Guide to the ADA Standards

Chapters 1 - 3

Guide to the ADA Standards

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[Upcoming: Guides covering Chapters 4 – 10]

About this Guide

This guide explains requirements in the current editions of the ADA Standards issued by the Department of Justice (DOJ) and the Department of Transportation (DOT). It was developed by the U.S. Access Board in cooperation with DOJ and DOT. It is important to use this guide along with a complete copy of the ADA Standards as it explains, but does not contain or reprint, the text of the ADA Standards.

DOJ updated its ADA Standards in 2010, which are referred to as the *2010 ADA Standards for Accessible Design.* These standards, which replace the original ADA Standards DOJ issued in 1991, became mandatory for newly constructed and altered facilities as of March 15, 2012. DOJ's ADA Standards apply to all facilities covered by the ADA except public transit facilities.

DOT issued its current edition of the ADA Standards in 2006. These standards apply to facilities used by state and local governments to provide public transportation. They became effective on November 29, 2006 and replace earlier standards issued by DOT in 1991.

The current DOJ and DOT ADA Standards are very similar as both documents are closely based on the Access Board's ADA Accessibility Guidelines (2004). This guide explains requirements of both standards, which are jointly referred to as the "ADA Standards" or "the standards." Most provisions of each standard are identical and discussed in this guide without distinction. Both standards contain several unique provisions not found in the other. In these limited areas, the guide notes the differences and explains how they are to be applied. This guide does not cover requirements of the original 1991 ADA Standards issued by DOJ or DOT.

In addition to explaining the requirements of the standards, this guide also provides clearly labeled recommendations for best practices that exceed the minimum requirements and are thus optional to follow. In addition, the guide provides links to other federal accessibility requirements that may also apply to entities covered by the ADA.

 Questions or comments on the guide should be directed to the Access Board at ta@access-board.gov, (800) 872-2253 (voice), or (800) 993-2822 (TTY).

Using the ADA Standards

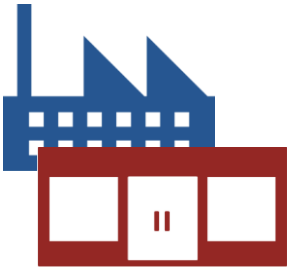
The design standards issued under the Americans with Disabilities Act (ADA) by the Department of Justice and the Department of Transportation are used to ensure access to the built environment for people with disabilities. The ADA Standards apply nationwide, in addition to any applicable state or local codes, where facilities are newly built or altered. Most facilities in the public and private sectors are covered by the ADA.

Facilities Covered by the ADA

State and Local Government Facilities

Units of government at the state, county, and local levels are subject to the ADA and must comply with the ADA Standards in new construction and alterations. All types of public facilities are covered, including schools, hospitals, public housing, courthouses, and prisons. Federal facilities are not covered by the ADA, but by an earlier law, the Architectural Barriers Act (ABA) and must meet separate, though very similar, standards.

Places of Public Accommodation and Commercial Facilities



In the private sector, the ADA Standards apply to places of public accommodation and commercial facilities. Places of public accommodation are facilities that affect commerce and that fall within twelve categories listed in the statute, including stores and shops, restaurants and bars, sales or rental establishments, service establishments, theaters, places of lodging, recreation facilities, assembly areas, private museums, places of education, and others. Nearly all types of private businesses that serve the public are included in the twelve categories, regardless of size. Commercial facilities include office buildings, factories, warehouses, manufacturing plants, and other facilities whose operations affect commerce.

Transportation Facilities

Bus stops and stations, rail stations, and other transportation facilities are required to be accessible by the ADA. The ADA also establishes standards for transportation vehicles, including buses, vans, and rail cars (which are not discussed in this guide).

Exemptions (Religious Entities and Private Clubs)

The ADA does not apply to religious organizations and private clubs, entities which historically have been exempt from federal civil rights laws. Places of worship and other facilities controlled by a religious organization, such as a school or day care center, are not subject to the ADA Standards. Private clubs may be similarly exempt depending on their exclusiveness, operations, and other factors. Facilities not subject to the ADA Standards may still be subject to state or local access codes.

ADA Coverage of Housing

Although private residential housing is not covered by the ADA, government-owned or operated housing and certain privately owned facilities that provide housing are subject to the ADA and its accessibility requirements. Government owned or operated facilities may include public housing, student and faculty housing, employee housing, nursing homes, temporary housing provided in emergencies, and social service facilities, such as homeless shelters and halfway houses.

Information on the Fair Housing Act is available from the Department of Housing and Urban Development at www.hud.gov or www.fairhousingfirst.org, (888) 341-7781 (V/TTY).

In the private sector, the ADA's coverage of housing is limited to places of public accommodation, such as social service establishments and housing provided on or behalf a place of education. The ADA does not apply to individually owned or leased housing in the private sector not used as a public accommodation, including single family homes, condominiums, or apartments. (Many types of multi-family housing in the private and public sectors are subject to the design requirements of the Fair Housing Act.) Places of public accommodation located in residential buildings, such as rental and sales offices, commercial spaces, and hotel accommodations, are covered by the ADA Standards.

ADA Regulations

Regulations issued by DOJ and DOT to implement the ADA provide important information and instructions on using the ADA Standards. The regulations define the types of facilities covered, set effective dates, and provide additional detail on certain provisions in the standards. They also address existing facilities and topics beyond building design, including access to programs, services, and communication and provision of auxiliary aids and services.

DOJ's ADA Regulations

DOJ regulations issued under title II of the ADA apply to programs, activities, and services of state and local governments. DOJ's title III regulations apply to public accommodations and commercial facilities. Both regulations contain general nondiscrimination provisions and address access to programs and services, effective communication, auxiliary aids and services, and reasonable modifications of policies, practices, and procedures. Under the title II regulation, state and local

governments must provide program accessibility in existing facilities, and the under the title III regulation public accommodations must remove architectural barriers in existing facilities where it is "readily achievable." In addition, both regulations specify the accessibility standards applicable to new construction and alterations, and to the provision of program access or barrier removal.

Title II Regulation for State and Local Governments
28 CFR Part 35
Available at www.ada.gov

Title III Regulation for Places of Public Accommodation and Commercial Facilities
28 CFR Part 36
Available at www.ada.gov

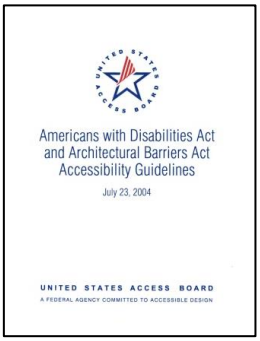
DOT's ADA Regulations

DOT's ADA regulations implement the transportation and related provisions of titles II and III of the ADA. They apply to any public entity that provides public transportation or intercity or commuter rail transportation, as well as to any private entity that provides public transportation or that is not primarily engaged in the business of transporting people but operates a demand responsive or fixed route system. They cover both vehicles and facilities and include nondiscrimination requirements associated with the provision of transportation services.

DOT Regulation for Transportation Services
49 CFR Part 37
Available at www.fta.dot.gov

ADA Accessibility Standards

Both DOJ's and DOT's ADA Standards are based on minimum accessibility guidelines adopted by the Access Board in 2004, known as the ADA Accessibility Guidelines. As a result, these two sets of standards are very similar for the most part. However, each contains additional requirements that are specific to the facilities covered by the respective agencies.



DOJ's and DOT's ADA Standards are based on the Board's ADA Accessibility Guidelines (2004).

DOJ's 2010 ADA Standards for Accessible Design

DOJ's 2010 ADA Standards are available on DOJ's ADA website at www.ada.gov.

DOJ's 2010 ADA Standards for Accessible Design became effective March 15, 2012 and apply to all facilities covered by the ADA except public transit facilities. This includes state and local government facilities subject to title II and places of public accommodation and commercial facilities under title III.

As implemented under title II, the 2010 Standards consist of the regulatory provisions in 28 CFR §35.151 and appropriate sections of the Access Board's 2004 ADA Accessibility Guidelines (36 CFR part 1191, appendices B and D).

For title III of the ADA, the 2010 Standards consist of both the regulatory provisions in 28 CFR part 36, subpart D, and appropriate sections of the Access Board's 2004 ADA Accessibility Guidelines (36 CFR part 1191, appendices B and D).

DOJ's 2010 Standards include provisions not included in DOT's standards that supplement or modify requirements related to scoping for:

- assembly areas (§221)
- medical care facilities (§223)
- transient lodging, including housing at places of education (§224)
- detention and correctional facilities (§232)
- social service establishments (§233)
- housing provided by state or local governments for sale to individual owners (§233).

DOT's ADA Standards (2006)

DOT's ADA Standards apply to facilities used by state and local governments to provide designated public transportation and to commuter and intercity rail stations. The current edition of the standards applies to new construction and alterations undertaken after November 29, 2006. These standards are very similar to DOJ's 2010 Standards but include unique provisions concerning:

- accessible route location (§206.3)
- detectable warnings on curb ramps (§406.8)
- bus boarding and alighting areas (§810.2.2)
- rail station platform (§810.5.3).

How the ADA Standards are Enforced

DOJ's and DOT's ADA Standards are not a building code, nor are they enforced like one. They constitute design and construction requirements issued under a civil rights law. The ADA's mandates, including the accessibility standards, are enforced through investigations of complaints filed with federal agencies, or through litigation brought by private individuals or the federal government. There is no plan review or permitting process under the ADA. Nor are building departments required or authorized by the ADA to enforce the ADA Standards (some building departments even include a disclaimer on their plan checks indicating that ADA compliance is not part of their approval process). Entities covered by the law ultimately are responsible for ensuring compliance with the ADA Standards in new construction and alterations.

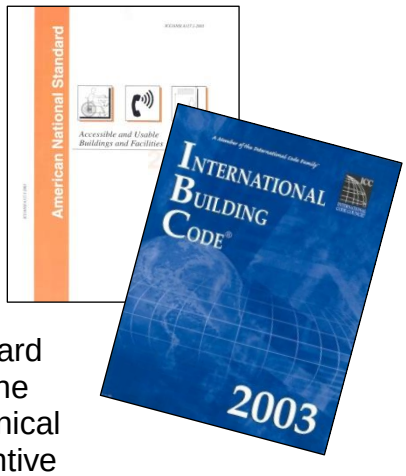
State and Local Access Codes

Building design and construction, including safety and accessibility, is largely regulated and enforced by states and local jurisdictions. The ADA does not intrude upon the authority these governmental entities have traditionally exercised over the built environment. Most states and many local jurisdictions have laws or ordinances that address access to the built environment. Several states have their own accessibility codes, while others have implemented requirements based on those of the ADA or adopted access provisions contained in model building codes. The ADA Standards apply nationally *in addition to* any applicable state or local access requirements or codes. An occupancy permit issued by a local jurisdiction (or a building inspection) does not ensure ADA compliance. Although local building departments sometimes can waive building code requirements, a local waiver does not affect the entity's obligation to comply with the ADA Standards.

State or Local Code Certification

The ADA sets up a voluntary process through which a state code can be certified by DOJ as meeting or exceeding the ADA Standards that apply to public accommodations and commercial facilities. Certification facilitates compliance by ensuring that state and local code requirements are consistent with the ADA accessible design requirements. This process, in effect, integrates the requirements for accessible design under the ADA into state or local code enforcement processes. Under a certified code, design errors are more likely to be caught and remedied before construction. Also, having a DOJ-certified code offers rebuttable evidence of compliance with title III of the ADA in response to a legal challenge under the law concerning accessible facility construction. Information on ADA state code certification is available from DOJ and its website at www.ada.gov/certcode.htm. DOT does not certify codes as compliant with its ADA Standards for transportation facilities.

Model Building Codes and Industry Standards



The Access Board's 2004 ADA Accessibility Guidelines, upon which the current ADA Standards are based, have been harmonized to a significant extent with industry standards and model building codes, including the International Building Code (IBC). The IBC contains application and scoping provisions for accessibility (in chapters 10, 11 and 34) that correspond to those in the ADA guidelines (chapters 1 and 2). For technical provisions, the IBC references a consensus standard developed through the American National Standards Institute (the ANSI A117.1 standard), which is highly consistent with the technical chapters (3-10) of the ADA guidelines. There are some substantive differences. For example, unlike the ADA guidelines, the ANSI standards require an additional vertical grab bar at water closets, transfer shower stalls, and tubs. Detailed comparisons between the 2004 ADA guidelines and the IBC/ANSI standard are available on the Access Board's website at www.access-board.gov and the International Code Council's website at www.iccsafe.org.

The ADA Standards also reference several industry standards, including the American Society of Mechanical Engineers (ASME) elevator safety code and the National Fire Protection Association (NFPA) 72 Fire Alarm Code. In addition, the ADA Standards reference provisions in the IBC covering accessible means of egress.

Chapter 1: Application and Administration

Purpose [§101]

The ADA Standards apply to new construction, alterations, and additions. While the scoping and technical requirements for new construction also apply to alterations and additions, provisions and exceptions specific to alterations or additions are provided throughout the document.

Furnishings and Equipment

The DOJ and DOT ADA Standards, like most building requirements and codes, apply to those elements that are fixed or built-in. Moveable elements and furnishings are generally not addressed or covered by the ADA Standards. DOJ's ADA regulations include requirements that may impact non-fixed elements, such as providing accessible medical equipment, including examination tables and chairs, to provide persons with disabilities effective access to health services. In addition, placement of non-fixed elements can affect the accessibility of an area by encroaching into accessible routes and clearances.

Recommendation: Design spaces so that planned furnishings and moveable elements are accommodated without encroaching into accessible routes and clearances. It is also helpful to consider relevant requirements in the standards when specifying or acquiring moveable furnishings, such as tables, systems furniture, and vending machines to ensure their usability.

Unless specifically permitted, access features required by the ADA Standards must be fixed or built-in even though portable alternatives may be available. This includes requirements for assistive listening systems, visual alarms, shower seats, ramps, and platform lifts. (In removing barriers to existing places of public accommodation, portable solutions may be permitted in some cases where permanent solutions are not readily achievable).

Maintenance of Accessible Features

The ADA Standards address the design, but not the maintenance, of building elements and features. However, it is important that accessible features be properly maintained in working order. DOJ's and DOT's regulations require that features of facilities and equipment required to be accessible be maintained in operable working condition, except for isolated or temporary interruptions in service due to maintenance or repairs.

Dimensions for Adults and Children [§102]

The ADA Standards provide technical specifications for building elements designed specifically for use by children 12 and younger. These provisions address access for children to:

- drinking fountains (§602)
- water closets and toilet compartments (§604)
- lavatories and sinks (§606) and
- dining and work surfaces (§902).

The ADA Standards also include requirements for play areas (§240 and §1008) and recommendations (advisory notes) with respect to children's reach ranges (§301.1) and ramp handrails used primarily by children (§505.4).

The ADA Standards do not specify where or when elements are to be designed or constructed for use primarily by children. This determination is left to other building requirements or regulations, good practice, client preference, or other factors. The provisions covering elements designed for children's use (other than those addressing play areas)

are structured as exceptions to specifications based on adult dimensions. Once the decision is made to design certain elements based on children's dimensions and to use the exceptions, the alternate specifications provided in the ADA Standards must be followed. The ADA Standards do not require provision of additional accessible elements in order to separately accommodate both children and adults, although doing so may be advisable in mixed use spaces. For example, in some restrooms at facilities such as schools and children's museums, it may be a good idea to provide a wheelchair accessible toilet compartment for use by adults and another for use by children.

Equivalent Facilitation [§103]

The ADA Standards allow alternatives to specified requirements that provide substantially equivalent or greater accessibility and usability as an "equivalent facilitation." The question of whether an alternative solution is "equivalent" involves considerations as to whether it is just as, if not more, effective in terms of accessibility, usability, convenience, and reliability for people with disabilities. For example, the ADA Standards specify permanent or built-in features for independent access. Unless otherwise specified, alternatives involving temporary or portable solutions or requiring assistance from others are not generally deemed equivalent to the required minimum level of access.

The provision of equivalent facilitation is intended to accommodate good faith innovations and technological advances not anticipated by the ADA Standards. It is not to be used as a means to resolve oversights in design or construction. Understanding the rationale for certain specifications is often helpful in determining whether an alternative is equivalent. For example, transfer shower stalls are required to be 36 inches by 36 inches absolute so that grab bars remain within reach from the seat. A wider transfer shower stall would not qualify as "equivalent facilitation" because it would make the grab bars less usable from the seat and less accessible to individuals with disabilities.

DOT's ADA regulations (§37.9) detail the process, procedures and requirements for seeking a determination of equivalent facilitation for a public transportation facility subject to DOT's ADA Standards. No departures from specific provisions of the DOT standards can be made without a determination issued by the Administrator of the relevant operating administration (e.g., the Federal Transit Administration, the Federal Railroad Administration, or the Federal Highway Administration) with the concurrence of the Assistant Secretary for Transportation Policy. Requests for official determinations of equivalent facilitation should be directed to the Federal Transit Administration.

DOJ's ADA regulations do not establish a process for approving or certifying equivalent facilitation alternatives to requirements of DOJ's ADA Standards. In the case of DOJ's ADA Standards, the responsibility for demonstrating equivalent facilitation in the event of a legal challenge or complaint rests with the covered entity. In pursuing equivalent facilitation alternatives under DOJ's ADA regulations, it is good practice to:

- base decisions on sound independent research and reliable data
- involve disability groups and individuals with a variety of disabilities in the process
- document the effort thoroughly, including information and feedback from consulted sources

Conventions [§104]

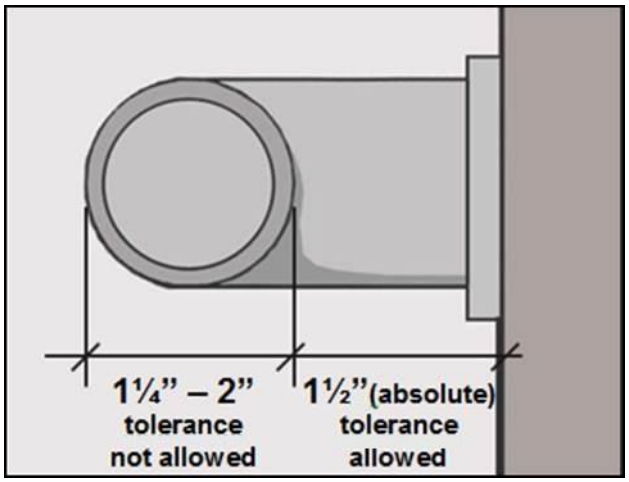
Most dimensions in the ADA Standards are specified as a minimum, maximum, or as a range. In a few areas, absolute dimensions are specified.

Construction and Manufacturing Tolerances

A tolerance is an unintended, but permitted (i.e., "tolerated"), variation from a specified dimension resulting from the process of construction or manufacture. The ADA Standards recognize conventional industry tolerances for dimensions not expressed as a range. This applies to field work, not design work. Tolerances necessary for a particular manufacturing process are also permitted. Information on specific tolerances may be available from industry and trade organizations, code groups and building officials, and published references.

Many dimensions in the ADA Standards are expressed as a range instead of an absolute so that designers can allow some room for minor deviations in construction or manufacturing. Tolerances do not apply to dimensions specified as a range.

Grab Bar Diameter and Clearance



Construction or manufacturing tolerances are permitted for the required clearance at grab bars since this is an absolute dimension (1½ inch), but they are not permitted for the grab bar diameter because a range is specified (1¼" to 2").

Calculation of Percentages

Some provisions in the ADA Standards specify a minimum number of elements or spaces as a minimum percentage or proportion. Rounding up to the next greater whole number is required where fractions or remainders occur. For example, if the standards require access to at least 5% of an element and a total of 25 are provided, at least 2 must be accessible (rounding up from 1.25).

In the case of specifications for dimensions or sizes that involve percentages or ratios, rounding down for values less than one half is allowed.

Recommendation: Dimensions expressed as a range are intended to accommodate deviations in the field. It is good practice to specify accordingly. For example, for the location of wheelchair accessible water closets (16" – 18" centerline from side walls or partitions), specifying to the midpoint of the range (17") will accommodate any construction variations up to 1" plus or minus. For dimensions not expressed as an absolute ("X maximum" or "Y minimum"), specify in a manner that accommodates the expected tolerance *within* the required dimensions by subtracting the tolerance from the required maximum or adding it to the required minimum.

Figures in the Standards

Figures in the ADA Standards are provided only for informational purposes to illustrate dimensions and requirements contained in the text. They do not establish enforceable requirements unless specifically stated otherwise.

Referenced Standards [§105]

The ADA Standards reference industry standards for certain elements, including automated doors (ANSI/BHMA standards), means of egress (IBC), fire alarms (NFPA National Fire Alarm Code), elevators and platform lifts (ASME Safety Code), and play surfaces (ASTM standards).

The specific editions of these documents referenced by the ADA Standards must be followed. Use of a more recent edition of a referenced standard is not recognized until DOJ and DOT update their standards to reference that edition. Compliance with a later edition may be possible under the provision for "equivalent facilitation" if it is comparable to, or provides greater accessibility than, the editions currently referenced by the ADA Standards.

Definitions [§106]

Many important terms used in the ADA Standards are defined in section 106. DOJ's and DOT's regulations also include definitions that are relevant to use of the ADA Standards. For example, DOJ's regulations define entities covered by the ADA, such as "places of public accommodation," or that are exempt from the ADA, such as "religious entities."

Defined terms in referenced standards govern when those terms are not defined in either the ADA Standards or regulations. Section 106.3 of the ADA Standards provides that terms not specifically defined in section 106.5, in regulations issued by either DOJ or DOT, or in referenced standards, shall be defined by collegiate dictionaries in the sense that the context implies.

Common Questions

How are the ADA Standards developed?

The ADA charges the Access Board with the responsibility of developing guidelines for accessible design that are intended to serve as the basis for mandatory and enforceable ADA Standards adopted by DOJ and DOT. The ADA Standards and the Board's guidelines are developed and adopted using the procedures that apply to the federal rulemaking process. Under this process, agencies publish proposed language in the *Federal Register*, and then provide the public with the opportunity to provide input during a specified comment period. Often, agencies also hold public hearings during the comment period. Prior to publication of the final rule, agencies must review the public comments they have received. They also must assess the costs and benefits of the new guidelines or standards on the public, including their impact on small businesses. The same process must be followed for changes and updates to the guidelines and standards.

Do the ADA Standards override state or local requirements?

No, both the ADA Standards and all applicable state and local requirements must be satisfied. Where there is a difference, the standard that provides greater accessibility must be followed.

If a state or local authority interprets an accessibility requirement differently than how a comparable requirement in the ADA Standards is interpreted under the ADA (or waives that requirement completely), does this have any bearing on ADA compliance?

No. While state or local authorities may interpret or waive their own state or local accessibility codes as they see fit, those decisions have no effect on the obligation to comply with requirements of the applicable ADA Standards. Covered entities are still required to design, construct or alter their facilities in compliance with the ADA Standards even where comparable requirements in a state or local code are interpreted or applied differently or are waived altogether by the appropriate state or local official.

Is there an official review and approval process under the ADA for alternatives pursued as an "equivalent facilitation"?

There is an official review and approval process under the ADA only for transportation facilities (and vehicles) subject to DOT's ADA regulations, which establish a process for determining whether a specific departure from the specific technical and scoping requirements provides equal or greater accessibility.

DOJ does not have a mechanism to certify any specific variation from its 2010 Standards as being "equivalent." Proposed alternative designs, when supported by available data, are not prohibited; but in any ADA title II or title III investigation,

compliance review, or lawsuit, the covered entity would bear the burden of proving that any alternative design provides equal or greater access.

Can later editions of the industry standards or building codes referenced by the ADA Standards be used?

The specific editions of the industry standards referenced by the ADA Standards are to be followed until DOJ or DOT revises its ADA Standards to reference later editions. Compliance with a later edition of a referenced standard or building code not currently referenced by the ADA Standards may be possible under the provision for "equivalent facilitation" if it is comparable to, or provides greater access than, the referenced editions.

Further Guidance

Technical assistance and additional guidance on using the ADA Standards is available from the:

U.S. Access Board
(800) 872-2253 (voice)
(800) 993-2822 (TTY)
ta@access-board.gov
www.access-board.gov

Department of Justice
(800) 514-0301 (voice)
(800) 514-0383 (TTY)
www.ada.gov

Federal Transit Administration
(888) 446-4511
FTA.ADAAssistance@dot.gov
www.fta.dot.gov

Chapter 2:
Scoping Requirements

New Construction

Alterations and Additions

ADA Scoping: New Construction

This guide provides an introduction to the scoping requirements that form the basis for the Department of Justice's 2010 ADA Standards and the DOT ADA Standards and is not intended to be comprehensive or used as a stand-alone technical guide to those requirements. Users of this guide must familiarize themselves with the specific scoping requirements that apply to each element, building, facility, or site that is subject to the Standards adopted to implement titles II and III of the ADA.

Although this guide focuses on the provisions of Chapter 2 of the ADA Accessibility Guidelines, which form the basis of the DOJ and DOT ADA Standards, the 2010 Standards adopted by DOJ incorporate regulatory language that modifies or augments a number of those provisions, or address certain occupancies that are not specifically addressed in Chapter 2, and these regulatory provisions must be read in conjunction with Chapter 2 to ensure an accurate understanding of the legal requirements. Readers should become familiar with how the 2010 Standards modify the requirements in Chapter 2 and should not assume that by reading the provisions of Chapter 2 alone they will have all the information and perspective they need to achieve compliance with the 2010 Standards.

Scoping Requirements

Requirements in Chapter 2 indicate which elements and spaces must be accessible on a site or in a facility (the scope of coverage). These "scoping" requirements apply technical provisions in Chapters 3 – 10 to those covered elements and spaces provided on a site.

Applicable building codes, design practices, and other factors determine the elements and spaces required for a site, including parking, means of egress, and plumbing fixtures. The ADA Standards, on the other hand, specify the elements and spaces provided that must be accessible.

Application [§201]

The ADA Standards apply to the various types of facilities subject to the ADA, from simple structures to complex, multi-building sites such as university campuses and airports. Requirements in the standards apply to both exterior and interior spaces and elements provided on a site, usually without distinction. Provisions for parking, for example, apply equally to exterior lots and to parking garages. The standards cover permanent facilities and temporary facilities (other than those used in construction), such as reviewing stands, stages, portable toilets, and temporary classrooms.

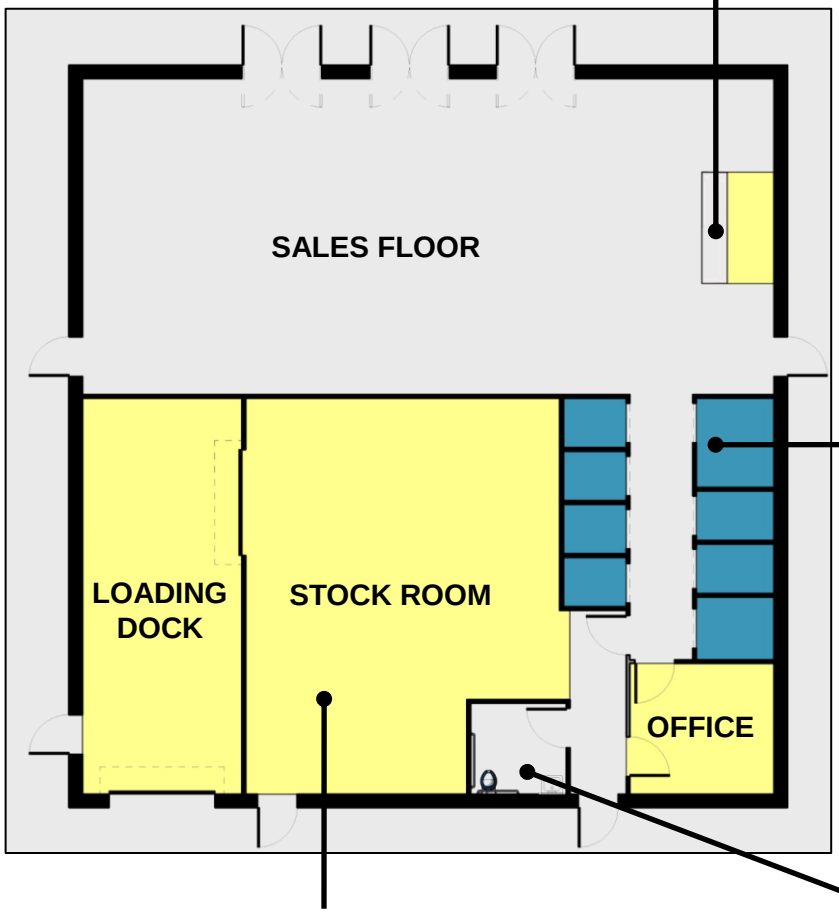
In new construction, all areas must be fully accessible, including multiple spaces of the same type, unless otherwise specified. Areas not required to be fully accessible include:

- certain limited-use or raised spaces that are exempt (§203)
- employee work areas (partial access) (§203.9)
- spaces covered by scoping provisions that require only a specified portion of the total number to comply, such as dressing rooms and patient bedrooms (various provisions in Chapter 2)

Example: Retail Facility

This example of a retail facility shows how scoping requirements for certain elements and spaces (sales counters and fitting rooms) apply and indicates employee work areas.

Sales Counters *(§227)*
Access is required to at least 1 of each type of sales counter provided. If counters are dispersed throughout a facility, accessible counters also must be dispersed.



Fitting Rooms (§222)
Access is required to at least 5% (but no less than 1) of each type of use in each cluster.

Toilet Rooms (§213)
Public use and common use toilet rooms, including employee restrooms, must comply.

Employee Work Areas (§203.9)
Partial access is required to areas used only by employees for work (worker side of sales counters, offices, stock room, and loading dock).

Example: Clinical Suite

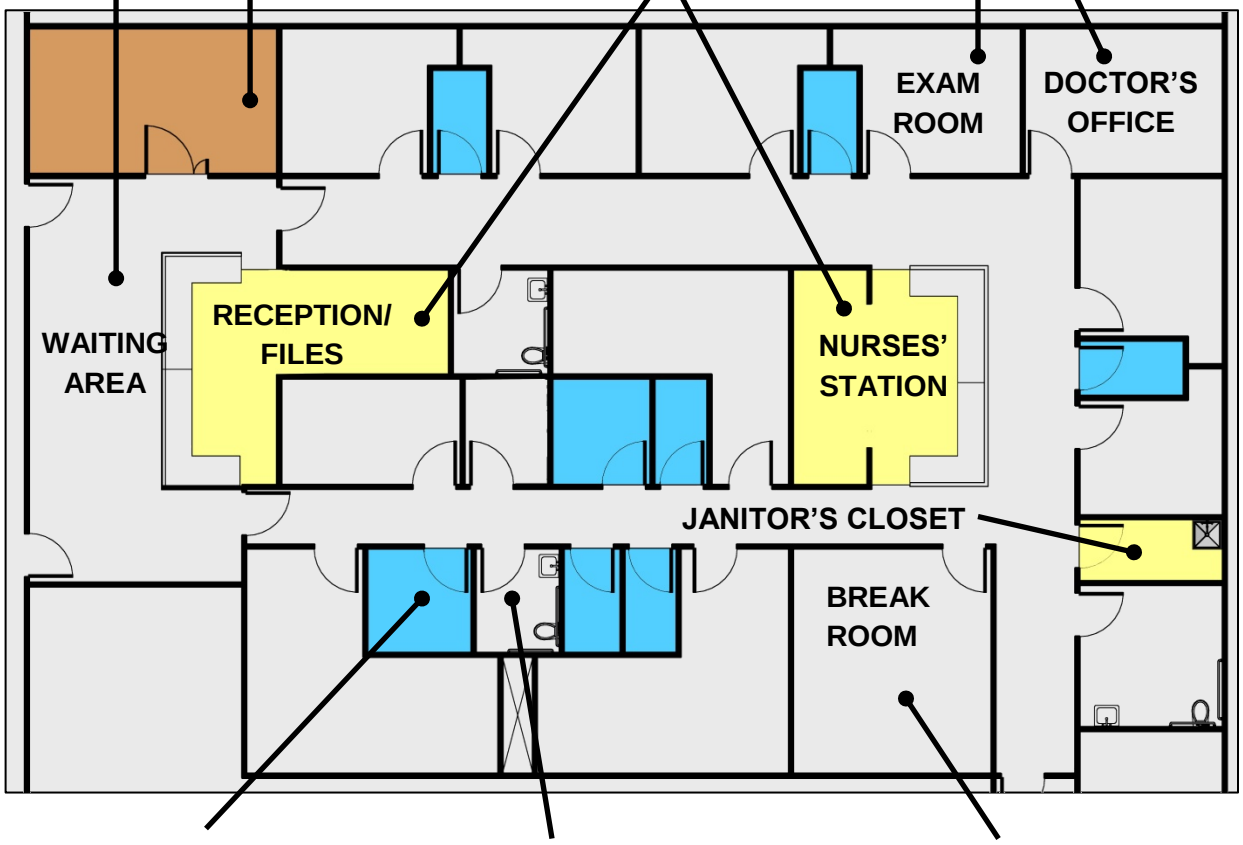
This facility includes public and common use areas and employee work areas.

Public Use Spaces (§201)
Full access to public use areas, including waiting areas and corridors

Exam Rooms and Offices (§201 and §203.9)
All exam rooms and offices used by the public must be accessible, but elements within these rooms that are used only by employees for work are not required to comply.

Mechanical Room (§203.5)
Exempt Space

Employee Work Areas (§203.9)
Partial access to areas used only by employees for work (reception/ file areas, nurses' station, and janitor's closet)



Dressing Rooms (§222)
Access is required to at least 5% (but no less than 1) of each type of use in each cluster.

Toilet Rooms (§213)
Access is required to all public and employee toilet rooms (or no more than 50% of single user toilet rooms for each use at each cluster).

Common Use (Non-Work) Areas (§201)
Full access to break rooms and to other employee areas not used for work purposes

Exception Based on Structural Impracticability in DOJ's 2010 ADA Standards and DOT"s ADA Regulations

DOJ's 2010 ADA Standards and DOT"s ADA regulations specify that full compliance is not required in new construction in rare circumstances where unique characteristics of terrain make the incorporation of accessibility features "structurally impracticable." In such a case, the new construction requirements apply except where the responsible entity can demonstrate that it is structurally impracticable to meet those requirements. This exception is very narrow and should not be used in cases of merely hilly terrain.

Even in those circumstances where the exception applies, portions of a facility that can be made accessible must still be made accessible. In addition, access must be provided for individuals with other types of disabilities, even if it may be structurally impracticable to provide access to individuals who use wheelchairs.

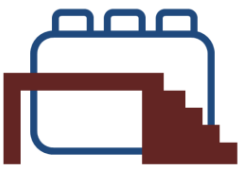
This exception is found in DOJ's 2010 Standards at §35.151(a) for title II and §36.401(c) for title III and in DOT's ADA regulations at §37.41(b).

General Exceptions [§203]

These structures and spaces are fully exempt from the standards and are not required to be accessible or on an accessible route:

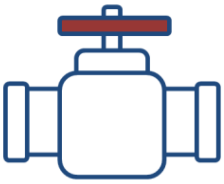
Construction Sites (§203.2)
Structures directly associated with the actual processes of construction and portable toilets used only by construction workers
Examples: scaffolding, bridging, materials hoists, construction trailers

Areas Raised for Security/ Safety (§203.3)
Areas raised primarily for purposes of security or life/ fire safety
Examples: life guard stands, fire towers, and prison guard towers



Raised Work Areas (§203.9)
Employee work areas under 300 s.f. that are elevated at least 7" as an essential functional condition of the space (excluding raised courtroom stations)
Example: Work areas with equipment/ machinery that must be operated from a platform

Limited Access Spaces (§203.4)
Spaces accessed only by ladders, catwalks, crawl spaces, or very narrow passageways
Examples: lighting/ equipment catwalks at stages and performing areas, platforms served only by ladder



Machinery Spaces (§203.5)
Spaces used only by service personnel for maintenance, repair, or occasional monitoring of equipment
Examples: elevator pits/ penthouses, mechanical/ electrical/ communications equipment rooms, water or sewage treatment pump rooms, electric substations, and transformer vaults

Single Occupant Structures (§203.6)
Single occupant structures accessed only by below-grade passageways or elevated above standard curb height
Examples: toll booths that are accessed by underground tunnels or elevated above curb height, such as those serving dedicated truck lanes

Detention/Correctional and Residential Facilities (§203.7 and §203.8)

Common use spaces in detention/ correctional facilities or residential facilities that do not serve accessible cells or dwelling units are exempt.

Certain Sports/ Recreation and Other Structures (§203.10 - §203.14)

These structures and spaces are also exempt:

- raised structures used solely for refereeing, judging, or scoring a sport
- raised boxing/ wrestling rings
- water slides and raised diving boards/ platforms
- animal containment areas not open to the public

Employee Work Areas [§203.9]

The ADA Standards require a more limited level of accessibility in employee work areas. At a minimum, areas used only by employees as work areas must meet requirements for:

- access to approach, entry, and exit the work area (§203.9)
- accessible means of egress (§207.1)
- wiring for visible alarms in areas served by audible alarms (§215.3)
- accessible common use circulation paths in most work areas of at least 1,000 sq.ft. (§206.2.8)

Other requirements, including those for turning space, do not apply to areas used only by employees for work.

Title I of the ADA prohibits discrimination based on disability in the workplace. Information on the ADA and equal opportunities in hiring and employment, including reasonable accommodations for employees, is available from the Equal Employment Opportunity Commission at (800) 669-4000 (v), (800) 669-6820 (TTY), or www.eeoc.gov.

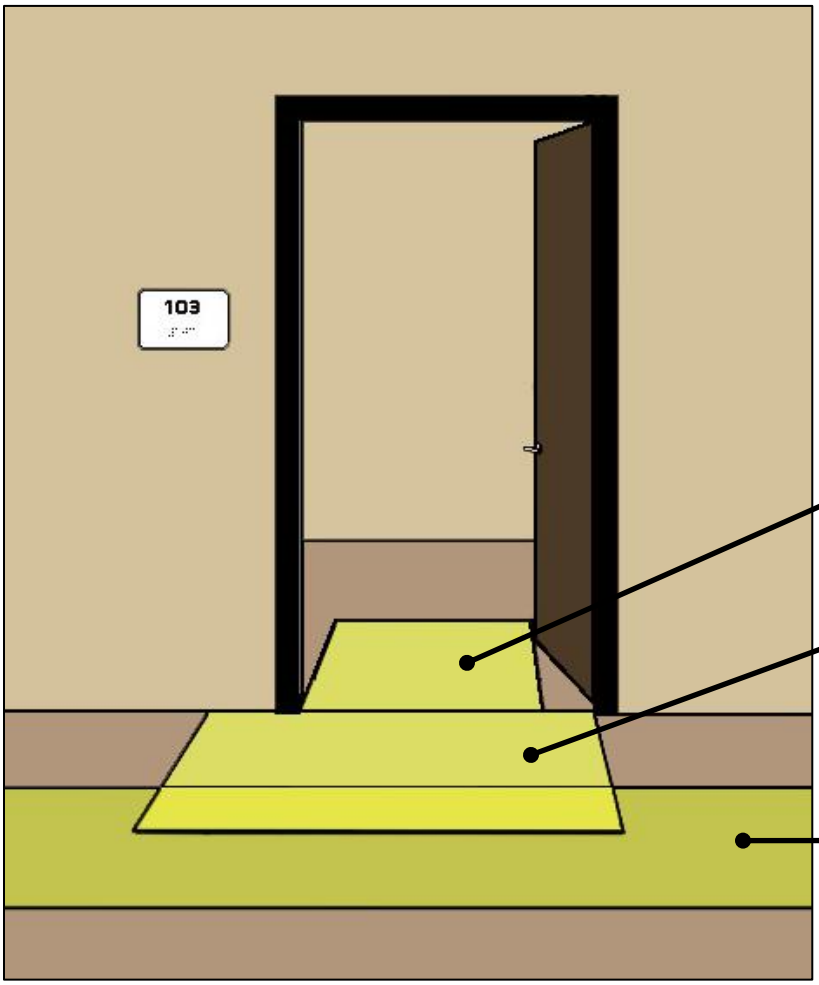
These provisions apply to those areas where only work is performed by employees. Spaces not used for work, including employee restrooms, locker rooms, break rooms, cafeterias, and parking, must be fully accessible. Some public use spaces also function as work spaces, such as medical exam rooms and classrooms. These spaces must be fully accessible for public use, but elements within used only by employees for work are not required to comply.

Recommendation: Although areas used only by employees for work are not required to be fully accessible, consider designing such areas to include non-required turning spaces, and provide accessible elements whenever possible. Under the ADA, employees with disabilities are entitled to reasonable accommodations in the workplace. Accommodations can include alterations to spaces within the facility. Designing employee work areas to be more accessible at the outset will eliminate or reduce the need for more costly retrofits in providing reasonable accommodations for employees with disabilities.

Access to Approach, Enter, and Exit Work Areas

Access for “approach, entry, and exit” requires a connecting accessible route to the work area and a compliant entrance, including entry doors or gates, plus wheelchair space in the work area. Work areas must also be served by an accessible means of egress, as required by the International Building Code.

Access for Approach, Entry, and Exit



Wiring must be designed to allow later installation of visible alarms in work areas served by audible alarms.

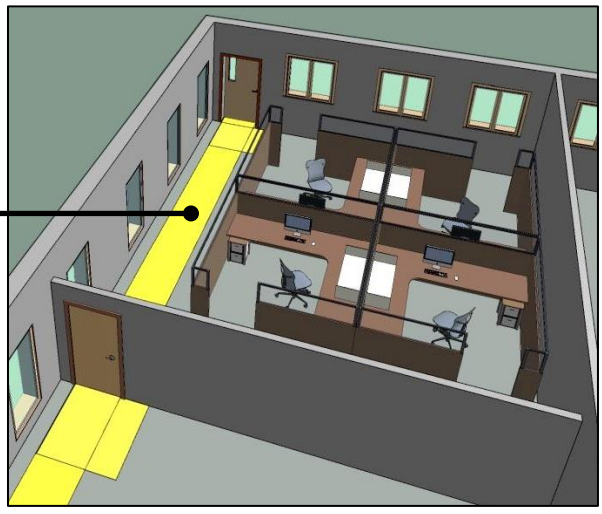
Wheelchair space (30" x 48" min.) in the work area

Accessible entry door/ gate (including maneuvering clearances on the exterior)

Connecting accessible route and accessible means of egress

Note: Signs and other elements provided outside the work area must comply with the requirements for those elements.

In some cases, other accessibility requirements may apply to an employee work area. For example, if a required accessible means of egress passes through a work area, the route must fully comply.

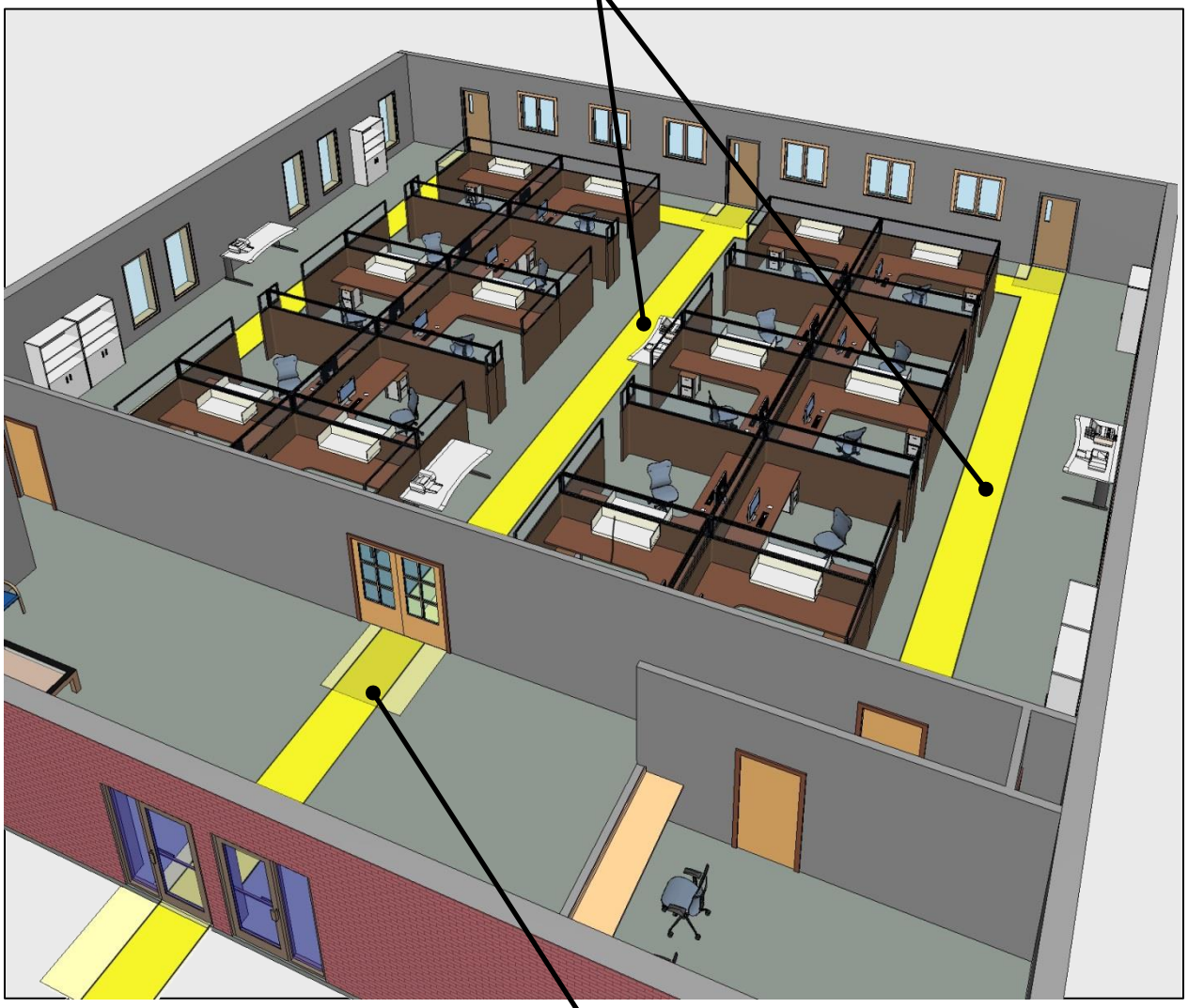


Common Use Circulation Paths in Employee Work Areas [§206.2.8]

Common use circulation paths must be accessible in work areas 1,000 square feet or more in size (as defined by permanently installed partitions, counters, casework, or furnishings). This requirement facilitates access to individual work stations within a space.

Common Use Circulation Paths

Common use circulation paths in work areas of 1,000 sq. ft. or more must meet requirements for accessible routes, including clear width and changes in level.



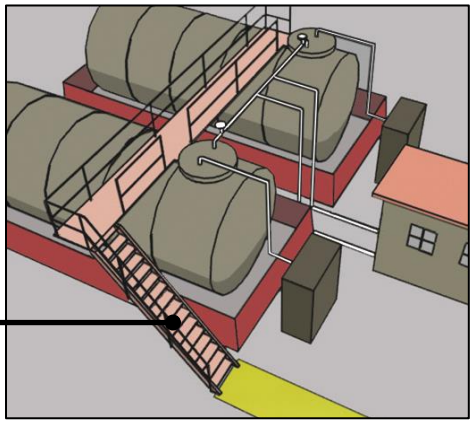
Doors and gates that are part of common use circulation paths, including those leading to and from the work area, must fully comply.

Work Area Circulation Paths: Exceptions

Common use circulation paths are required to be accessible except:

- in work areas below 1,000 sq. ft. in size
- in work areas fully exposed to the weather (regardless of size)
- where they are integral to work equipment

Circulation paths integrated into storage tanks, machinery, and other work equipment are not required to comply. Technical exceptions also allow circulation path clearances to be reduced where it is essential to the work function (§403.5, §405.5) and permit later installation of ramp handrails (§405.8).



Circulation Paths Serving Exempted Spaces [§203]

Portions of common use circulation paths serving exempt spaces within a work area are not required to comply, including routes to or within:

- machinery spaces used only by service personnel;
- spaces accessed only by ladders, catwalks, crawl spaces, or very narrow passageways;
- employee work areas under 300 sq. ft. that are elevated at least 7” as an essential functional condition of the space (excluding raised courtroom stations);
- and other exempted spaces.

Wiring for Visible Alarms [§215.3]

All employee work areas served by audible fire alarms, regardless of size, must be designed to support later installation of visible alarms after construction if needed. In new construction, alarm systems are typically provided with sufficient power resources to support the addition of strobes where they are needed to accommodate an employee who cannot hear the audible alarm.

Recommendation: In facilities where an above-average number of employees with hearing impairments is likely, such as in the offices of a school for people who are deaf or hard of hearing, it is advisable to equip alarm systems with power capacity above the level that is typically provided in order to accommodate a greater number of visual appliances.

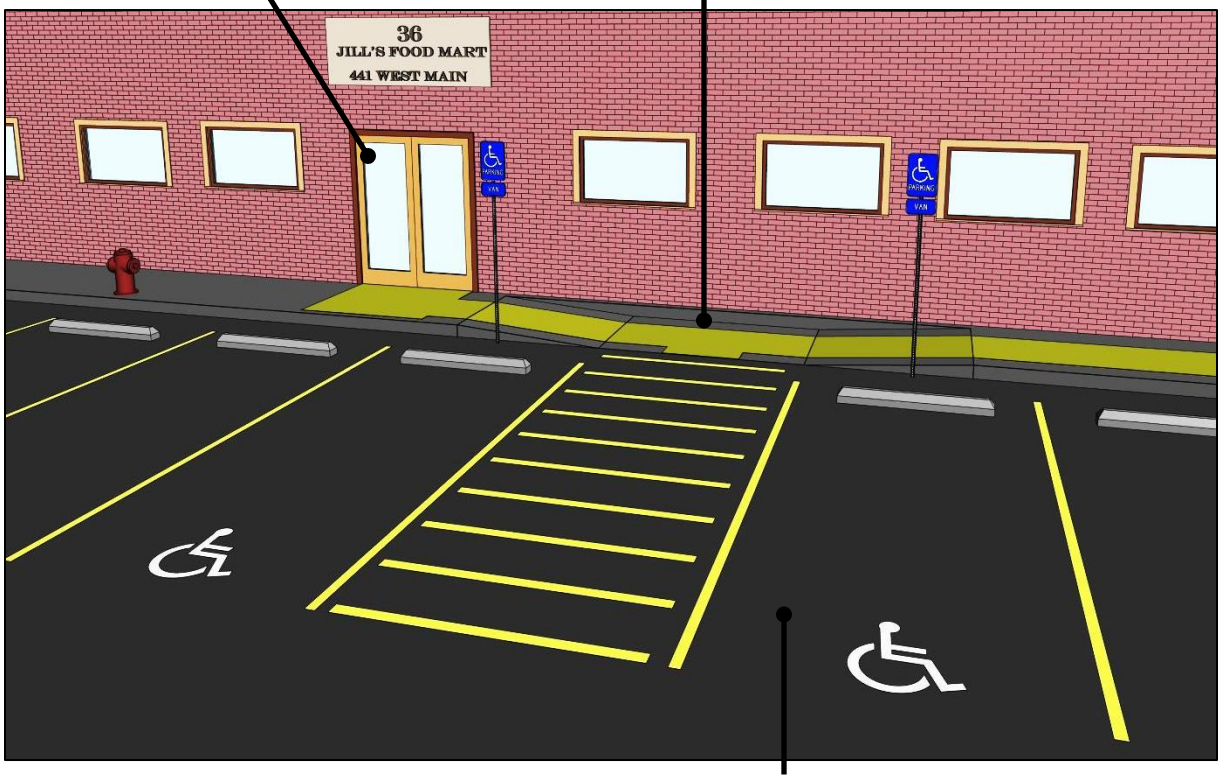
Scoping Requirements for Elements and Spaces [§204 – §243]

Scoping provisions for elements and spaces, which are summarized here, are further discussed with relevant technical provisions in the following chapters of this guide.

Site Arrival Points, Entrances, and Egress

Entrances (§206.4)
At least 60% of all public entrances must be accessible, in addition to entrances serving parking structures, tunnels or elevated walkways, tenant spaces, or those entrances that are restricted.

Accessible Routes (§206)
An accessible route to accessible entrances is required from public streets and sidewalks (unless site arrival is by vehicle only), parking, passenger loading zones, and transportation stops provided within the boundary of the site.



Accessible Means of Egress (§207)
Accessible means of egress must be provided as required by the International Building Code (2000 edition with 2001 supplement or 2003 edition).

Parking (§208)
The minimum number of accessible spaces is based on the total number of spaces provided in each parking lot or garage. At least 1 of every 6 accessible spaces must be van accessible.

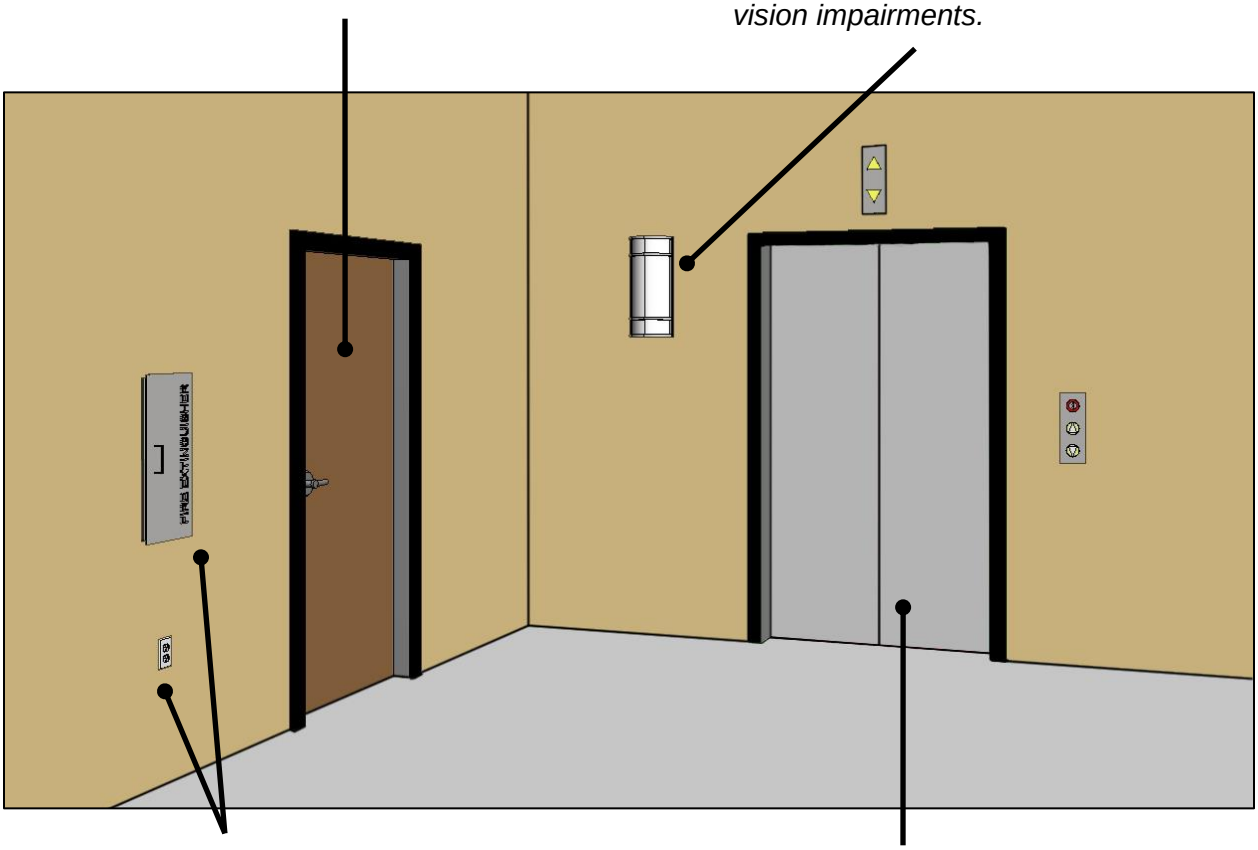
Passenger Loading Zones and Bus Stops (§209)
Where passenger loading zones are provided, an accessible loading zone is required in every continuous 100 linear feet or fraction thereof. Bus stops and bus loading zones for designated or specified public transportation, where provided, must meet requirements for bus boarding and alighting areas.

General Elements

Most scoping provisions apply to both interior and exterior elements where provided throughout facilities and sites (and are not limited to those in corridors as shown here).

Accessible Routes (§206) and Doors (§206.5)
An accessible route must connect all accessible spaces and elements in a facility, and doors on accessible routes must comply.

Protruding Objects (§204)
Objects on all circulation paths (not just accessible routes) must be installed so that they do not pose hazards to people with vision impairments.



Operable Parts (§205)
Controls, outlets, receptacles, and other operable parts are covered (excluding those used only by maintenance personnel or serving a dedicated use).

Elevators (§206.6)
Vertical access between stories is required in most multi-story facilities.

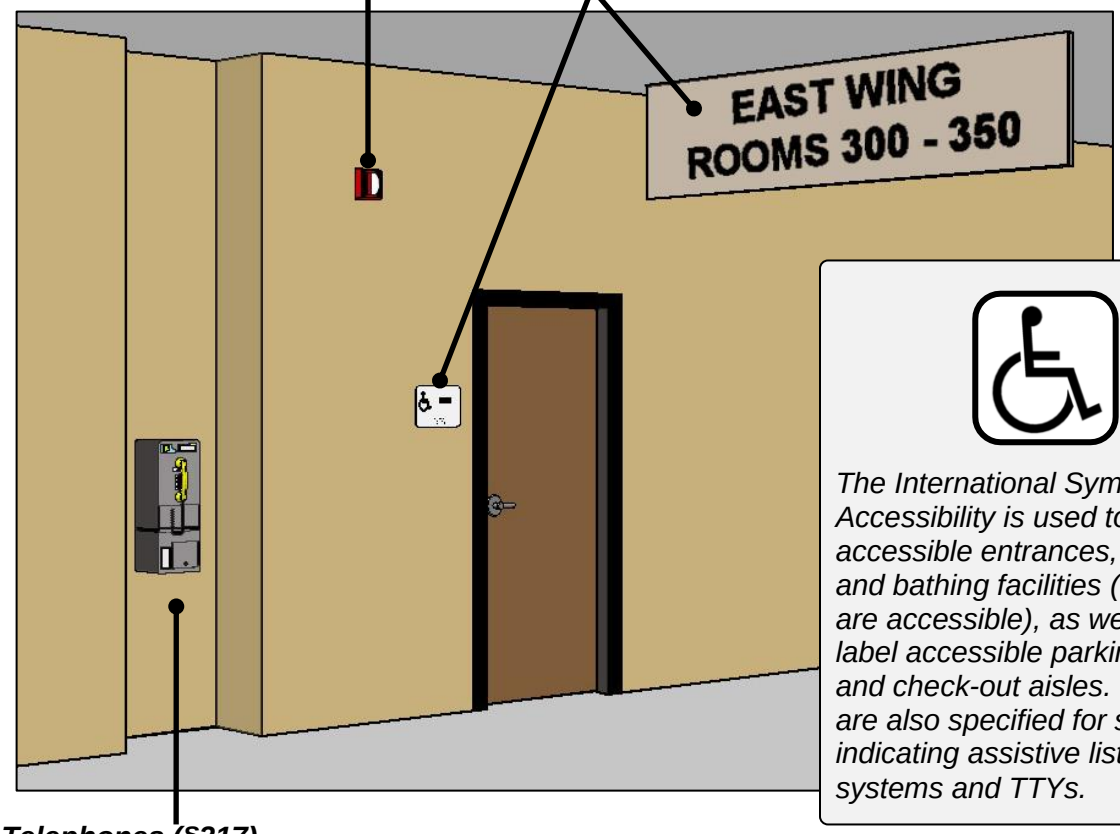
Stairways (§210)
All stairs that are part of a required means of egress must comply.

Windows (§229)
If windows are provided in accessible spaces for operation by occupants, at least 1 must comply. Each window that is required to be operable by a local code or authority also must comply. These requirements do not apply to residential facilities.

Communication Elements

Fire Alarm Systems (§215)
Fire alarms, if provided, must comply with the National Fire Alarm Code (NFPA 72) which covers audible and visual features.

Signs (§216)
Directional and informational signs, where provided, must meet requirements for visual access, and signs identifying permanent spaces, room numbers/ names, floor levels, and exits must also have raised characters and braille.



The International Symbol of Accessibility is used to identify accessible entrances, restrooms, and bathing facilities (unless all are accessible), as well as to label accessible parking spaces, and check-out aisles. Symbols are also specified for signs indicating assistive listening systems and TTYs.

Telephones (§217)
All public telephones must have volume control and wheelchair access is required to at least 1 public phone of each type (e.g., pay, closed circuit, courtesy, etc.) provided on a floor/level or exterior site (or at each bank if more than 1 bank is provided on a floor). TTYs are required based on the number of pay telephones provided.

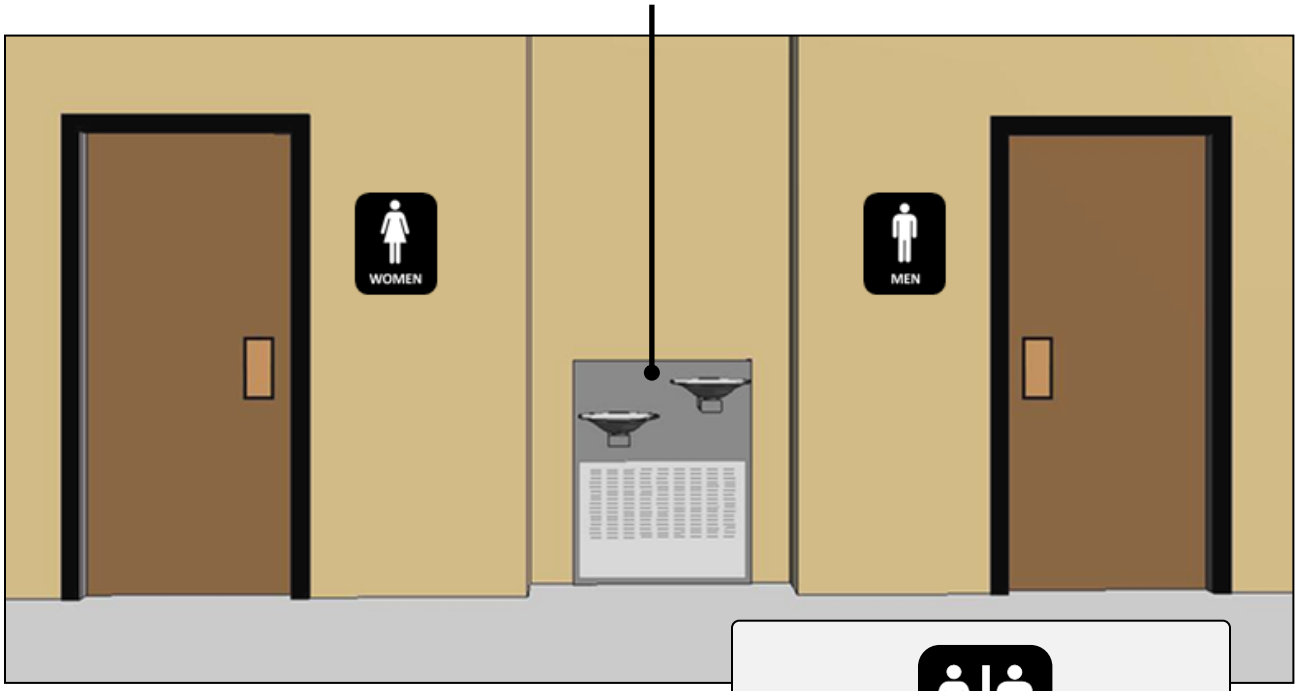
Assistive Listening Systems (§219)
Assistive listening systems for people who are hard of hearing are required in all assembly areas equipped with audio amplification and all courtrooms.

Two-way Communication Systems (§230)
Two-way communication systems provided to gain admittance to buildings must be accessible and have audible and visual signals.

Transient Lodging (§224) and Dwelling Units (§233)
A specified portion of transient lodging guest rooms and dwelling units must be equipped with accessible communication features, such as visual devices for door bells and visible alarms.

Plumbing Elements and Facilities

Drinking Fountains (§211)
Half the units provided on floors and exterior sites must be wheelchair accessible and the other half accessible to standees (dual access must be provided where 1 unit is planned on a floor or exterior site).



Toilet and Bathing Facilities (§213)
All toilet and bathing facilities provided must be accessible, except portable units (5% minimum) and single user toilet rooms clustered at one location (no more than 50% for each use are required to comply).

If multi-user toilet or bathing facilities are provided, accessible unisex facilities cannot substitute for access to multi-user rooms (except in certain alterations where compliance is technically infeasible).

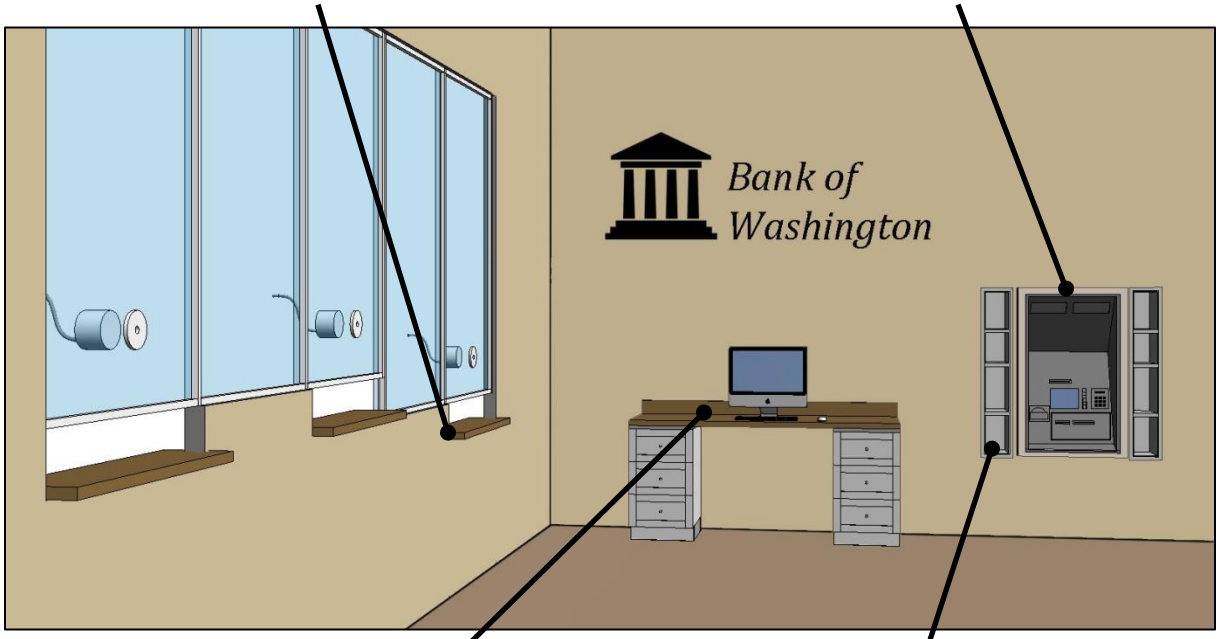
Kitchens, Kitchenettes, and Sinks (§212)
Kitchens, kitchenettes, and sinks must comply. Access is required to at least 5% of each type of sink in accessible rooms or spaces but no fewer than 1 (except those in work areas used only by employees for work purposes).

Washing Machines and Clothes Dryers (§214)
At least 2 washing machines must comply if more than 3 are provided, and at least 1 washing machine must comply if 3 or fewer are provided. This level of access is also required for clothes dryers.

Sales and Service Elements and Spaces

Sales and Service Counters (§227.3)
Access is required to at least 1 of each type of sales and service counter provided. If counters are dispersed throughout a facility, accessible counters must also be dispersed.

ATMs and Fare Machines (§220)
At least one of each type at each location must comply.



Work Surfaces (§226)
At least 5% of work surfaces are required to comply (excluding those surfaces used only by employees to perform work).

Self-Service Shelving (§225.2)
Self-service shelves in stores, banks, libraries and other facilities must be on an accessible route.

Check-out aisles (§227.2)
A minimum number of check-out aisles of each type must comply based on the total provided and must be dispersed where check-out aisles are dispersed throughout a facility.

Fuel Dispensers, Vending Machines, Change Machines, Depositories (§228)
Access is required to at least 1 of each type of dispenser, machine, or depository provided that is fixed or built-in.

Mail Boxes (§228.2)
At least 5% of mail boxes provided in an interior location of non-residential facilities must be accessible. In residential facilities, if mail boxes are provided for each dwelling unit, mail boxes serving mobility accessible units must comply.

Dining Surfaces (§226) and Food Service Lines (§227.4)
At least 5% of seating and standing spaces at fixed or built-in dining surfaces are required to be accessible. Food service lines, where provided, must comply and at least 50% of self-service shelves are required to be within accessible reach range.

Specific Spaces and Occupancies

The ADA Standards include scoping requirements specific to certain types of spaces and facilities that apply based on the intended use and design. Spaces with multiple uses must meet all applicable requirements for each use. Scoping provisions for specific spaces and occupancies address:

Transportation Facilities (§218) and Bus Stops (§209)

Assembly Areas (§221) *

Dressing, Fitting, and Locker Rooms (§222)

DOJ's 2010 ADA Standards incorporate regulatory language that modifies or augments a number of these provisions (noted with an asterisk) and also set forth additional requirements for spaces and facilities provided in housing at a place of education, social service center establishments, and curb ramps.

Medical Care and Long-Term Care Facilities (§223) *

Transient Lodging Guest Rooms (§224) *

Storage (§225)

Judicial Facilities (§231)

Detention and Correctional Facilities (§232) *

Residential Facilities (§233) *

Recreation Facilities (§234 – §243)

Common Questions

Are all public use and common use areas required to be accessible?

All areas of facilities, including public and common use areas, are required to be accessible in new construction except those that are specifically exempt (e.g., certain types of limited use or raised spaces) or that are covered by provisions that require only a specified portion to comply (e.g., transient lodging guest rooms and patient bedrooms). All other rooms and spaces, including multiple ones of the same type, such as patient exam rooms, classrooms, and courtrooms, are required to be accessible. Employee work areas, however, are not required to be fully accessible.

Can access be provided after construction based on need?

Access required by the ADA Standards must be put in place and ready for use as part of construction. This is required in all but a few specified instances, such as:

- Toilet and bathrooms in residential dwelling units or accessed through an individual's private office for his or her exclusive use are not required to be built with certain specifically enumerated access features, such as grab bars and lavatory clearances, if they are built according to criteria that will facilitate later installation or adaptation, such as reinforcement for grab bars and removable vanity cabinets.
- Vertical access to work stations in courtrooms, such as judges' benches, can be provided after construction if space and other requirements are met to ease later installation of necessary ramps or lifts.

Are employee restrooms and break rooms required to be accessible?

Yes, spaces used by employees for purposes other than work, including restrooms, break rooms, locker rooms, lounges, and parking must be fully accessible. Areas used only by employees for work are not required to be fully accessible but must be connected by accessible routes and means of egress for approach, entry, and exit and have wiring to support visual alarms if served by audible alarms. Also, circulation paths must be accessible in work areas at least 1,000 square feet in size.

What does access for "approach, entry, and exit" to employee work areas require?

Access for individuals with disabilities to "approach, entry, and exit" employee work areas requires that the following be provided at a minimum: an accessible route to the work area, a compliant entrance, including any entry door or gate, to the work area, and wheelchair space (30 inches by 48 inches minimum) within the work area. Work areas also must also meet referenced requirements in the International Building Code for

accessible means of egress and also have wiring to support later installation of visual alarm appliances.

ADA Scoping: Alterations and Additions

This guide provides an introduction to the scoping requirements that form the basis for the Department of Justice's 2010 ADA Standards and the DOT ADA Standards and is not intended to be comprehensive or used as a stand-alone technical guide to those requirements. Users of this guide must familiarize themselves with the specific scoping requirements that apply to each element, building, facility, or site that is subject to the Standards adopted to implement titles II and III of the ADA. See the introduction to the guide on "ADA Scoping: New Construction" for further discussion.

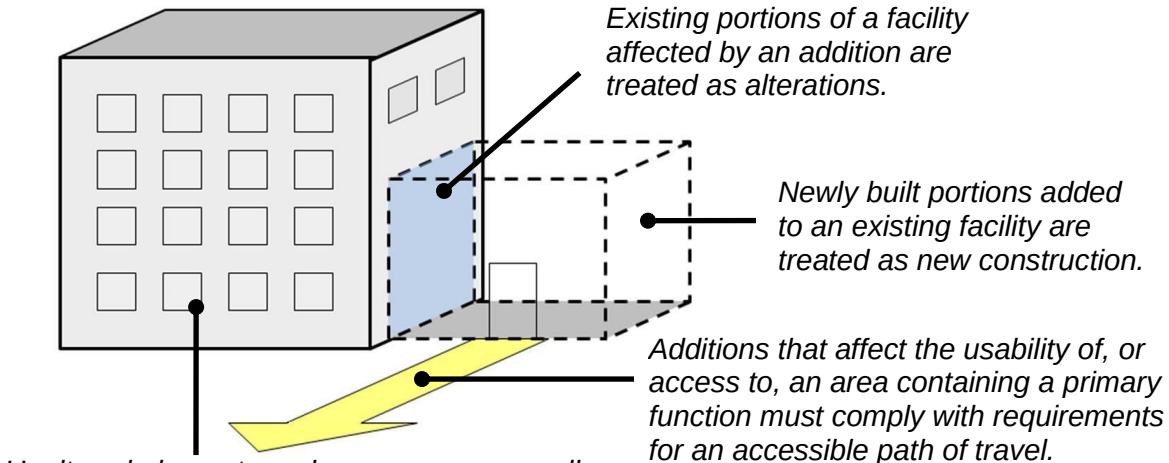
General [§202.1]

Additions and alterations undertaken at existing facilities are covered by the ADA Standards. The extent of application is largely determined by a project's scope of work as the standards apply to those elements or spaces that are altered or added. Additional requirements apply to projects that affect or could affect the usability of, or access to, an area containing a primary function.

Additions [§202.2]

Projects that increase, expand, or extend a facility's gross floor area or height of a facility are considered additions (as defined in §106.5) and must comply with the requirements of the standards applicable to new construction. Existing elements and spaces affected by an addition are treated as alterations and qualify for certain allowances or exceptions that are not permitted in new construction.

Application of the Standards in Additions



Alterations [§202.3]

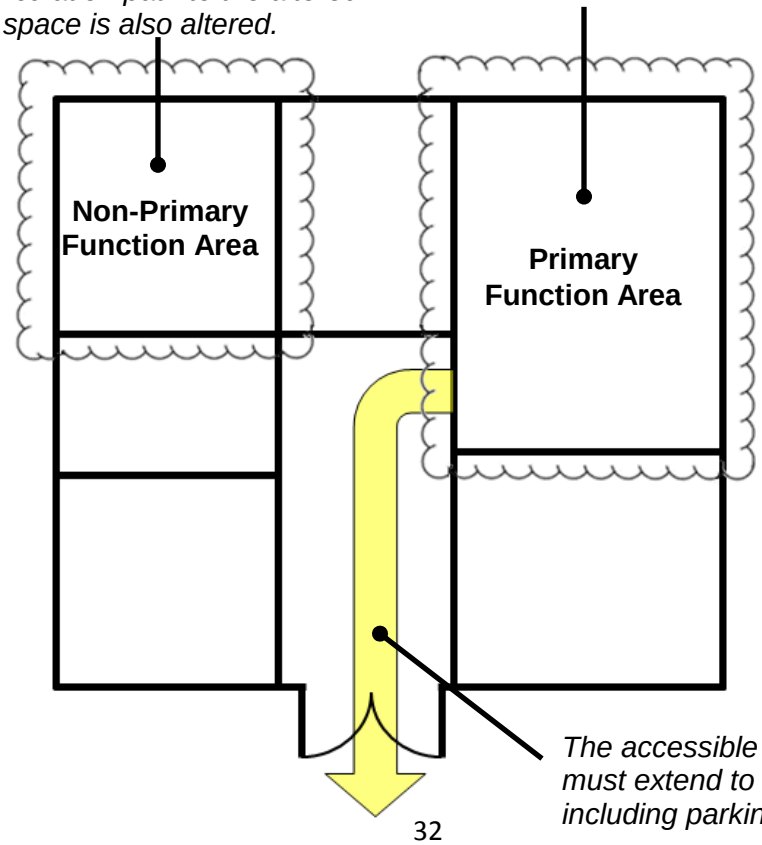
Alterations are defined in the standards (§106.5) as "a change in a building or facility that affects or could affect the usability of a building or facility or portion thereof." Many types of projects are covered as "alterations," including remodeling, renovation, rehabilitation, reconstruction, restoration, resurfacing of circulation paths or vehicular ways, and changes or rearrangement of structural parts, elements, or walls. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not considered alterations unless they affect a facility's usability. For example, a project limited to an HVAC system that includes the addition of thermostats would affect a facility's usability because it involves elements (operable parts) covered by the standards.

The standards ensure that the opportunities for accessibility presented by an alteration are taken. How and to what extent the standards apply is determined by the scope of a project and the elements and spaces altered. Only those elements or spaces altered are required to comply, but alterations made to areas containing a primary function (a major activity for which a facility is intended) also require an accessible path of travel.

Application of the Standards in Alterations

Altered elements and spaces are required to comply. In areas not containing a primary function, an accessible route to an altered element or space is required only when the circulation path to the altered element or space is also altered.

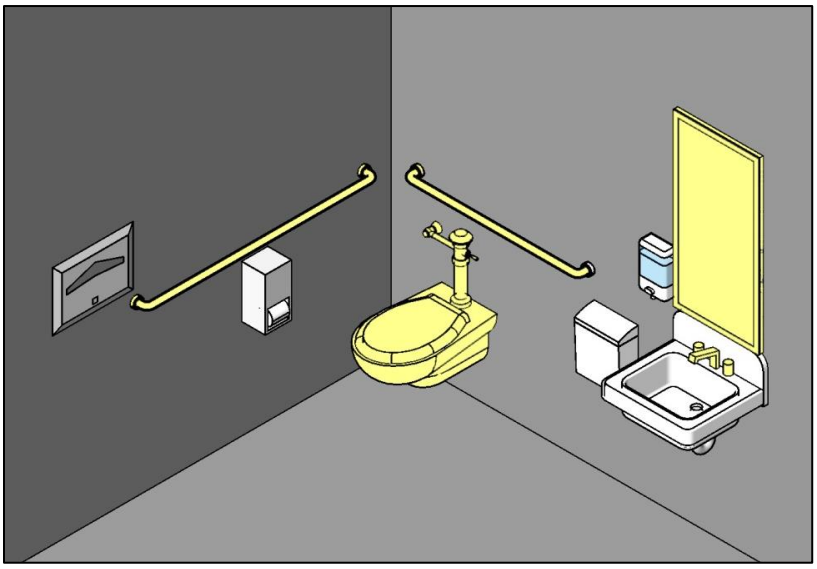
Alterations made to areas containing a primary function also require an accessible path of travel to the extent that it is not "disproportionate" to the cost.



The accessible path of travel must extend to site arrival points, including parking.

If alterations are limited only to elements in a room or space, then the standards apply only to the elements altered. Similarly, where spaces are altered, the standards apply to those spaces that are altered. If a room or space is completely altered (or built new as part of an alteration), the entire room or space is fully subject to the standards. Compliance is required to the extent that it is technically feasible.

Example: Toilet Room Alterations



In a restroom project involving alterations to the toilet, grab bars, faucet controls, and mirror, the standards apply to these elements but not to those that remain unaltered. In more extensive projects where additional elements are altered, application of the standards is greater, commensurate with the scope of work.

Recommendation: While only those elements altered are required to comply, it is advisable to maximize opportunities for accessibility in alterations. Alteration of multiple elements in a room or space may provide a cost-effective opportunity to make the entire room or space fully accessible.

The standards do not require alterations to exceed the level of access required in new construction. For example, spaces that are exempt in new construction are also exempt in alterations.

Prohibited Reduction in Access

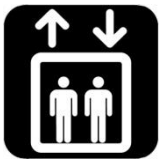
New construction requirements also set the baseline for any alteration that would effectively reduce existing accessibility. Alterations that reduce accessibility below the level that would be required in new construction are prohibited. Reductions in access are allowed only where, and to the extent that, the minimum level required in new construction is exceeded. For example, if an alteration will reduce the number of parking spaces on a site, accessible parking spaces can be proportionately reduced as long as the minimum required in new construction (based on the parking facility's new total) is met. Elements that are not required by the standards to be provided for accessibility, such as phones, can be completely removed from a site.

Special Provisions for Alterations

The standards apply the same requirements used in new construction to alterations but also include provisions unique to alterations. Some provisions clarify application, while others are structured as exceptions that limit coverage or relax technical criteria under certain conditions. Located throughout the standards at the relevant scoping or technical requirement, these provisions and exceptions are distinguished by references to “alterations” or “existing facilities.”

Examples of Provisions for Alterations

Vertical Access
An accessible route to stories and mezzanines is required in alterations (or additions) where stairs or escalators are added where none existed previously and major structural modifications are necessary (§206.2.3.1) (or as needed to provide an accessible path of travel to an altered primary function area if not disproportionate to the cost (§202.4)), unless the building is exempt from the requirement for access between stories.



Elevators
If elevators are altered, all cars programmed to respond to the same call control must be similarly modified (§206.6.1).

Fire Alarms
Compliant fire alarm systems are required only in alterations where fire alarm systems are installed new, replaced, or upgraded (§215.1, Ex. 1).

Ramps
Slightly steeper running slopes are permitted for short ramps (maximum 6” rise) where space is limited (§405.2, Ex.).

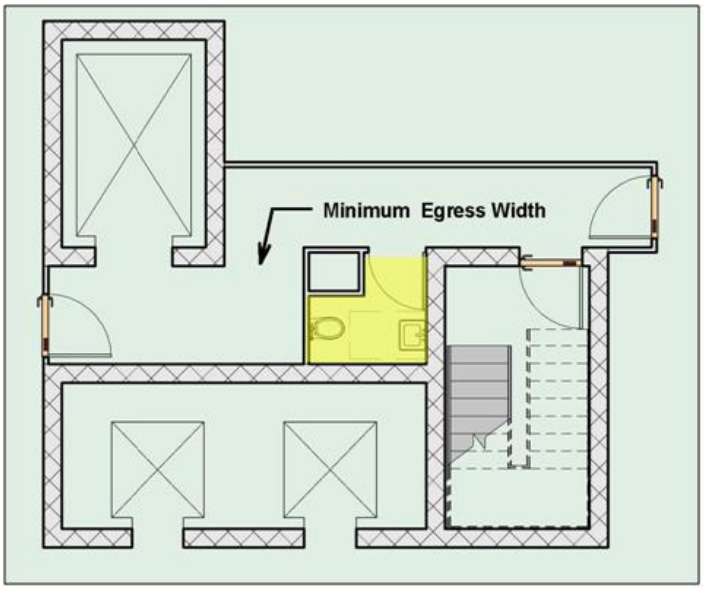
Stairs
Full handrail extensions at stairs are not required where they would project hazardously into circulation paths (§505.10, Ex. 3).

Technical Infeasibility

Compliance in an alteration is not required where it is "technically infeasible." The term is defined as "something that has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member that is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features that are in full and strict compliance with the minimum requirements."

Where technical infeasibility is encountered, compliance is still required to the maximum extent technically feasible.

Example of Technical Infeasibility



It may be technically infeasible in an alteration to enlarge a toilet room confined in size by structural supports, elevator shafts, mechanical rooms and chases, stairways, or required egress routes not affected by the project. In this case, the toilet room must be sized and other requirements, including those for plumbed fixtures, must be met to the maximum extent technically feasible. However, the concept of technical infeasibility remains relative to the planned scope of work. If the entire building is significantly renovated or gutted, constraints of this type would likely not exist.

Other examples where compliance could potentially be technically infeasible include:

- conflicts with applicable building, plumbing, life safety or other codes (such as when combining two toilet stalls to create an accessible stall would violate the plumbing code's required fixture count);
- meeting slope requirements on existing developed sites located on steep terrain where necessary re-grading and other design solutions are not feasible; or
- work that would impact load-bearing walls and other essential components of the structural frame, including structural reinforcement of the floor slab.

Alterations Affecting Primary Function Areas [§202.4]

Additional requirements apply when alterations are made to areas containing a "primary function," which is a major activity intended for a facility. Examples of primary function areas include dining areas of a restaurant, retail space in a store, exam rooms in a doctor's office, classrooms in a school, and offices and other work areas where the activities of a covered entity are carried out. Spaces not considered primary function areas include entrances, corridors, restrooms, break rooms, employee locker rooms, and mechanical or electrical closets. Restrooms are not primary function areas unless their provision is the primary purpose of a facility, such as a highway rest stop. DOJ's 2010 ADA Standards and DOT's ADA regulations contain detailed provisions on alterations to primary function areas that must be applied in addition to section 202.4.

Accessible Path of Travel

When alterations are made to a primary function area, an accessible path of travel to the area must be provided. The accessible path of travel must extend from the altered primary function area to site arrival points, including public sidewalks and parking and passenger loading zones provided on the site. The path of travel also includes access to restrooms, telephones, and drinking fountains, where provided to serve the primary function area. In leased facilities, alterations made by a tenant to primary function areas that only the tenant occupies do not trigger a path of travel obligation upon the landlord with respect to areas of the facility under the landlord's authority if those areas are not otherwise being altered.

Disproportionality (20%)

The accessible path of travel is required to the extent that it is not "disproportionate" to the total cost. Regulations implementing the standards define "disproportionate" as exceeding 20% of the total cost of alterations to the primary function area. The 20% cap applies only to costs associated with the accessible path of travel, including an accessible route to the primary function area from site arrival points, entrances, and retrofits to restrooms, telephones, and drinking fountains.

Prioritization

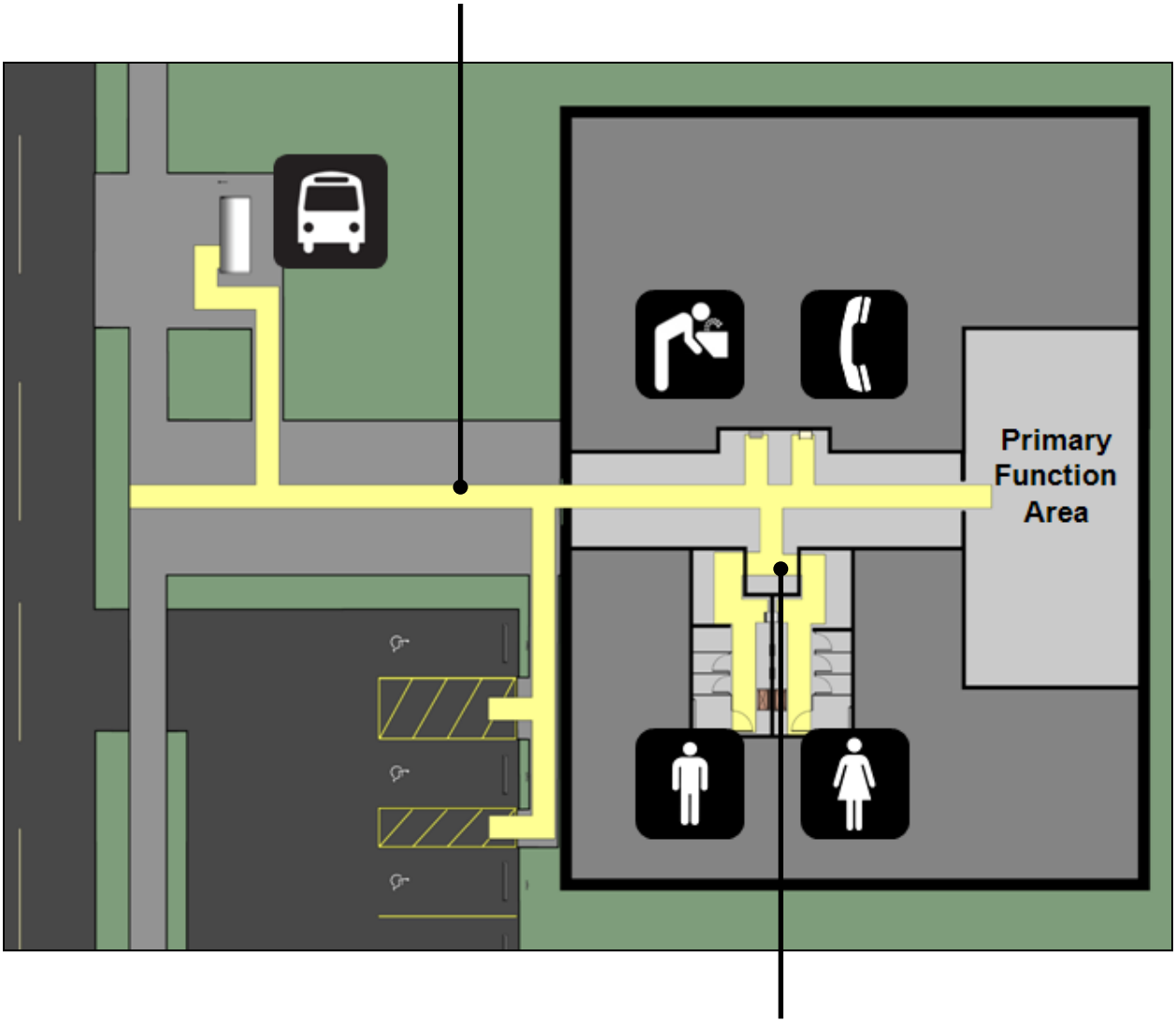
Compliance is required up to the point the 20% cost cap is reached, even where it does not result in a fully accessible path of travel. Where costs exceed this cap, compliance should be prioritized in this order:

1. an accessible entrance
2. an accessible route to the primary function area
3. restroom access
4. an accessible telephone
5. an accessible drinking fountain
6. access to other elements such as parking and storage

The requirements for alterations to primary function areas are found in DOJ's ADA Standards at 28 CFR §35.151(b) (title II) and 28 CFR §36.403 (title III) and in DOT's ADA Regulation at 49 CFR §37.43.

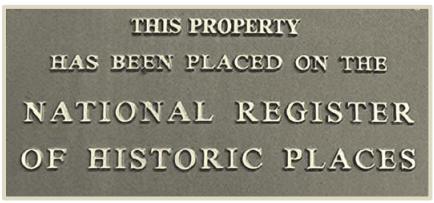
Accessible Path of Travel

The accessible path of travel extends from the altered primary function area to site arrival points (public sidewalks, parking, passenger loading zones, public transit stops located on the site).



The path of travel also includes an accessible restroom (for each sex unless only unisex restrooms are provided), telephone, and drinking fountain serving the primary function area, where such elements are provided.

Alterations to Qualified Historic Facilities [§202.5]



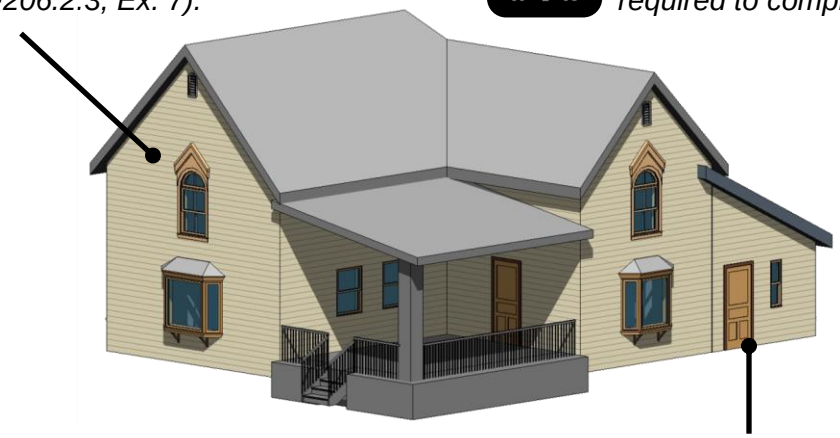
The standards contain specific provisions for qualified historic facilities which are defined as buildings or facilities that are "listed in or eligible for listing in the *National Register of Historic Places* or designated as historic under an appropriate State or local law." Alterations to qualified historic facilities must comply with section 202.5 to the maximum extent feasible. If it is not feasible to provide physical access to an historic property in a manner that will not threaten or destroy the historic significance of the building or facility, alternative methods of access are permitted by DOJ's ADA Standards (28 CFR 35.151(b)(3)(ii) and 28 CFR 36.405(b)).

Like other existing facilities, the requirements for alterations apply in relation to the scope of work. Alterations provisions and exceptions, including those based on technical infeasibility, and requirements for path of travel to primary function areas, apply to historic facilities with exceptions for circumstances where compliance with the standards would threaten or destroy the historic integrity or significance of a facility as determined by the appropriate State Historic Preservation Official or Advisory Council on Historic Preservation. These exceptions apply to requirements for accessible routes (§206.2) entrances (§206.4), and toilet rooms (§213.2).

Exceptions for Qualified Historic Facilities
(where compliance would threaten or destroy a facility's historic significance)

***Vertical access** to stories above or below the accessible story is not required (§206.2.3, Ex. 7).*

*At least 1 unisex **toilet room** or 1 men's and 1 women's room is required to comply (§213.2, Ex. 2).*



*At least 1 **accessible route** is required from a site arrival point to an accessible entrance (§206.2.1, Ex. 1).*

*At least 1 **public entrance** is required to be accessible (if that would also threaten the historic significance, access can be provided to a non-public entrance but a notification or remote monitoring system is required for locked entrances)* (§206.4, Ex. 2).

Common Questions

What requirements of the standards apply in an alteration?

Application of the standards in an alteration is determined by the scope of work and whether it involves areas containing a primary function. Altered elements or spaces must comply with relevant provisions of the standards except where compliance is technically infeasible. Where compliance is technically infeasible, compliance is required to the maximum extent feasible. If alterations are made to an area containing a primary function (a major activity for which a facility is intended), an accessible path of travel from the area to site arrival points, as well as the restrooms, telephones, and drinking fountains serving the area, must be made accessible as part of the work to the extent it is not "disproportionate" (more than 20% of the total cost).

How is "technical infeasibility" determined in an alteration?

Determining "technical infeasibility" requires a site-specific assessment of constraints or complications in relation to the planned scope of work. The term, as defined in the standards (§106), is intended to encompass design, site, engineering or other constraints that prohibit compliance. Examples include work that would impact a facility's structural frame or that would conflict with applicable codes or building requirements.

Do the ADA Standards apply to existing facilities that are not subject to the alterations requirements?

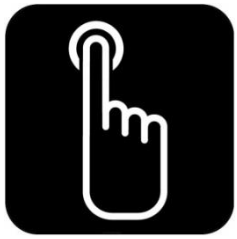
DOJ's ADA regulations address access to existing facilities that are not being altered. The regulations require removal of barriers by public accommodations (title III) and program access by state and local governments (title II). The 2010 Standards apply when architectural changes are made to facilities in order to comply with the program access requirements of title II of the ADA. In addition, the 2010 Standards are the benchmark for compliance with the title III barrier removal requirements. For more information about barrier removal and program access, visit DOJ's website at www.ada.gov or contact the DOJ ADA Information Line at (800) 514-0301 (voice) or (800) 514-0383 (TTY).

Chapter 3:
Building Blocks

Floor and Ground Surfaces

Clear Floor or Ground Space and Turning Space

Protruding Objects



Operable Parts

Floor and Ground Surfaces

Specifications for floor and ground surfaces address surface characteristics, carpeting, openings, and changes in level. They apply to:

- interior and exterior accessible routes, including walking surfaces, ramps, elevators, and lifts
- stairways that are part of a means of egress
- required clearances, including clear floor space, wheelchair seating spaces, turning space, and door maneuvering clearances
- accessible parking spaces, access aisles, and accessible passenger loading zones.

Firmness, Stability, and Slip Resistance [§302.1]

Accessible floor and ground surfaces must be stable, firm, and slip resistant. Stable surfaces resist movement, while firm surfaces resist deformation by applied forces. Accessible surfaces remain unchanged by external forces, objects, or materials.

Hardened materials such as concrete, asphalt, tile, and wood are sufficiently firm and stable for accessibility.

Most loose materials, including gravel will not meet these requirements unless properly treated to provide sufficient surface integrity and resilience. Binders, consolidants, compaction, and grid forms may enable some of these materials to perform satisfactorily but require repeated maintenance.

Slip Resistance

Accessible surfaces must be slip resistant to minimize hazards to people with disabilities, especially those who are ambulatory or semi-ambulatory or who use canes, crutches, and other walking aids. However, the standards do not specify a minimum level of slip resistance (coefficient of friction) because a consensus method for rating slip resistance remains elusive. While different measurement devices and protocols have been developed over the years for use in the laboratory or the field, a widely accepted method has not emerged. Since rating systems are unique to the test method, specific levels of slip resistance can only be meaningfully specified according to a particular measurement protocol. Some flooring products are labeled with a slip resistance rating based on a laboratory test procedure.

Compliance with the standards requires specifying surface materials, textures, or finishes that prevent or minimize slipperiness under the conditions likely to be found on the surface. Standard practices for minimizing floor or ground slipperiness will likely satisfy compliance with the standards as slip resistance is important not just for accessibility but for general safety as well. Applications and finishes used to increase a surface material's slip resistance may require continued maintenance or re-application.

Surface Smoothness

The standards limit changes in level and openings in floor and ground surfaces, but they do not further address overall surface smoothness. Rough surfaces composed of cobblestones, Belgian blocks, and similar materials can be difficult and sometimes painful to negotiate with wheeled mobility aids due to the vibrations they cause.

Cobblestones and other rough surfaces make wheelchair travel difficult and uncomfortable.

Recommendation: Avoid materials or construction methods that create bumpy and uneven surfaces in areas and along routes required to be accessible.

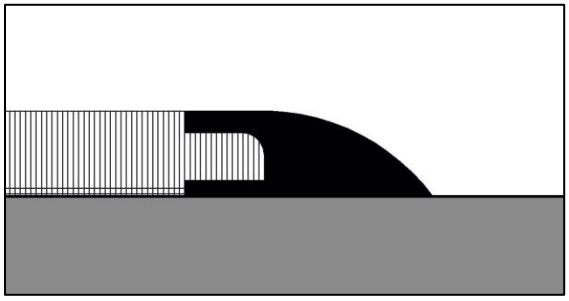
Carpet [§302.2]

Carpet that is thick, cushiony, or loose impairs accessibility, particularly wheelchair maneuvering. The standards specify the maximum pile height (1/2" measured to the backing, cushion, or pad) and texture (level or textured loop, level cut pile, or level cut/uncut pile) and require firm backing. Cushions or pads also must be firm or can be avoided to ensure greater firmness.

Carpeting must be securely attached so that it does not shift or buckle against wheeled traffic. Cushions or pads, if used, also must be properly secured to resist movement. Rolling or buckling occurs when carpet is not properly secured and makes wheelchair maneuvering very difficult.

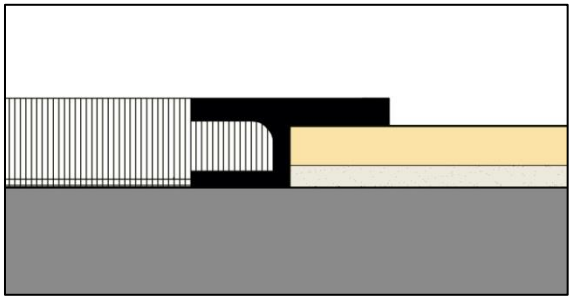
Exposed edges must have trim on the entire length of the exposed edge and be fastened to the floor to prevent curling. Trim must meet specifications for changes in level, including requirements for beveled edges when the height exceeds ¼ inch. The maximum height is ½ inch.

Carpet Edge Treatment



1/2" max height, 1:2 max beveled edge

Carpet to Tile Transition

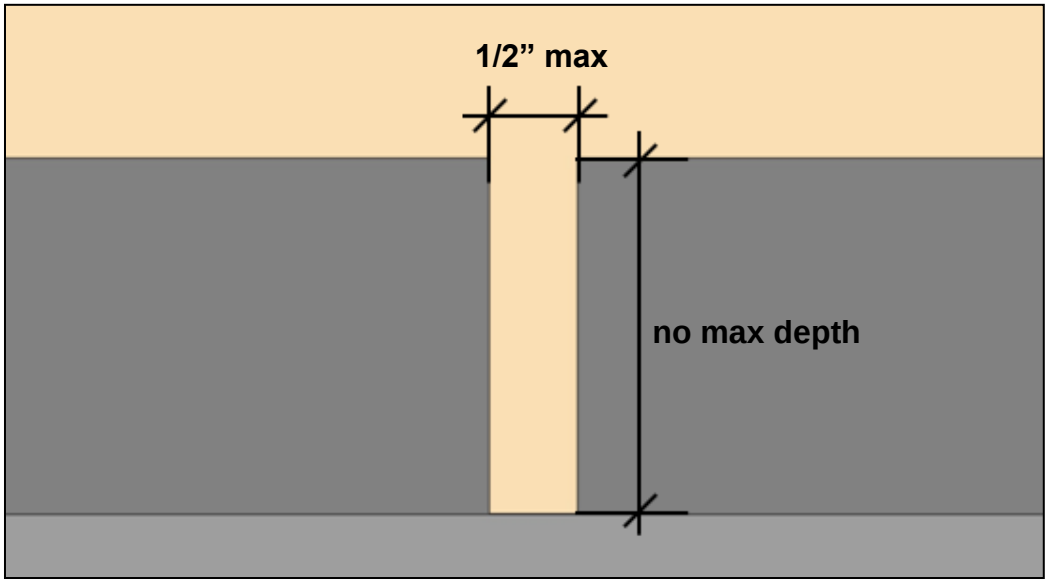


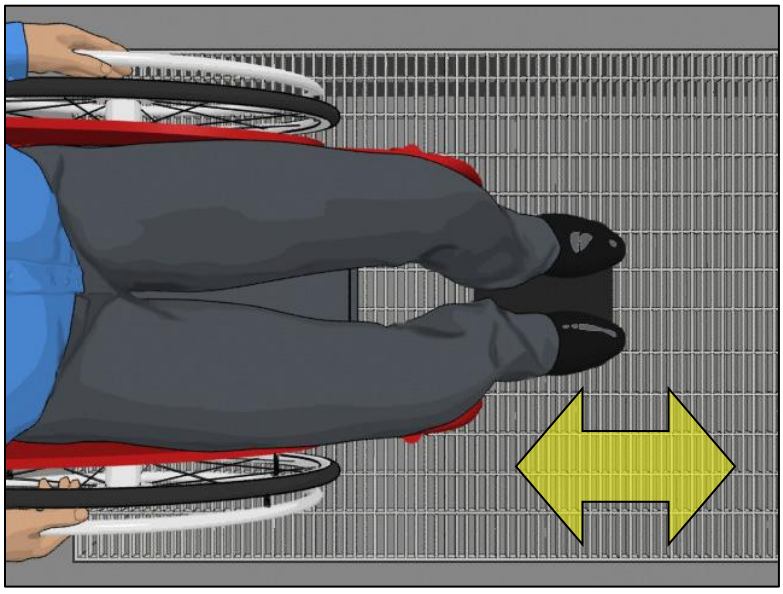
Changes in level 1/4" max high permitted vertical edge

Openings [§302.3]

Openings in ground and floor surfaces, such as grates, are limited in width to prevent passage of a ½" diameter sphere. Wheelchair casters can get wedged into wider openings.

Surface Opening (Cross Section)



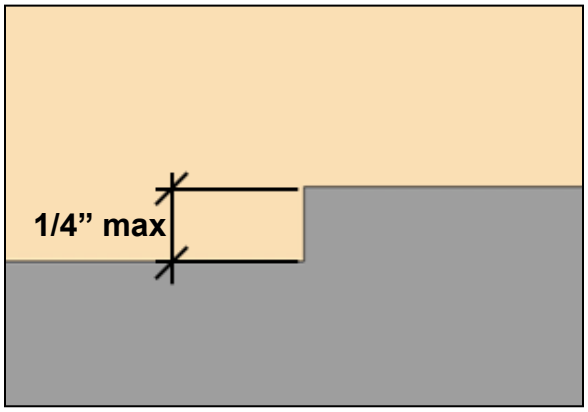


Elongated openings, like those of most grates, must be oriented so that the long dimension is perpendicular to the dominant travel direction. In locations where there is no dominant flow pattern, openings must be limited to ½" in both dimensions. Where an accessible route is available to bypass openings completely, they can be oriented in any direction.

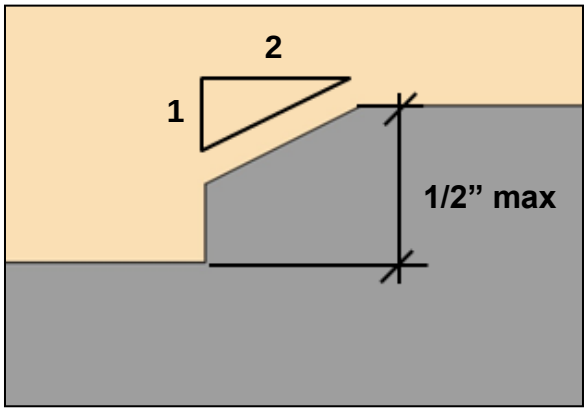
Changes in Level [§303]

Changes in level can be up to ¼" without treatment or ½" if beveled with a slope no steeper than 1:2. Changes in level above a ½" must be treated as a ramp or curb ramp (or a walkway if a slope no steeper than 1:20 can be achieved). These specifications apply to all portions of accessible routes, including thresholds and carpet trim.

1/4" Max Change in Level



1/2" Max Change in Level



Common Questions

Must accessible surfaces be paved?

Concrete, asphalt, and other paved surfaces are more reliably compliant, but other materials, such as wood, and construction methods can be used to provide firm and stable surfaces. Loose material like gravel will not perform adequately unless it is sufficiently stabilized by binders, compaction, or other treatments and will likely require repeated maintenance.

What is the minimum level of slip resistance required by the standards?

The standards require ground and floor surfaces to be slip resistant, but they do not specify a minimum level of slip resistance or coefficient of friction. This value varies according to the measurement method and protocols used. Some products are labeled with a rated level, but in the absence of a consensus test procedure, the standards do not set a minimum value. Standard methods to prevent or minimize slipperiness in the specification of floor materials, textures, applications, and finishes may be sufficient for compliance with the standards.

Is there a minimum distance between changes in level?

The standards do not require a minimum horizontal separation between changes in level of a ½" or less. Such level changes may need to be in close proximity, such as at raised thresholds (otherwise a minimum 48" separation will provide enough wheelchair space so that only one vertical change is negotiated at a time). Ramps and curb ramps, which must be used to span vertical changes greater than ½", must have level landings and clearances at the tops and bottoms of each run to provide adequate separation and resting intervals between sloping surfaces.

Elongated surface openings must be perpendicular to the dominant direction of travel, but what if there is no dominant direction of travel?

When there is no dominant direction of cross traffic, openings must be limited to ½" in both dimensions. Where space allows accessible routes to completely bypass the area with openings, elongated openings can be oriented in either direction.

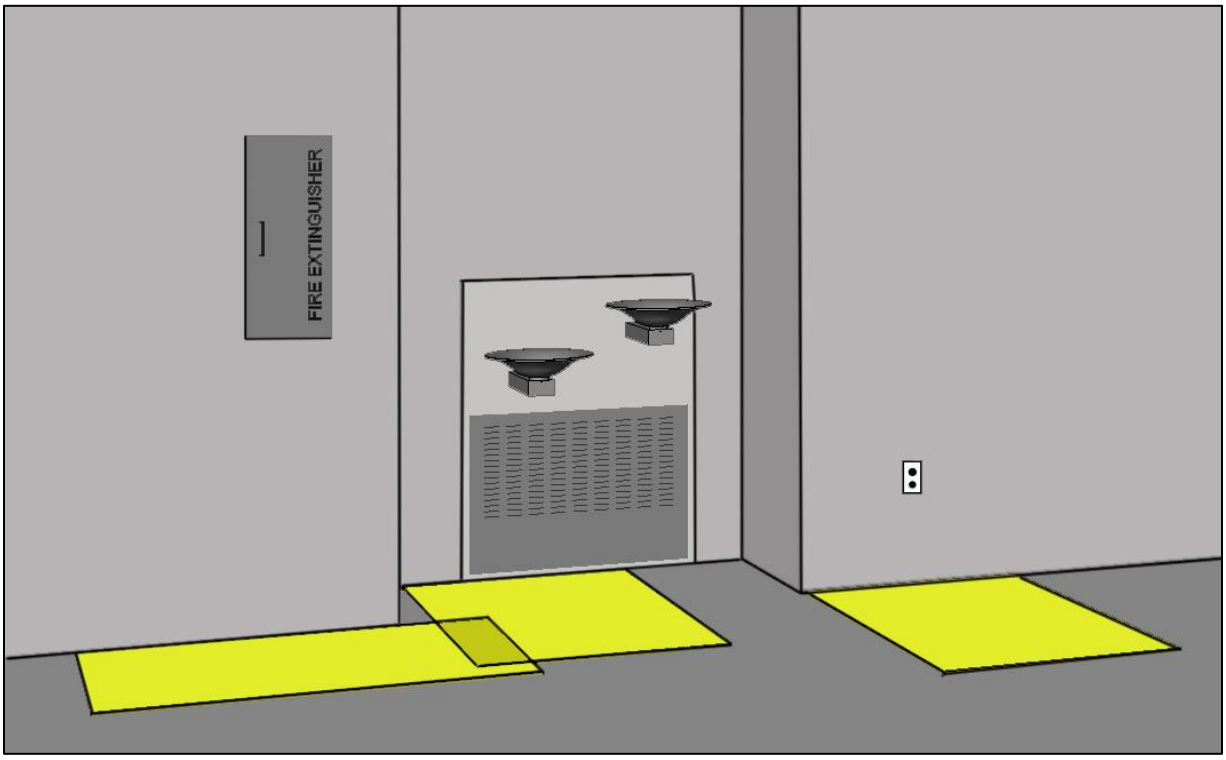
Clear Floor or Ground Space and Turning Space

Clearances are required at accessible elements, fixtures, and controls so that people with disabilities, including those who use wheelchairs, can approach and use them. The standards also address maneuvering space for wheelchair turning. Provisions throughout the standards reference these basic “building block” requirements.

Clear Floor or Ground Space [§305]

Sufficient clear floor or ground space is required at accessible controls, operable parts, drinking fountains, lavatories and sinks, ATMs and fare machines, appliances, beds, and other elements. Provisions for these elements apply the clear floor or ground specifications in 305.

Clear Floor Space at Elements

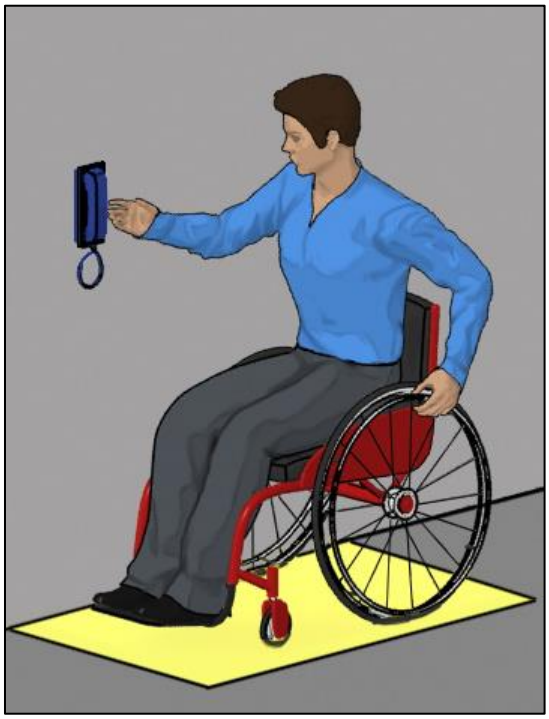


Clear floor space is required at each accessible element, including storage cabinets, drinking fountains and other fixtures, and electrical outlets. Clear floor spaces can overlap where elements are in close proximity.

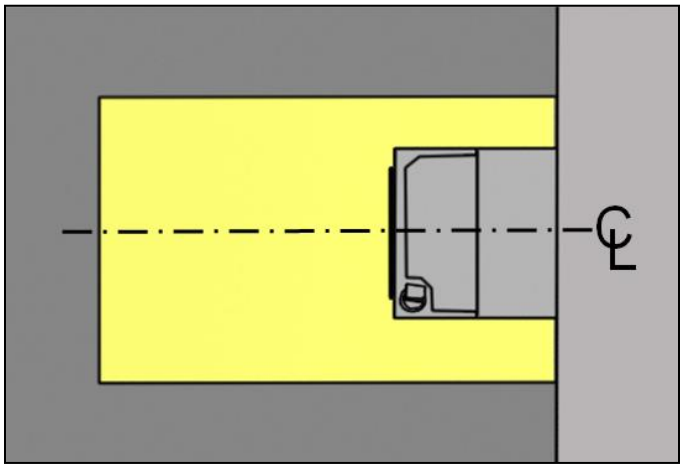
Position [§305.5]

At most elements, clear floor or ground space can be positioned for either a forward or a side approach. For better usability, a forward approach is required at certain elements, including dining and work surfaces, drinking fountains, lavatories, and most sinks. At other elements, a side approach is allowed. A side approach is typically provided or required at sales and service counters, beds, and most appliances.

Forward Approach



Side Approach



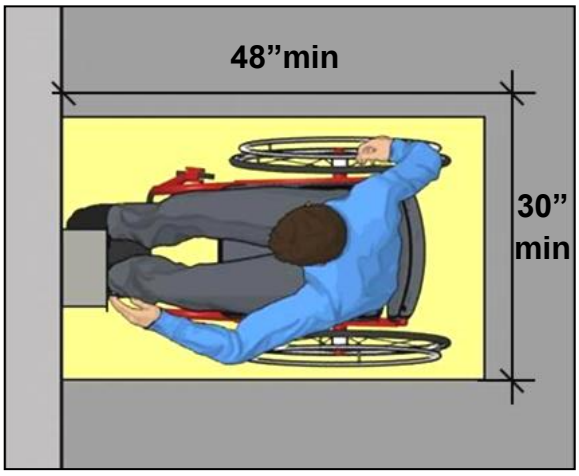
Centering

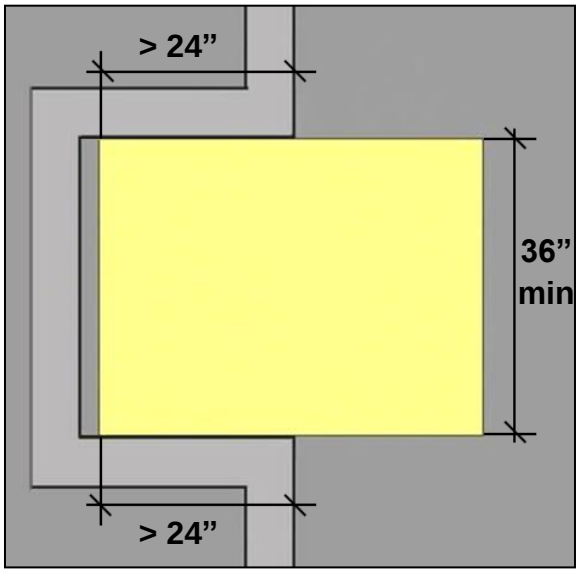
Centering the clear floor or ground space on elements is often advisable but is only required at drinking fountains, kitchen work surfaces, and washers and dryers.

Surface and Size [§305.2 and §305.3]

Clear floor spaces must meet requirements for ground and floor surfaces, including criteria for firmness, stability, and slip resistance. They must be free of level changes and not slope more than 1:48.

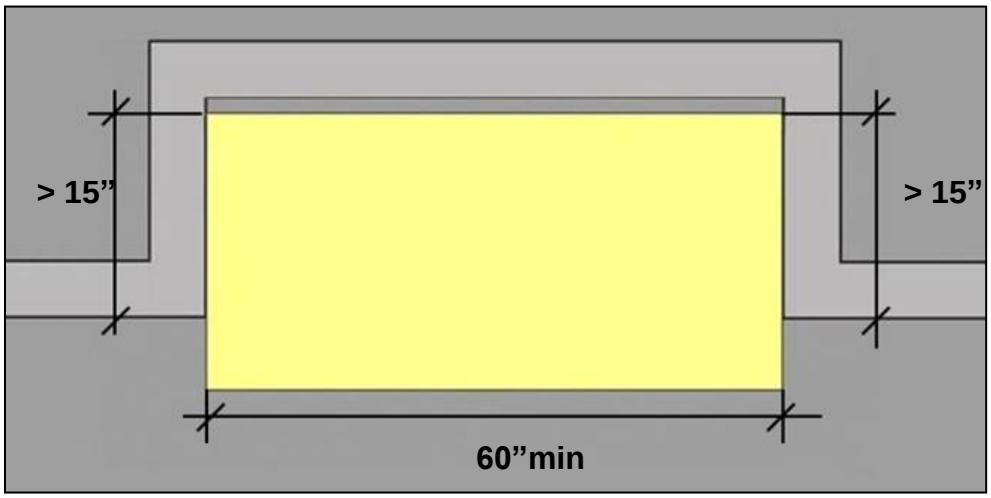
The minimum size (30” by 48”) applies whether the space is positioned for forward or side approaches. Additional space is required when the space is confined on three sides and is obstructed for more than half the depth, such as when elements are recessed in alcoves.





Approach and Maneuvering Clearance [§305.6 and §305.7]

Where the space is obstructed on both sides for more than half the depth, additional clearance is required for maneuvering. Accessible routes must connect to the unobstructed side of the space.



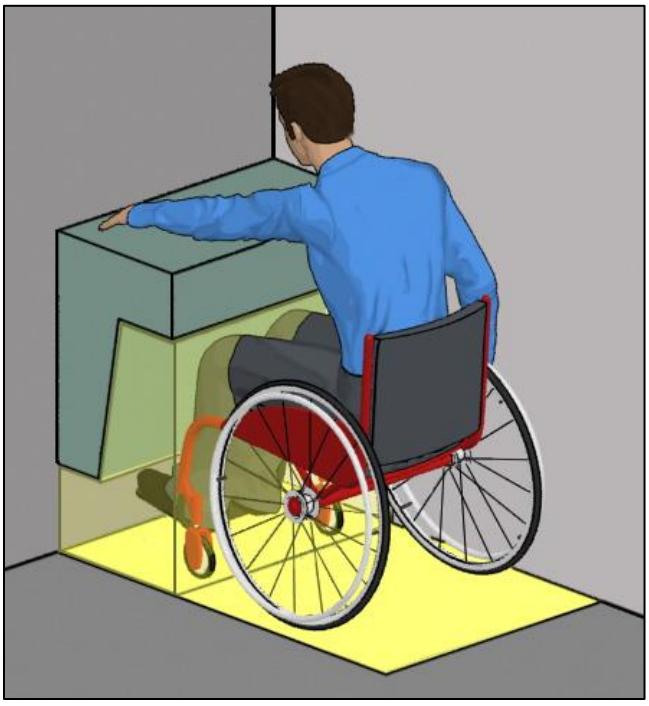
Knee and Toe Space [§305.4 and §306]

Objects that provide space for toes or knees can overlap a portion of the clear floor space. Knee and toe space allows a closer approach to elements and reduces the reach to operable parts. It is required at some elements, such as drinking fountains and lavatories, so that people using wheelchairs can pull up to them.

Toe Space

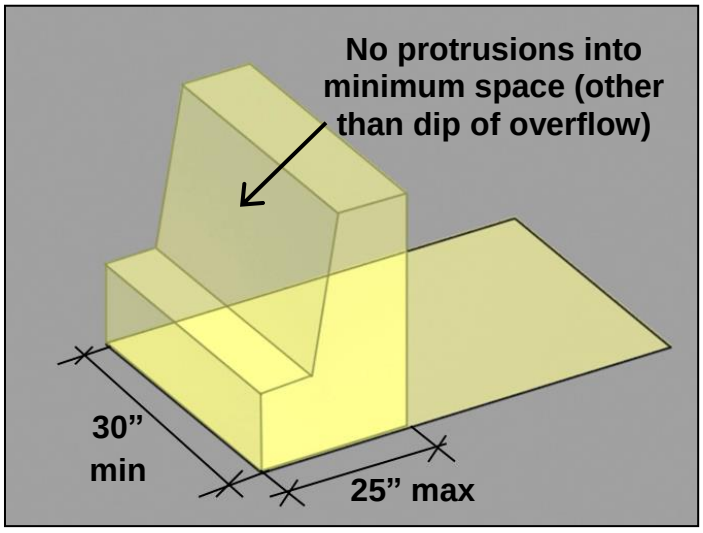
Objects that provide clearance for toes can overlap a portion of the clear floor space.

Knee Space



Objects that provide clearance for knees and toes can overlap a greater portion of the clear floor space (up to a depth of 25").

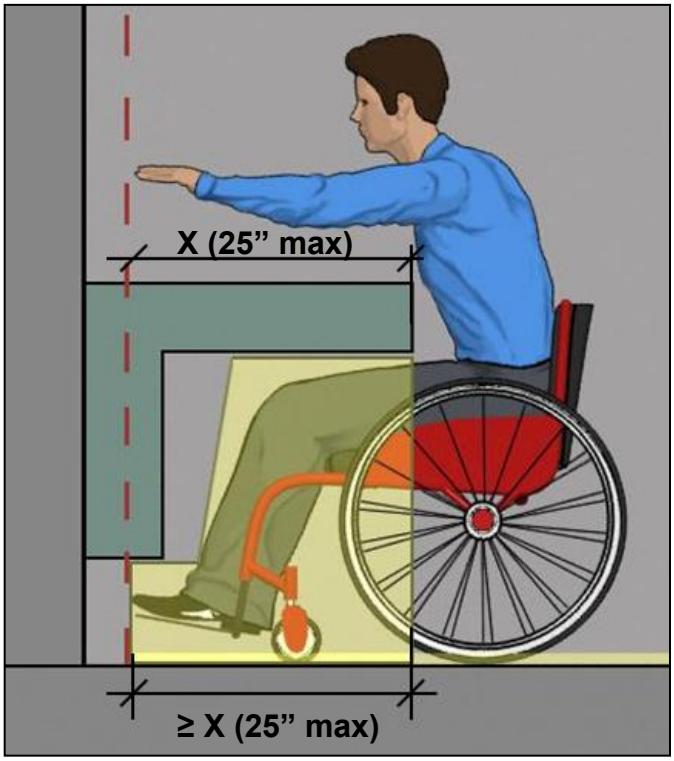
Knee and toe space must be at least 30" wide and up to 25" deep measured to the leading edge of the clear floor space. The specifications allow space for plumbing, enclosures, and supports outside the minimum clearances. No object can protrude into the required clearances (other than the dip of the overflow at lavatories and sinks).



Knee and Toe Space Depth

Where knee and toe space is required, it must be at least 17" deep. In all cases, the minimum depth may be further determined by the required reach to operable parts served by the clear floor space.

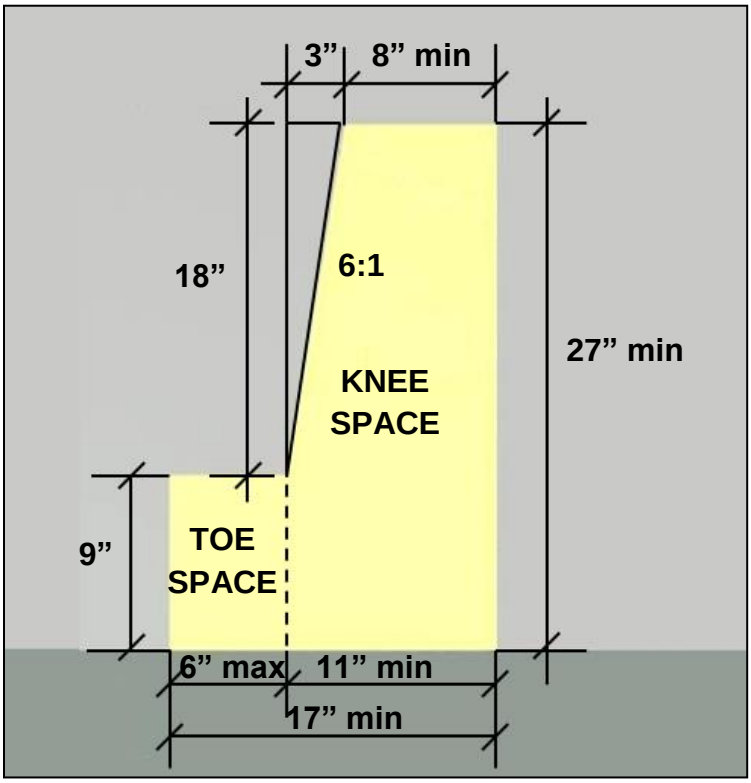
Knee and toe space is required below drinking fountains, lavatories and sinks, dining and work surfaces, and those sales and service counters that provide a forward approach.



Obstructed Reach Depth

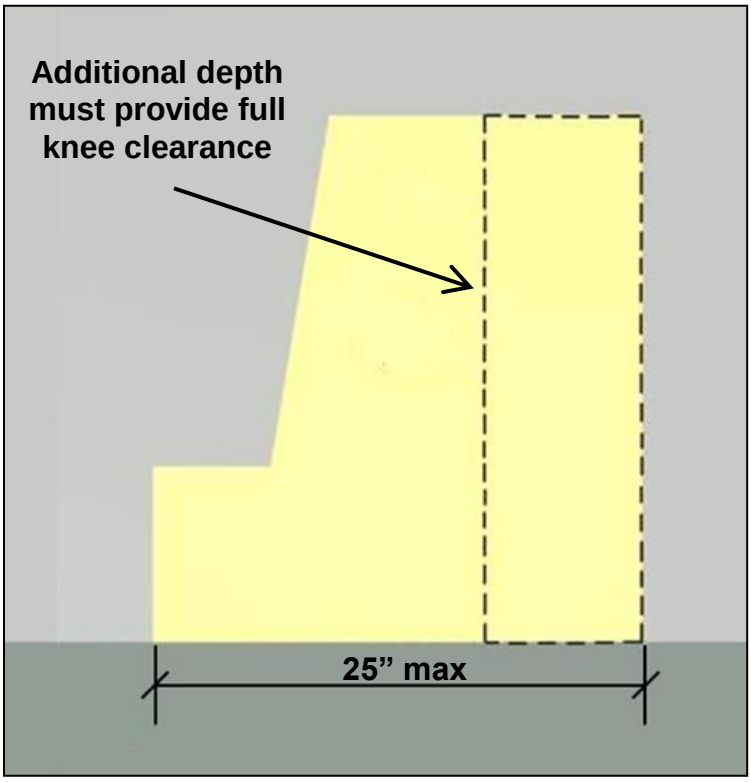
At any element, the knee and toe space must be as deep as the required reach to operable parts. This facilitates access since a forward reach does not extend far beyond the toes. Both the reach depth and the knee and toe space depth are limited to 25" measured from the leading edge of obstructions. Space beyond this depth is not usable.

Knee and Toe Clearances



Where knee and toe space is required at an element, it must be at least 17” deep.

Beyond a depth of 8” measured from the leading edge, the 27” minimum high knee clearance can reduce 18” (to the 9” toe space) over a 3” span.



When the knee and toe depth exceeds the 17” minimum, the additional space must provide full knee clearance at least 27” high.

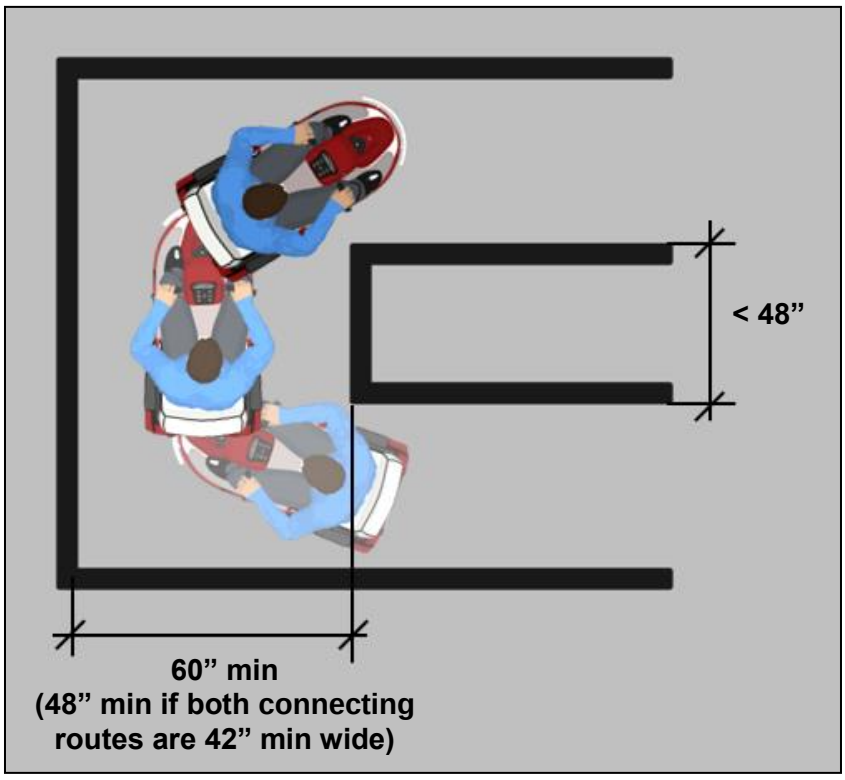
Turning Space [§304]

Turning space is required in these accessible rooms and spaces:

- toilet and bathing facilities
- dressing, fitting, and locker rooms
- transient lodging guest rooms
- dwelling units (all rooms on an accessible route)
- patient bedrooms
- holding and housing cells
- saunas and steam rooms
- raised courtroom stations served by ramps or lifts with entry ramps
- certain recreation spaces (amusement ride load/ unload areas, fishing piers and platforms, play components, and shooting facilities)

Space for turning is also required along accessible routes where a 180 degree turn around an obstruction less than 48” wide is required (§403.5.2).

Clear Width at 180 Degree Turn Around a Narrow Obstruction

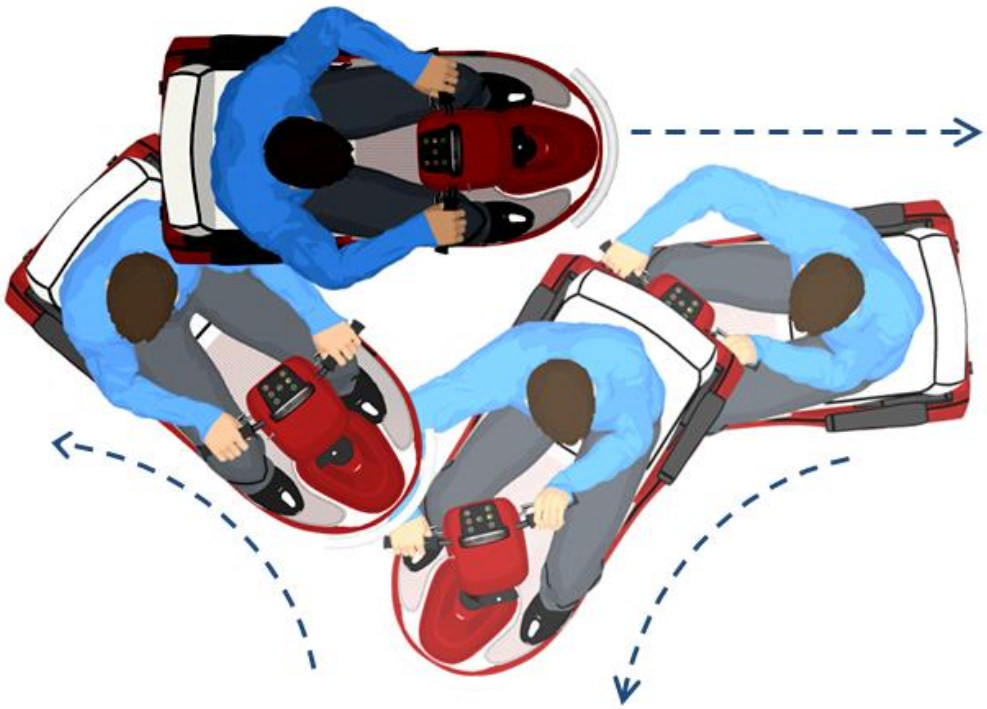


Recommendation: Turning space is recommended in small spaces with entrapment risks as well as at dead-end aisles and corridors so that people using wheeled mobility aids do not have to back up considerable distances.

Maneuvering for Turns

Maneuvering for 180 degree turns varies by person and the mobility aid used. An efficient way of turning using a manual wheelchair is to turn the wheels in opposite directions for a pivoting turn. Some power chairs also may permit tight circular turns.

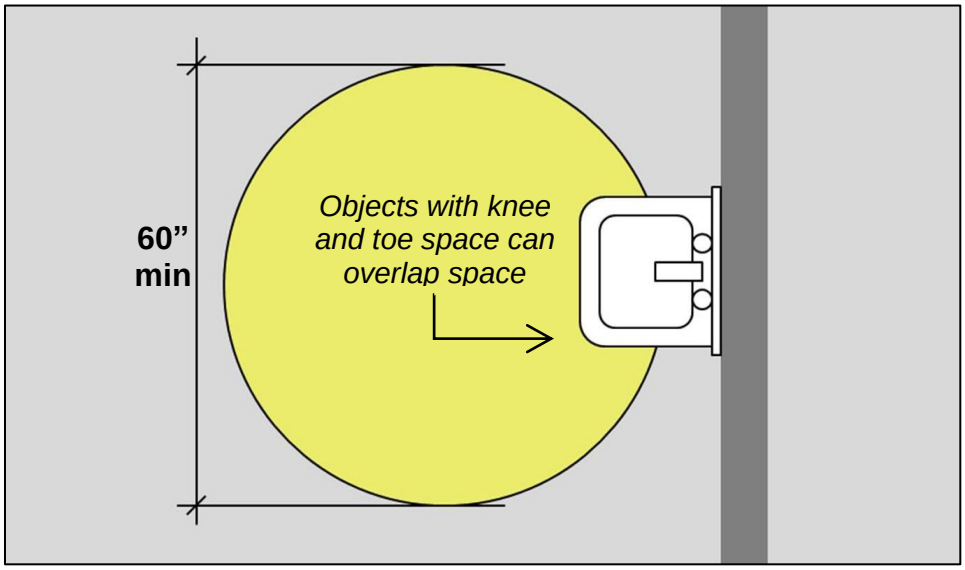
A three-point turn is common when using scooters and other motorized devices that have a larger turning radius.



Size [§304.3]

Turning space can be provided in the shape of a circle or a T. Elements with knee and toe space can overlap a portion of the turning space.

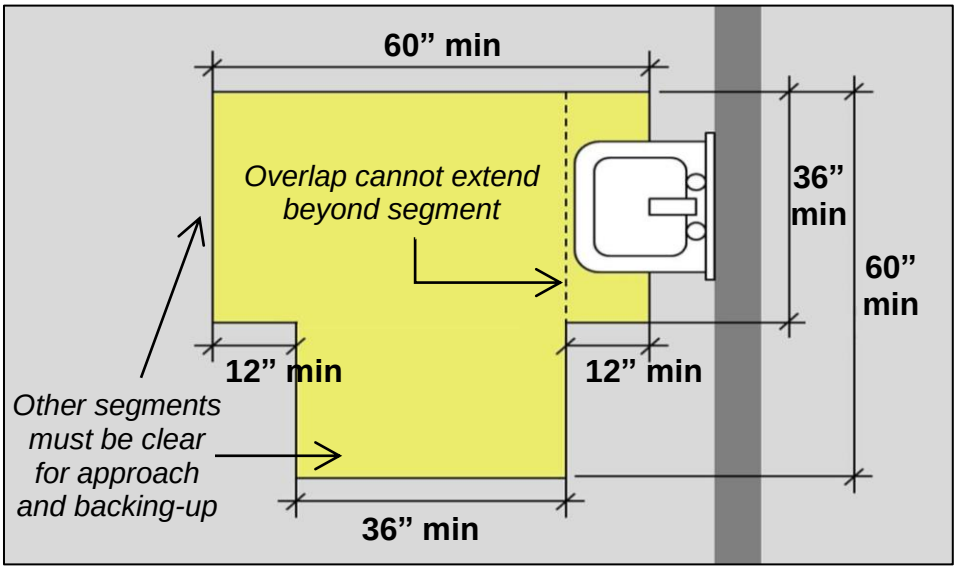
Circular Turning Space



Recommendation: To provide easier access, locate elements with knee and toe space outside the turning space or, with circular space, limit overlap to approximately 12” so that wheelchair space 48” long minimum remains clear.

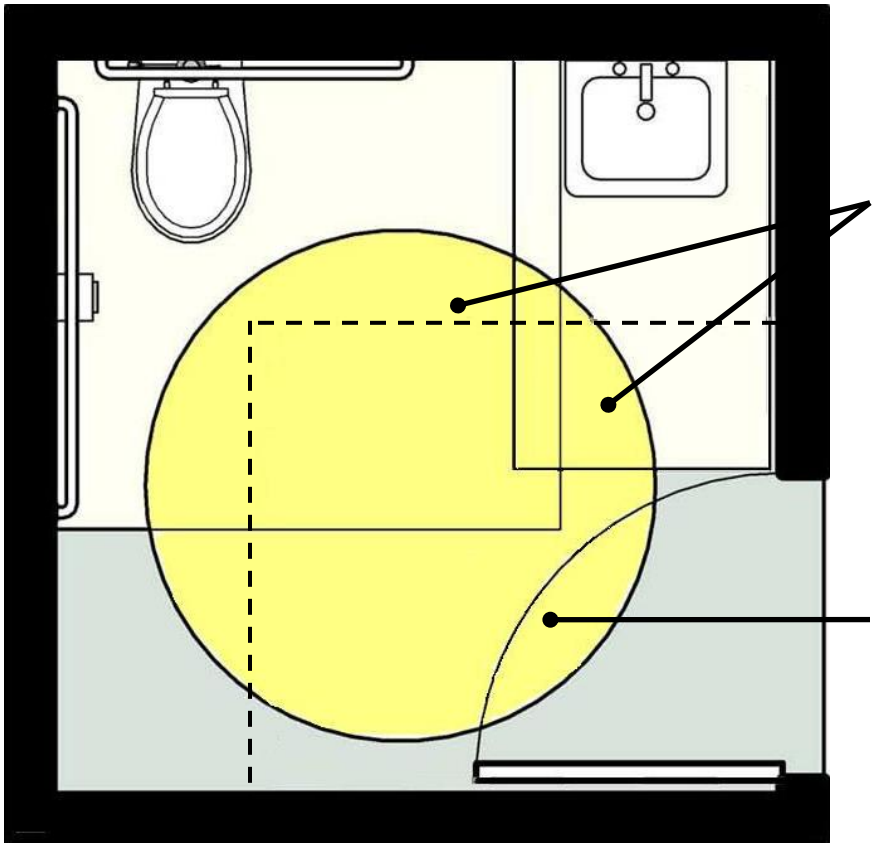
T-Shaped Turning Space

T-shaped space can be configured for approach on any segment (stem or either arm).



Door Swing [§304.4] and Other Space Requirements

Doors can swing into the turning space. The turning space can overlap other space requirements, including clear floor space required at elements and fixtures.



Common Questions

Is clear floor space required to be centered on elements?

The standards require the clear floor space to be centered on wheelchair accessible drinking fountains (forward approach), kitchen work surfaces, (forward approach), and washers and dryers (side approach). Centering the clear floor space on other elements is often advisable, but not required.

Can doors swing into required clear floor or ground space?

Doors cannot swing into required clear floor or ground spaces in these specific instances:

- clear floor space at controls for automatic and power assisted doors and gates (404.3.5)
- fixture clearances in toilet and bathing facilities (except those that are single user where wheelchair space beyond the door swing is provided) (603.2.3)
- clear floor space required at benches in saunas and steam rooms (612.2)
- clear floor space required at tactile signs, which must be beyond the arc of any door swing between the closed position and 45 degree open position (703.4.2)
- dressing, fitting, or locker rooms unless wheelchair space is provided beyond the arc of the door swing (803.3)

In other locations, doors can swing into clear floor or ground space, although locating door swing outside required clearances is advisable.

Can doors swing into turning space?

Yes, doors can swing into turning space.

Can clear floor/ground space or turning space overlap other space requirements?

Yes, clear floor or ground spaces and turning space can overlap other required clearances, including other clear floor spaces, door maneuvering clearances, and fixture clearances.

Is turning space required in all rooms and spaces?

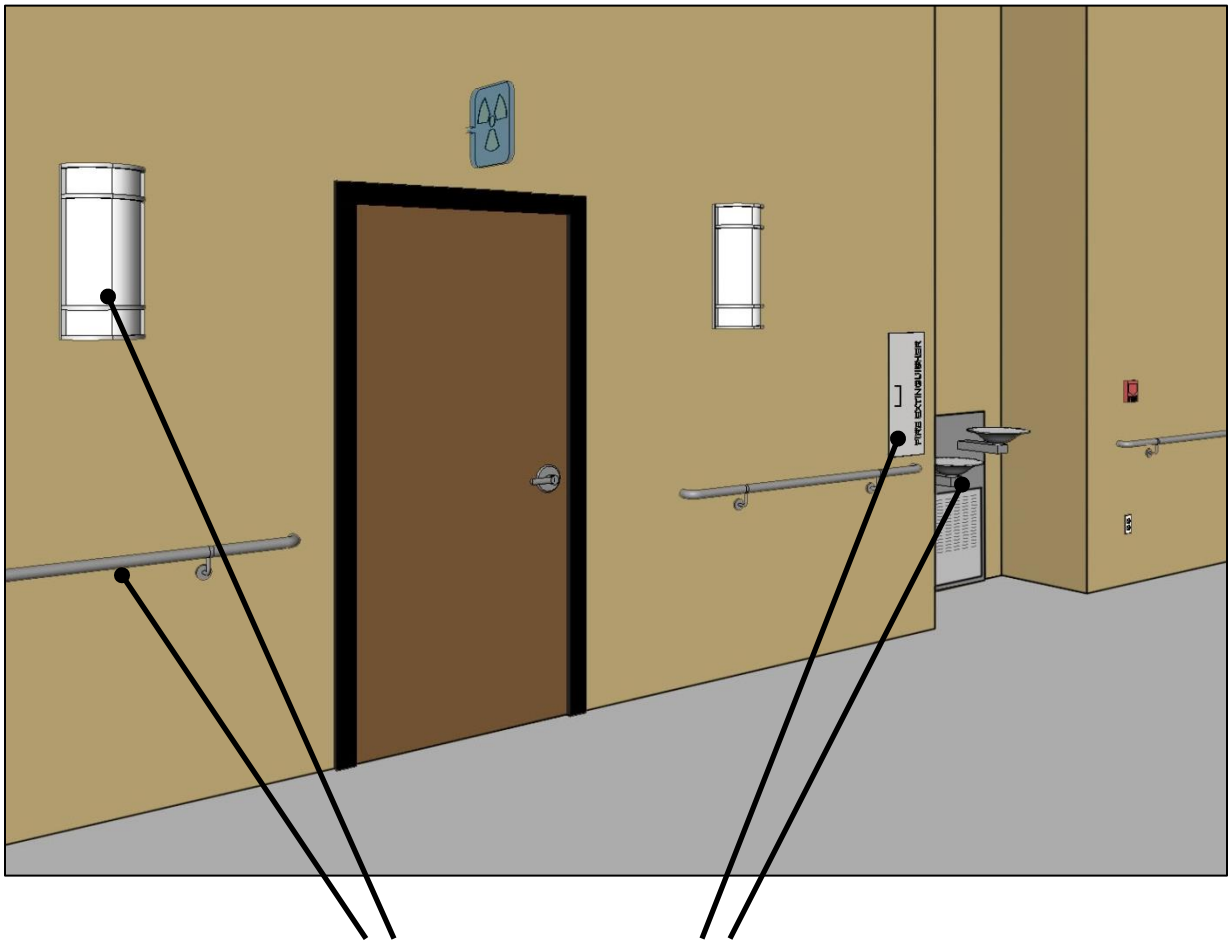
No. Turning space is required in certain spaces, such as toilet and bathing facilities, dressing and fitting rooms, and transient lodging guest rooms. Unless addressed by a specific requirement for turning space in the standards, other spaces are not required to provide them, including lobbies, offices, and meeting rooms.

Protruding Objects

Protruding Objects [§204]

To prevent hazards to people with vision impairments, the standards limit the projection of objects into circulation paths. These requirements apply to all circulation paths and are not limited to accessible routes. Circulation paths include interior and exterior walks, paths, hallways, courtyards, elevators, platform lifts, ramps, stairways, and landings.

Examples of Protruding Objects

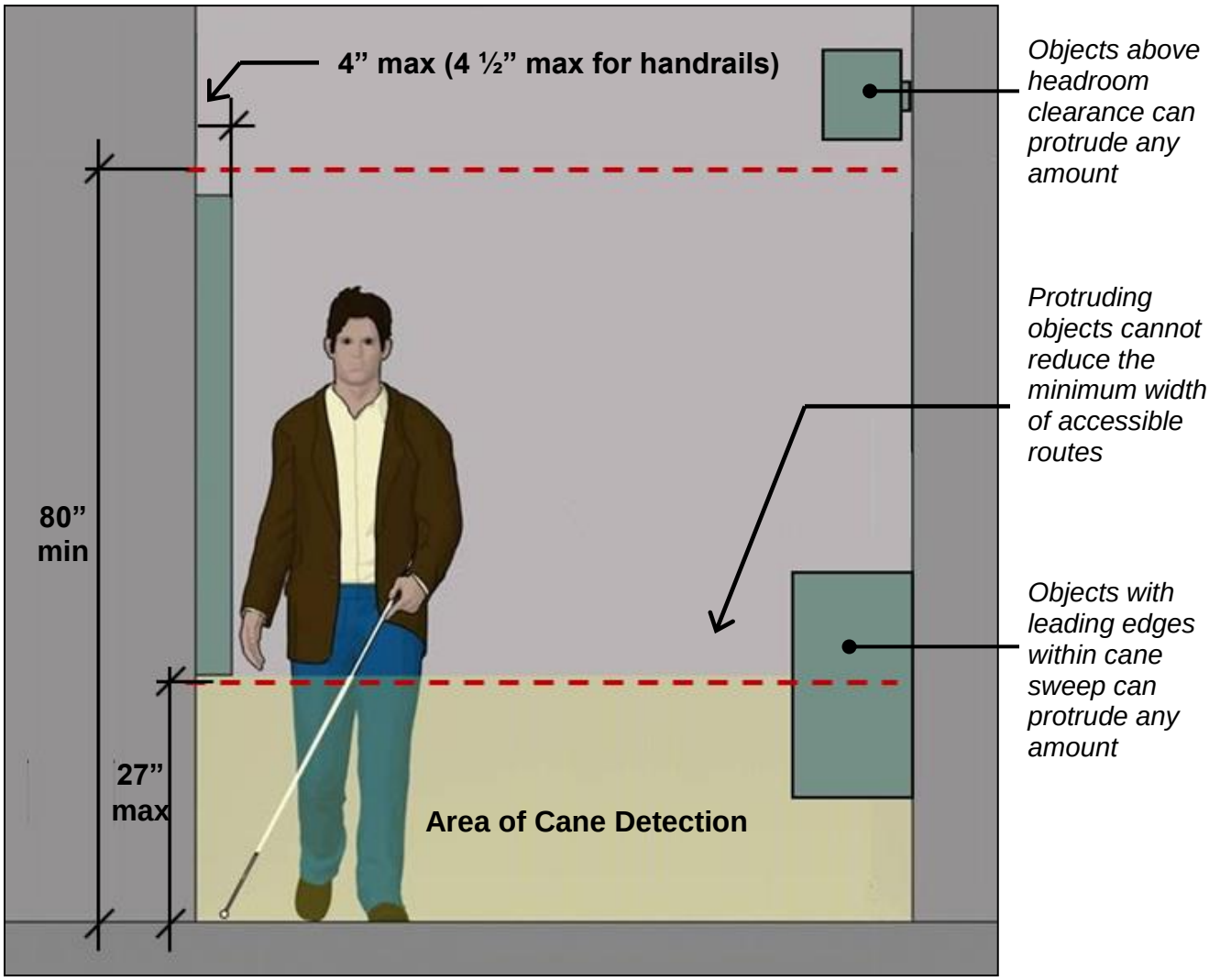


Sconces, handrails, cabinets, drinking fountains and other elements that project into circulation paths must comply with provisions for protruding objects (unless they are located within cane sweep or above headroom clearance). Requirements for protruding objects apply to all interior and exterior circulation paths of sites. They are not limited to hallways and corridors and apply equally to circulation paths in rooms and spaces.

Protrusion Limits [§307.2]

People with vision impairments often travel closely along walls which can provide wayfinding cues sometime called a “shoreline.” Objects mounted on walls, partitions, columns, and other elements along circulation paths can pose hazards unless their projection is limited. Those with leading edges that are within cane sweep (27” high maximum) or that provide minimum headroom clearance (80” minimum) do not pose hazards and can protrude any amount.

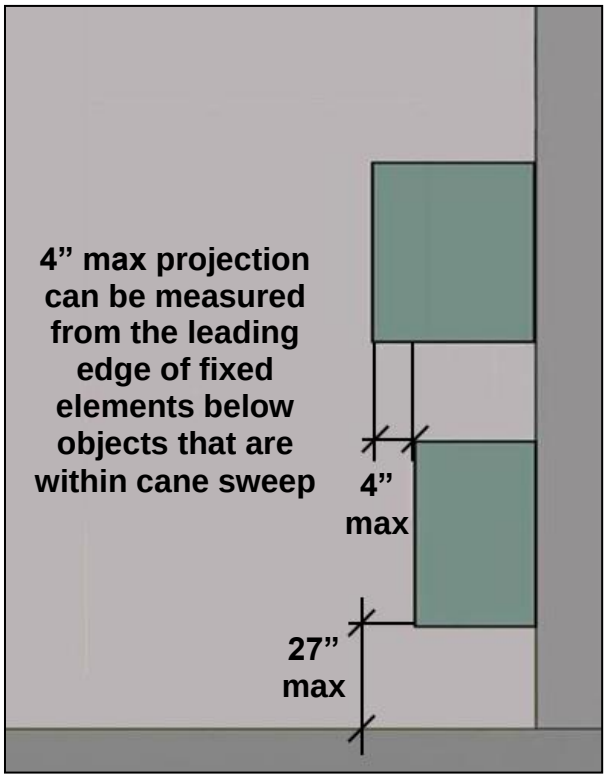
Limits of Protruding Objects

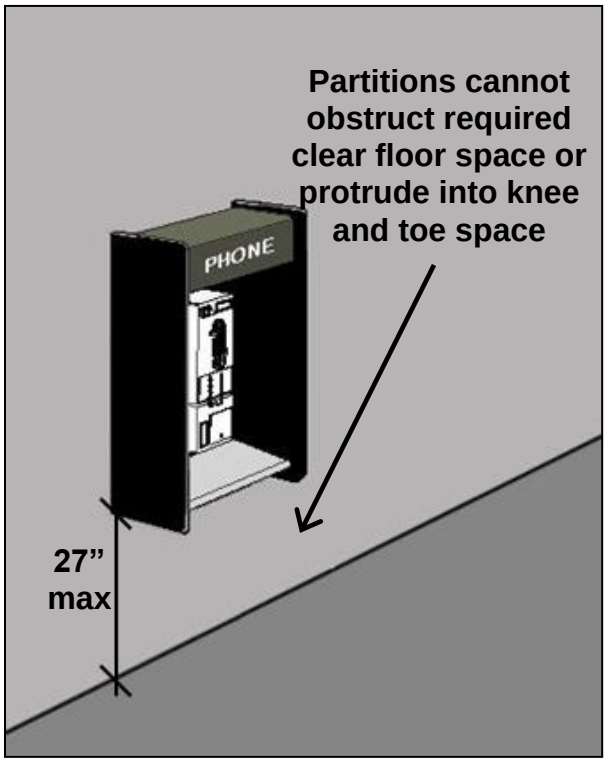


Protruding object limits apply to the full width of circulation paths.

Location Above Detectable Elements

Objects located above elements that are within can sweep can protrude 4” maximum from the leading edge of such elements provided that any required reach or clear floor space is not obstructed.



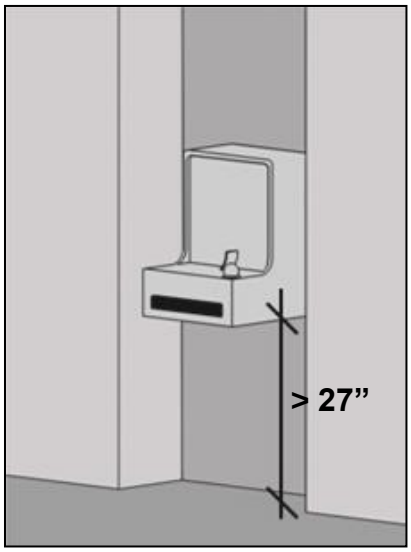


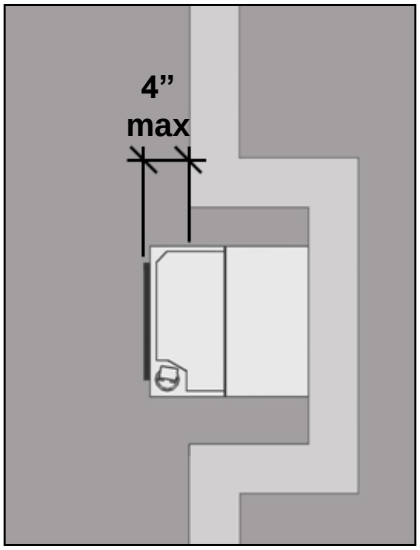
Side Partitions and Wing Walls

Side partitions or panels and wing walls can also be used to make protruding objects compliant. The bottom edge of panels or partitions must be 27” high maximum.

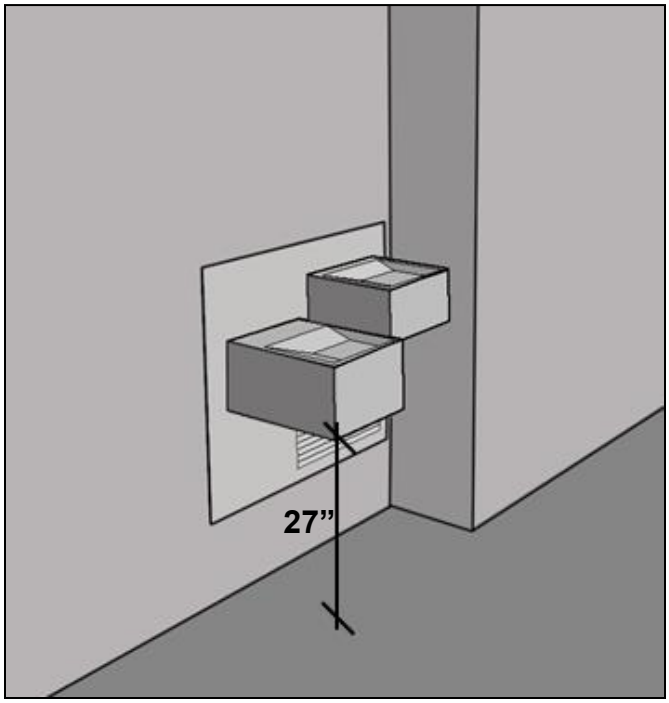
Recessed Objects

Objects can be recessed in alcoves so that they do not project more than 4” into circulation paths. Alcoves must be sized to accommodate required clear floor space at accessible elements.





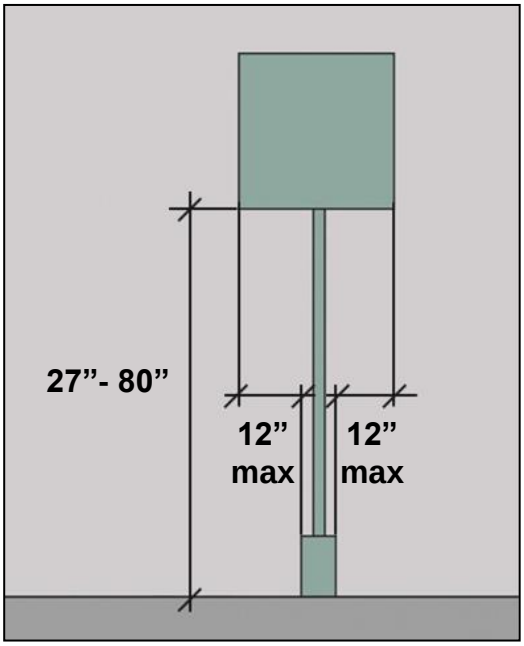
Elements, such as wheelchair accessible drinking fountains, must provide a knee clearance of at least 27”. If located to provide, but not exceed this clearance (27” above the floor or ground absolute), they are not protruding objects because the leading edge will be within cane detection.

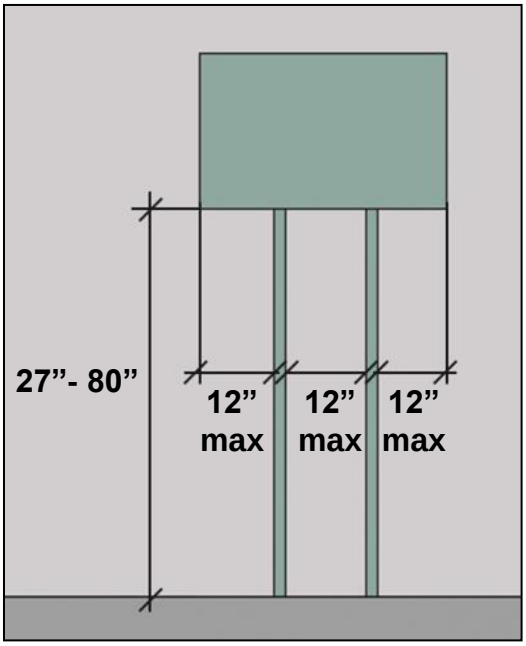


A wheelchair accessible unit located 27” absolute above the ground or floor is cane detectable and can be used to enclose one side of high units for standing access. In this instance, the 27” height is effectively an absolute dimension because it is the minimum required for knee clearance and the maximum specified for cane detection.

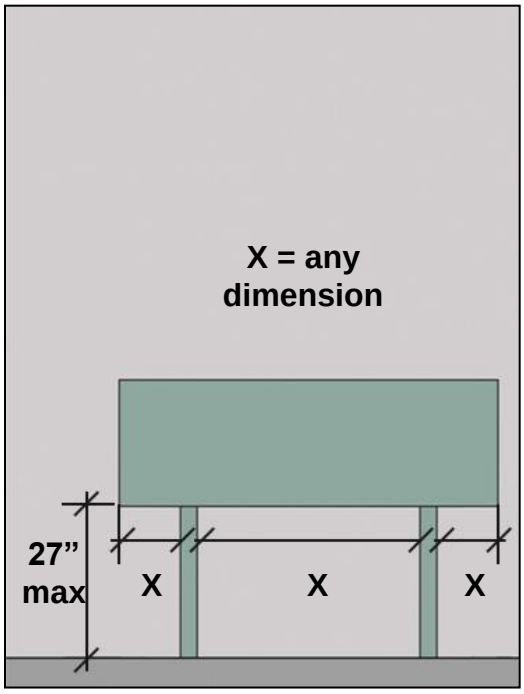
Post-Mounted Objects [§307.3]

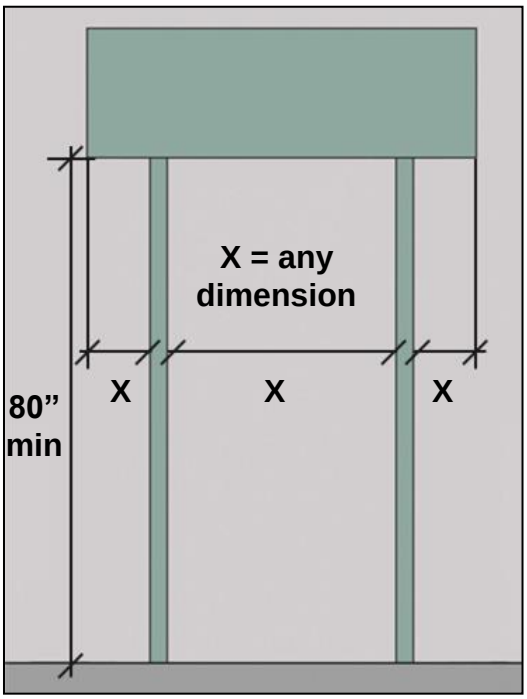
Free-standing objects with leading edges 27” to 80” high that are mounted on posts or pylons cannot protrude more than 12” into circulation paths. The 12” limit also applies to the clearance between multiple posts (excluding the sloping portions of handrails).





Objects with leading edges 27” maximum or above 80” can protrude any amount from posts or pylons.



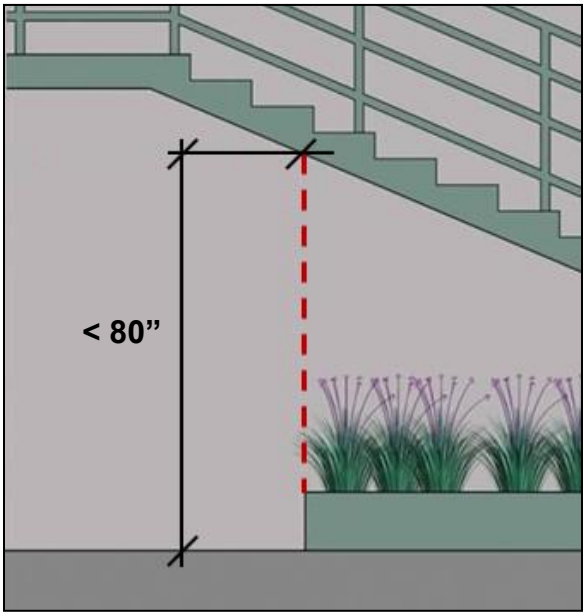


Vertical Clearance [§307.4]

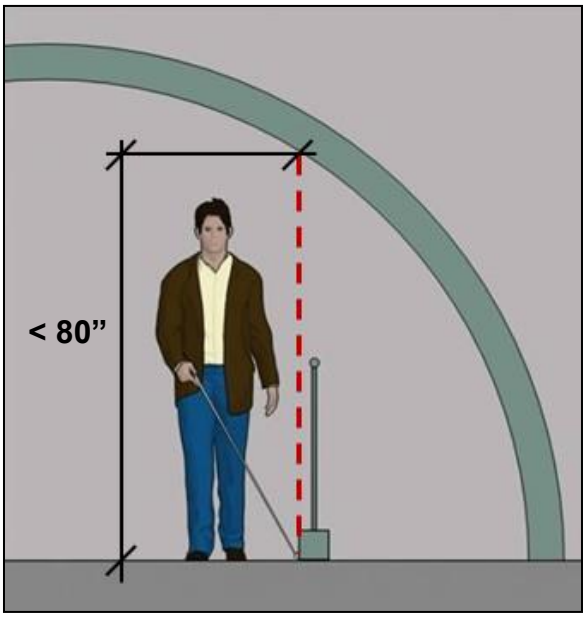
Headroom clearance of at least 80” high is required along all circulation paths (except at doors and doorways where a 78” minimum clearance is permitted to accommodate door stops and closers).

Fixed barriers, such as guardrails, are required where the vertical clearance is less than 80” such as at open stairways and along sloped or curved walls. Barriers must have leading edges no higher than 27” so that they are within cane sweep. Fixed planters, benches, and other elements can be used instead of guardrails.

Barriers at Circulation Areas with Reduced Vertical Clearance



Reduced Clearance Below Stairway



Clearance Reduced at Curved (or Sloped Walls)

Recommendation: A minimum height is not specified for barriers demarcating areas with less than 80” of vertical clearance. It is recommended that barriers be high enough so that they are not mistaken for a step or other change in level and do not pose a tripping hazard.

Common Questions

Are requirements for protruding objects limited to hallways and corridors?

No, requirements for protruding objects apply to all circulation paths, including those in rooms and spaces off corridors. They apply to both interior and exterior circulation paths.

Do drinking fountains pose hazards as protruding objects?

Cantilevered units at standard heights for people who stand must be recessed or protected as protruding objects. This is not required for wheelchair accessible units with no more than a 27" clearance below (the minimum required for knee clearance and the maximum recognized for cane detection).

Can curbs be used to indicate areas with less than 80" of vertical clearance?

The standards specify a maximum height (27") for the leading edge of barriers so they are within cane sweep, but a minimum height is not specified. Curbs may be mistaken for a step or change in level, instead of a barrier. For this reason, barriers significantly higher than a curb or riser, such as a guardrail, planter box, bench, parapet wall, or similar elements are recommended.

Operable Parts

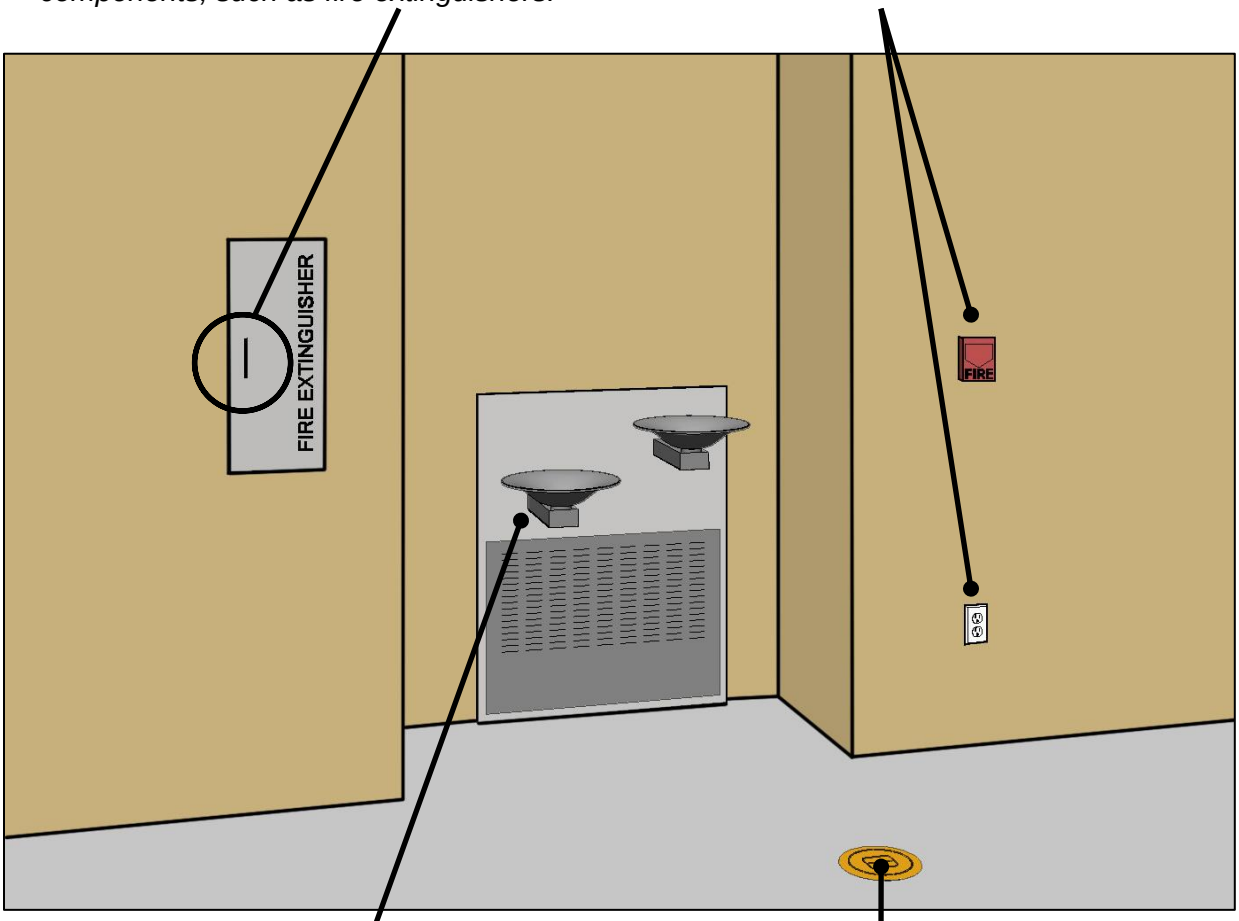
Operable Parts Covered [§205]

Compliance is required for operable parts located in accessible spaces and along accessible routes. Operable parts include light switches, electrical and communication receptacles, thermostats, alarm pulls, automatic door controls, and other elements used by facility occupants.

Examples of Operable Parts

Compliance is required for the operable portions of fixed elements, such as cabinet hardware, but not for inoperable portions or to non-fixed components, such as fire extinguishers.

Electrical outlets, alarm pulls, and many other types of receptacles and controls are covered.



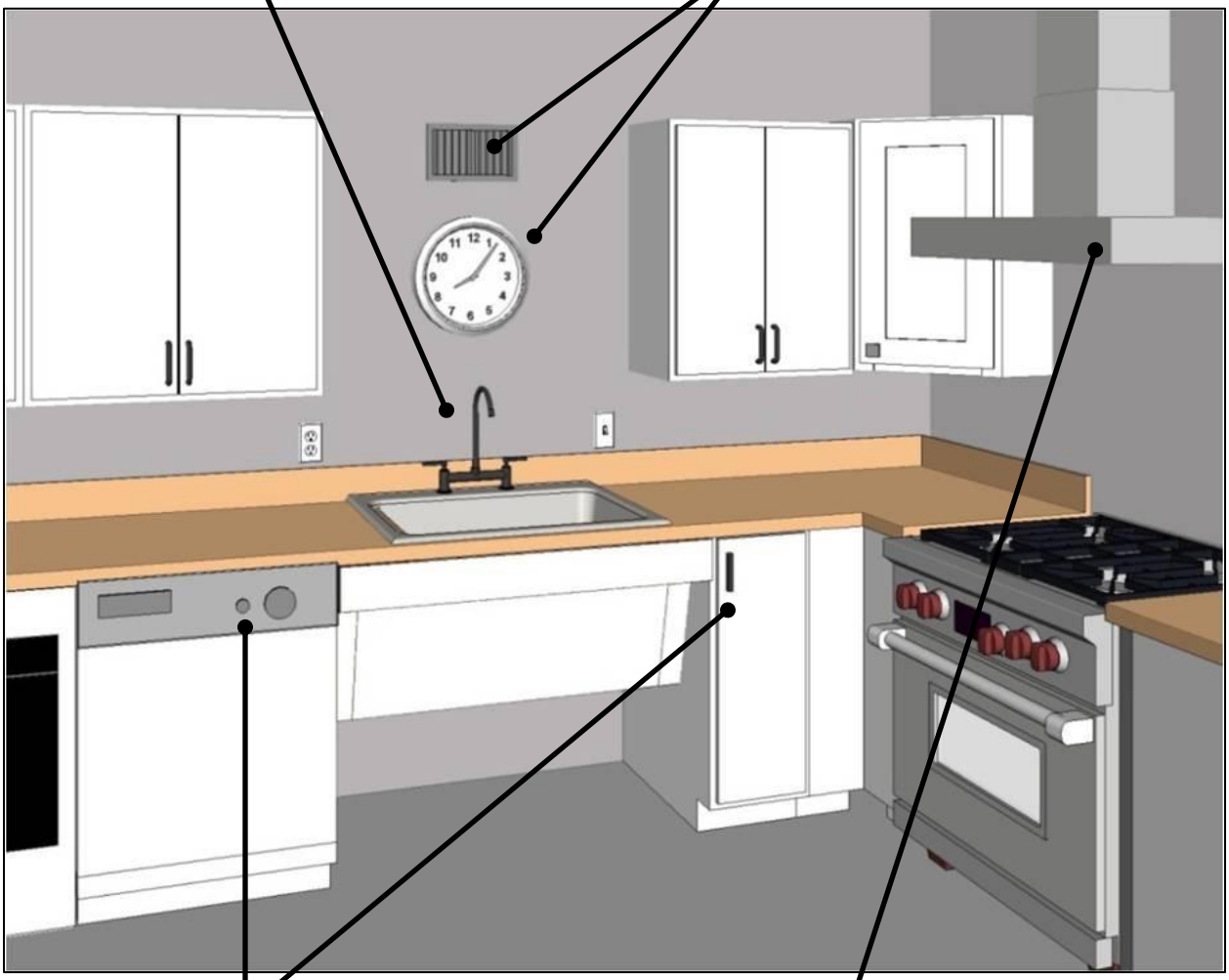
Provisions for drinking fountains and other elements covered by the standards also apply the criteria for operable parts.

Exempt: floor receptacles and operable parts used only by service or maintenance personnel.

Examples of Operable Parts in Kitchens

Electrical outlets, switches, and faucet controls are required to comply.

Exempt: HVAC diffusers and dedicated electrical or communication receptacles.



Appliance controls and handles to accessible storage are also covered as operable parts.

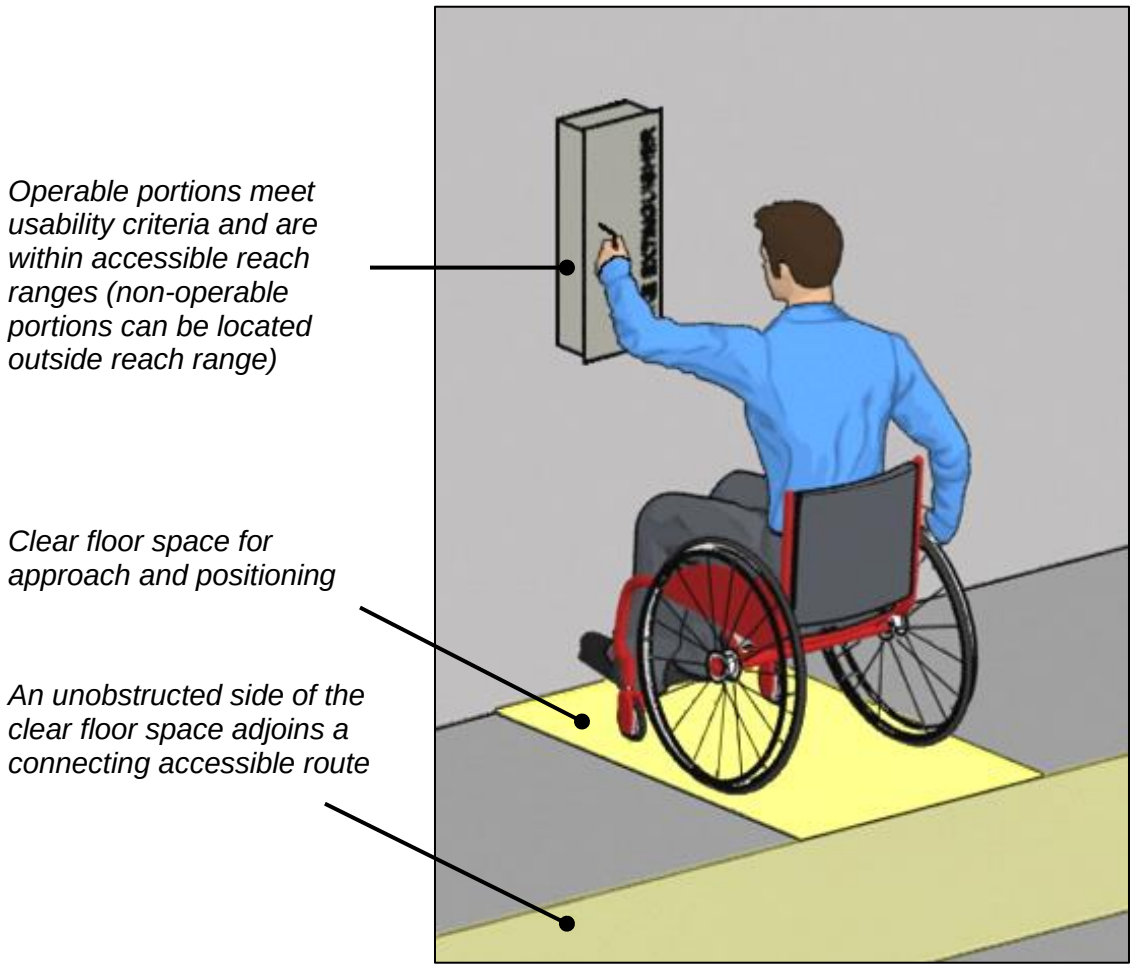
Controls on elements outside reach range, such as range hoods, require provision of a second control.

If redundant controls (other than light switches) are provided for an element, one control in each space is not required to comply.

Operable Parts [§309]

Requirements apply generally to all types of operable parts covered. They are also referenced by technical sections of the standards covering drinking fountains, faucet and flush controls, ATM and fare machines, appliances, storage, windows, and door and gate hardware, and other elements.

Accessible Features of Operable Parts



Forward and Side Approaches

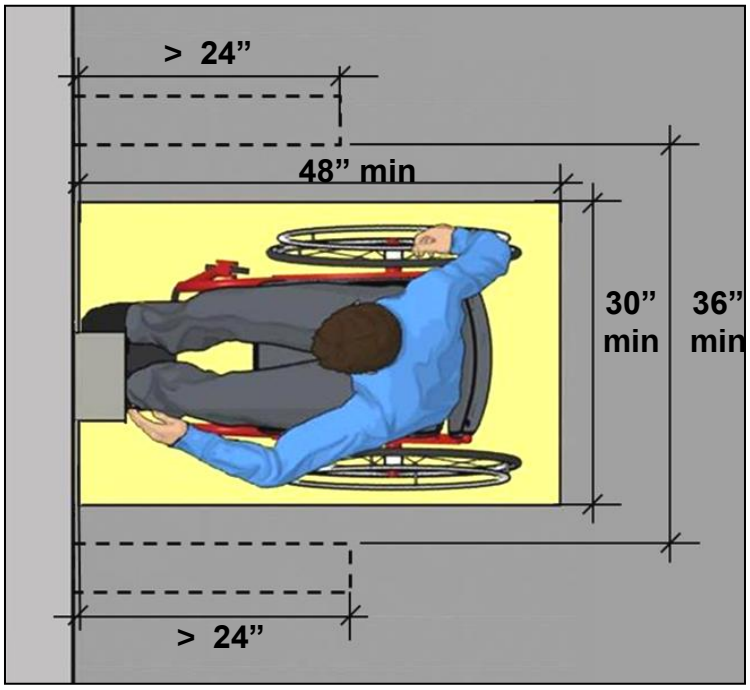
At most elements, clear floor space can be positioned for either a forward approach or a side approach. A forward approach is required at some elements, such as drinking fountains and lavatories, for easier access.

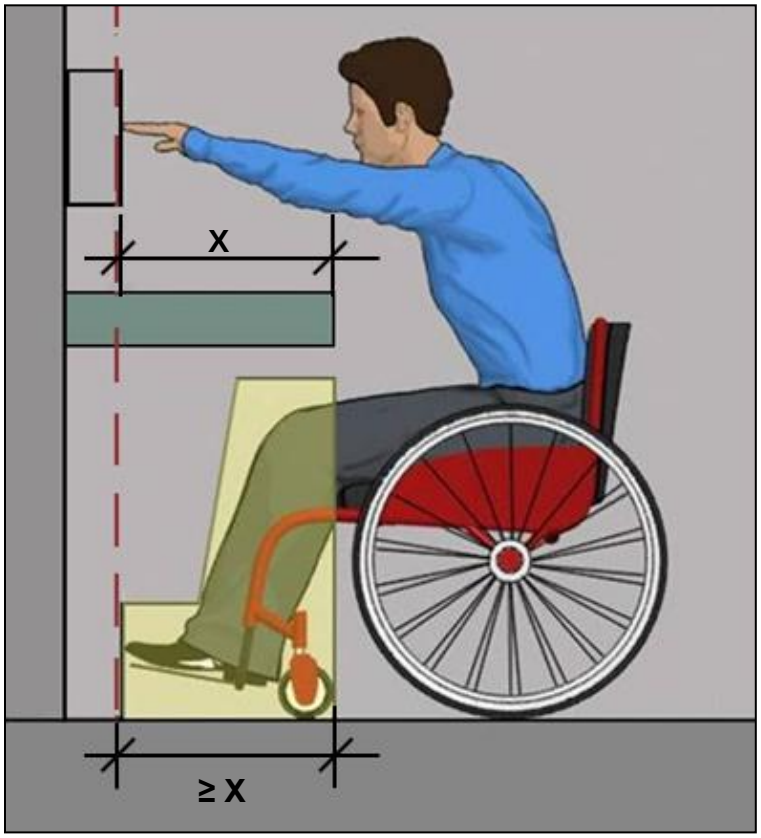
Forward Approach and Reach

Clear Floor Space [§309.2]

Clear floor space for forward approaches must extend up to or, if knee or toe space is provided, below operable parts. This facilitates access since the forward reach does not extend beyond a wheelchair user's toes.

If clear floor space is obstructed on both sides more than half the minimum required depth, a wider clearance (36" min.) is required for maneuvering and sway.



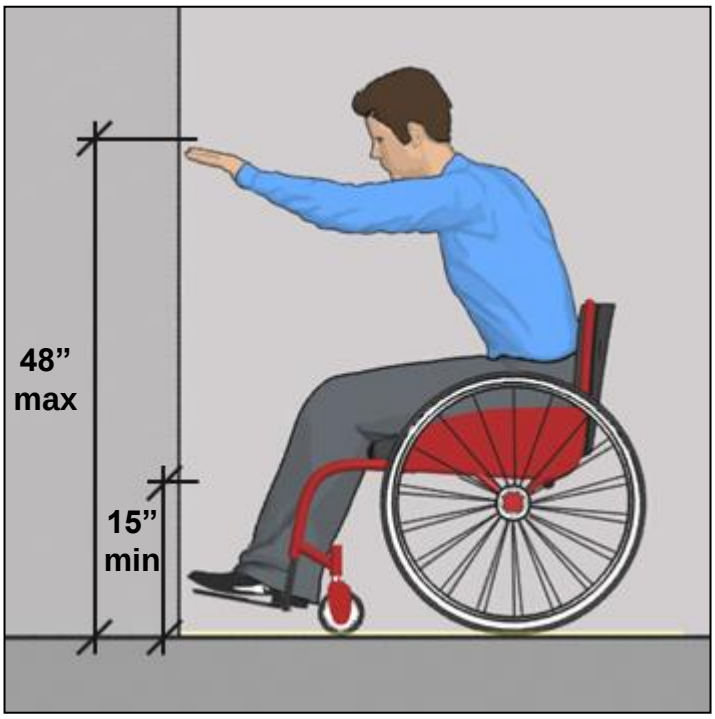


Knee and Toe Space

If the forward reach to operable parts extends over an obstruction, such as a counter, clearances for toes and knees is required below. The knee and toe space must be at least as deep as the reach depth measured from the leading edge of the obstruction.

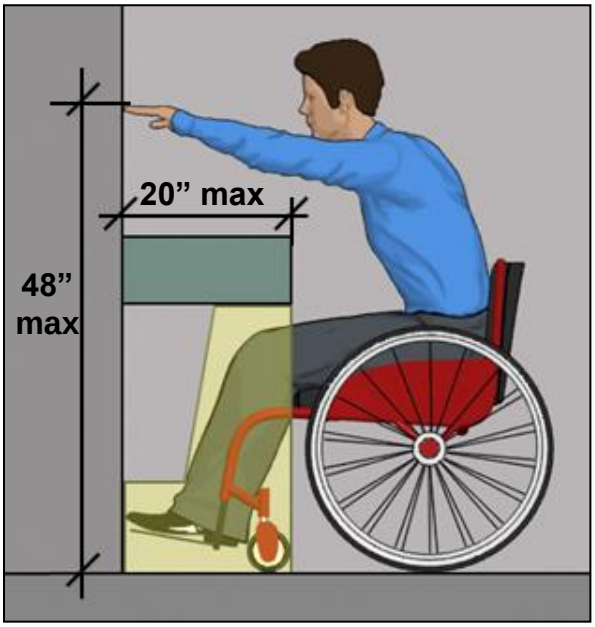
Forward Reach [§308.2]

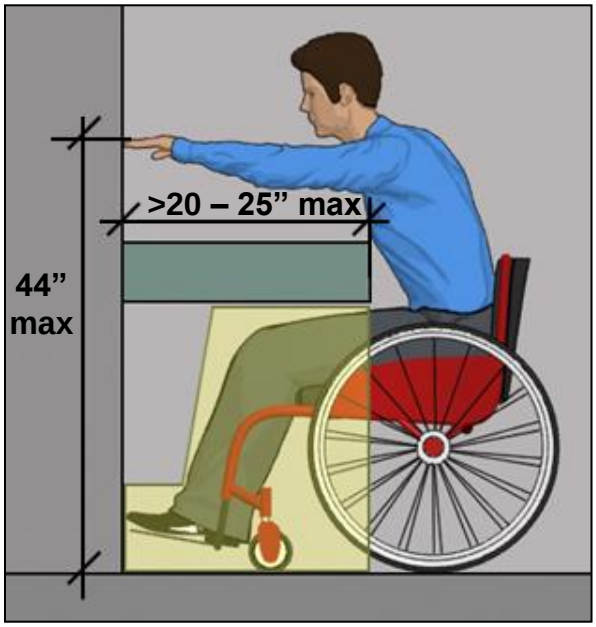
The range for unobstructed reaches (15” – 48”) applies only to those portions of elements that are operable. Non-operable portions can be located outside the range.



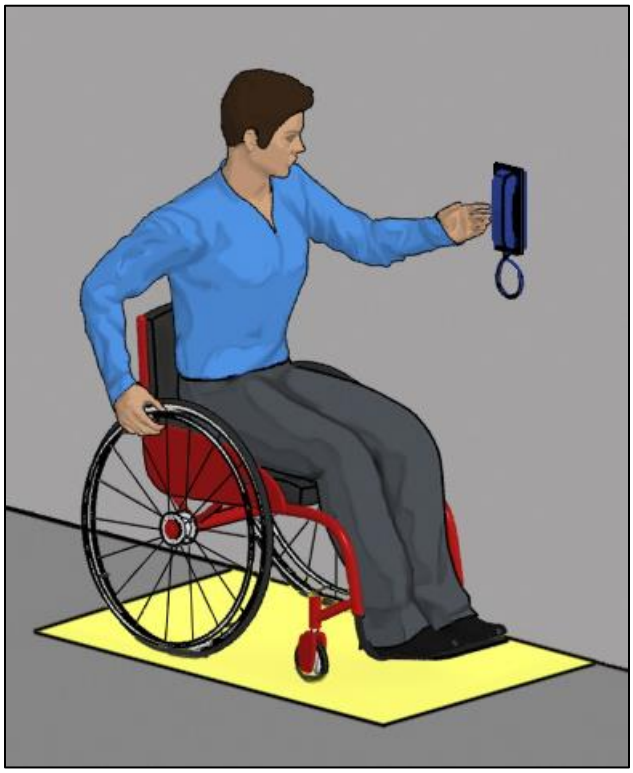
Obstructed High Reach

The maximum reach of 48” is reduced to 44” when the depth of reach over an obstruction exceeds 20.” Knee and toe space must extend the full depth of reach.





Side Approach and Reach

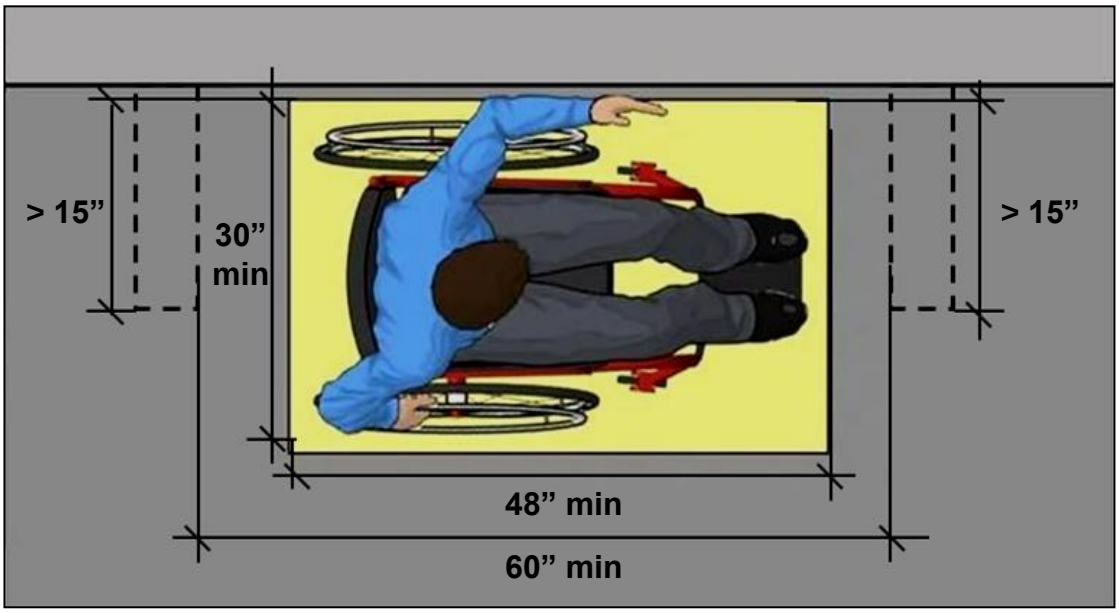


Clear Floor Space [§309.2]

Clear floor space can be oriented for a side approach instead of a forward approach at most operable parts. Nominal centering of the space on operable portions of elements is advisable, but not required (except at washers and dryers).

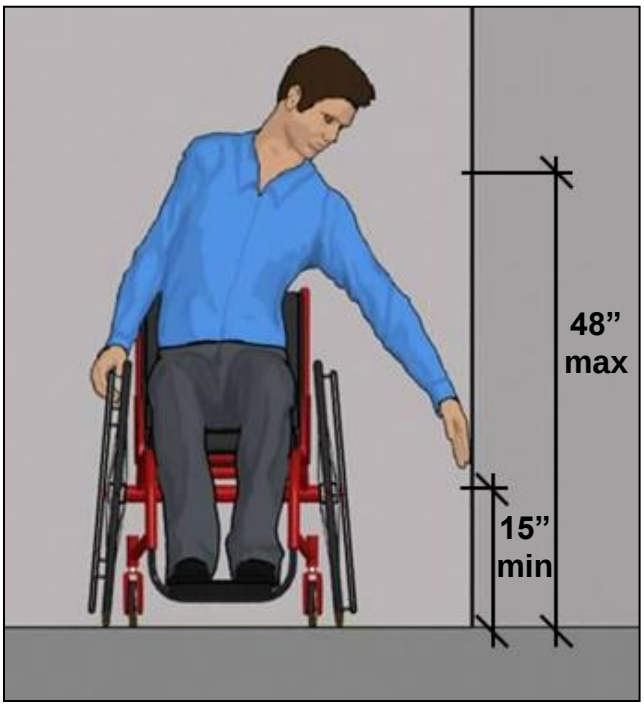
Clear Floor Space

Additional clearance is required if the space is obstructed on three sides for more than half the depth to allow easier maneuvering into the space.



Side Reach [§308.3]

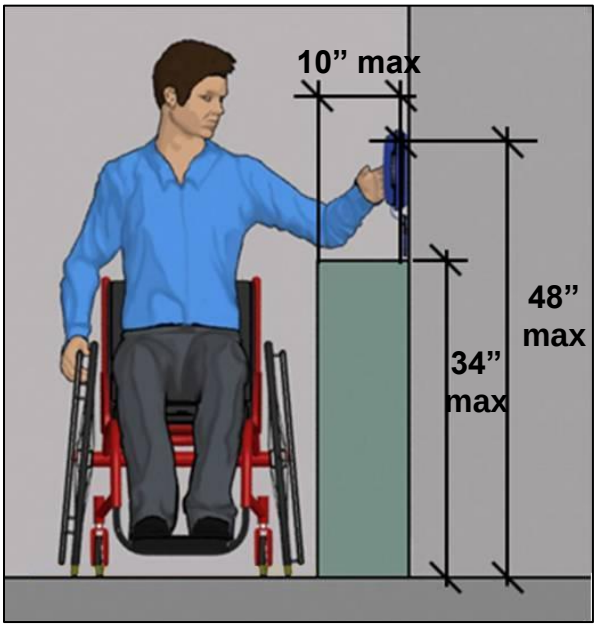
The range for side reach, like forward reach is 15” to 48” if unobstructed. The maximum reach depth for this range is 10” measured from the available clear floor space.

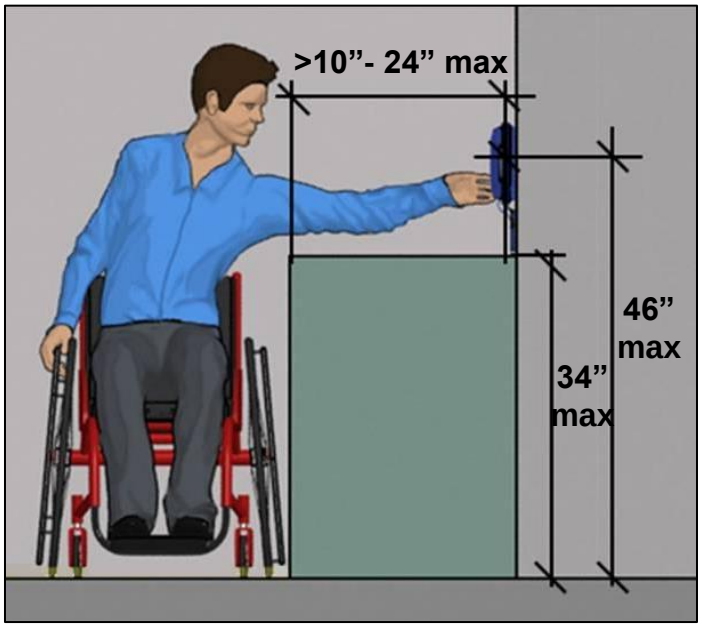


Fuel Dispensers
The operable parts of fuel dispensers located on existing curbs can be up to 54” high.

Obstructed High Reach

The maximum high reach is reduced to 46” when the reach over an obstruction is deeper than 10” (to a maximum of 24”). Obstructions at side reaches are limited to a height of 34”.

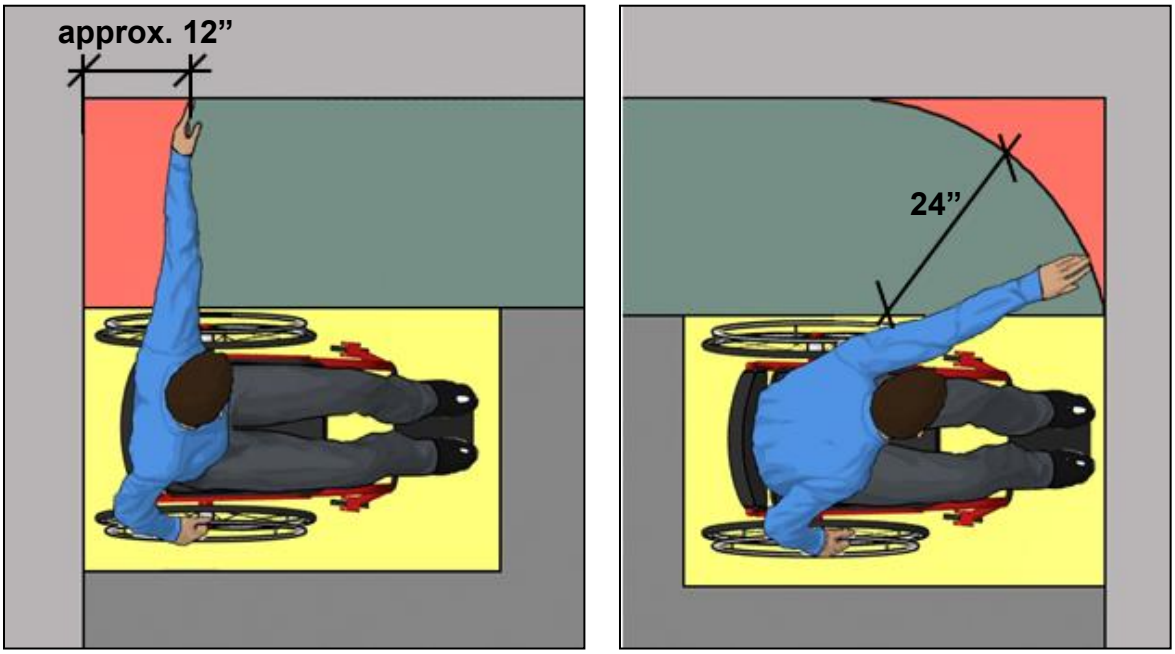




Side Reach Radius

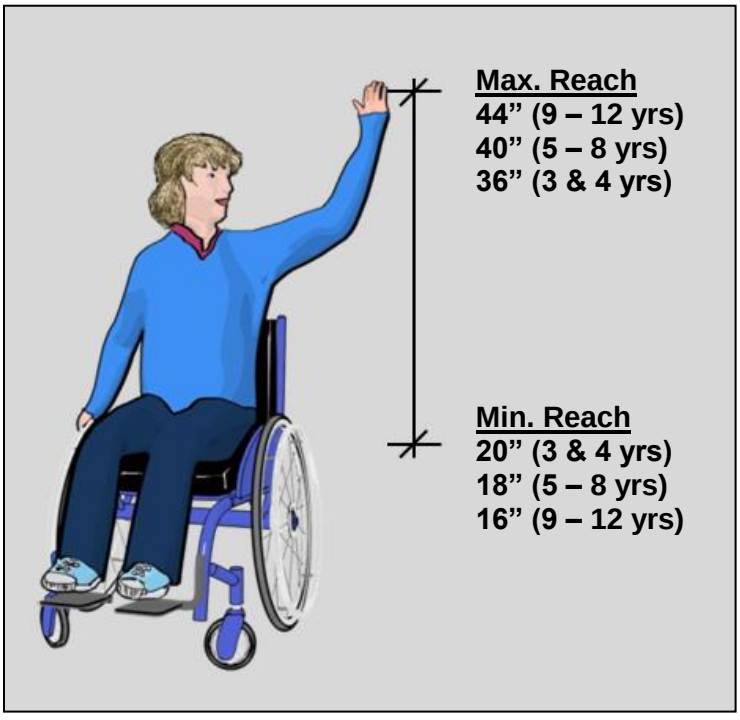
Elements located in corners can be difficult to reach from a side approach.

Recommendation: Where a side reach is provided, locate elements away from corners in consideration of the typical reach radius.



Advisory Reach Range for Children

The standards include advisory (non-mandatory) reach ranges based on children’s dimensions that can be followed when operable parts are designed for use by children. This guidance provides reach ranges recommended according to three age groups.

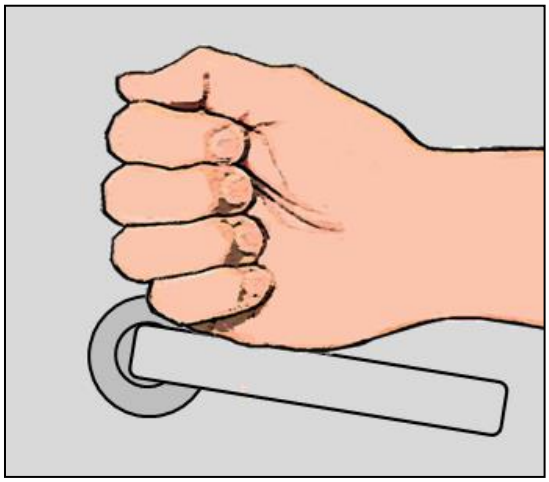


Operation [§309.4]

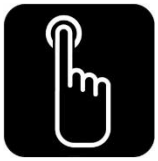
Operable parts must be usable with one hand and not require:

- tight grasping, pinching, or twisting of the wrist, or
- more than 5 pounds of force (lbf) to operate.

Parts that can be operated without hand or finger dexterity, fine motor movement, or simultaneous actions provide easier access and accommodate a broader range of users.



Operability with a closed fist is a reliable test of usability, but is not required by the standards.



Push Plates, Buttons, and Bars
Push-activated controls not requiring more than 5 lbf are acceptable. Buttons that are raised or flush are easier to use than those that are recessed. (Elevator control buttons cannot be recessed, and input keys at ATM and fare machines must be raised.)

Handles, Pulls, and Knobs
Standard U-shaped pulls and lever-shaped handles are acceptable. Stationary knobs with a shape that can be loosely gripped also are acceptable. Knobs that require a full hand grip and turning, including round door knobs and shower controls, do not comply because they require twisting of the wrist.

Latches and Locks
Latches and locks with small parts that must be manipulated can be difficult to use and will not comply if pinching is necessary. However, non-fixed portions of locks and other operable parts, such as keys and access cards, are not required to comply (but those that do not require pinching or turning provide better access). Hardware that does not require simultaneous actions are better, but some types, such as handles with thumb latches are acceptable.

Controls and Switches
Dials and other controls that can be turned with the fingers but not the full hand can be used if they do not require twisting of the wrist or pinching. Flip switches and similar controls are acceptable, though push plate types can provide easier access.

Common Questions

Are redundant controls for an element required to comply?

If redundant controls, other than light switches, serve a single element, one control in each space is not required to comply. If a redundant control is located in a different space, however, it must comply. All light switches are required to comply.

What types of electrical or communication receptacles are exempt because they serve a "dedicated use"?

Electrical receptacles serving a dedicated use include those installed for appliances, including refrigerators, ranges, and dishwashers, and wall clocks. Floor electrical receptacles are also exempt. Communication receptacles serving a dedicated use include phone jacks, data ports, network and audio-visual connections. Electrical receptacles provided for portable communication devices such as TTYs are not covered by this exception and must comply.

Do reach range requirements apply to elements or only to operable parts of elements?

Reach range requirements apply to the operable portions of elements, including handles, controls, switches, buttons, control pads and other mechanisms that must be activated or manipulated for use. Non-operable portions of elements do not have to be within accessible reach ranges.

Must operable parts be usable with a closed fist?

Closed-fist operation is a good performance test but is not required by the standards. Many types of operable parts, such as pull handles, satisfy the requirements even though they may not be operable with a closed fist.

Are turn-key locks prohibited by the standards?

Key locks or key cards are not prohibited by the standards which apply only to the fixed portions of operable parts. Similarly, items dispensed by ATMs and fare machines, such as receipts, cash, fare cards, and vending machine products are not covered by the standards.