *assistive listening systems* are required by **521 CMR 14.5, Assistive Listening Devices** the availability of such systems shall be identified with *signage* that includes the international symbol of access for hearing loss. See **Fig 41b**.

41.11 **ILLUMINATION LEVELS** (reserved)