
# ADA Standards for Accessible Design Revisions - Effective 3/15/12

Course No: A02-004
Credit: 2 PDH

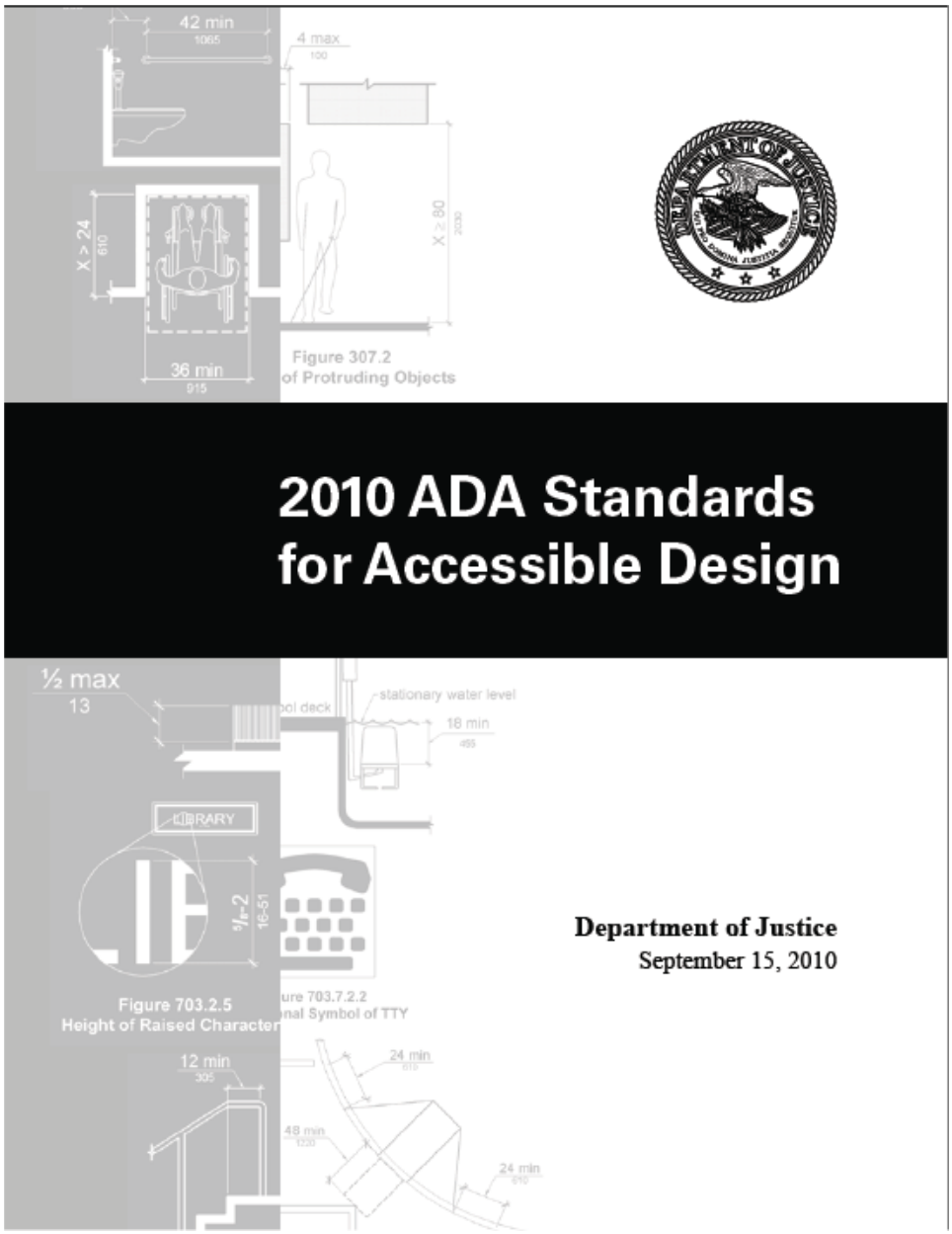
John McNally, P.E., A.I.A, LEED AP

Continuing Education and Development, Inc.

P: (877) 322-5800
info@cedengineering.com

# ADA Standards for Accessible Design Revisions – Effective 3/15/12

***John J. McNally, P.E, AIA***



Introduction & Brief History:

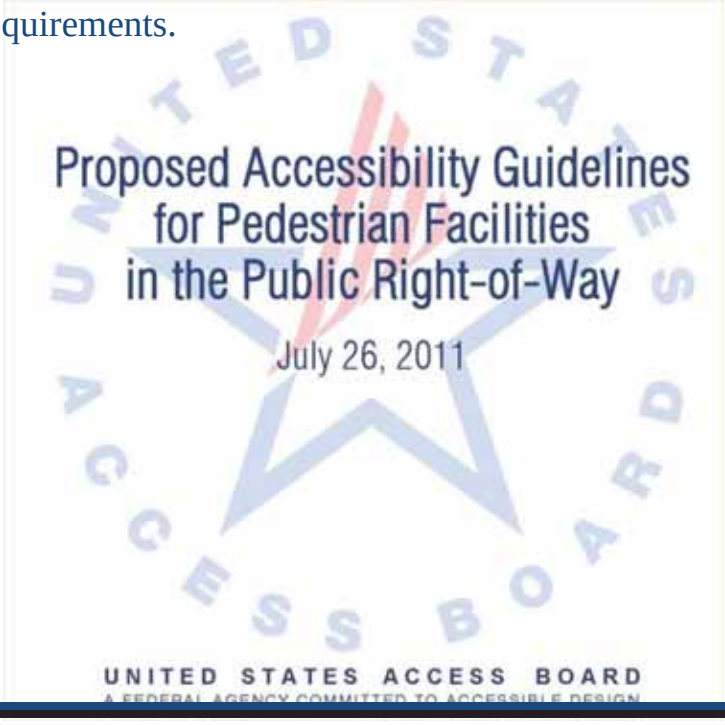
The Department of Justice published the first major revisions of the 1991 ADA standards in the **Federal Register** on September 15, 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design "2010 Standards" or "Standards". The 2010 Standards set minimum requirements – both scoping and technical - for newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

On March 15, 2012, compliance with the 2010 Standards will be required for new construction and alterations. In the period between September 15, 2010 and March 15, 2012, covered entities may choose between the 1991 ADA Standards (without the elevator exemption for Title II facilities), the Uniform Federal Accessibility Standards (Title II facilities only), and the 2010 Standards.

This course focuses on the Building related changes to the ADA standards

Relationship to PROWAG

PROWAG is the Access Board's guidelines for the public right of way. The 2010 ADA standards are focused mainly on facilities on sites. While the 2010 ADA standards address certain features common to public sidewalks, such as curb ramps, PROWAG provides further guidelines necessary to address conditions unique to public rights-of-way. Various constraints posed by space limitations at sidewalks, roadway design practices, slope, terrain, access for blind pedestrians at street crossings, and wheelchair access to on-street parking initiated the need for separate right of way requirements.



**102 Dimensions for Adults and Children**

The 1991 Standards did not provide specific requirements for children´s elements or facilities. Section 102 of the 2010 Standards states that the technical requirements are based on adult dimensions and anthropometrics. In addition, technical requirements are also provided based on children´s dimensions and anthropometrics for drinking fountains, water closets and other elements located in toilet compartments, lavatories and sinks, dining surfaces, and work surfaces

**202 Visible Alarms in Alterations to Existing Facilities.** The 1991 Standards, at sections 4.1.3(14) and 4.1.6(1) (b), and sections 202.3 and 215.1 of the 2010 Standards require that when existing elements and spaces of a facility are altered, the alterations must comply with new construction requirements. Section 215.1 of the 2010 Standards adds a new exception to the scoping requirement for visible alarms in existing facilities so that visible alarms must be installed only when an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.

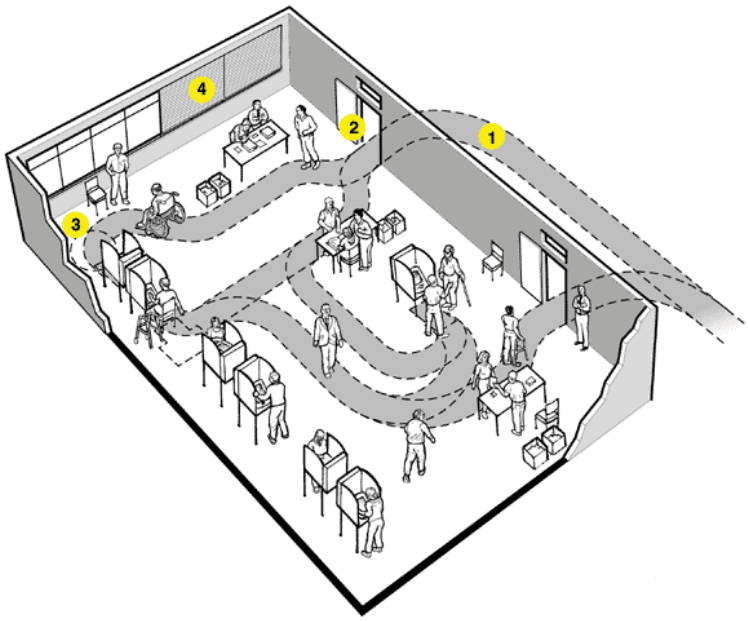

**203 General Exceptions**

Limited Access Spaces and Machinery Spaces. The 1991 Standards, at section 4.1.1, contain an exception that exempts "non-occupiable" spaces that have limited means of access, such as ladders or very narrow passageways, and that are visited only by service personnel for maintenance, repair, or occasional monitoring of equipment, from all

accessibility requirements. Sections 203.4 and 203.5 of the 2010 Standards expand this exception by removing the condition that the exempt spaces be "non-occupiable," and by separating the other conditions into two independent exceptions: one for spaces with limited means of access, and the other for machinery spaces. More spaces are exempted by the exception in the 2010 Standards.

### 203, 206 and 215 Employee Work Areas

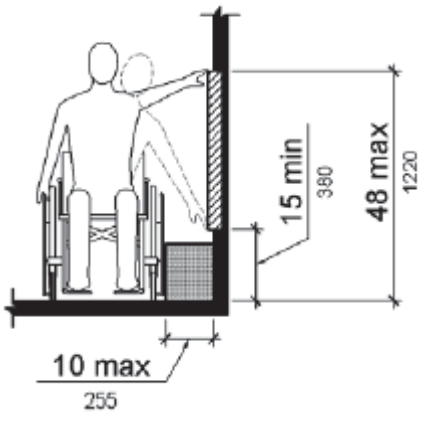
**Common Use Circulation Paths in Employee Work Areas.** The 1991 Standards at section 4.1.1(3), and the 2010 Standards at section 203.9, require employee work areas in new construction and alterations *only* to be designed and constructed so that individuals with disabilities can approach, enter, and exit the areas. Section 206.2.8 of the 2010 Standards requires accessible common use circulation paths within employee work areas unless they are subject to exceptions in sections 206.2.8, 403.5, 405.5, and 405.8.




The ADA, 42 U.S.C. 12112(b) (5) (A) and (B), requires employers to make reasonable accommodations in the workplace for individuals with disabilities, which may include modifications to work areas when needed.

### Reach Ranges

Section 4.2.6 of the 1991 Standards specifies a maximum 54-inch high side reach and a minimum 9-inch low side reach for an unobstructed reach depth of 10 inches maximum. Section 308.3.1 of the 2010 Standards specifies a maximum 48-inch high side reach and a minimum 15-inch low side reach where the element being reached for is unobstructed. Section 308.3.1, Exception 1,

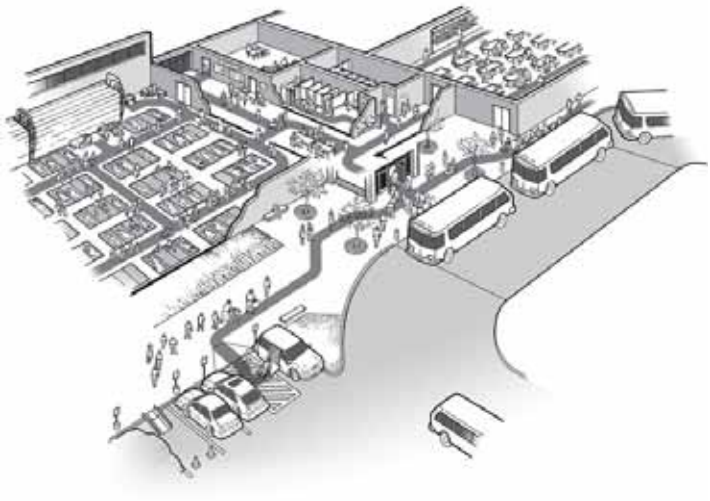


permits an obstruction that is no deeper than 10 inches between the edge of the clear floor or ground space and the element that the individual with a disability is trying to reach. Changes in the side-reach range for new construction and alterations in the 2010 Standards will affect a variety of building elements such as light switches, electrical outlets, thermostats, fire alarm pull-stations, card readers, and keypads.

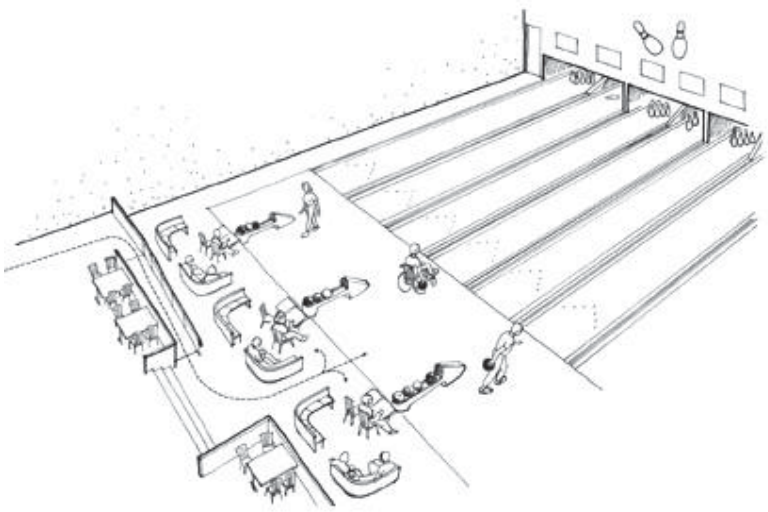
### 206 and Chapter 4 Accessible Routes

**Slope.** The 2010 Standards provide, at section 403.3, that the cross slope of walking surfaces not be steeper than 1:48. The 1991 Standards´ cross slope requirement was that it not exceed 1:50.

**Accessible Routes from Site Arrival Points and Within Sites.** The 1991 Standards, at sections 4.1.2(1) and (2), and the 2010 Standards, at sections 206.2.1 and 206.2.2, require that at least one accessible route be provided within the site from site arrival points to an accessible building entrance and that at least one accessible route connect accessible facilities on the same site. The 2010 Standards also add two exceptions that exempt site arrival points and accessible facilities within a site from the accessible route requirements where the only means of access between them is a vehicular way that does not provide pedestrian access.



**Areas of Sport Activity.**



ACCESSIBLE ROUTE CONNECTING ACCESSIBLE LANES AND TEAM PLAYER AREAS

Section 206.2.2 of the 2010 Standards requires at least one accessible route to connect accessible buildings, facilities, elements, and spaces on the same site. Advisory section 206.2.2 adds the explanation that an accessible route must connect the boundary of each area of sport activity (e.g., courts and playing fields, whether indoor or outdoor). Section 206.2.12 of the 2010 Standards further requires that in court sports the accessible route must directly connect both sides of the court.

**Limited-Use/Limited-Application Elevators, Destination-Oriented Elevators and Private Residence Elevators.** The 1991 Standards, at section 4.1.3(5), and the 2010 Standards, at sections 206.2 and 206.6, include exceptions to the scoping requirement for accessible routes that exempt certain facilities from connecting each story with an elevator. If a facility is exempt from the scoping requirement, but nonetheless installs an elevator, the 1991 Standards require the elevator to comply with the technical requirements for elevators. The 2010 Standards add a new exception that allows a facility that is exempt from the scoping requirement to install a limited-use/limited-application (LULA) elevator. LULA elevators are also permitted in the 1991 Standards and the 2010 Standards as an alternative to platform lifts. The 2010 Standards also add a

new exception that permits private residence elevators in multi-story dwelling and transient lodging units. The 2010 Standards contain technical requirements for LULA elevators at section 408 and private residence elevators at section 409.

**Accessible Routes to Tiered Dining Areas in Sports Facilities.** The 1991 Standards, at sections 4.1.3(1) and 5.4, and section 206.2.5 of the 2010 Standards require an accessible route to be provided to all dining areas in new construction, including raised or sunken dining areas. The 2010 Standards add a new exception for tiered dining areas in sports facilities. Dining areas in sports facilities are typically integrated into the seating bowl and are tiered to provide adequate lines of sight for individuals with disabilities. The new exception requires accessible routes to be provided to at least 25 percent (25%) of the tiered dining areas in sports facilities. Each tier must have the same services and the accessible routes must serve the accessible seating.


**Accessible Routes to Press Boxes.** The 1991 Standards, at sections 4.1.1(1) and 4.1.3(1), cover all areas of newly constructed facilities required to be accessible, and require an accessible route to connect accessible entrances with all accessible spaces and elements within the facility. Section 201.1 of the 2010 Standards requires that all areas of newly designed and constructed buildings and facilities and altered portions of existing buildings and facilities be accessible. Sections 206.2.7(1) and (2) of the 2010 Standards add two exceptions that exempt small press boxes that are located in bleachers with entrances

on only one level, and small press boxes that are free-standing structures elevated 12 feet or more above grade, from the accessible route requirement when the aggregate area of all press boxes in a sports facility does not exceed 500 square feet. It is anticipated that this change will significantly reduce the economic impact on smaller sports facilities, such as those associated with high schools or community colleges.

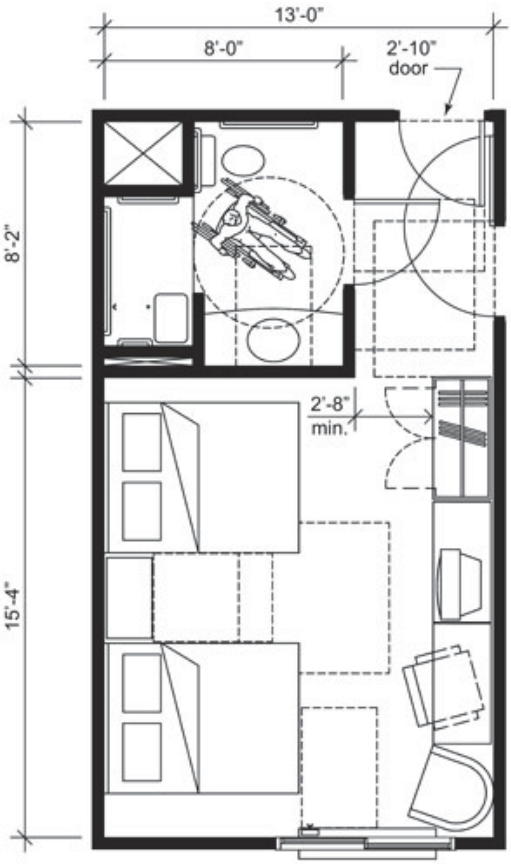
**Public Entrances.**

The 1991 Standards, at sections 4.1.3(8) and 4.1.6(1) (h), require at least fifty percent (50%) of public entrances to be accessible. Section 206.4.1 of the 2010 Standards requires at least sixty percent (60%) of public entrances to be accessible. Thus, under the 2010 Standards where two public entrances are planned in a newly constructed facility, both entrances must be accessible.

**Alterations to Existing Elevators.**

When a single space or element is altered, the 1991 Standards, at sections 4.1.6(1) (a) and (b), require the space or element to be made accessible. When an element in one elevator is altered, the 2010 Standards, at section 206.6.1, require the same element to be altered in all elevators that are programmed to respond to the same call button as the altered elevator. The 2010 Standards, at sections 407.2.1 - 407.4.7.1.2, also contain exceptions to the technical requirements for elevators when existing elevators are altered that minimize the impact of this change.

**Accessible Routes in Dwelling Units with Mobility Features.** Sections 4.34.1 and 4.34.2 of the UFAS require the living area, kitchen and dining area, bedroom, bathroom, and laundry area, where provided, in covered dwelling units with mobility features to be on an accessible route. Where covered dwelling units have two or more bedrooms, at least two bedrooms are required to be on an accessible route. The 2010 Standards at sections 233.3.1.1, 809.1, 809.2, 809.2.1, and 809.4 will require all spaces and elements within dwelling units with mobility features to be on an accessible route. These changes exempt unfinished attics and unfinished basements from the accessible route requirement. Section 233.3.5 of the 2010 Standards also includes an exception to the dispersion requirement that permits accessible single-story dwelling units to be constructed, where multi-story dwelling units are one of the types of units provided




**Location of Accessible Routes.** Section 4.3.2(1) of the 1991 Standards requires accessible routes connecting site arrival points and accessible building entrances to coincide with general circulation paths, to the maximum extent feasible. The 2010 Standards require all accessible routes to coincide with or be located in the same general area as general circulation paths. Additionally, a new provision specifies that where a circulation path is

interior, the required accessible route must also be located in the interior of the facility. The change affects a limited number of buildings. Section 206.3 of the 2010 Standards requires all accessible routes to coincide with or be located in the same general area as general circulation paths.

**Location of Accessible Routes to Stages.** The 1991 Standards at section 4.33.5 require an accessible route to connect the accessible seating and the performing area. Section 206.2.6 of the 2010 Standards requires the accessible route to directly connect the seating area and the accessible seating, stage, and all areas of the stage, where a circulation path directly connects the seating area and the stage. Both the 1991 Standards and the 2010 Standards also require an accessible route to connect the stage and ancillary areas, such as dressing rooms, used by performers. The 2010 Standards do not require an additional accessible route to be provided to the stage. Rather, the changes specify where the accessible route to the stage, which is required by the 1991 Standards, must be located.

**207 Accessible Means of Egress**

The 1991 Standards at sections 4.1.3(9); 4.1.6(1)(g); and 4.3.10 establish scoping and technical requirements for accessible means of egress. Section 207.1 of the 2010 Standards reference the International Building Code (IBC) for scoping and technical requirements for accessible means of egress. The 1991 Standards require the same number of accessible means of egress to be provided as the number of

exits required by applicable building and fire codes. The IBC requires at least one accessible means of egress and at least two accessible means of egress where more than one means of egress is required by other sections of the building code.

### 208 and 502 Parking Spaces

Where parking spaces are provided, the 1991 Standards, at sections 4.1.2 (5)(a) and (7) and 7(a), and the 2010 Standards, at section 208.1, require a specified number of the parking spaces to be accessible. The 2010 Standards, at section 208, include an exception that exempts parking spaces used exclusively for buses, trucks, delivery vehicles, law enforcement vehicles, or for purposes of vehicular impound, from the scoping requirement for parking spaces, provided that when these lots are accessed by the public the lot has an accessible passenger loading zone.

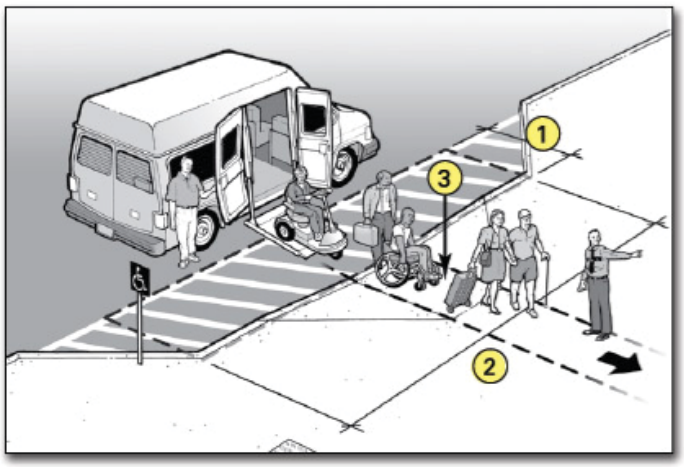
The 2010 Standards require accessible parking spaces to be identified by signs that display the International Symbol of Accessibility. Section 216.5, Exceptions 1 and 2, of the 2010 Standards exempt certain accessible parking spaces from this signage requirement. The first exception exempts sites that have four or fewer parking spaces from the signage requirement. Residential facilities where parking spaces are assigned to specific dwelling units are also exempted from the signage requirement.

**Van Accessible Parking Spaces.** The 1991 Standards, at sections 4.1.2 (5) (b), 4.6.3, 4.6.4, and 4.6.5, require one in every eight accessible parking spaces to be van accessible. Section 208.2.4 of the 2010 Standards requires one in every six accessible parking spaces to be van accessible.


**Direct Access Entrances from Parking Structures.** Where levels in a parking garage have direct connections for pedestrians to another facility, the 1991 Standards, at section 4.1.3(8) (b) (i), require at least one of the direct connections to be accessible. The 2010 Standards, at section 206.4.2, require all of these direct connections to be accessible.

**209 and 503 Passenger Loading Zones and Bus Stops**

**Passenger Loading Zones at Medical Care and Long-Term Care Facilities.** 1991 Standards and section 209.3 of the 2010 Standards require medical care where the period of stay exceeds 24 hours, to provide at least one accessible entrance. The 1991 Standards also require a canopy or roof overhang zone. The 2010 Standards do not require a canopy or roof overhang.



**Passenger Loading Zones.** Where passenger loading zones are provided, the 1991 Standards, at sections 4.1.2(5) and 4.6.6, require at least one passenger loading zone to be accessible. Sections 209.2.1 and 503 of the 2010 Standards require facilities such as airport passenger terminals that have long, continuous passenger loading zones to provide one accessible passenger loading zone in every continuous 100 linear feet of loading zone space. The 1991 Standards and the 2010 Standards both include technical requirements for the vehicle pull-up space (96 inches wide minimum and 20 feet long minimum). Accessible passenger loading zones must have an access aisle that is 60 inches wide minimum and extends the full length of the vehicle pull-up space. The 1991 Standards permit the access aisle to be on the same level as the vehicle pull-up space, or on the sidewalk. The 2010 Standards require the access aisle to be on the same level as the vehicle pull-up space and to be marked so as to discourage parking in the access aisle.

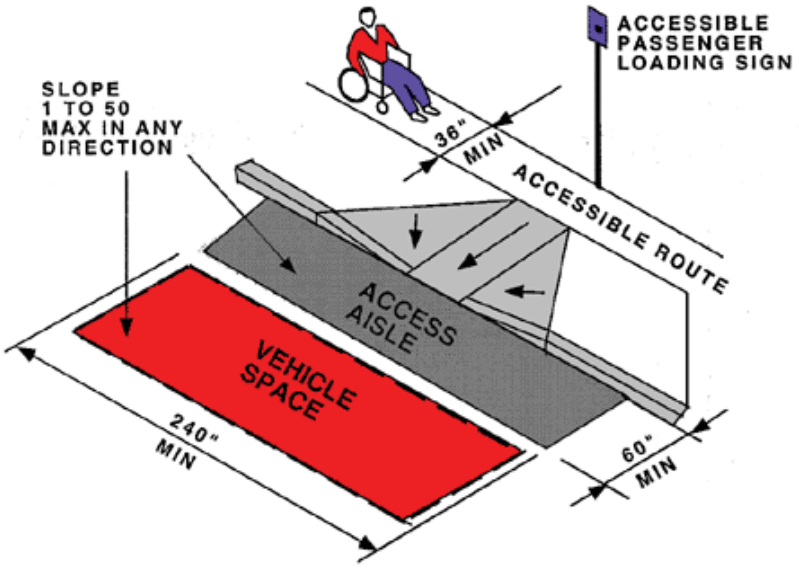


FIGURE P-4

**Valet Parking and Mechanical Access Parking Garages.**

The 1991 Standards, at sections 4.1.2(5)(a) and (e), and sections 208.2, 209.4, and 209.5 of the 2010 Standards require parking facilities that provide valet parking services to have an accessible passenger loading zone. The 2010 Standards extend this requirement to mechanical access parking garages. The 1991 Standards contained an exception that exempted valet parking facilities from providing accessible parking spaces. The 2010 Standards eliminate this exception. The reason for not retaining the provision is that valet parking is a service, not a facility type.

### 210 and 504 Stairways

The 1991 Standards require stairs to be accessible only when they provide access to floor levels not otherwise connected by an accessible route (e.g., where the accessible route is provided by an elevator, lift, or ramp). The 2010 Standards, at sections 210.1 and 504, require all *newly constructed stairs* that are part of a *means of egress* to comply with the requirements for accessible stairs, which include requirements for accessible treads, risers, and handrails. In existing facilities, where floor levels are connected by an accessible route, only the handrail requirement will apply when the stairs are altered. Exception 2 to section 210.1 of the 2010 Standards permits altered stairs to not comply with the requirements for accessible treads and risers where there is an accessible route between floors served by the stairs.

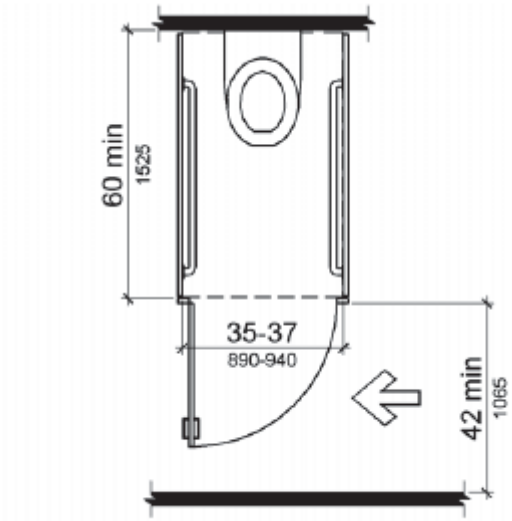
### 211 and 602 Drinking Fountains

Sections 4.1.3(10) and 4.15 of the 1991 Standards and sections 211 and 602 of the 2010 Standards require drinking fountains to be provided for persons who use wheelchairs and for others who stand. The 1991 Standards require wall and post-mounted cantilevered drinking fountains mounted at a height for wheelchair users to provide clear floor space for a forward approach with knee and toe clearance and free standing or built-in drinking fountains to provide clear floor space for a parallel approach. The 2010 Standards require drinking fountains mounted at a height for wheelchair users to provide clear floor space for a forward approach with knee and toe clearance, and include an exception for a parallel approach for drinking fountains installed at a height to accommodate very small children. The 2010 Standards also include a technical requirement for drinking fountains for standing persons.

### 212 and 606 Kitchens, Kitchenettes, Lavatories, and Sinks

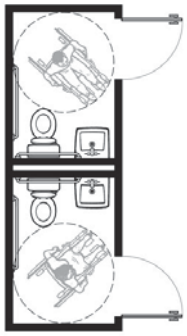
The 1991 Standards, at sections 4.24, and 9.2.2(7), contain technical requirements for sinks and only have specific scoping requirements for sinks in transient lodging. Section 212.3 of the 2010 Standards requires at least five percent (5%) of sinks in each accessible space to comply with the technical requirements for sinks. The technical requirements address clear floor space, height, faucets, and exposed pipes and surfaces. The 1991 Standards, at section 4.24, and the 2010 Standards, at section 606, both require the clear floor space at sinks to be positioned for a forward approach and knee and toe clearance to be provided under the sink. The 1991 Standards, at section 9.2.2(7), allow the clear floor space at kitchen sinks and wet bars in transient lodging guest rooms with mobility features to be positioned for either a forward approach with knee and toe clearance or for a parallel approach. The 2010 Standards include an exception that permits the clear floor space to be positioned for a parallel approach at kitchen sinks in any space where a cook top or conventional range is not provided, and at a wet bar.

**Ambulatory Accessible Toilet Compartments.** Section 213.3.1 of the 2010 Standards requires multi-user men´s toilet rooms, where the total of toilet compartments and urinals is six or more, to contain at least one ambulatory accessible compartment. The 1991 Standards count only toilet stalls (compartments) for this purpose. The 2010 Standards establish parity between multi-user women´s toilet rooms and multi-user men´s toilet rooms with respect to ambulatory accessible toilet compartments.



**Urinals.** Men´s toilet rooms with only one urinal will no longer be required to provide an accessible urinal under the 2010 Standards. Such toilet rooms will still be required to provide an accessible toilet compartment.

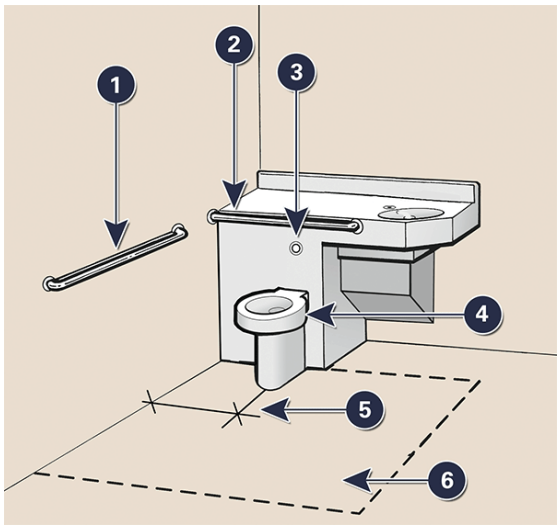
**Multiple Single-User Toilet Rooms.** Where multiple single-user toilet rooms are clustered in a single location, fifty percent (50%), rather than the one hundred percent (100%) required by the 1991 Standards, are required to be accessible by section 213.2, Exception 4 of the 2010 Standards. Section 216.8 of the 2010 Standards requires that accessible single-user toilet rooms must be identified by the International Symbol of Accessibility where all single-user toilet rooms are not accessible.



**Hospital Patient Toilet Rooms.** An exception was added in section 223.1 of the 2010 Standards to allow toilet rooms that are part of critical or intensive care patient sleeping rooms to no longer required to provide mobility features.

be

**Water Closet Location and Rear Grab Bar.** Section 604.2 of the 2010 Standards allows greater flexibility for the placement of the centerline of wheelchair accessible and ambulatory accessible water closets. Section 604.5.2, Exception 1 permits a shorter grab bar on the rear wall where there is not enough wall space due to special circumstances (e.g., when a lavatory or other recessed fixture is located next to the water closet and the wall behind the lavatory is recessed so that the lavatory does not overlap the required clear floor space at the water closet). The 1991 Standards contain no exception for grab bar length, and require the water closet centerline to be exactly 18 inches from

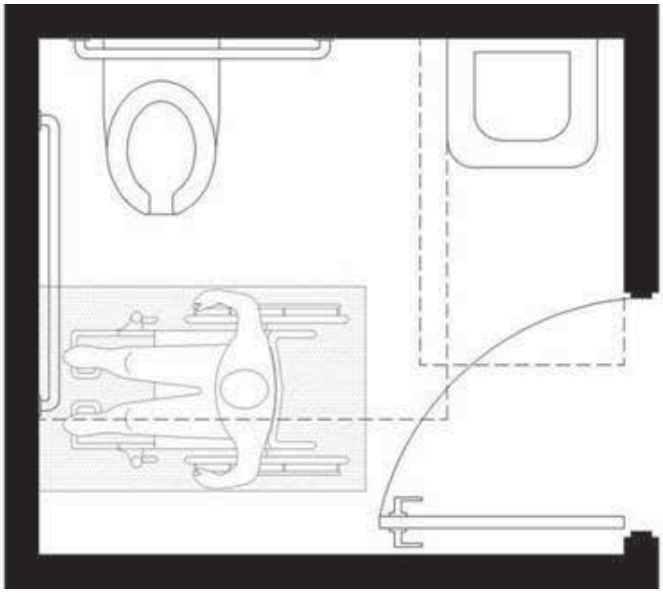


the side wall, while the 2010 Standards requirement allows the centerline to be between 16 and 18 inches from the side wall in wheelchair accessible toilet compartments and 17 to 19 inches in ambulatory accessible toilet compartments.

**Water Closet Clearance.** Section 604.3 of the 2010 Standards represents a change in the accessibility requirements where a lavatory is installed adjacent to the water closet.

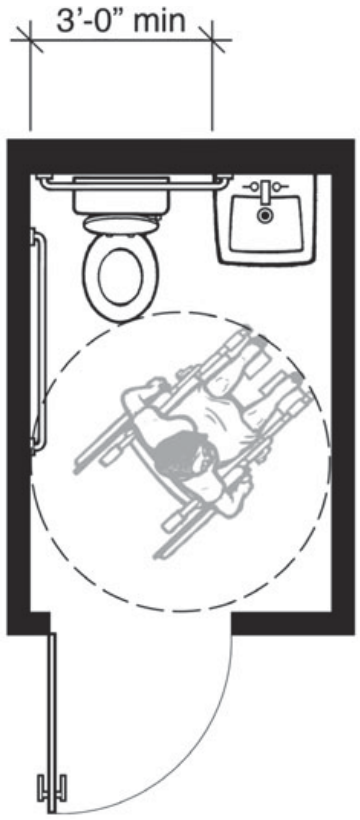
The 1991 Standards allow the nearest side of a lavatory to be placed 18 inches minimum from the water closet centerline and 36 inches minimum from the side wall adjacent to the water closet. However, locating the lavatory so close to the water closet prohibits many individuals with disabilities from using a side transfer. To allow greater transfer options, including side transfers, the 2010 Standards prohibit lavatories from overlapping the clear floor space at water closets, except in covered residential dwelling units.

**Toilet Room Doors.** Sections 4.22.2 and 4.22.3 of the 1991 Standards and Section 603.2.3 of the 2010 Standards permit the doors of all toilet or bathing rooms with in-swinging doors to swing into the required turning space, but not into the clear floor space required at any fixture. In single-user toilet rooms or bathing rooms, Section 603.2.3 Exception 2 of the 2010 Standards permits the door to swing into the clear floor space of an accessible fixture if a clear floor space that measures at least 30 inches by 48 inches is provided outside of the door swing.



# Comparison of Single-User Toilet Room Layouts

## 1991 Standards

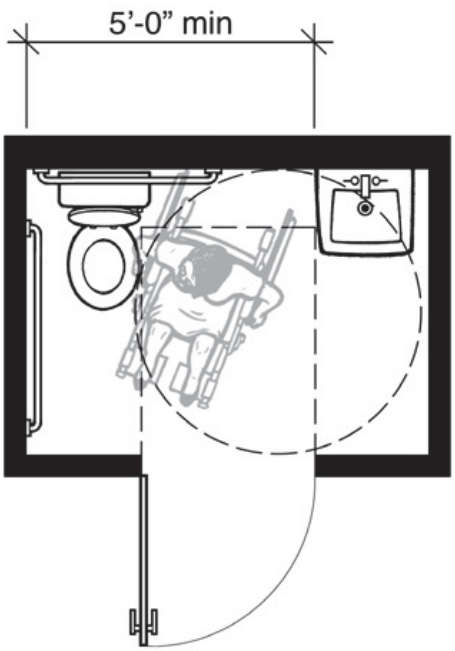



### Plan-1A: 1991 Standards Minimum with Out-Swinging Door

### 5’-0” x 7’-3” 36.25 Square Feet

The size of this space is determined by the minimum width required for the water closet and lavatory between the side walls, the minimum wheelchair turning space, and the space required for the out-swinging door. A lavatory with knee space can overlap the clear floor space required for the water closet provided that at least 36 inches of clearance is maintained between the side wall next to the water closet and the lavatory A wheelchair turning space meeting section 4.2.3 of the 1991 Standards must be provided. The size of this room requires that the entry door swing out. The room is larger if the door were in-swinging.

## 2010 Standards




### Plan-1B: 2010 Standards Minimum with Out-Swinging Door

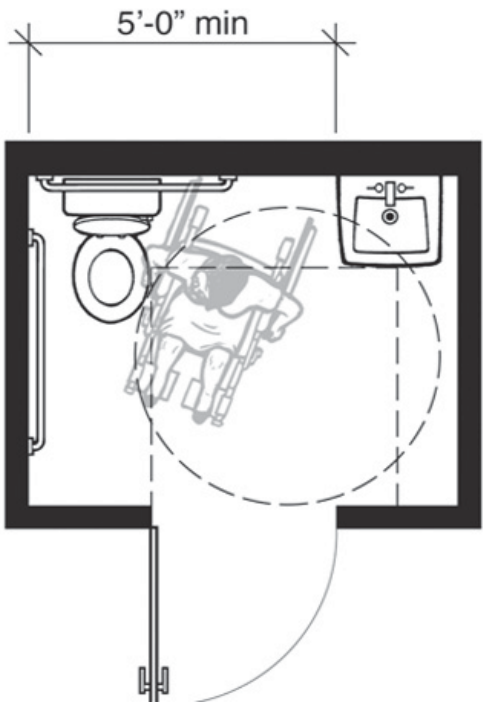
### 7’-0” x 5’-0” • 35.00 Square Feet

Features include: five-foot minimum width between the side wall of the water closet and the lavatory; 60-inch minimum circular wheelchair turning space; and 36-inch by 48-inch clear maneuvering space for the out-swinging entry door. Section 604.3.1 of the 2010 Standards requires a floor clearance at a water closet that is a minimum of 60 inches wide by 56 inches deep regardless of approach. Section 604.3.2 prohibits any other plumbing fixtures from being located in this clear space, except in residential dwelling units. The 2010 Standards, at section 304.3, allows the turning space to extend into toe and knee space provided beneath fixtures and other elements. Required maneuvering space for the entry door (inside the room) must be clear of all fixtures. If the door had both a closer and latch, section 404.2.4.1 and Figure 404.2.4.1(c) require additional space on the latch side.

This layout is three point five percent (3.5%) smaller than the accompanying Plan-1A: 1991 Standards Minimum with Out-Swinging Door example.

## Comparison of Single-User Toilet Room Layouts

### 2010 Standards




### Plan-1C: 2010 Standards Minimum with Out-Swinging Door

(entry door has both closer and latch)

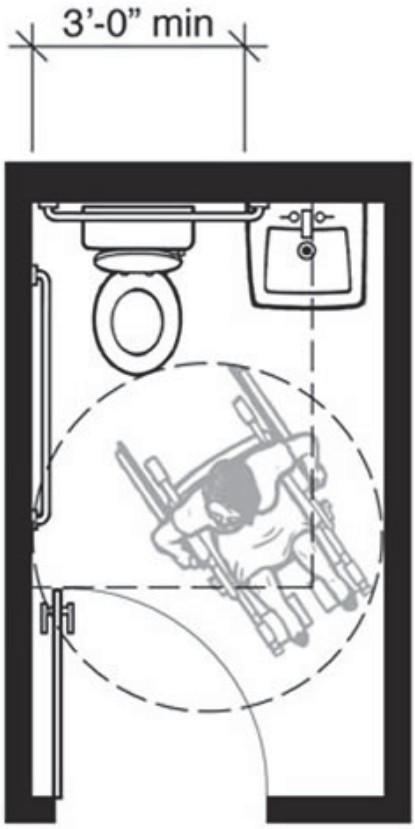
### 7’-0” x 5’-6” 38.50 Square Feet

This plan shows the same typical features of a single-user toilet room that meets the minimum requirements of the 2010 Standards as Plan-1B does except the entry door has both a closer and latch. Because the door has both a closer and latch, a minimum additional foot of maneuvering space is required on the latch side (see section 404.2.4.1 and Figure 404.2.4.1(c) of the 2010 Standards).

This layout is six point two percent (6.2%) larger than the accompanying Plan-1A: 1991 Standards Minimum with Out-Swinging Door example.

# Comparison of Single-User Toilet Room Layouts

## 1991 Standards




### Plan-2A: 1991 Standards Minimum with In-Swinging Door

### 5’-0” x 8’-6” 42.50 Square Feet

Depending on the width of the hallway and other circulation issues, it can be preferable to swing the entry door into the toilet room. Businesses and public entities typically prefer to have an in-swinging door. The in-swinging door increases overall room size because it cannot swing over the required clear floor space at any accessible fixture, (see section 4.22.2 of the 1991 Standards). This increases the room depth from Plan-1A. The door is permitted to swing over the required turning space shown as a 60-inch circle.

## 2010 Standards

### Plan-2B: 2010 Standards Minimum with In-Swinging Door

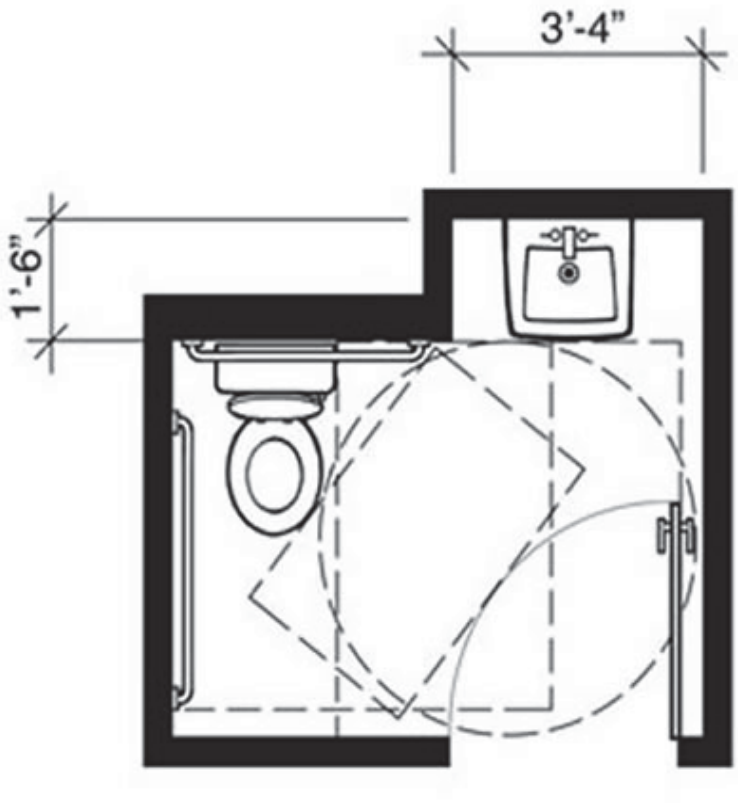
### 7’-0” x 6’-6” 45.50 Square Feet

In the 2010 Standards an exception allows the entry door to swing over the clear floor spaces and clearances required at the fixtures if a clear floor space complying with section 305.3 (minimum 30 inches by 48 inches) is provided outside the arc of the door swing, section 603.3.3 exception 2. The required maneuvering space for the door, section 404.2.4.1 and Figure 404.2.4.1(a), also is a factor in room size. This clear space cannot be obstructed by the plumbing fixtures. Note that this layout provides more space for turning when the door is closed than Plan-1B.

This layout is seven percent (7%) larger than the accompanying Plan-2A: 1991 Standards Minimum with
In-Swinging Door example.

## Comparison of Single-User Toilet Room Layouts

### 2010 Standards




**Plan-2C: 2010 Standards Minimum with In-Swinging Door**

**7’-0” x 6’-6” 40.00 Square Feet**

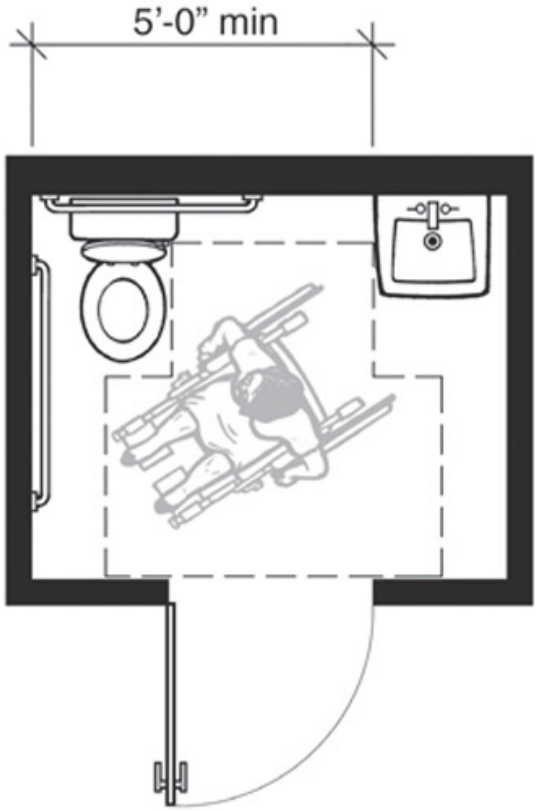
(plumbing chase not included)

This plan shows the same typical features of a single-user toilet room that meets the minimum requirements of the 2010 Standards as Plan-2B when the entry door swings into the room. Note that this layout also provides more space for turning when the door is closed than Plan-1B.

This layout is six point two five percent (6.25%) smaller than the accompanying Plan-2A: 1991 Standards Minimum with In-Swinging Door example.

## Comparison of Single-User Toilet Room Layouts

### 1991 Standards and 2010 Standards




### Plan-3: Meets Both 1991 Standards and 2010 Standards

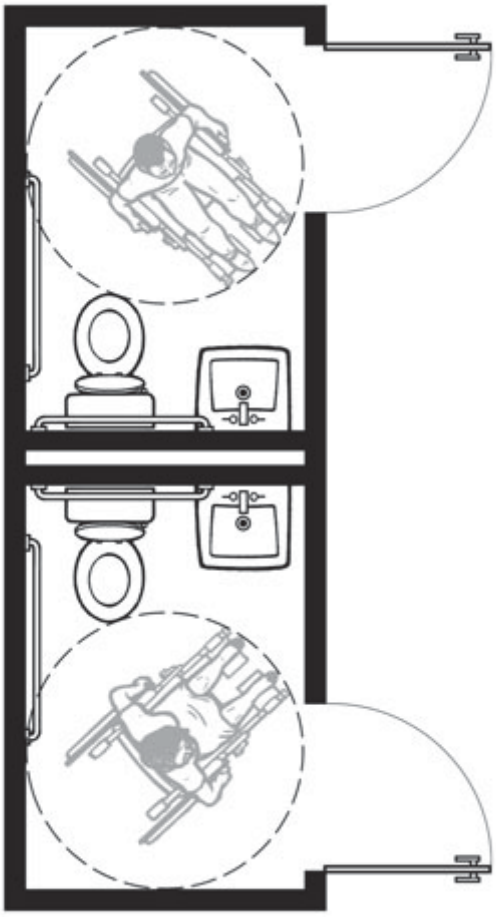
### 7’-0” x 5’-9” 40.25 Square Feet

A T-shaped turning space has been used (see Fig. 3(a) of the 1991 Standards and Figure 304.3.2 of the 2010 Standards) to maintain a compact room size. An out-swinging door also minimizes the overall layout depth and cannot swing over the required clear floor space or clearance at any accessible plumbing fixture.

This layout is eleven percent (11%) larger than the Plan-1A: 1991 Standards Minimum with Out-Swinging Door example shown at the beginning of these plan comparisons.

## Comparison of Single-User Toilet Room "Pairs" With Fixtures Side-by-Side

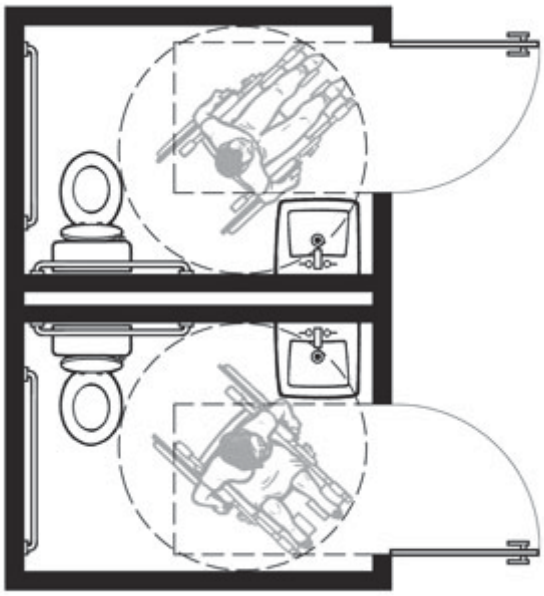
**1991 Standards**



**Plan-1A Pair: 1991 Standards with Out-Swinging Doors**

**Two 5'-0" x 7'-3" Rooms –**
**72.50 Square Feet Total**

**2010 Standards**

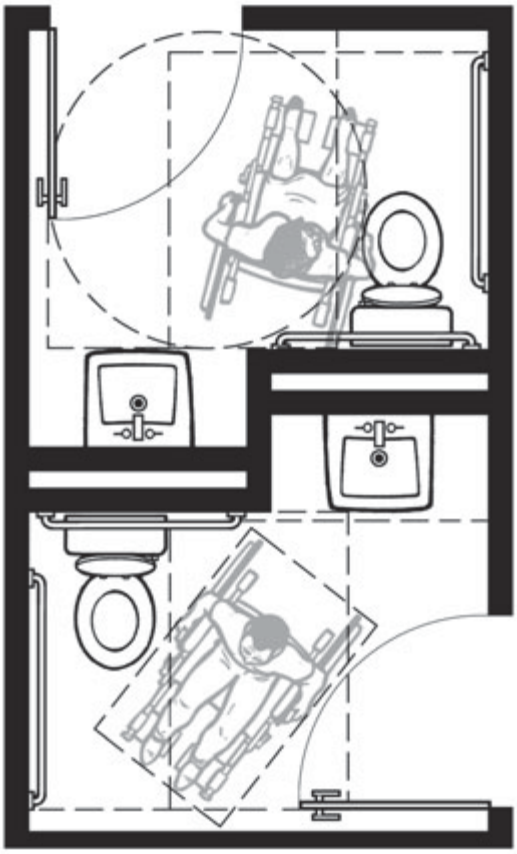


**Plan-1B Pair: 2010 Standards with Out-Swinging Doors**

**Two 7'-0" x 5'-0" Rooms-**
**70.00 Square Feet Total**

These plans show men's/women's room configurations using Plans 1A and 1B.

## Comparison of Single-User Toilet Room “Pairs” With Fixtures Side-by-Side

| 1991 Standards | 2010 Standards |
|---|---|
| |  |

**Plan-2C Pair: 2010 Standards with In-Swinging Doors**

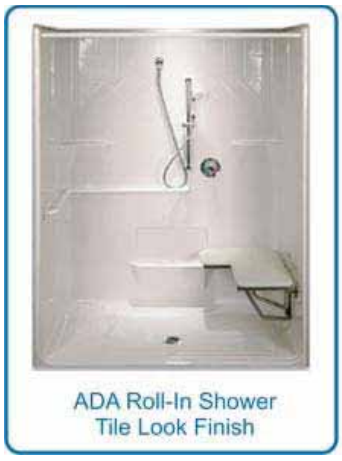
**Two 7’-2” x 6’-6” Rooms - 82.00 Square Feet Total**

This plan shows a men’s/women’s room configuration using Plan 2C.

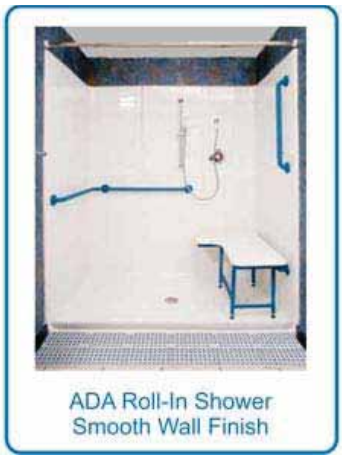
**Toilet Paper Dispensers.** The provisions for toilet paper dispensers at section 604.7 of the 2010 Standards require the dispenser to be located seven inches minimum and nine inches maximum in front of the water closet measured to the centerline of the dispenser. The paper outlet of the dispenser must be located 15 inches minimum and 48 inches maximum above the finish floor. In the 1991 Standards the location of the toilet paper dispenser is determined by the centerline and forward edge of the dispenser. In the 2010 Standards the mounting location of the toilet paper dispenser is determined by the centerline of the dispenser and the location of the outlet for the toilet paper.

**Shower Spray Controls.** In accessible bathtubs and shower compartments, sections 607.6 and 608.6 of the 2010 Standards require shower spray controls to have an on/off control and to deliver water that is 120¡F (49¡C) maximum. Neither feature was required by the 1991 Standards, but may be required by plumbing codes. Delivering water that is no hotter than 120¡F (49¡C) will require controlling the maximum temperature at each accessible shower spray unit.

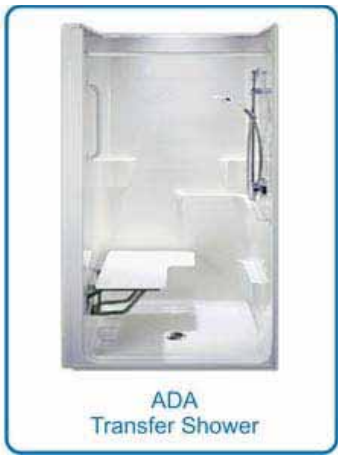
**Shower Compartments.** The 1991 Standards at sections 4.21 and 9.1.2 and the 2010 Standards at section 608 contain technical requirements for transfer-type and roll-in shower compartments. The 2010 Standards provide more flexibility than the 1991 Standards as follows:



ADA Roll-In Shower
Tile Look Finish



ADA Roll-In Shower
Smooth Wall Finish



ADA
Transfer Shower

- Transfer-type showers are exactly 36 inches wide by 36 inches long.
- The 1991 Standards and the 2010 Standards permit a 1/2-inch maximum curb in transfer-type showers. The 2010 Standards add a new exception that permits a 2-inch maximum curb in transfer-type showers in alterations to existing facilities, where recessing the compartment to achieve a 1/2-inch curb will disturb the structural reinforcement of the floor slab.
- Roll-in showers are 30 inches wide minimum by 60 inches long minimum. Alternate roll-in showers are 36 inches wide by 60 inches long minimum, and have a 36-inch minimum wide opening on the long side of the compartment. The 1991 Standards require alternate roll-in showers in a portion of accessible transient lodging guest rooms, but provision of this shower type in other facilities is generally permitted as an equivalent facilitation. The 1991 Standards require a seat to be provided adjacent to the opening; and require the controls to be located on the side adjacent to the seat. The 2010 Standards permit alternate roll-in showers to be used in any facility, only require a seat in transient lodging guest rooms, and allow location of controls on the back wall opposite the seat as an alternative.

**214 and 611 Washing Machines and Clothes Dryers**

Sections 214.2 (washing machines) and 214.3 (clothes dryers) of the 2010 Standards specify the number of each type of these machines required to be accessible (one to two depending upon the total number of machines provided) and section 611 specifies the technical requirements. An exception will permit the maximum height for the tops of these machines to be 2 inches higher than the general requirement for maximum high reach over an obstruction.

### 216 and 703 Signs

The following types of signs, though they are not specifically subject to the 1991 Standards requirement for signs, will now be explicitly exempted by sections 216 and 703 of the 2010 Standards. These types of signs include: seat and row designations in assembly areas; occupant names, building addresses; company names and logos; signs in parking facilities (except those identifying accessible parking spaces and means of egress); and exterior signs identifying permanent rooms and spaces that are not located at the door to the space they serve. This requirement also clarifies that the exception for temporary signs applies to signs used for seven days or less.


The 2010 Standards retain the option to provide one sign where both visual and tactile characters are provided or two signs, one with visual, and one with tactile characters.

### 218 and 810 Transportation Facilities

**Detectable Warnings.** Detectable warnings provide a distinctively textured surface of truncated domes. The 1991 Standards at sections 4.1.3(15), 4.7.7, 4.29.2, 4.29.5, 4.29.6, and 10.3.1(8) require detectable warnings at curb ramps, hazardous vehicular areas, reflecting pools, and transit platform edges. The 2010 Standards at sections 218, 810.5, 705.1, and 705.2 only require detectable warnings at transit platform edges. The technical specifications for the diameter and spacing of the truncated domes have

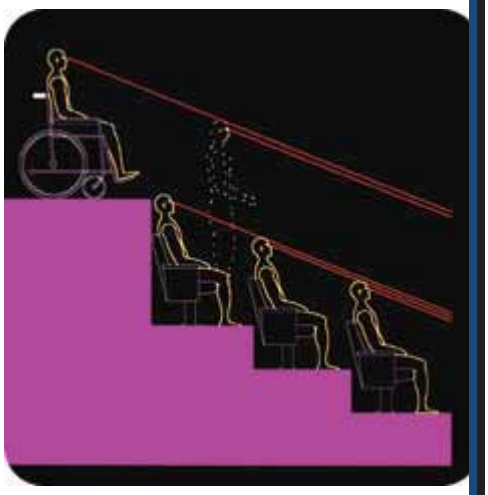
also been changed. The 2010 Standards also delete the requirement for the material used to contrast in resiliency or sound-on-cane contact from adjoining walking surfaces at interior locations.

The 2010 Standards apply to detectable warnings on developed sites. They do not apply to the public right-of-way. Scoping for detectable warnings at all locations other than transit platform edges has been eliminated from the 2010 Standards. However, because detectable warnings have been shown to significantly benefit individuals with disabilities at transit platform edges, the 2010 Standards provide scoping and technical requirements for detectable warnings at transit platform edges.

**221 Assembly Areas**
**Wheelchair Spaces/Companion Seats.**

Owners of large assembly areas have historically complained to the Department that the requirement for one percent (1%) of seating to be wheelchair seating is excessive and that wheelchair seats are not being sold. At the same time, advocates have traditionally argued that persons who use wheelchairs will increasingly participate in activities at assembly areas once they become accessible and that at least one percent (1%) of seats should be accessible.
The 1991 Standards, at sections 4.1.3(19) (a) and 4.33.3, require assembly areas to provide wheelchair and companion seats. In assembly areas with a capacity of more than five hundred seats, accessible seating at a ratio of one percent (1%) (Plus one seat) of the number of traditional fixed seats must be provided. The 2010 Standards, at section 221.2, require assembly areas with 501 to 5000 seats to provide at least six wheelchair spaces and companion seats plus one additional wheelchair space for each additional 150 seats (or fraction thereof) between 501 through 5000. In assembly areas

with more than 5000 seats at least 36 wheelchair spaces and companion seats plus one additional wheelchair space for each 200 seats (or fraction thereof) more than 5000 are required.



**Line of Sight and Dispersion of Wheelchair Spaces in Assembly Areas.** Sections 221.2.3 and 802.2 of the 2010 Standards add specific technical requirements for providing lines of sight over seated and standing spectators and also require wheelchair spaces and companion seats (per section 221.3) to provide individuals with disabilities choices of seating locations and viewing angles that are substantially equivalent to, or better than, the choices of seating locations and viewing angles available to other spectators. This applies to all types of assembly areas, including stadium-style movie theaters, sports arenas, and concert halls

Section 4.33.3 of the 1991 Standards requires wheelchair spaces and companion seating to be offered at a choice of admission prices, but section 221.2.3.2 of the 2010 Standards no longer requires wheelchair spaces and companion seats to be dispersed based on admission prices.

Sections 221.2.3.2 and 221.3 of the 2010 Standards require wheelchair spaces and companion seats to be vertically dispersed at varying distances from the screen, performance area, or playing field. The 2010 Standards, at section 221.2.3.2, also require wheelchair spaces and companion seats to be located in each balcony or mezzanine served by an accessible route. The final regulations at 28 CFR 35.151(g)(1) and 36.406(f)(1) also require assembly areas to locate wheelchair spaces and companion seats at all levels of the facility that include seating and that are served by an accessible route.

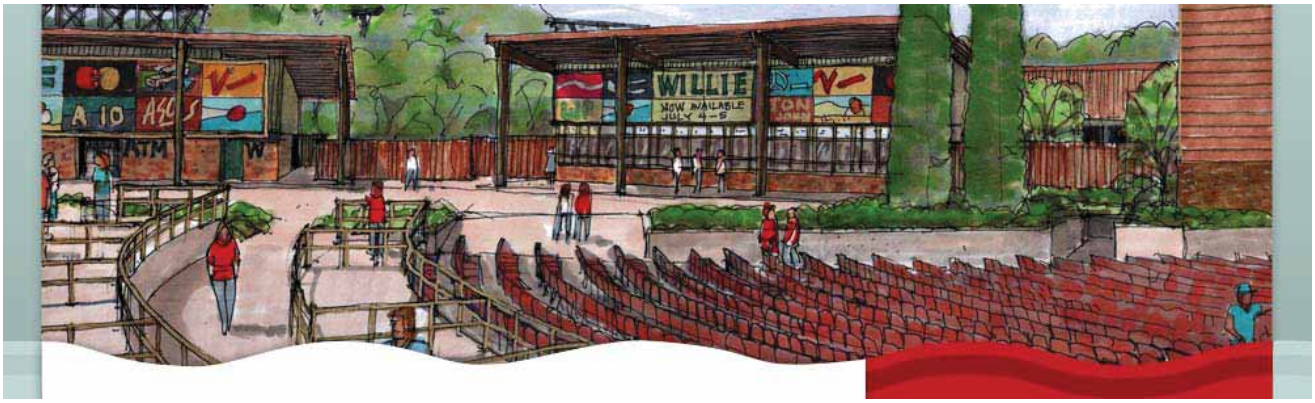
**Stadium-Style Movie Theaters**

Pursuant to 28 CFR 35.151(g) and 36.406(f), in addition to other obligations, stadium-style movie theaters must meet horizontal and vertical dispersion requirements set forth in sections 221.2.3.1 and 221.2.3.2 of the 2010 Standards; placement of wheelchair and

companion seating must be on a riser or cross-aisle in the stadium section of the theater; and placement of such seating must satisfy at least one of the following criteria: (i) it is located within the rear sixty percent (60%) of the seats provided in the auditorium; or (ii) it is located within the area of the auditorium where the vertical viewing angles are between the 40th and 100th percentile of vertical viewing angles for all seats in that theater as ranked from the first row (1st percentile) to the back row (100th percentile). The line-of-sight requirements recognize the importance to the movie-going experience of viewing angles, and the final regulations ensure that movie patrons with disabilities are provided views of the movie screen comparable to other theater patrons..

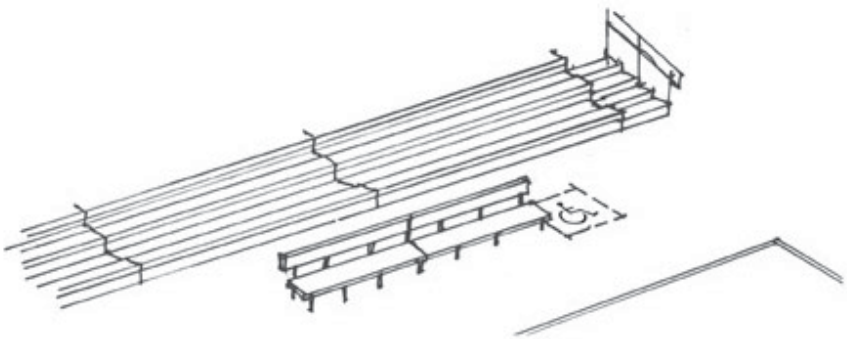
**Companion Seats.** Section 4.33.3 of the 1991 Standards required at least one fixed companion seat to be provided next to each wheelchair space. The 2010 Standards at sections 221.3 and 802.3 permit companion seats to be movable,

**Designated Aisle Seats.**




Section 4.1.3(19)(a) of the 1991 Standards requires one percent (1%) of fixed seats in assembly areas to be designated aisle seats with either no armrests or folding or retractable armrests on the aisle side of the seat. The 2010 Standards, at sections 221.4 and 802.4, base the number of required designated aisle seats on the total number of aisle seats, instead of on all of the seats in an assembly area as the 1991 Standards require. At least five percent (5%) of the aisle seats are required to be designated aisle seats and to be located closest to accessible routes. This option will almost always result in fewer aisle seats being designated aisle seats compared to the 1991 Standards.

**Team or Player Seating Areas.** Section 221.2.1.4 of the 2010 Standards requires that at least one wheelchair space compliant with section 802.1 be provided in each team or player seating area serving areas of sport activity. For bowling lanes, the requirement for a wheelchair space in player seating areas is limited to lanes required to be accessible.



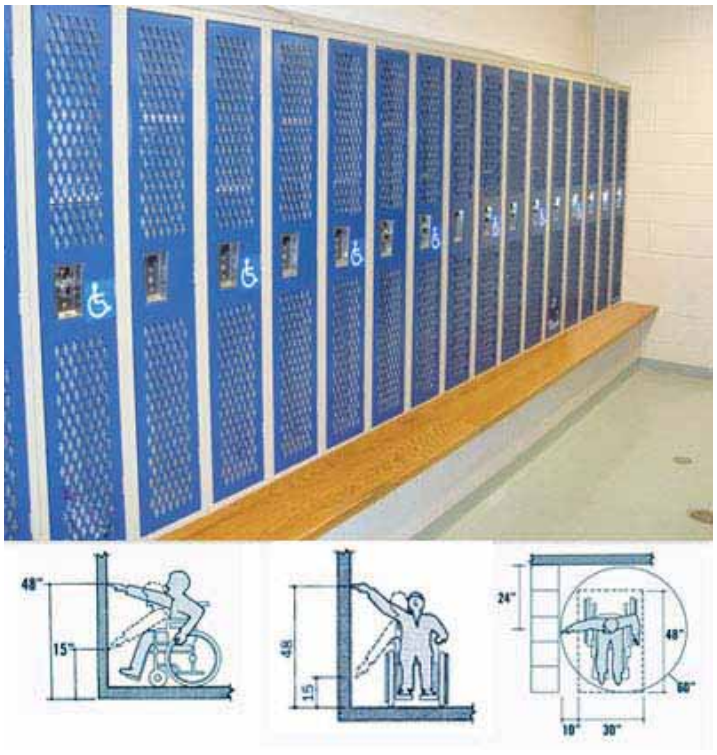
ACCESSIBLE TEAM PLAYER SEATING AREA

**Lawn Seating.** The 1991 Standards, at section 4.1.1(1), require all areas of newly constructed facilities to be accessible, but do not contain a specific scoping requirement for lawn seating in assembly areas. The 2010 Standards, at section 221.5, specifically require lawn seating areas and exterior overflow seating areas without fixed seats to connect to an accessible route.

**Aisle Stairs and Ramps in Assembly Areas.** Sections 4.1.3 and 4.1.3(4) of the 1991 Standards require that interior and exterior stairs connecting levels that are not connected by an elevator, ramp, or other accessible means of vertical access must comply with the technical requirements for stairs set out in section 4.9 of the 1991 Standards. Section 210.1 of the 2010 Standards requires that stairs that are part of a means of egress shall comply with section 504´s technical requirements for stairs. The 1991 Standards do not contain any exceptions for aisle stairs in assembly areas. Section 210.1, Exception 3 of the 2010 Standards adds a new exception that exempts aisle stairs in assembly areas from section 504´s technical requirements for stairs, including section 505´s technical requirements for handrails.

Section 4.8.5 of the 1991 Standards exempts aisle ramps that are part of an accessible route from providing handrails on the side adjacent to seating. The 2010 Standards, at section 405.1, exempt aisle ramps adjacent to seating in assembly areas and not serving elements required to be on an accessible route, from complying with all of section 405´s technical requirements for ramps. Where aisle ramps in assembly areas serve elements required to be on an accessible route, the 2010 Standards require that the aisle ramps comply with section 405´s technical requirements for ramps. Sections 505.2 and 505.3 of the 2010 Standards provide exceptions for aisle ramp handrails. Section 505.2

states that in assembly areas, a handrail may be provided at either side or within the aisle width when handrails are not provided on both sides of aisle ramps. Section 505.3 states that, in assembly areas, handrails need not be continuous in aisles serving seating.




### 222 and 803 Dressing, Fitting, and Locker Rooms

Dressing rooms, fitting rooms, and locker rooms are required to comply with the accessibility requirements of sections 222 and 803 of the 2010 Standards. Where these types of rooms are provided in clusters, five percent (5%) but at least one room in each cluster must comply

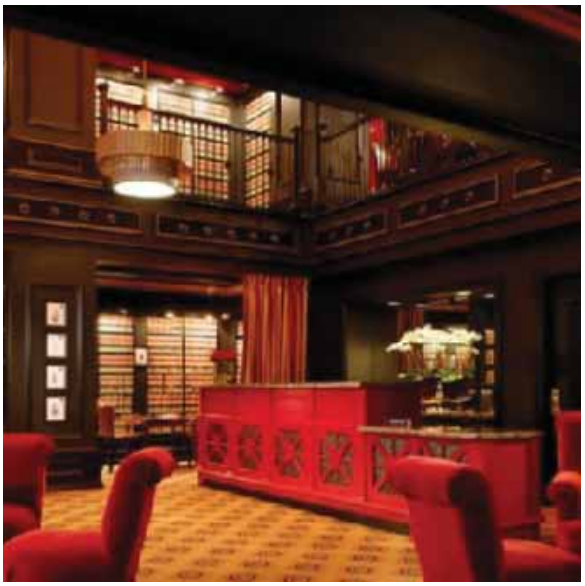
### 225 and 811 Storage

Section 225 of the 2010 Standards provides that where storage is provided in accessible spaces, at least one of each type shall comply with the 2010 Standards. Self-service shelving is required to be on an accessible route, but is not required to comply with the reach range requirements. These requirements are consistent with the 1991 Standards.

Section 225.3 adds a new scoping requirement for self-storage facilities. Facilities with 200 or fewer storage spaces will be required to make at least five percent (5%) of the storage spaces accessible. Facilities with more

than 200 storage spaces will be required to provide ten accessible storage spaces, plus two percent (2%) of the total storage spaces over 200.
Sections 225.2.1 and 811 of the 2010 Standards require lockers to meet accessibility requirements. Where lockers are provided in clusters, five percent (5%) but at least one locker in each cluster will have to comply. Under the 1991 Standards, only one locker of each type provided must be accessible.

### 226 and 902 Dining Surfaces and Work Surfaces



Section 226.1 of the 2010 Standards require that where dining surfaces are provided for the consumption of food or drink, at least five percent (5%) of the seating spaces and standing spaces at the dining surfaces comply with section 902. Section 902.2 requires the provision of accessible knee and toe clearance.

### 227 and 904 Sales and Service

**Check-Out Aisles and Sales and Service Counters.** The 1991 Standards, at section 7.2, and the 2010 Standards, at section 904.4, contain technical requirements for sales and service counters. The 1991 Standards

generally require sales and service counters to provide an accessible portion at least 36 inches long and no higher than 36 inches above the finish floor. The nondiscrimination requirements of the ADA regulations require the level of service provided at the accessible portion of any sales and service counter to be the same as the level of service provided at the inaccessible portions of the counter.

The 2010 Standards specify different lengths for the accessible portion of sales and service counters based on the type of approach provided. Where a forward approach is provided, the accessible portion of the counter must be at least 30 inches long and no higher than 36 inches, and knee and toe space must be provided under the counter. The requirement that knee and toe space be provided where only clear floor space for a forward approach to a sales and service counter is provided is not a new requirement. It is a clarification of the ongoing requirement that part of the sales and service counter be accessible. This requirement applies to the entire accessible part of sales and service counters and requires that the accessible clear floor or ground space adjacent to those counters be kept clear of merchandise, equipment, and other items so that the accessible part of the counter is readily accessible to and usable by individuals with disabilities. The accessible part of the counter must also be staffed and provide an equivalent level of service as that provided to all customers.

Where clear floor space for a parallel approach is provided, the accessible portion of the counter must be at least 36 inches long and no higher than 36 inches above the finish floor. A clear floor or ground space that is at least 48 inches long x 30 inches wide must be provided positioned for a parallel approach adjacent to the 36-inch minimum length of counter.

Section 904.4 of the 2010 Standards includes an exception for alterations to sales and service counters in existing facilities. It permits the accessible portion of the counter to be at least 24 inches long, where providing a longer accessible counter will result in a reduction in the number of existing counters at work stations or existing mailboxes, provided that the required clear floor or ground space is centered on the accessible length of the counter.

Section 904.4 of the 2010 Standards also clarifies that the accessible portion of the counter must extend the same depth as the sales or service counter top. Where the

counter is a single-height counter, this requirement applies across the entire depth of the counter top. Where the counter is a split-height counter, this requirement applies only to the customer side of the counter top. The employee-side of the counter top may be higher or lower than the customer-side of the counter top.

### 229 Windows

A new requirement at section 229.1 of the 2010 Standards provides that if operable windows are provided for building users, then at least one window in an accessible space must be equipped with controls that comply with section 309.

### 231 and 808 Judicial Facilities and Courtrooms

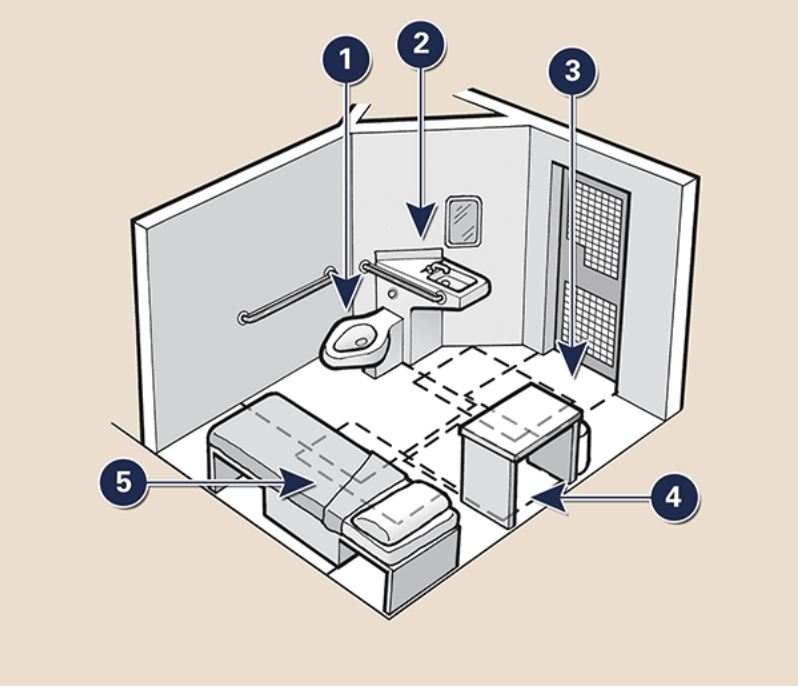
Section 231 of the 2010 Standards adds requirements for accessible courtrooms, holding cells, and visiting areas.

**Accessible Courtroom Stations.** Sections 231.2, 808, 304, 305, and 902 of the 2010 Standards provide increased accessibility at courtroom stations. Clear floor space for a forward approach is required for all courtroom stations (judges´ benches, clerks´ stations, bailiffs´ stations, deputy clerks´ stations, court reporters´ stations, and litigants´ and counsel stations). Other applicable specifications include accessible work surface heights and toe and knee clearance.

**Accessible Jury Boxes, Attorney Areas, and Witness Stands.** Section 206.2.4 of the 2010 Standards requires, in new construction and alterations, at least one accessible route to connect accessible building or facility entrances with all accessible spaces and elements within the building or facility that are connected by a circulation path unless they are exempted by Exceptions 1 - 7 of section 206.2.3. Advisory 206.2.4 Spaces and Elements Exception 1 explains that the exception allowing raised courtroom stations to be used by court employees, such as judge´s benches; to be adaptable does not apply to areas of the courtroom likely to be used by members of the public such as jury areas, attorney areas, or witness stands. These areas must be on an accessible route at the time of initial construction or alteration.

**Raised Courtroom Stations Not for Members of the Public.** Section 206.2.4, Exception 1 of the 2010 Standards provides that raised courtroom stations that are used by judges, clerks, bailiffs, and court reporters will not have to provide full vertical access when first constructed or altered if they are constructed to be easily adaptable to provide vertical accessibility.

## 232 Detention Facilities and Correctional Facilities




Section 232 of the 2010 Standards establishes requirements for the design and construction of cells, medical care facilities, and visiting areas in detention facilities and in correctional facilities. Section 35.151(k) of the Department´s title II rule provides scoping for newly constructed general holding cells and general housing cells requiring mobility features compliant with section 807.2 of the 2010 Standards in a minimum of three percent (3%) of cells, but no fewer than one cell. Section 232.2 of the 2010 Standards provides scoping for newly constructed cells with communications features requiring a minimum of two percent (2%) of cells, but at least one cell, to have communication features.