



ADA Standards

Part 1

Agenda

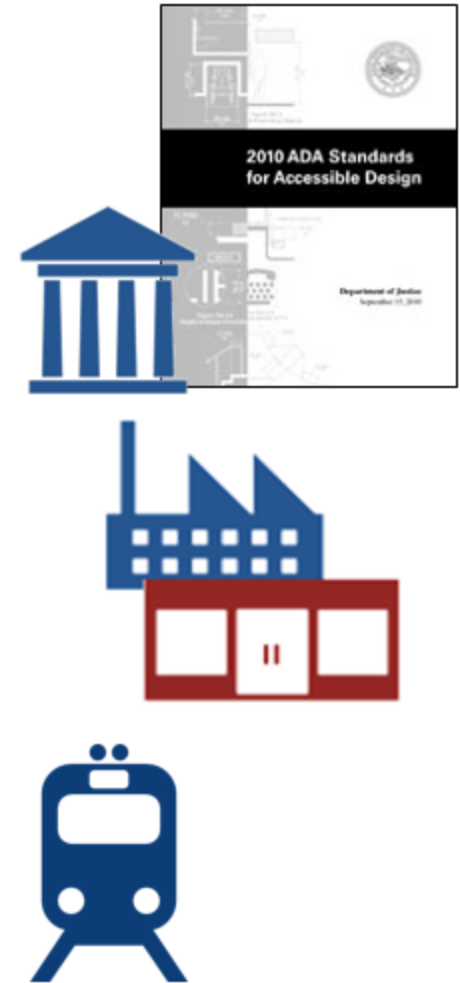
- Access onto Sites
- Entrances & Doors
- Spaces Covered
- Operable Parts & Elements

(Chapters 1 – 5)

ADA Standards (2010)

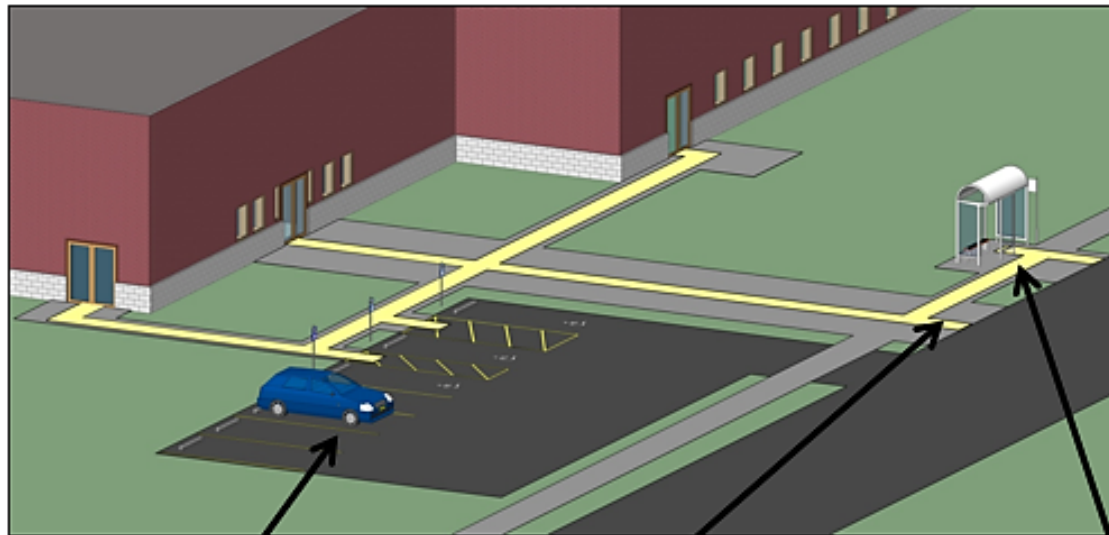
Apply to:

- **State/ local gov't facilities**
- **Places of public accommodation**
- **Commercial facilities**
- **Transportation facilities (DOT's 2006 Standards)**



Application

Standards fully apply within boundary of the site starting with site arrival points (at least one accessible route to accessible entrance)



parking & passenger
loading zones



streets &
sidewalks



transportation
stops

Parking Spaces

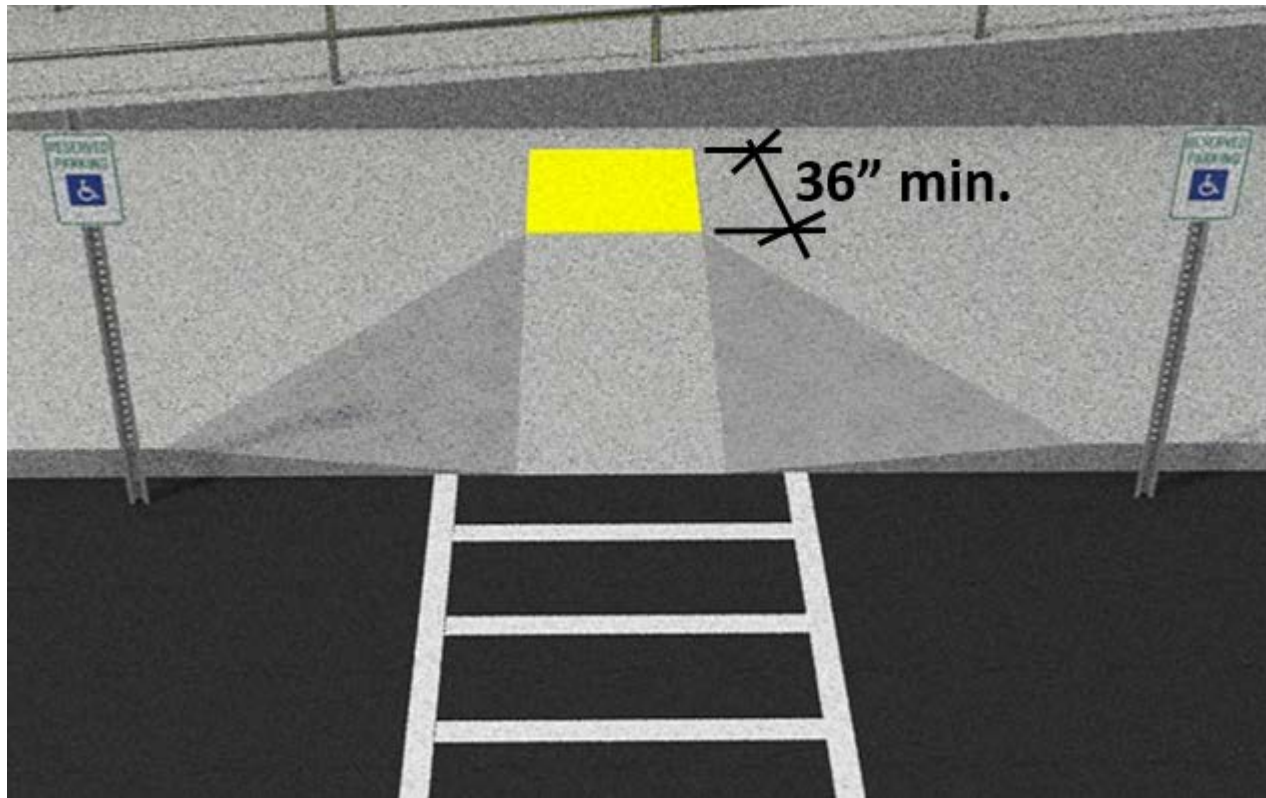
AR must connect to access aisles at accessible parking spaces



Recommended: connect AR to front of aisle to prevent travel behind parked cars

Curb Ramps (§406)

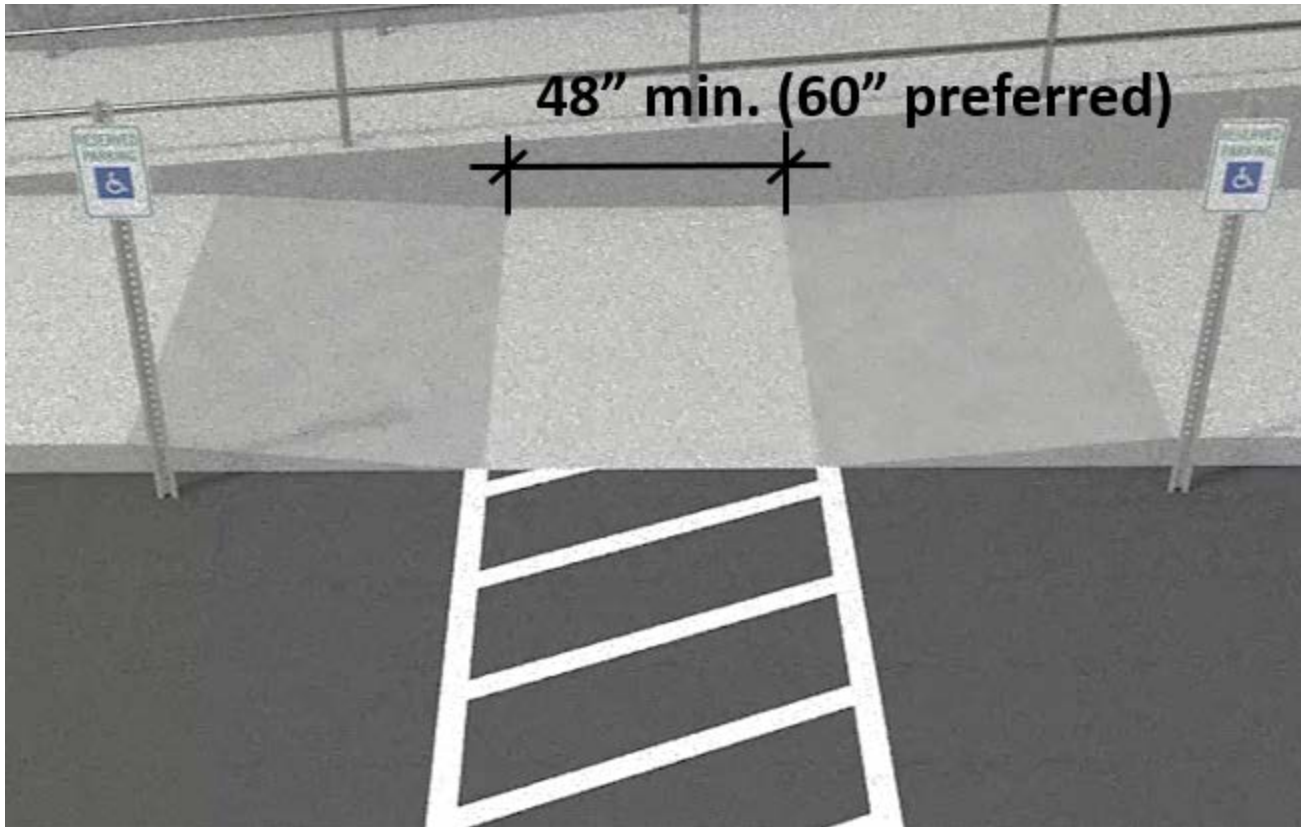
Landing 36" deep min. required at top of curb ramps in new construction



Curb ramps cannot protrude into access aisle

Curb Ramps

Parallel curb ramps can be used where top landing space is unavailable



Detectable Warnings



Required on curb ramps at:

- Transit facilities (DOT standards – 406.8)
- FHwy funded projects
- Public sidewalks (recommended – new ROW guidelines will address)

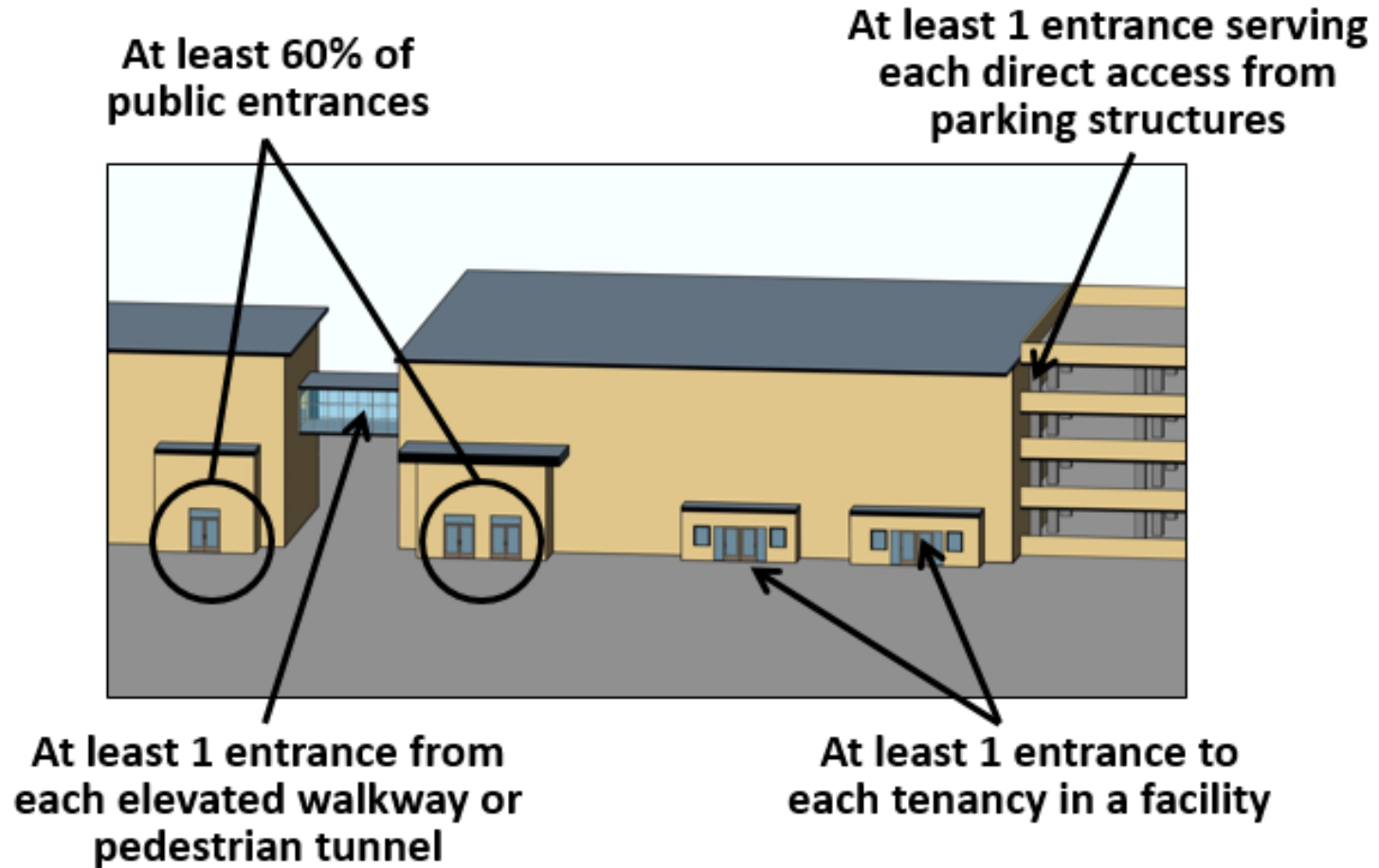
Not required on curb ramps at other facilities or hazardous vehicular areas

Required on rail station boarding platforms

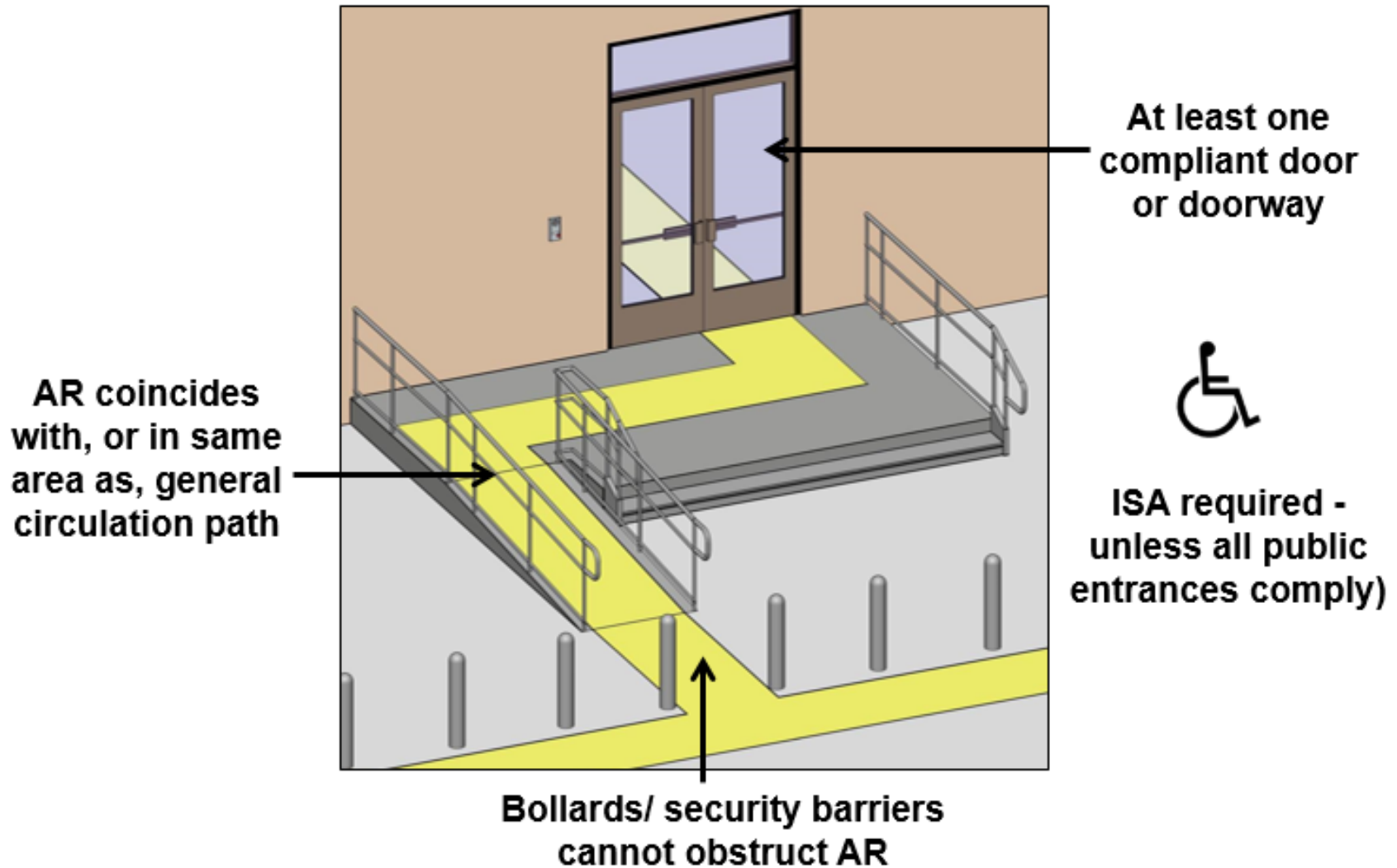


Entrances (§206.4)

Minimum Number

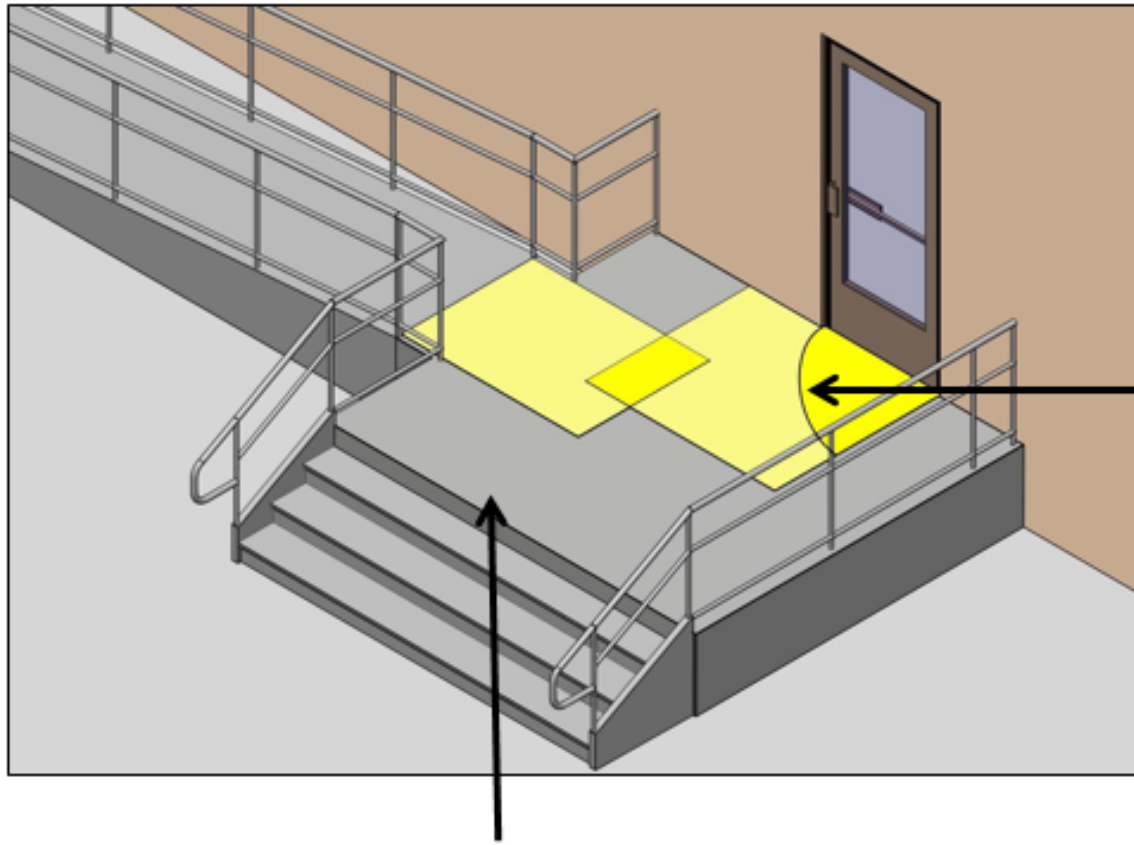


Entrances



Entrances

Landings must accommodate door man. clearances



**Recommended:
locate door swing
outside ramp landing**

**Recommended: locate clearances away
from stair openings/ drop-offs**

Entrances

Exterior Doors: Automation Recommended



**Required at GSA buildings
(Public Building Service Standards)**

**Which rooms and
spaces must comply?**

New Construction (§201)

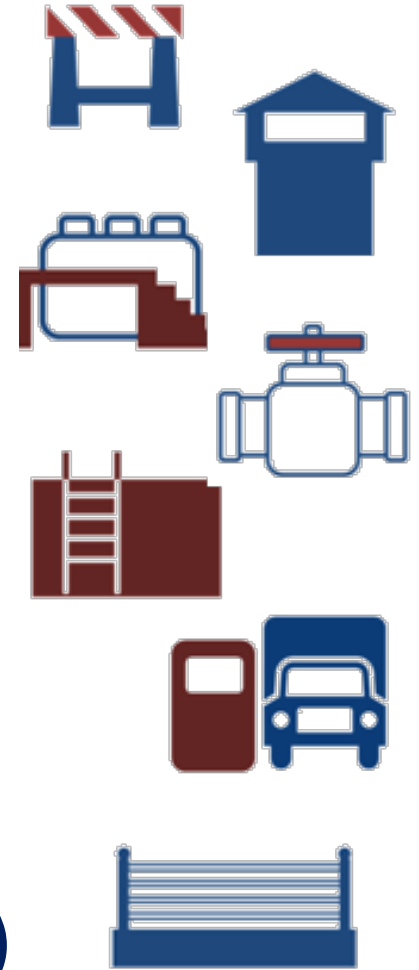
All areas must comply except:

- Exempted structures/ spaces
- Employee Work areas
- Partially scoped spaces

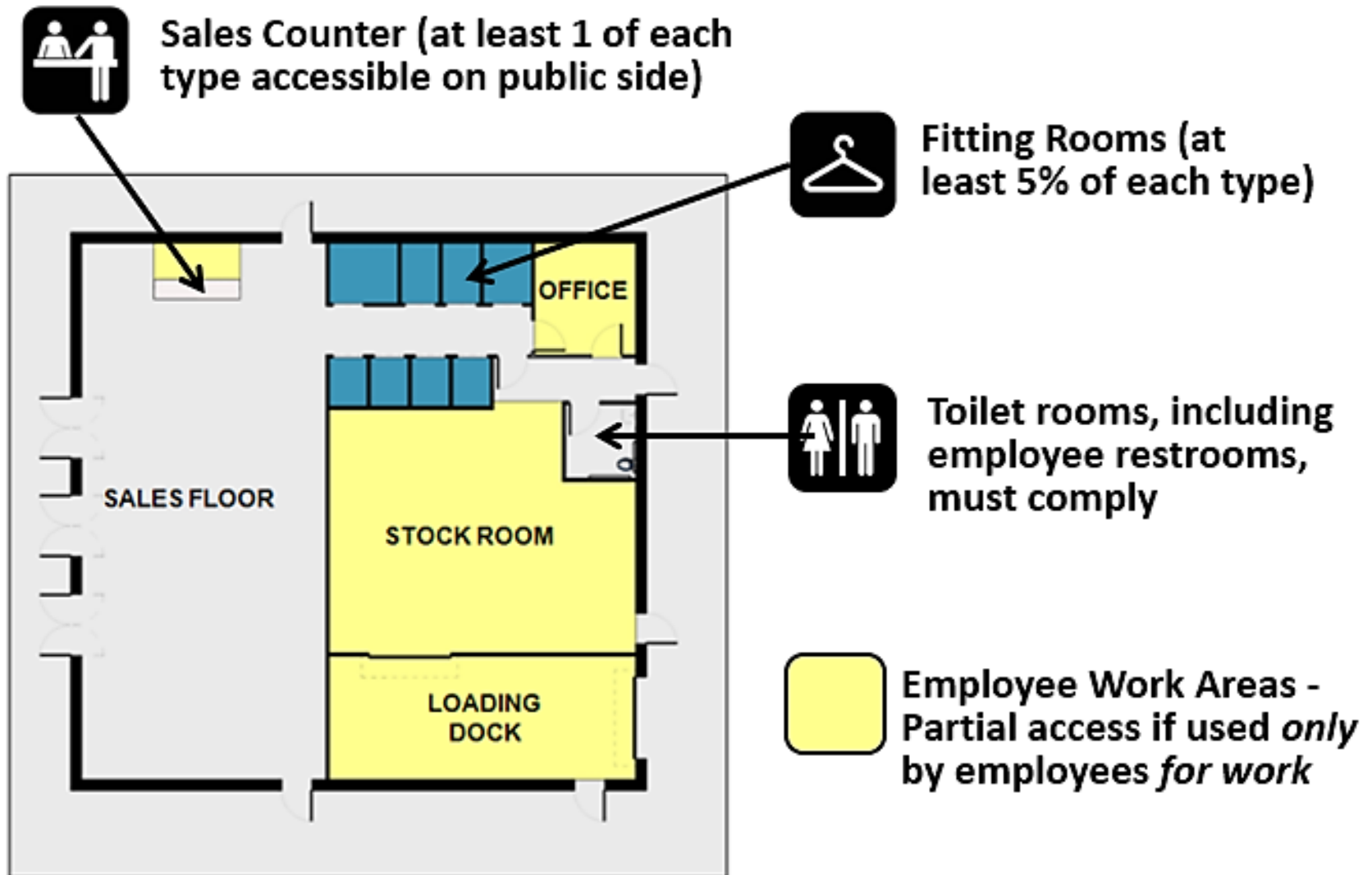


General Exceptions (§203)

- construction sites
- areas raised for security, life/fire safety
- raised work areas
- machinery spaces
- spaces accessed by ladders, catwalks, crawl spaces, very narrow passageways
- certain single occupant structures (e.g., toll booths)
- certain sports structures (e.g., referee standards, boxing rings, diving platforms)



Example: Retail Facility





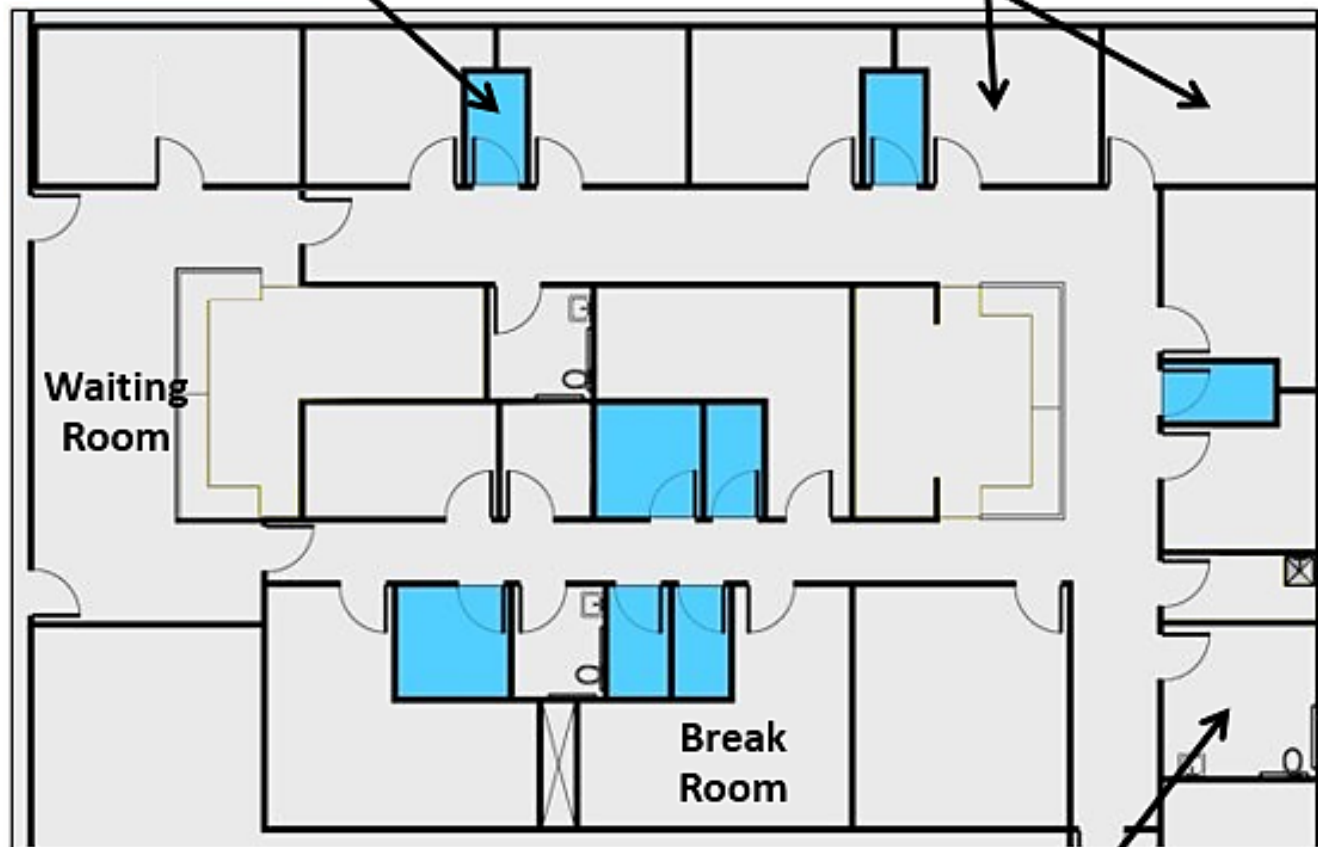
Example: Medical Care Suite

Public & Common Use Areas: Full Access



Dressing Rooms: access to at least 5% of each type

Exams Rooms & Doctors' Offices: 100% scoping (public access)



Toilet rooms – access to all
(50%: clustered single user of same type)



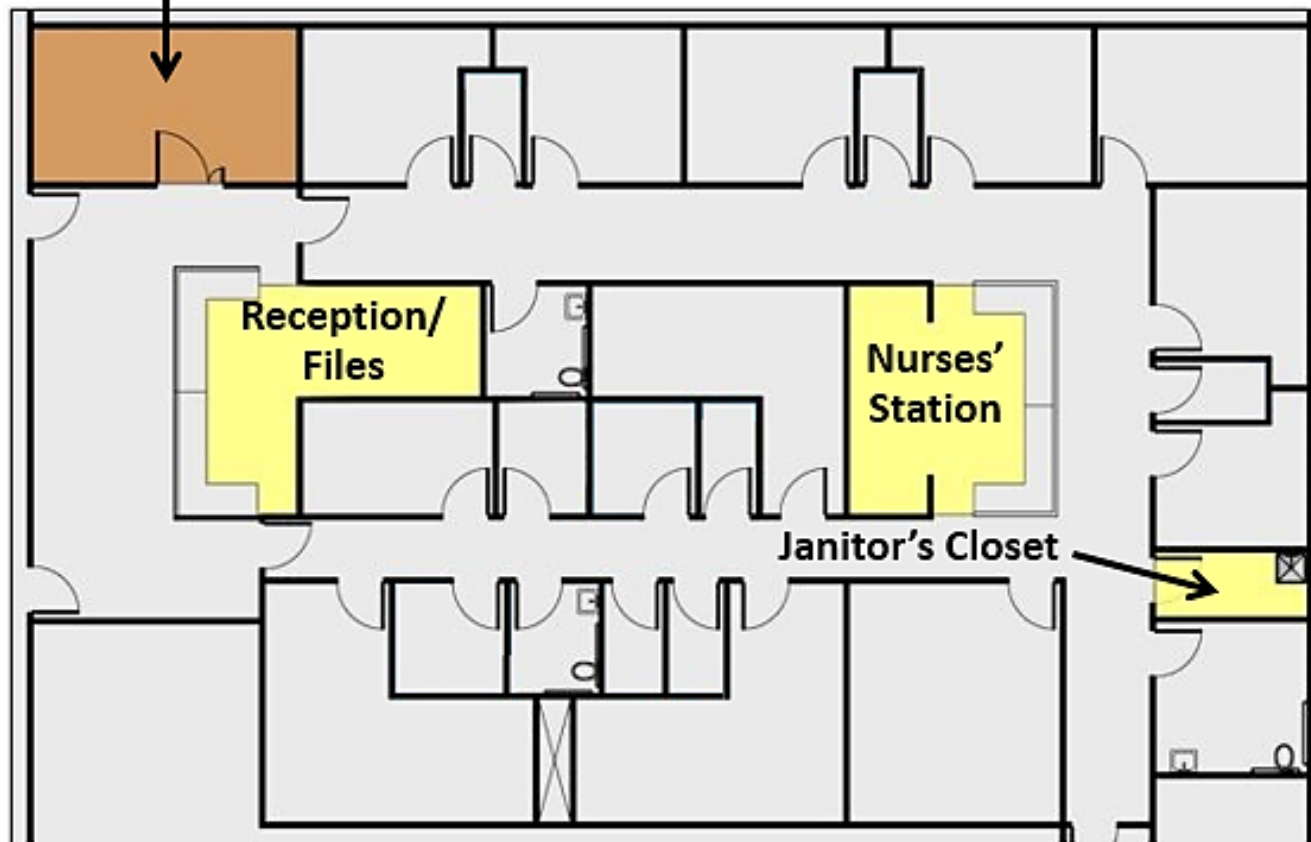
Example: Medical Care Suite

Employee Work Areas & Exempt Spaces

Mechanical (exempt)



Employee Only Work Areas



Employee Work Areas (§203.9)

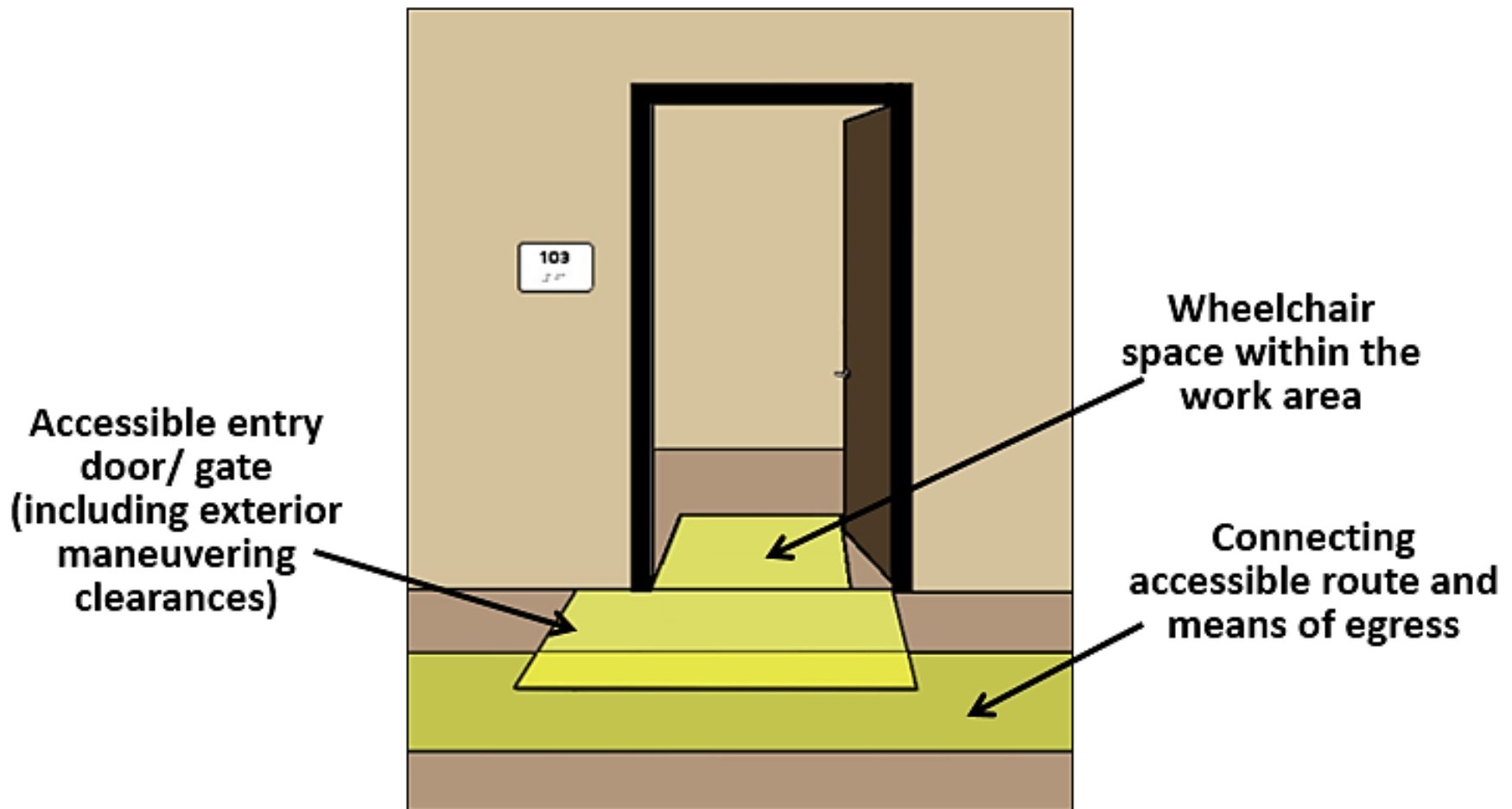
Minimum requirements:

- “approach, entry, & exit”
- circulation paths (in areas ≥ 1000 sq ft)
- means of egress
- visual alarm connection



Employee Work Areas

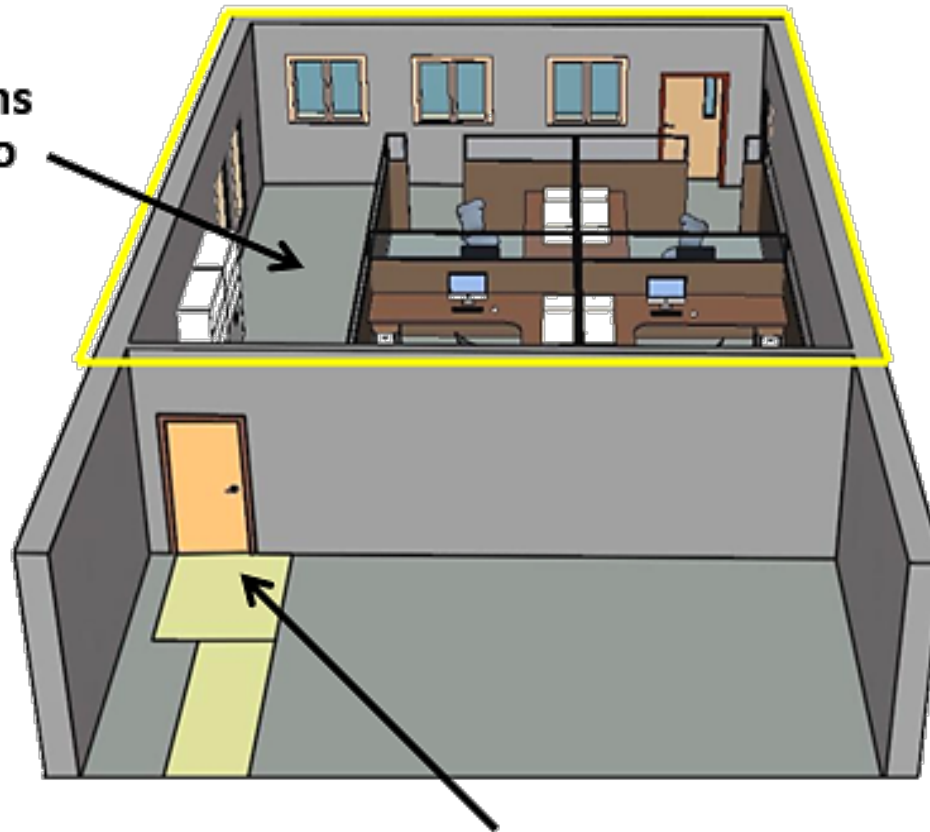
Access for “approach, entry, & exit”



Employee Work Areas

Less than 1,000 SF

Common use
circulation paths
not required to
comply



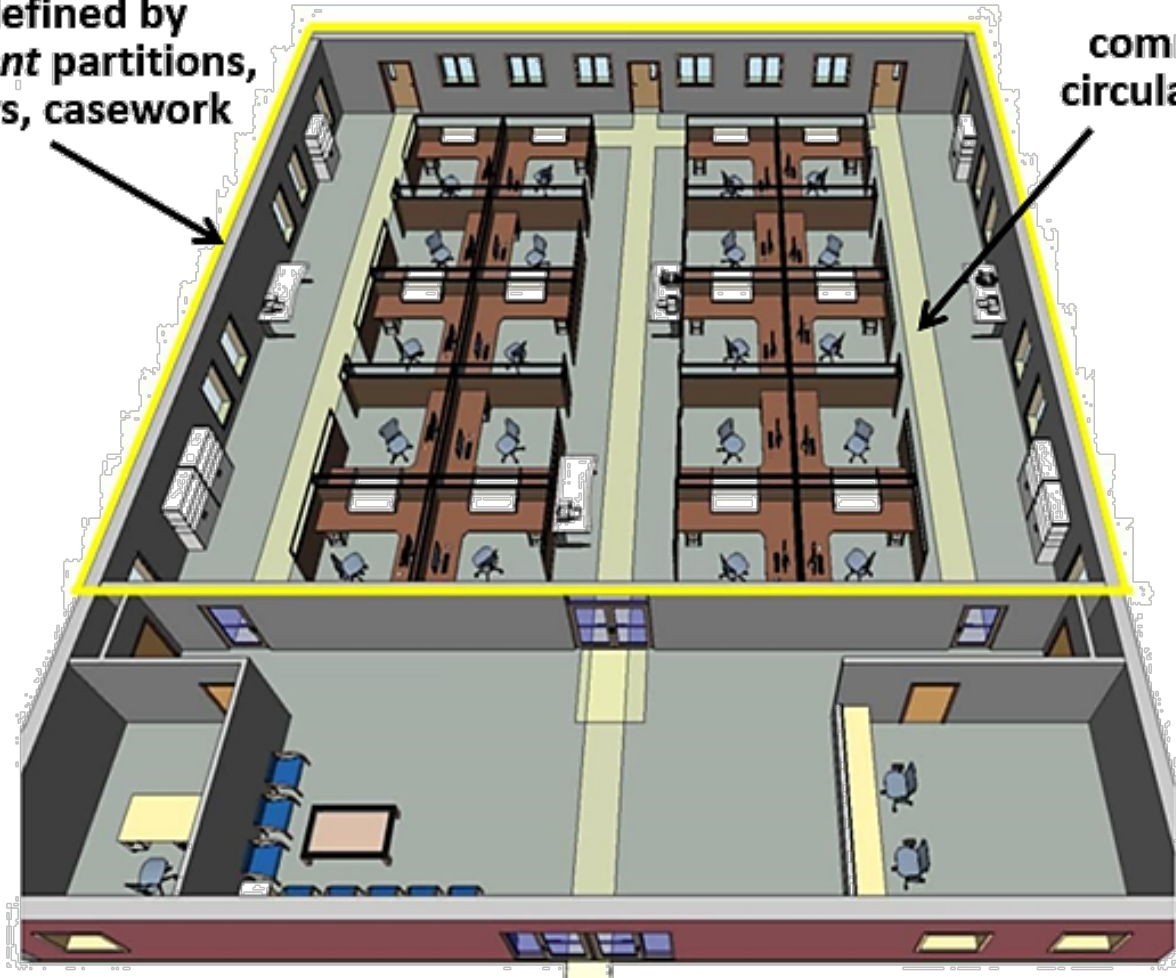
Access for approach, entry, and
exit to work area required

Employee Work Areas

1,000 SF or more in size

size defined by
permanent partitions,
counters, casework

common use
circulation path

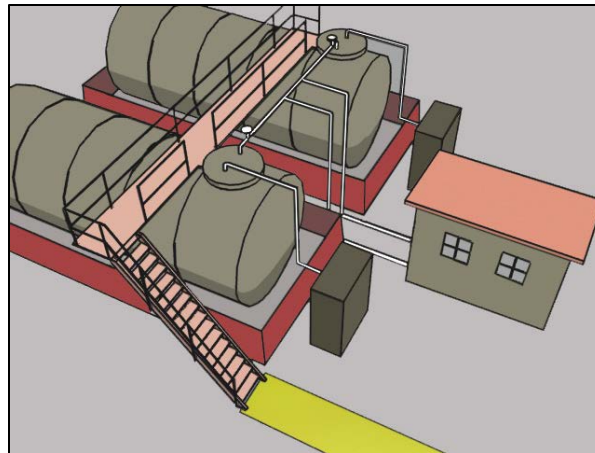


Employee Work Areas (§206.2.8)

Common use circulation paths must comply in work areas 1,000 SF or more in size

Exempt:

- exterior areas fully exposed to weather
- portions of paths integral to equipment

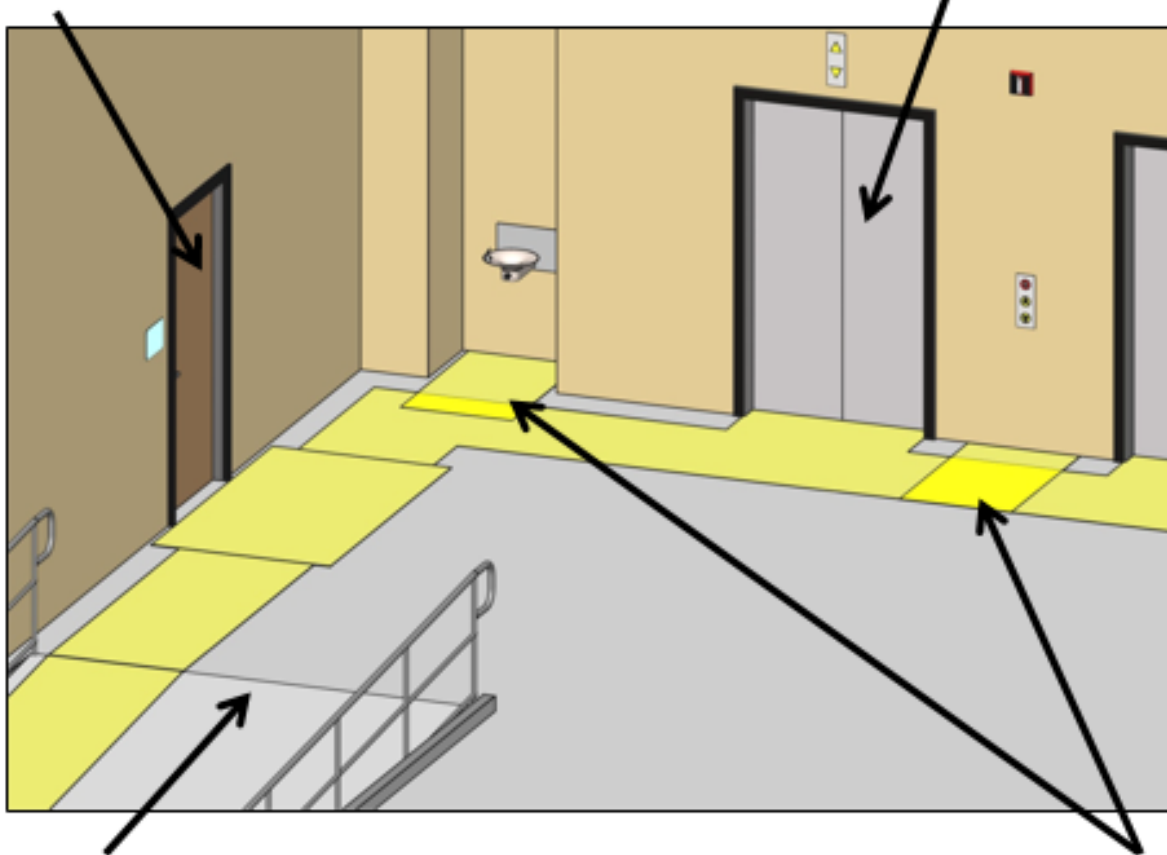


Accessible Routes

Must connect to:

each accessible room and space

each story (unless an exception applies)

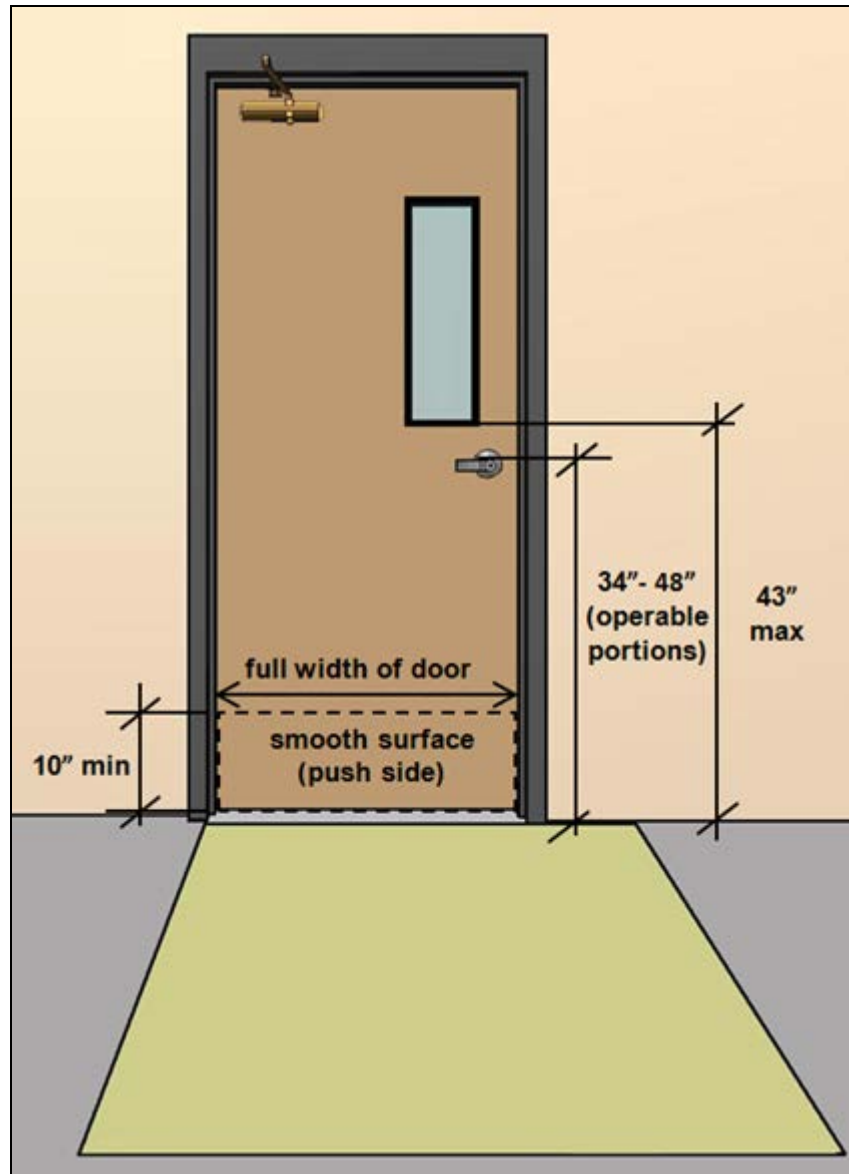


each level on a floor required to be accessible

each accessible element

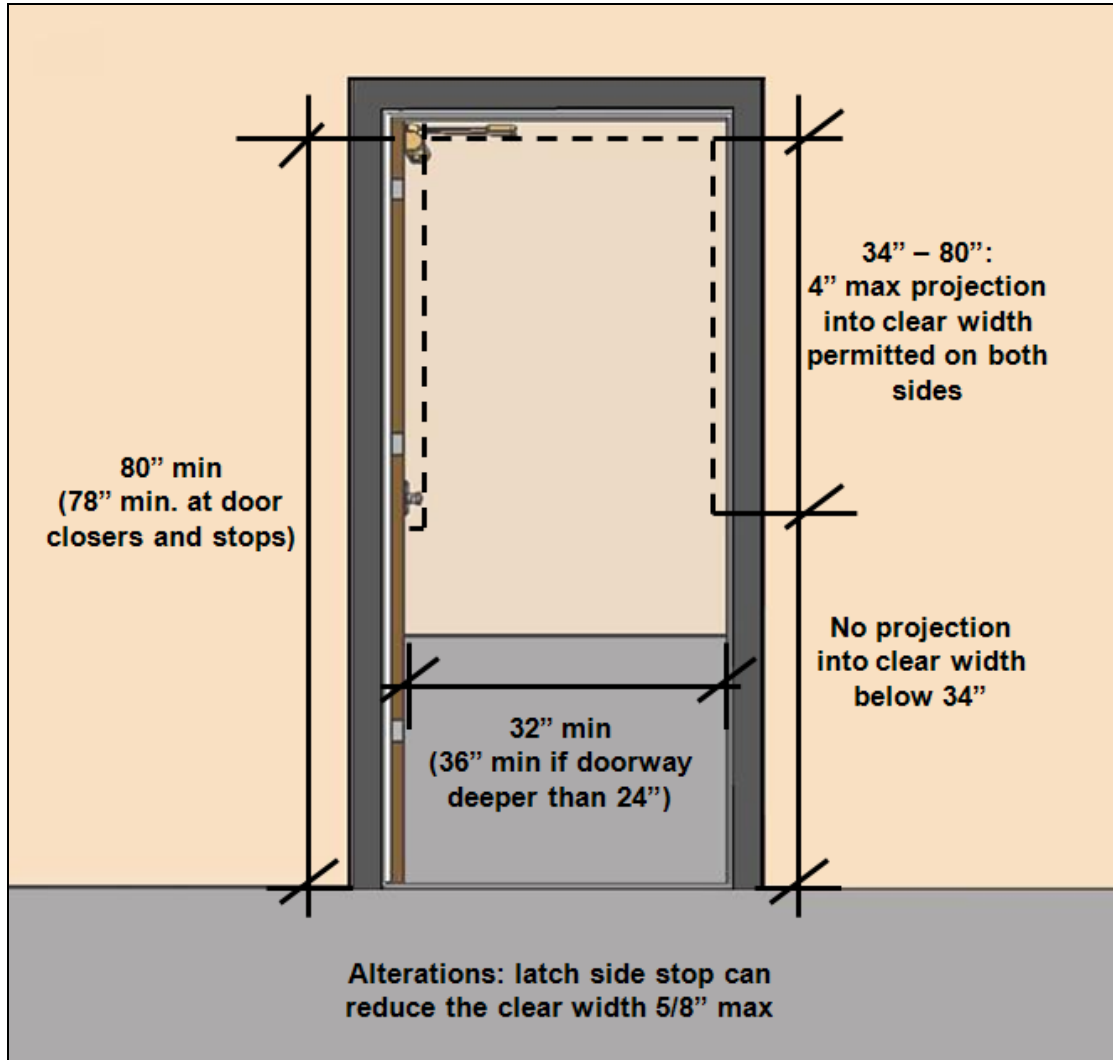
Doors, Doorways, and Gates

Doors, Doorways, Gates (§404)



- Clear Width (32" min.)
- Closing Speed
- Opening Force (5 lbf max)
- Vision/ Side Lights
- Compliant Hardware
- Smooth Surface (bottom, push side)
- Thresholds (1/2" max)
- Maneuvering Clearance (both sides unless usable in 1 direction only)

Doors, Doorways, Gates

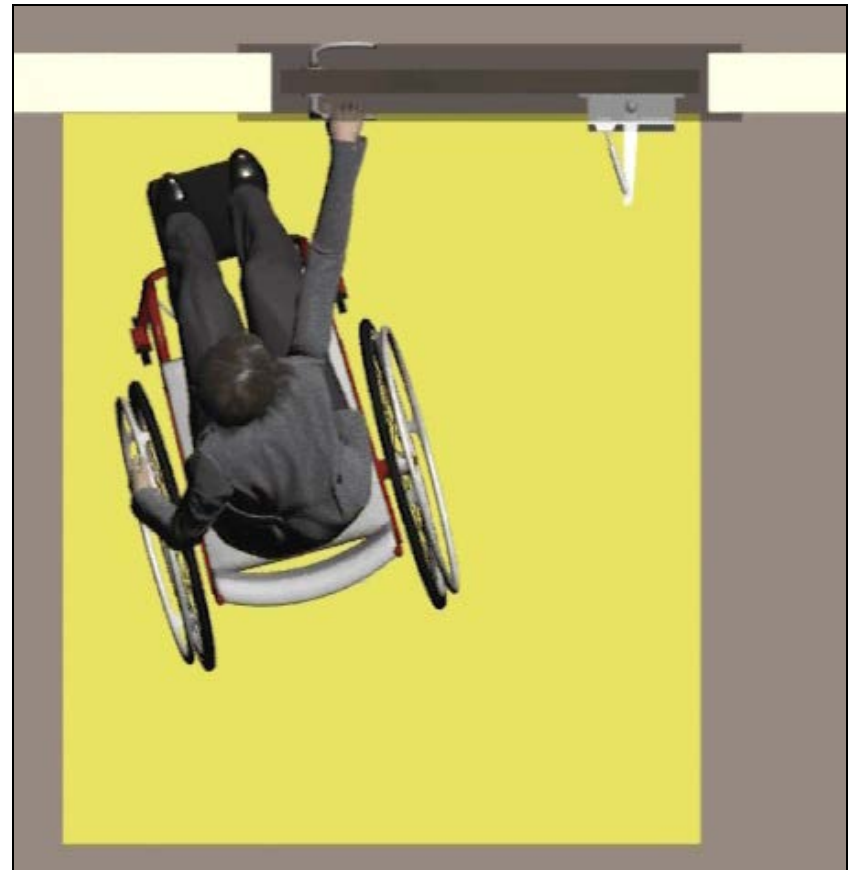


**Limited
projections into
door clear width**

**Hardware height:
34" - 48"**

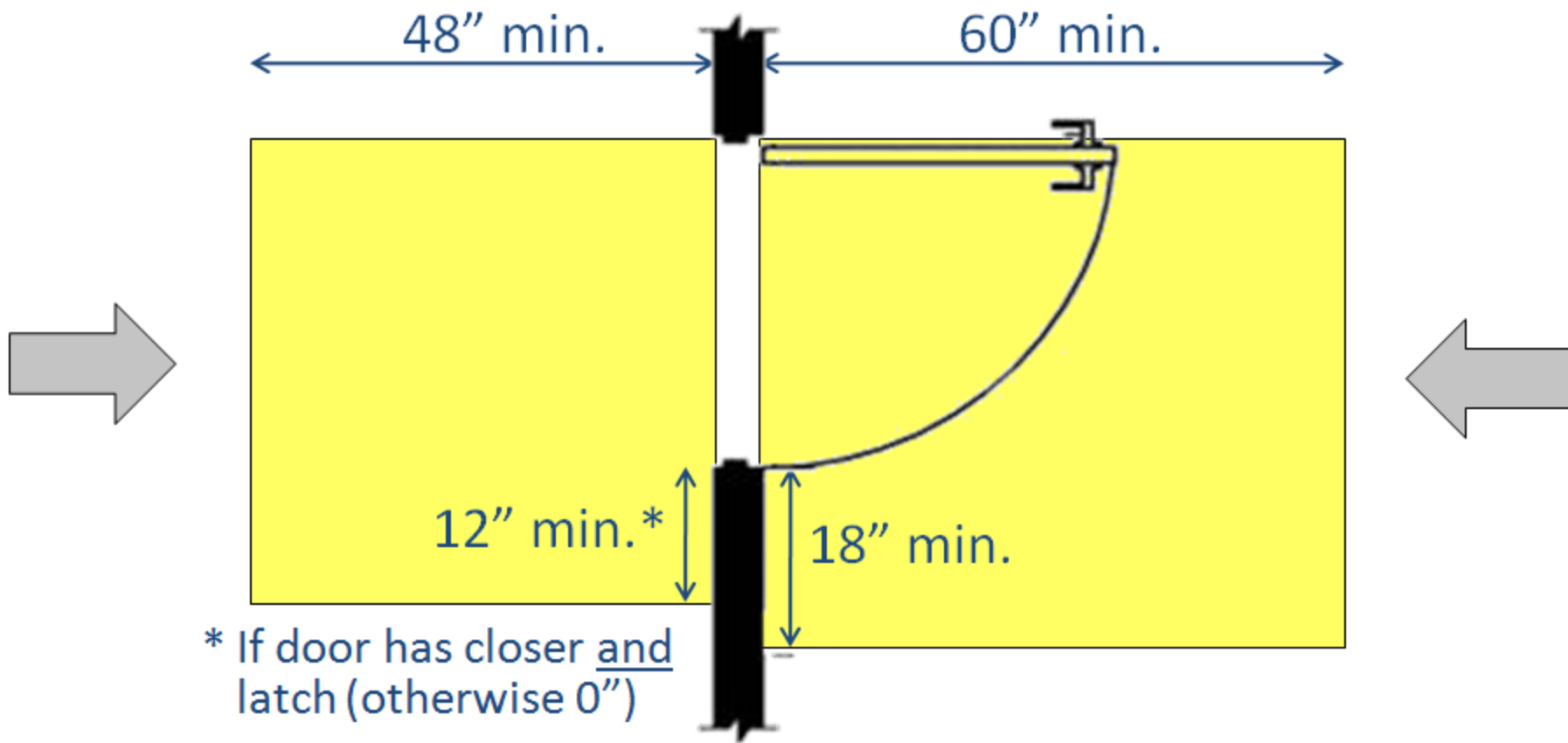
Maneuvering Clearances

Minimum space for positioning/
maneuvering at doors



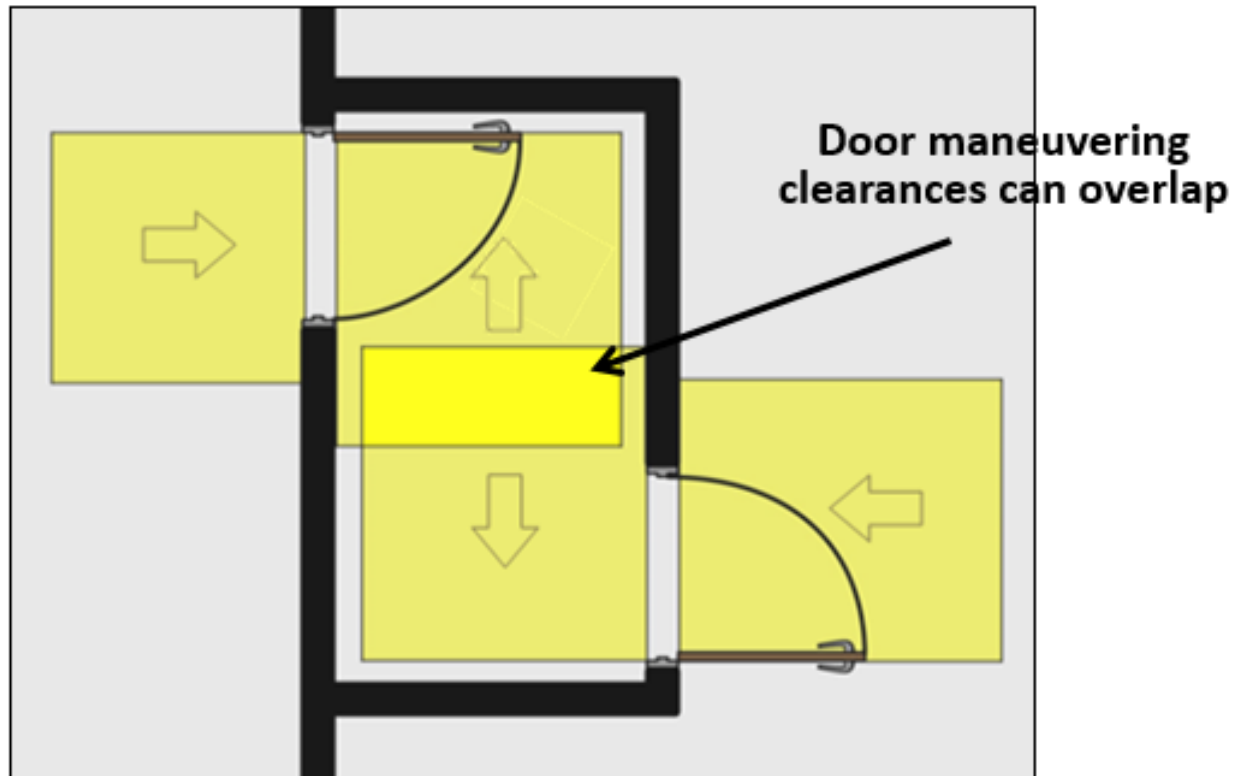
Maneuvering Clearances

Forward Approach



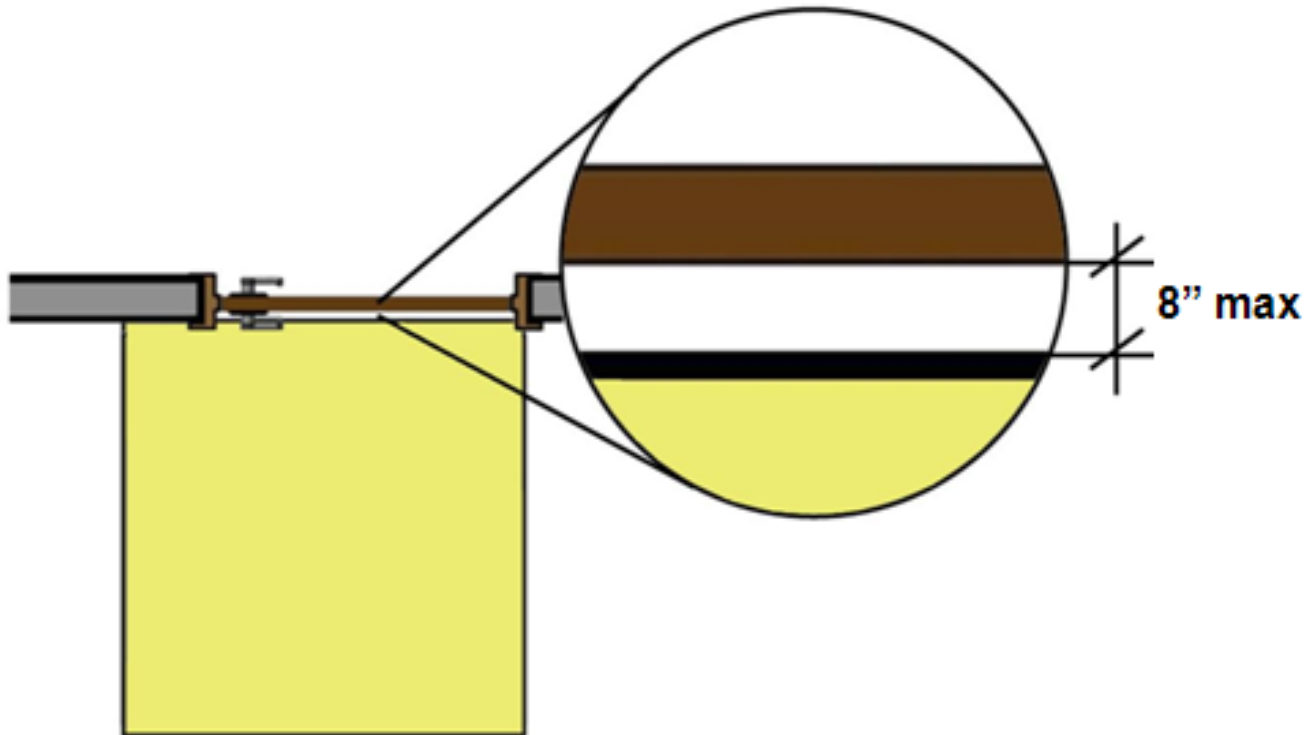
Maneuvering Clearances

Required at each accessible door based on approach & swing



Maneuvering Clearances

Maneuvering clearance measured from the wall - cannot be offset more than 8" from the face of the door

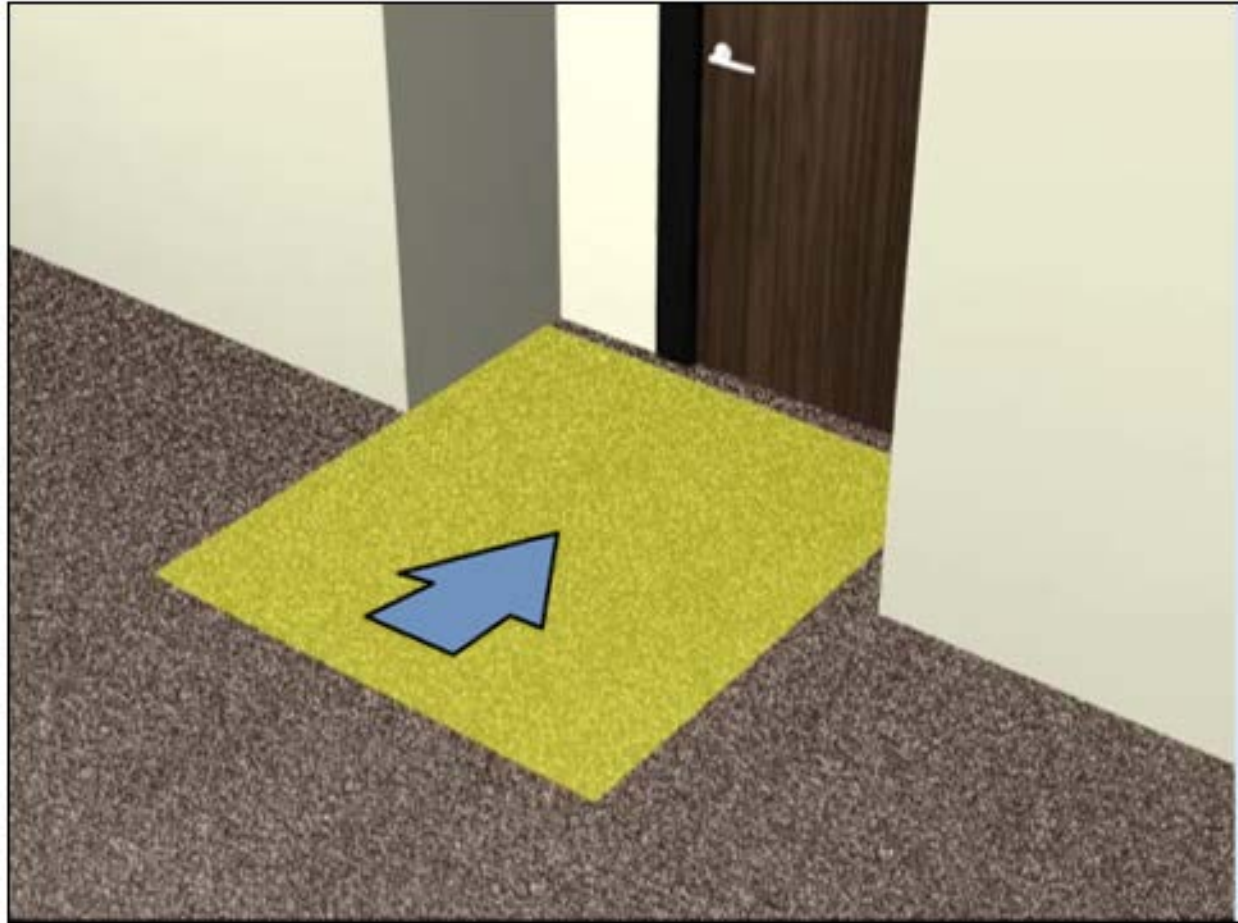


Maneuvering Clearances

8" max. offset from face of door



Maneuvering Clearances

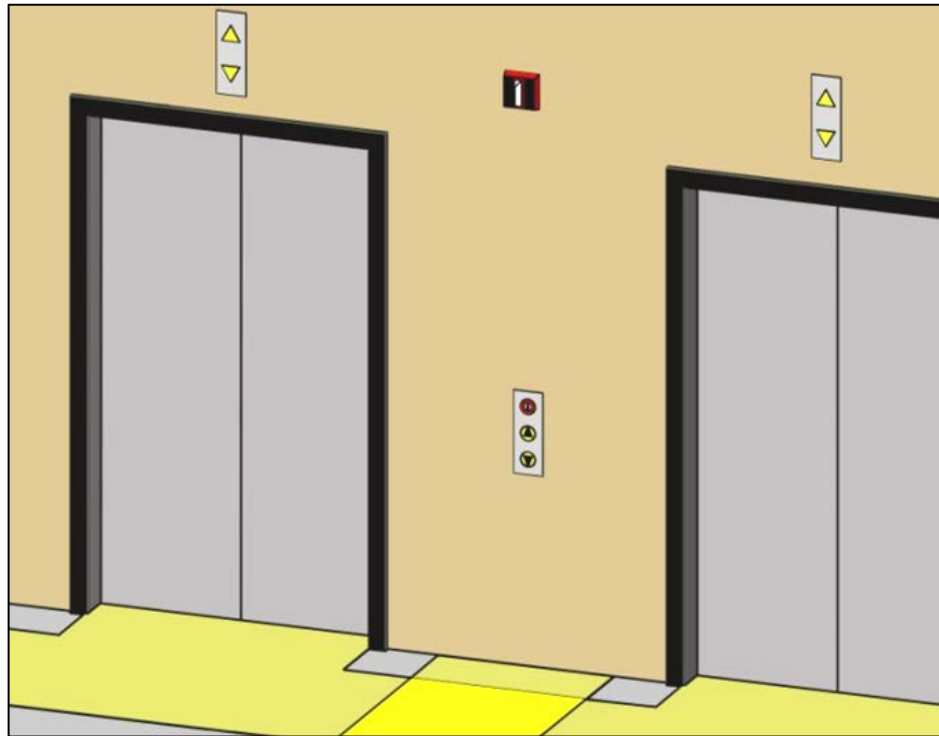


Recess > 8": maneuvering clearance for forward approach located 8" max. from face of door

Accessible Routes Between Stories

Multi-Story Facilities (§206.2.3)

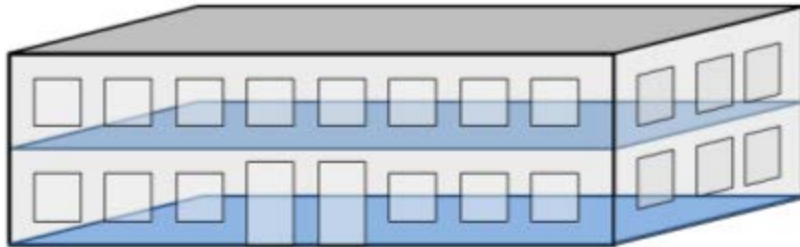
At least one accessible route must connect each story and mezzanine unless an exception applies



Exceptions (§206.2.3)

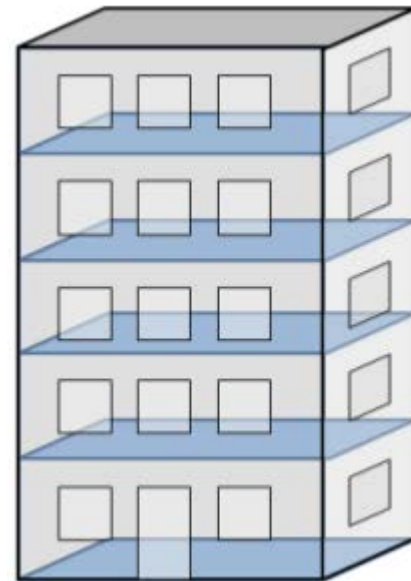
AR between floors (“elevator exception”)

Private sector facilities only:



less than 3 stories

OR



less than 3,000 sf/ flr)

Exceptions

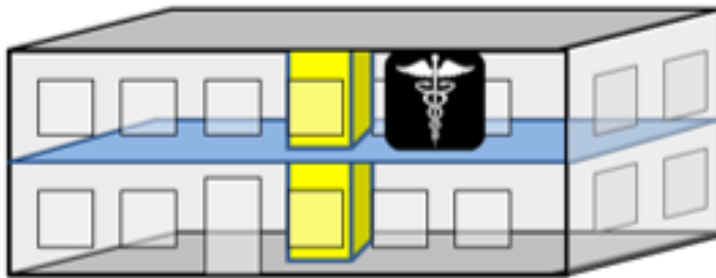
Exception not allowed for:

- Shopping centers/ malls with 5 or more sales or rental establishments)
- Professional offices of health care providers
- Terminal, depots, or stations used for public transportation
- Government Facilities

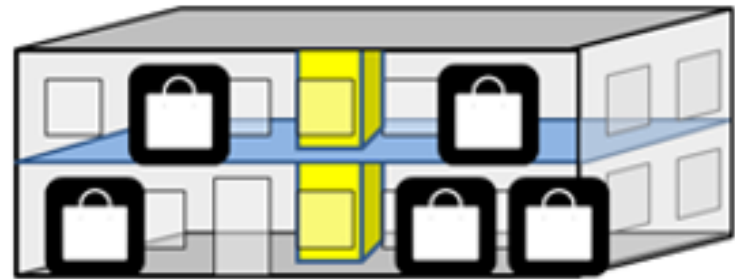


Exceptions

Accessible route required to upper story:



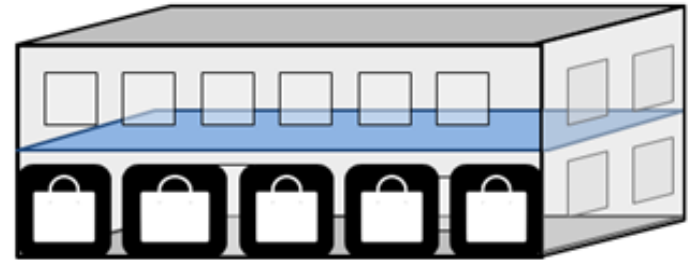
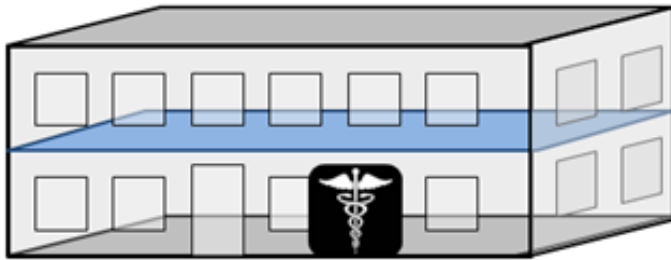
**containing a health
care facility**



**containing a sales/rental
establishment (if facility
contains at least 5 total)**

Exceptions

- Accessible route not required to upper story without a health care facility or a sales/rental establishment



Exceptions

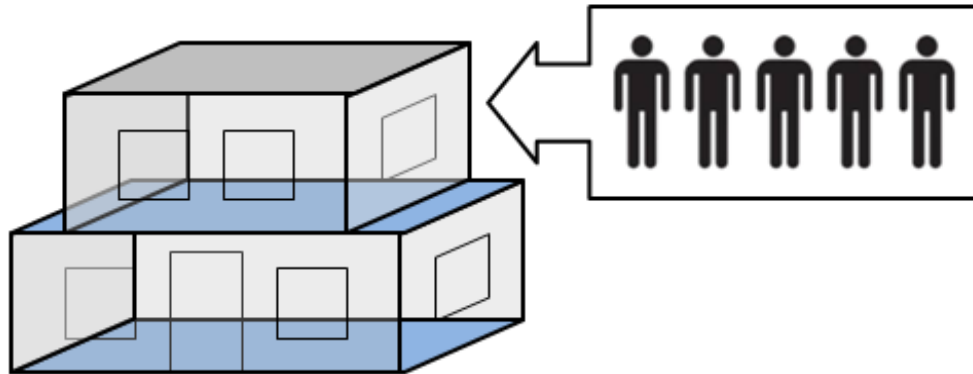
If facility qualifies for exception,

- all other provisions in the standards still apply to stories/ mezzanines not served by AR**
- elevators provided anyway must fully comply (as standard or LULA elevators)**
- vertical access still may be required by state or local code.**

Exception: Gov't Buildings

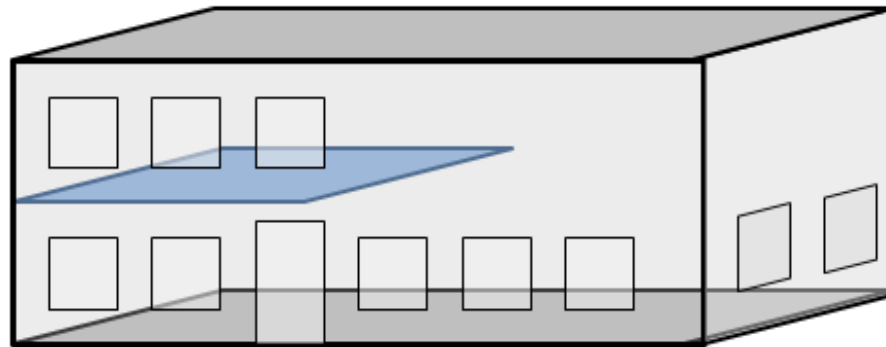
Exception for public (government) buildings:

- 2 story only AND
- 1 floor has: no public space AND max. occupancy of 5



Exceptions: Mezzanines

**AR not required to mezzanines in
buildings not required to have an elevator**



Additional conditions for restaurants & cafeterias

Exceptions

Additional exceptions:

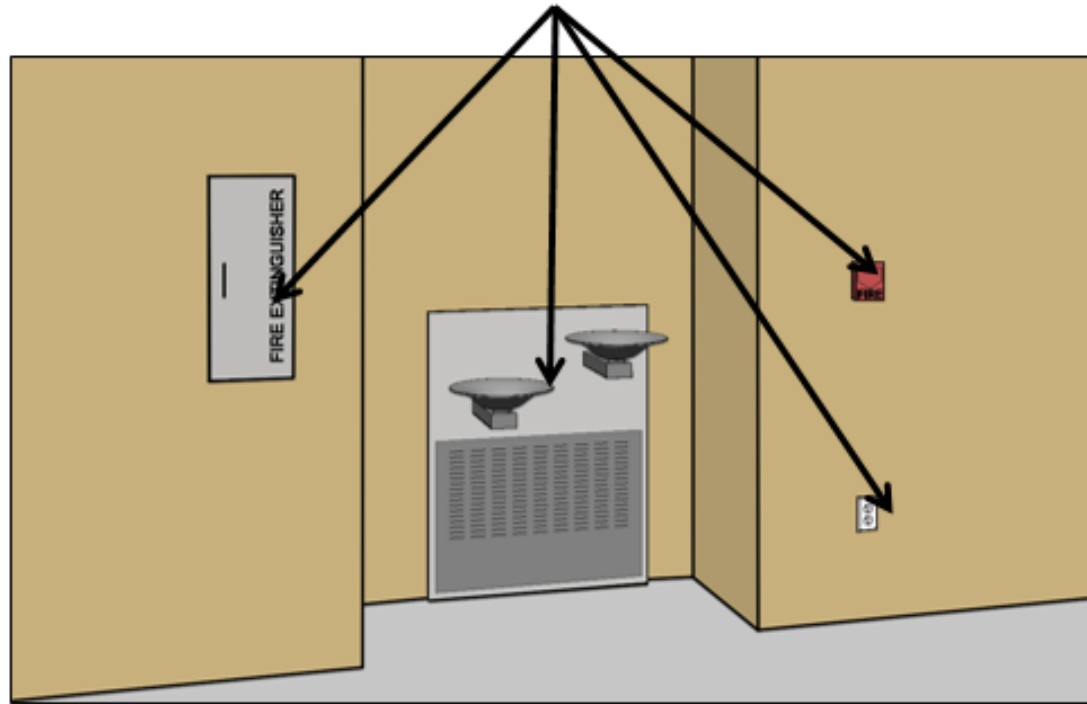
- detention and correctional facilities
- residential facilities
- transient lodging (multi-story units)
- air traffic control tower cab
- qualified historic facilities
- press boxes



Operable Parts & Elements

Operable Parts

Standards apply to *fixed or built-in* elements



Moveable elements/ furnishings not covered
by the standards

Operable Parts (§309)

- Operability
- Reach range
- Clear floor space
- AR connection



Reach Ranges (§308)

Side reach range reduced:

48" – 15"

(same as forward reach)



Clear Floor Space (§305)

Forward Approach



Required at:

- dining/ work surfaces
- drinking fountains
- lavatories & most sinks

Side Approach



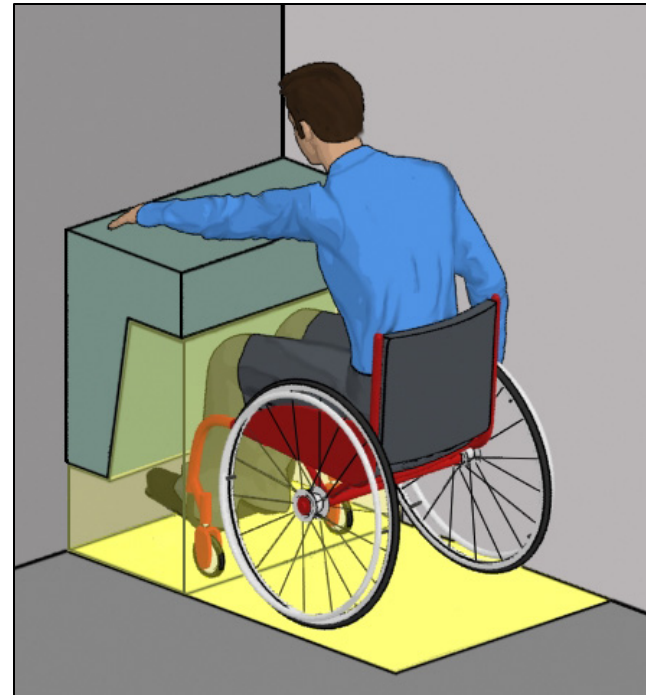
**Allowed at other elements
(including sales/service
counters), specified for:
beds & most appliances**

Clear Floor Space (§306)

**Forward Approach: Objects with knee/toe clearance
can overlap a portion of the space
(required at some elements, e.g. DFs & lavs)**



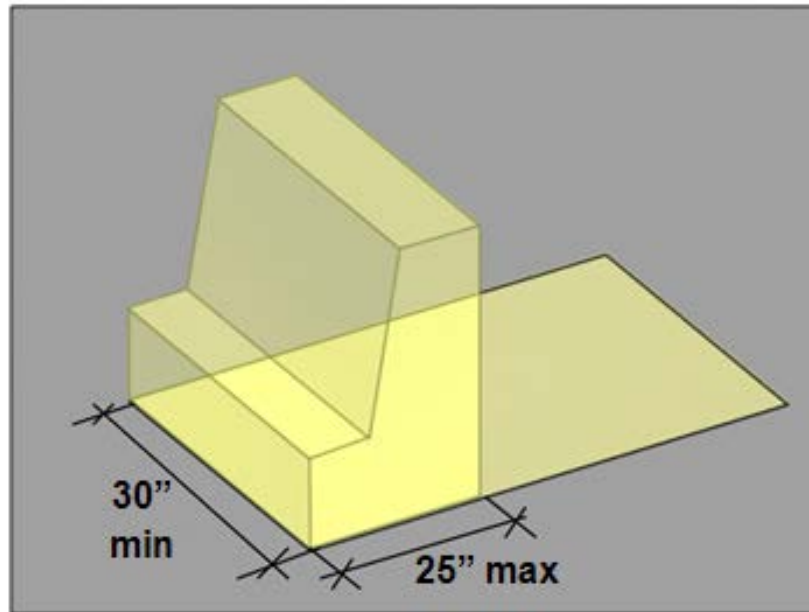
**Toe space (9" high min.):
Max. depth 6"**



**Knee & Toe Space:
Max. depth 25"**

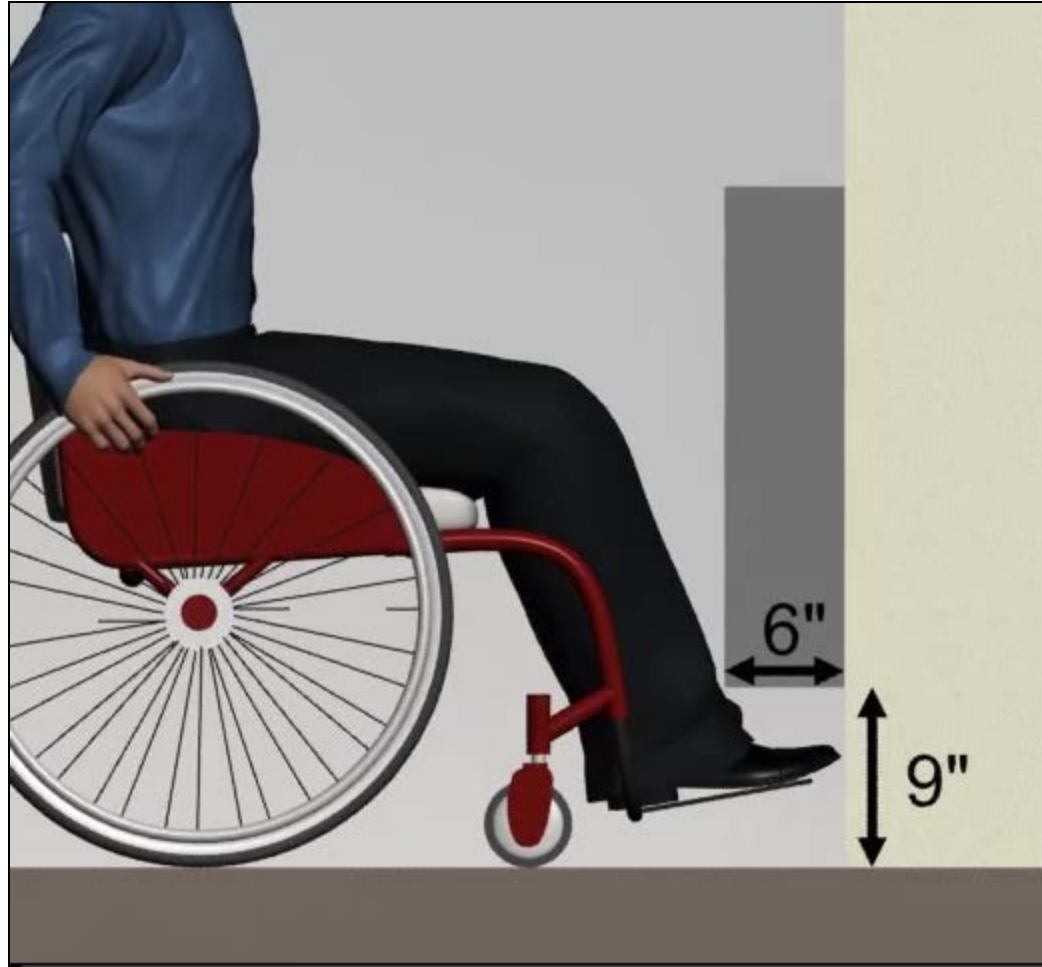
Clear Floor Space

Knee/toe specifications allow space for plumbing, enclosures, and supports



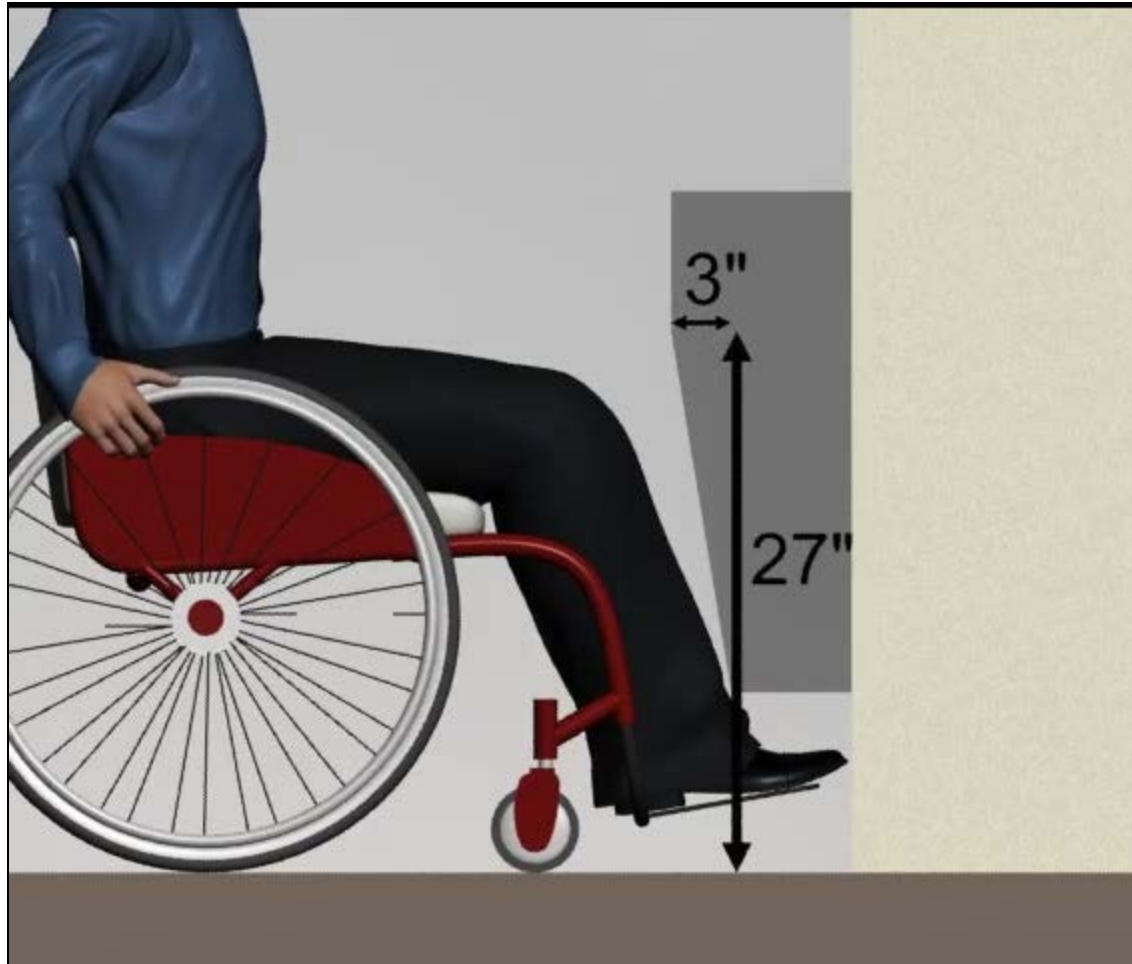
No object can protrude into min. clearances (other than dip of overflow at lavs & sinks)

Knee & Toe Space



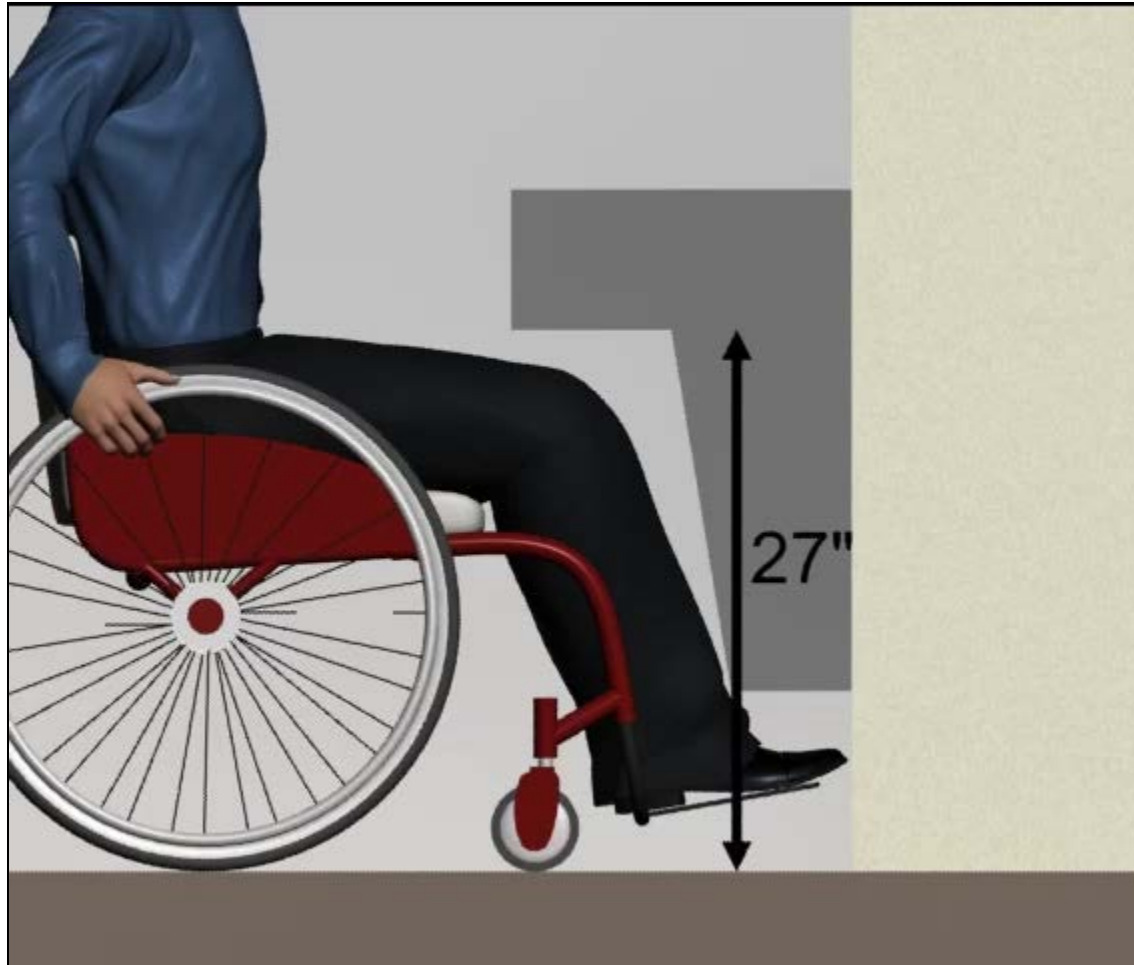
Toe space

Knee & Toe Space



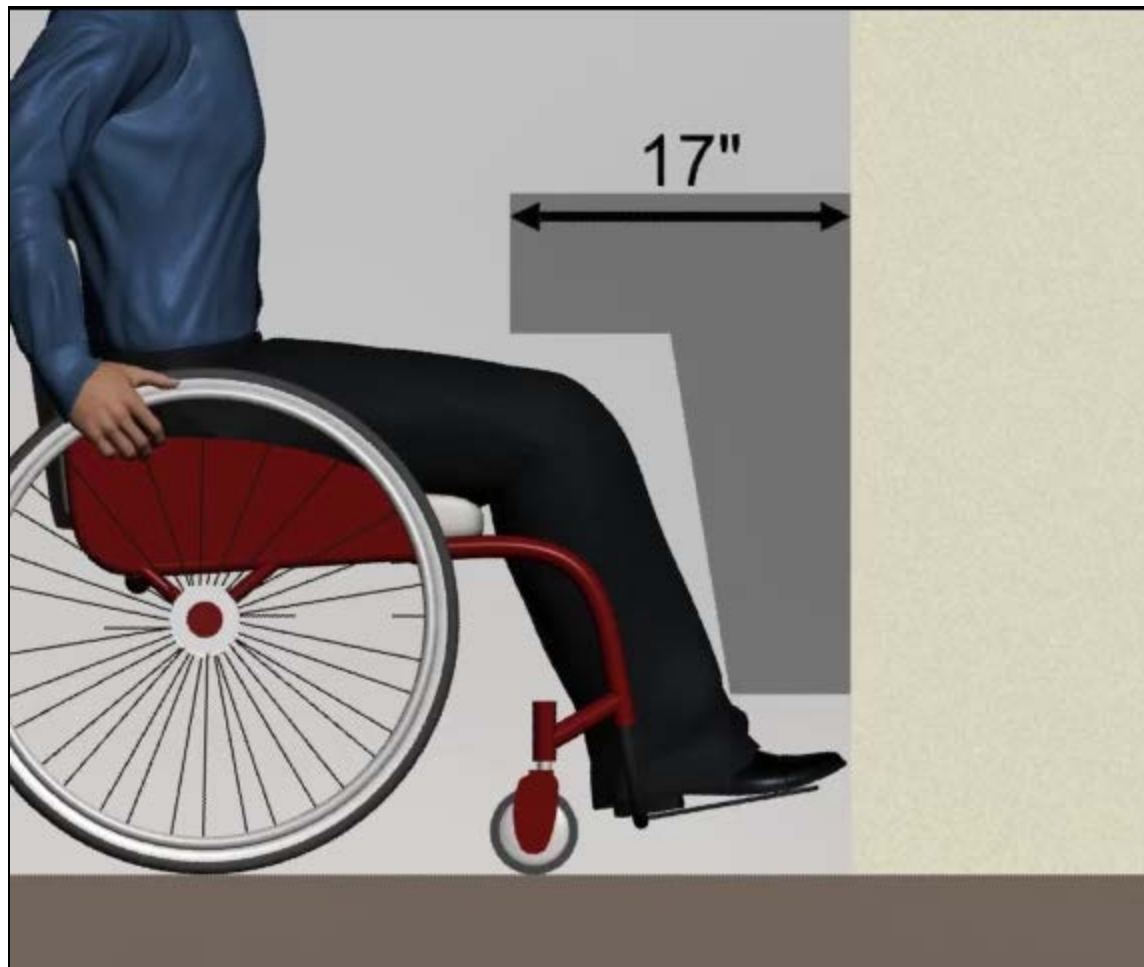
Beyond toe space, clearance increases from 9" to 27" min. high over 3" span (6:1 slope)

Knee & Toe Space



Knee Space (8" deep min. where knee space required)

Knee & Toe Space



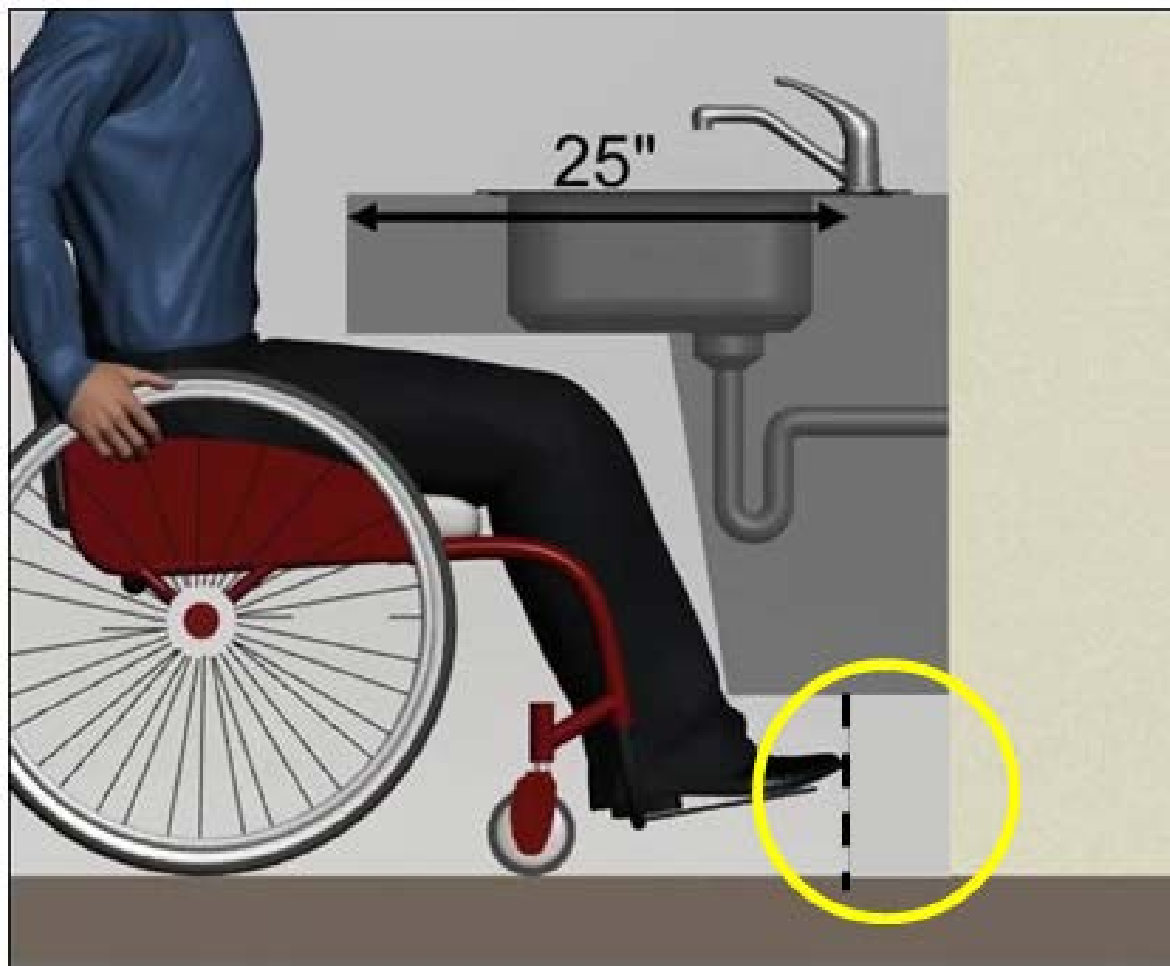
Required knee & toe space must be at least 17" deep

Knee & Toe Space



**Additional depth must provide clearance for knees
(27" high min.)**

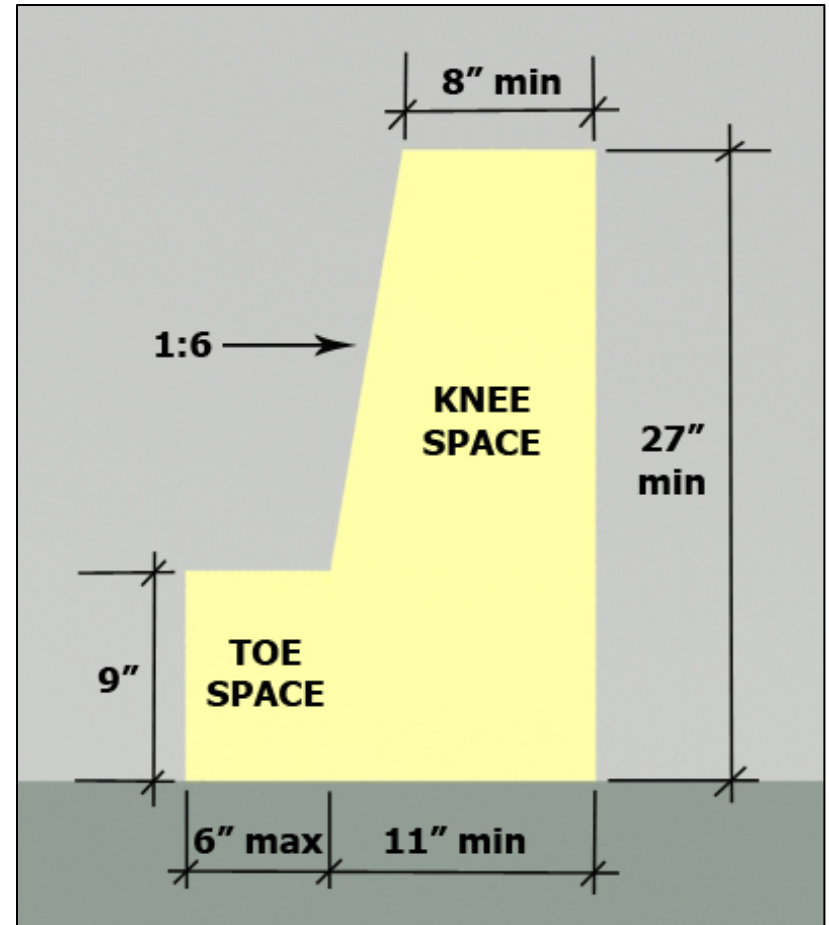
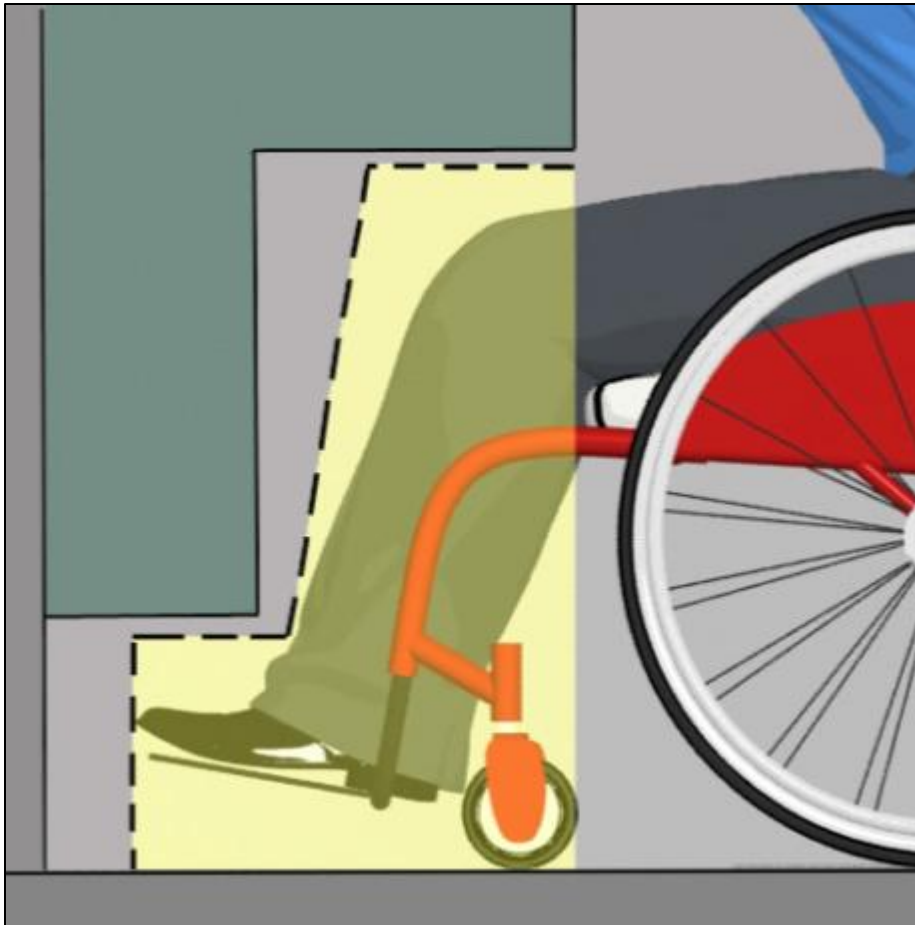
Knee & Toe Space



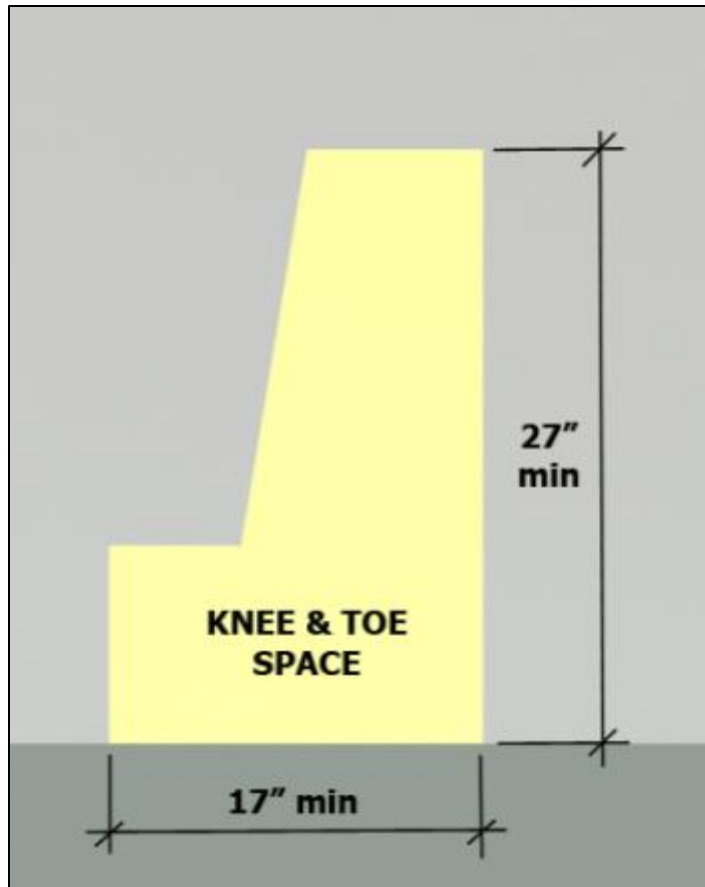
Space beyond 25" depth can exist but is not usable

Knee & Toe Space (§306)

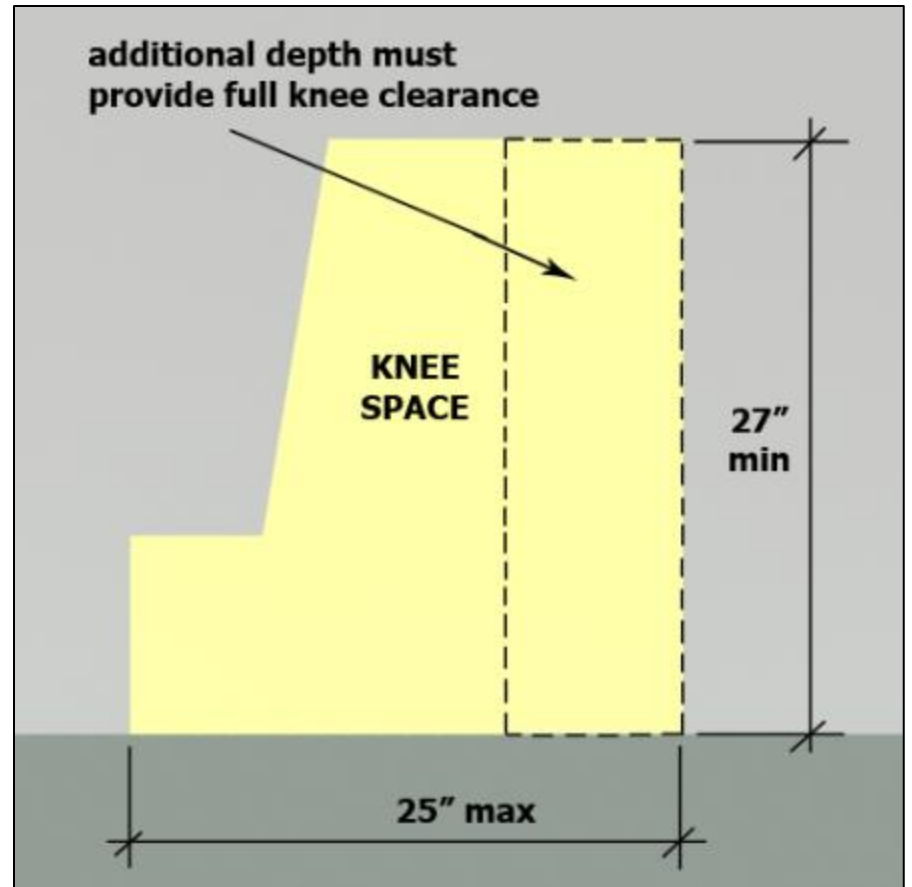
Knee and Toe Clearances



Knee & Toe Space



**17" min. depth at DFs, lavs,
sinks, dining/work surfaces**



**25" max. depth (all
elements)**

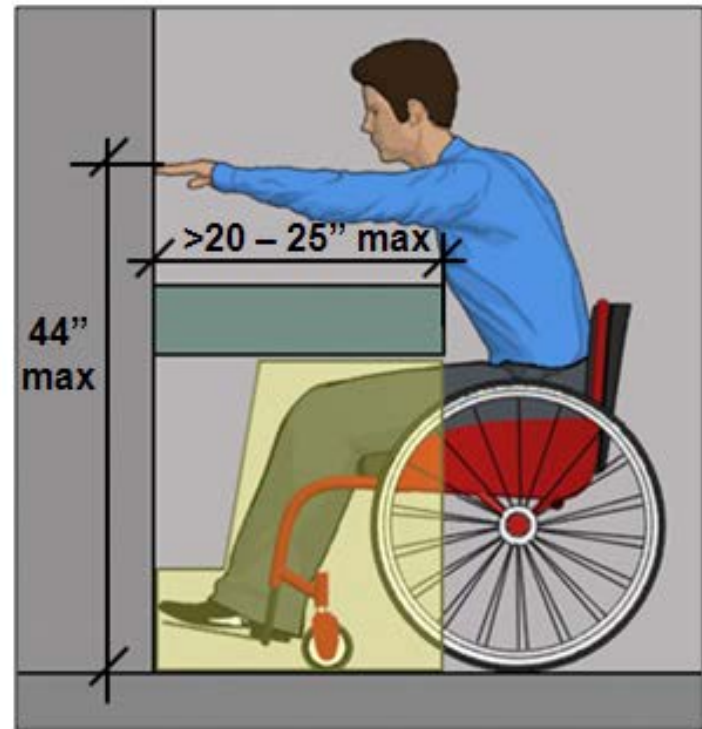
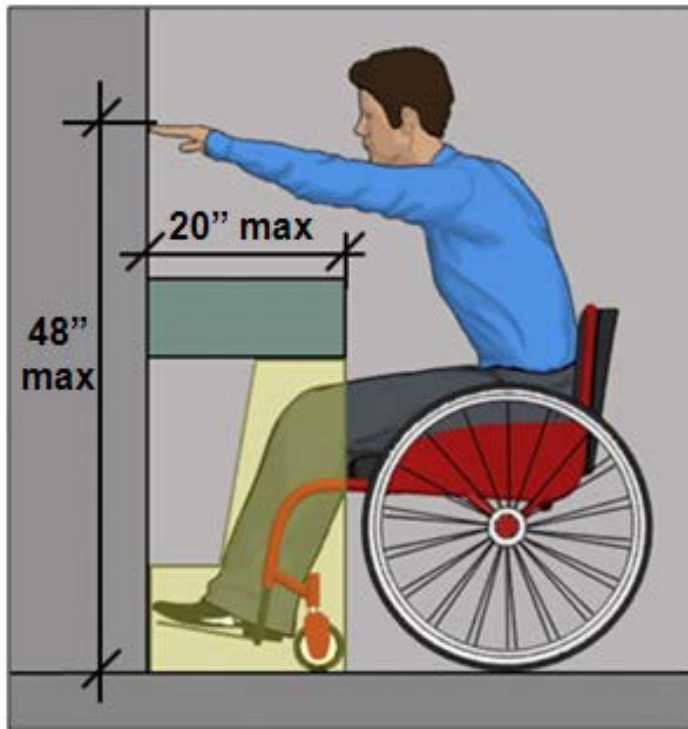
Knee & Toe Space

Knee/ toe space must equal or exceed the reach depth over obstruction



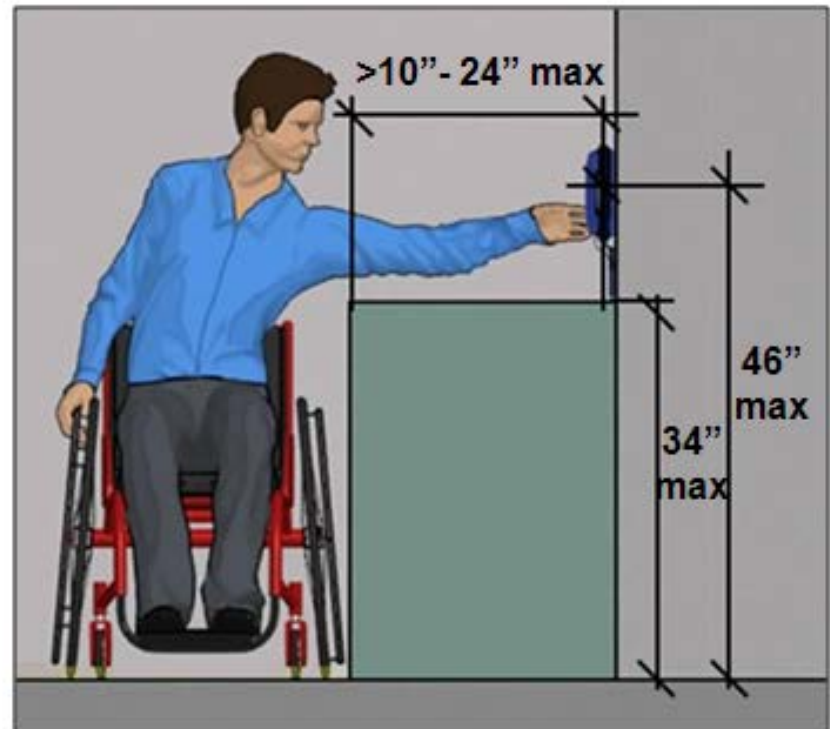
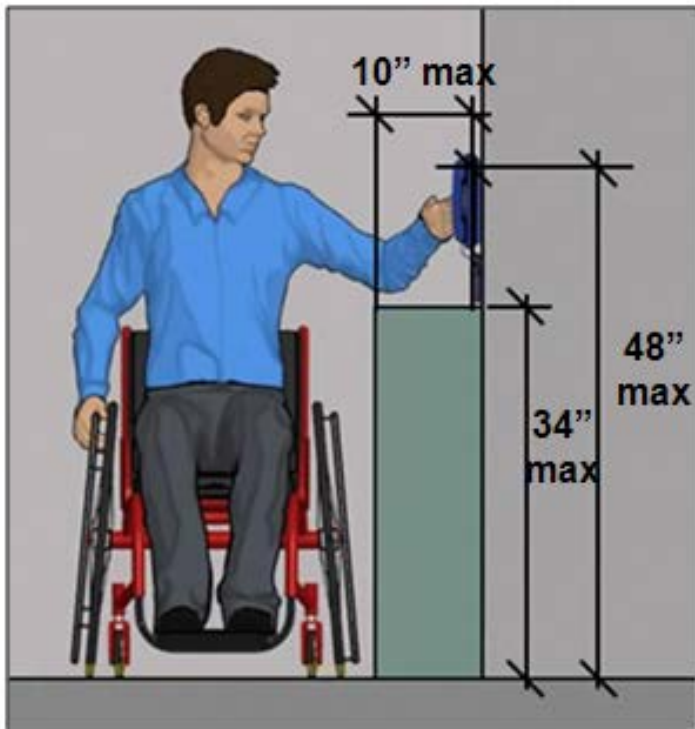
Reach Range (§308)

Forward reach depth over obstruction limited to 25"
(max. height reduced to 44" when depth exceeds 20")



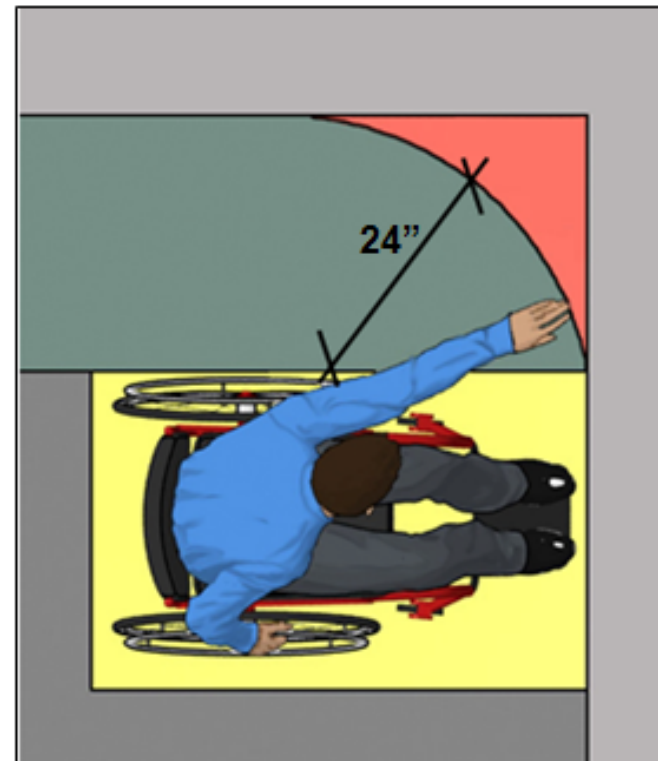
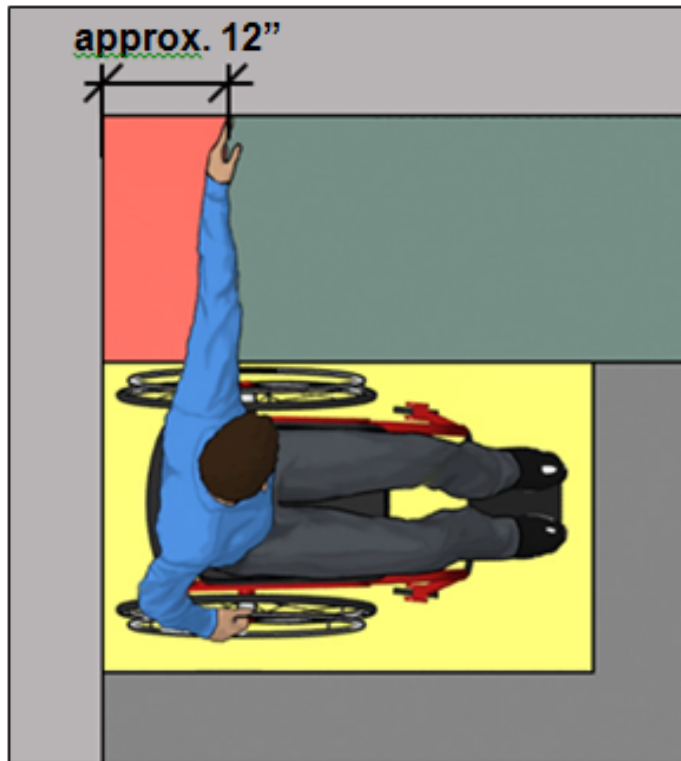
Reach Range

**Side reach depth over obstruction limited to 24"
(max. height reduced to 46" when depth exceeds 10")**



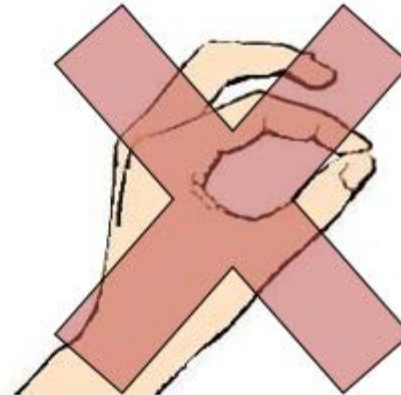
Reach Range

Elements in corners can be hard to reach (side approach) Recommendation: locate away from corners where possible or within reach radius



Operability

- 1 hand operation
- no tight grasping, pinching, twisting of wrist
- 5 lbf max.



Technical Guides on the Standards

Available on the Board's website

The collage illustrates the availability of technical guides on the Board's website. It features three main components:

- U.S. Access Board Website Screenshot:** The leftmost image shows the official website of the United States Access Board. The header includes the Board's logo and the tagline "Advancing Full Access and Inclusion for All". A navigation menu lists categories: The Board, Guidelines & Standards, Training, and Enforcement. Below this, a section titled "Communications & IT" lists various areas: Buildings & Sites, Recreation Facilities, Streets & Sidewalks, Transportation, and Health Care. A "BOARD NEWS" section at the bottom provides updates on recent board actions, such as the release of final guidelines for federal outdoor recreation sites and the creation of the Access Board.
- Technical Guide Covers:** Two overlapping covers of technical guides are shown in the center. The top cover is titled "U.S. ACCESS BOARD TECHNICAL GUIDE Operable Parts" and includes a section on "Operable Parts Covered [§205]" and "Examples of Operable Parts". The bottom cover is titled "U.S. ACCESS BOARD TECHNICAL GUIDE Floor and Ground Surfaces" and includes sections on "Specifications for floor and ground surfaces" and "Firmness, Stability, and Slip Resistance [§202.3]".
- 3D Simulation on Tablet:** The rightmost image shows a tablet displaying a 3D simulation of a person in a wheelchair. The person is positioned on a yellow rectangular tactile paving surface, which is highlighted to show its placement and use in a real-world environment.

Questions?



U.S. Access Board

(800) 872-2253 (voice)

(800) 993-2822 (TTY)

E-mail: ta@access-board.gov

www.access-board.gov



ADA Standards

Part 2

Agenda

(Chapters 6 – 10)

- Plumbing Facilities & Elements
- Communication Elements
- Special Rooms & Spaces
- Built-In Elements
- Recreation Facilities
- Alterations

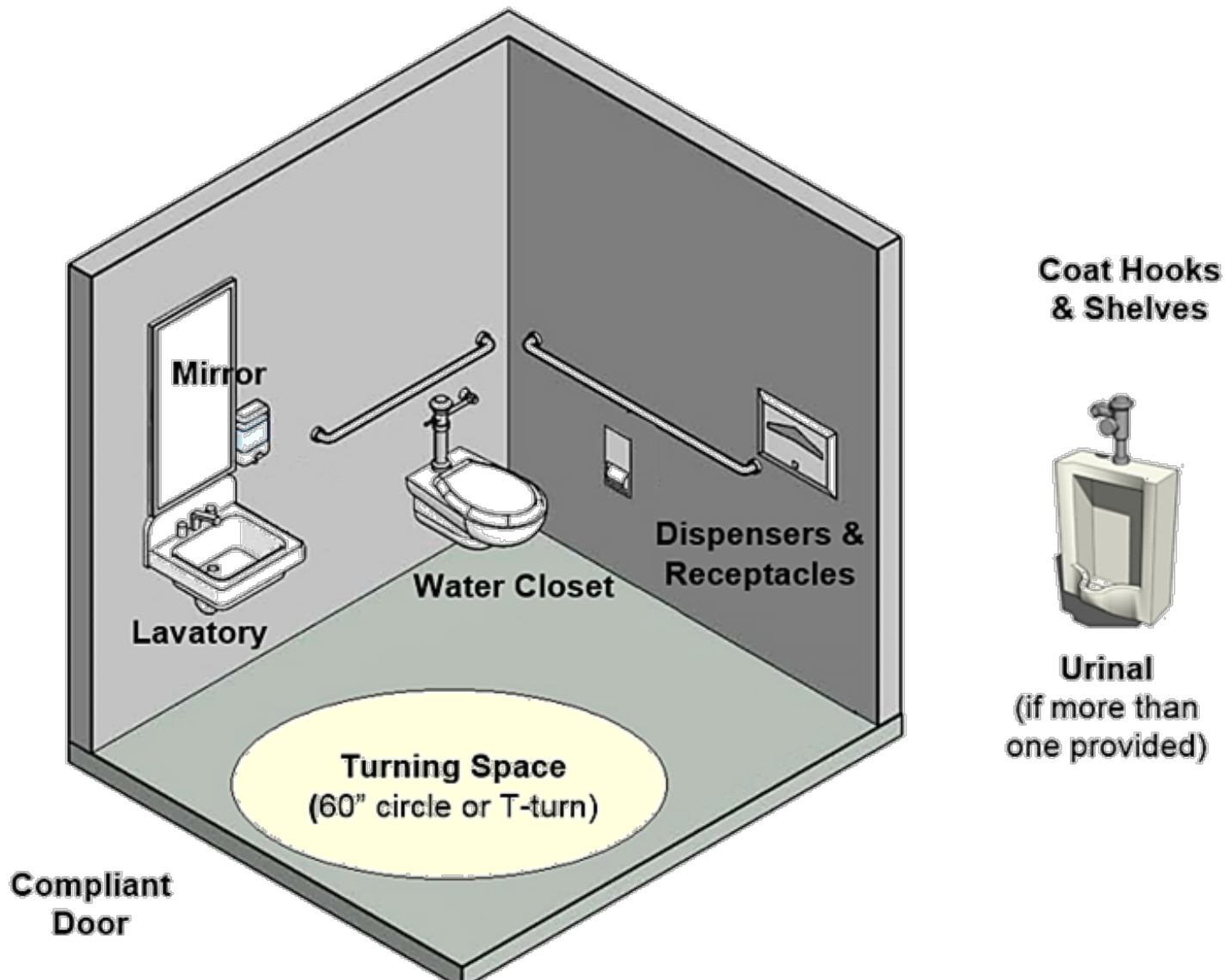
Toilet & Bathing Facilities (§213)

In new construction, all toilet and bathing facilities must be accessible, except:

- portable units (5% min)
- clustered single user toilet rooms (50% min)

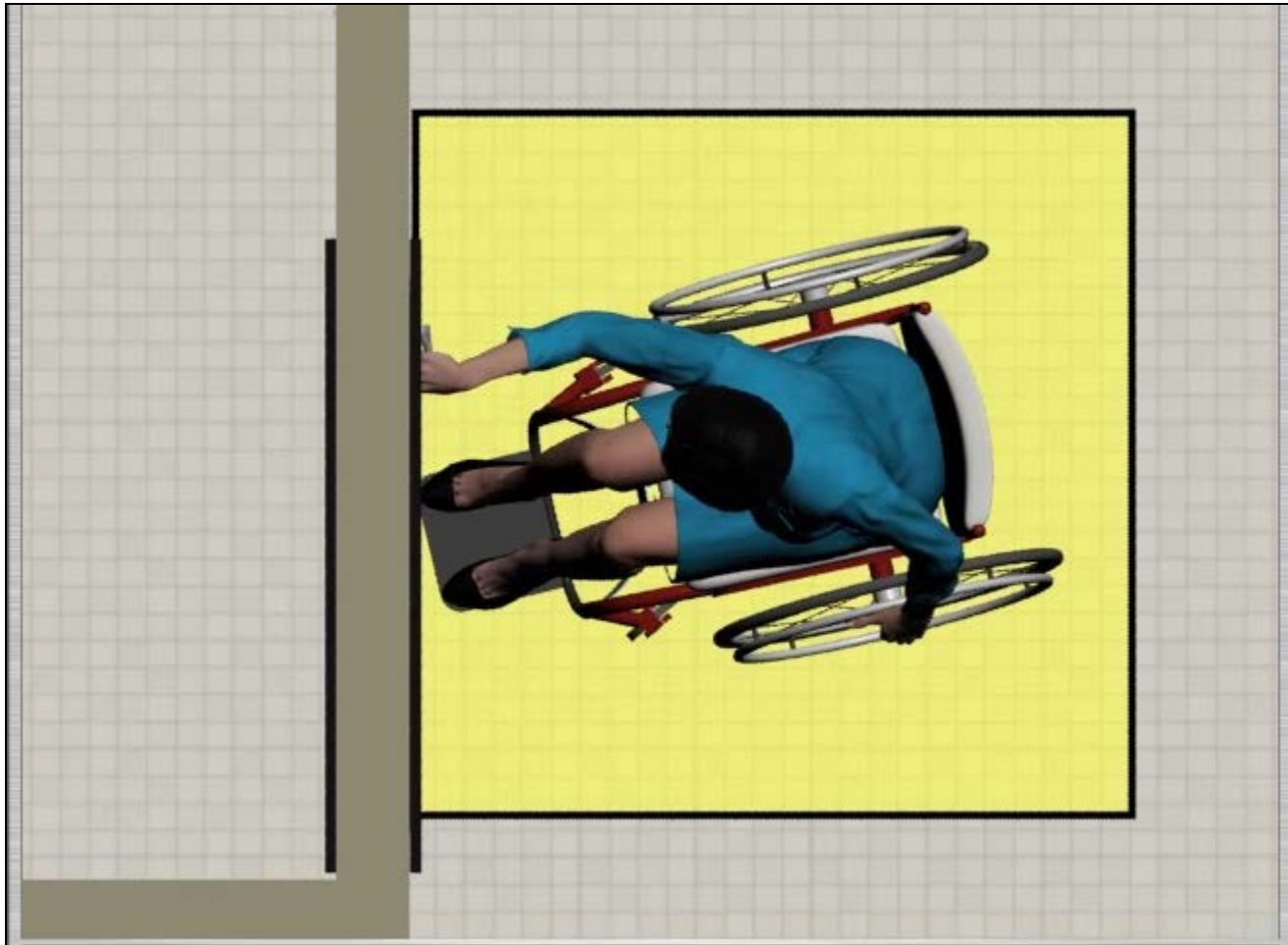


Toilet Rooms (§603)



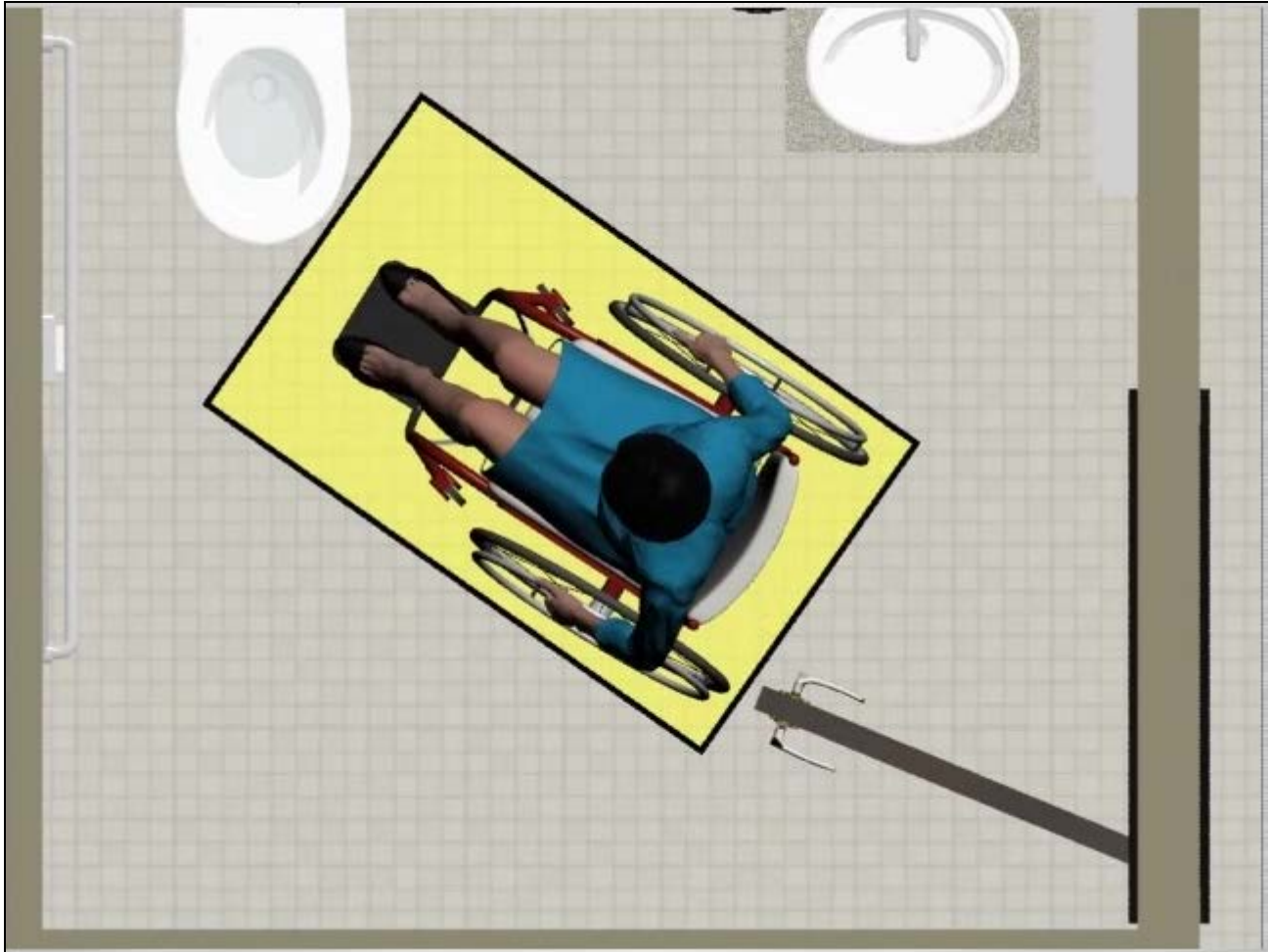
Toilet Rooms

Door maneuvering clearance (exterior)



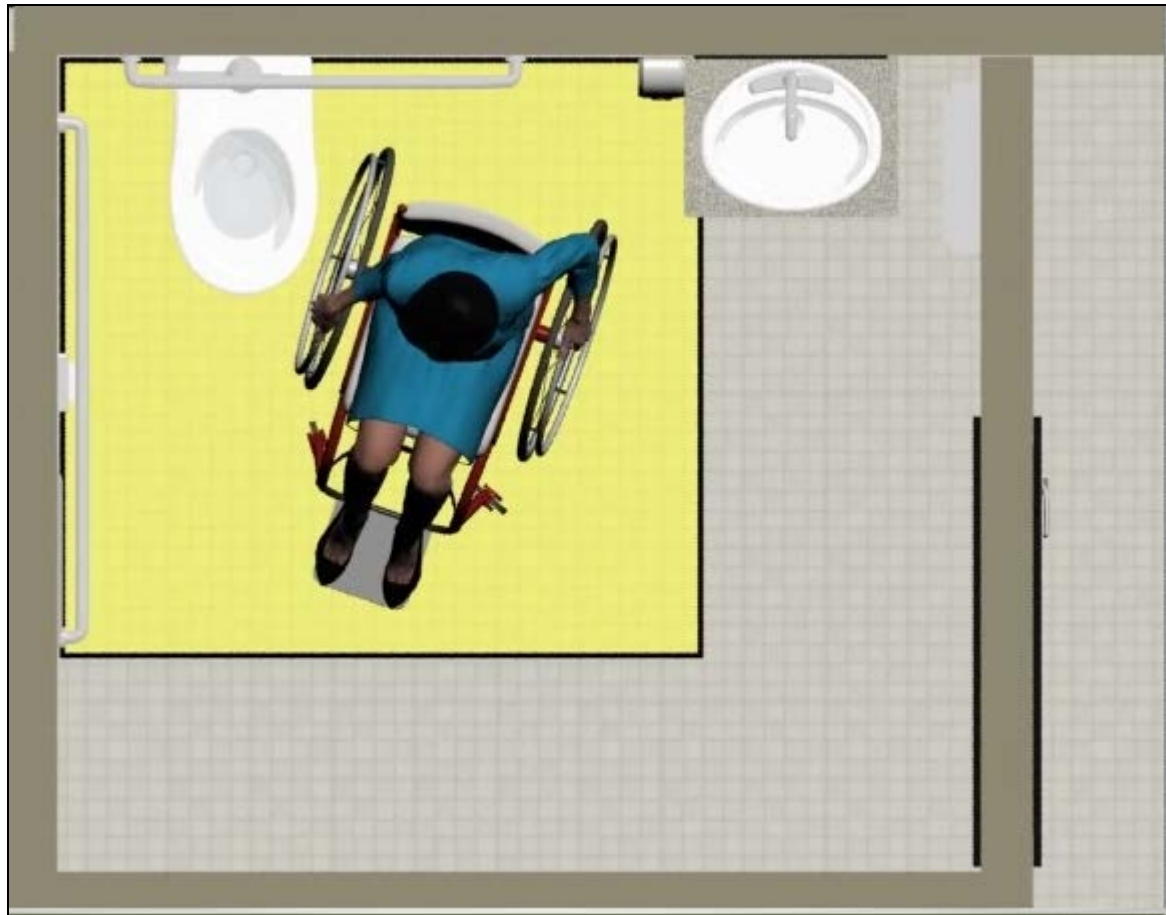
Toilet Rooms

Wheelchair space beyond door swing



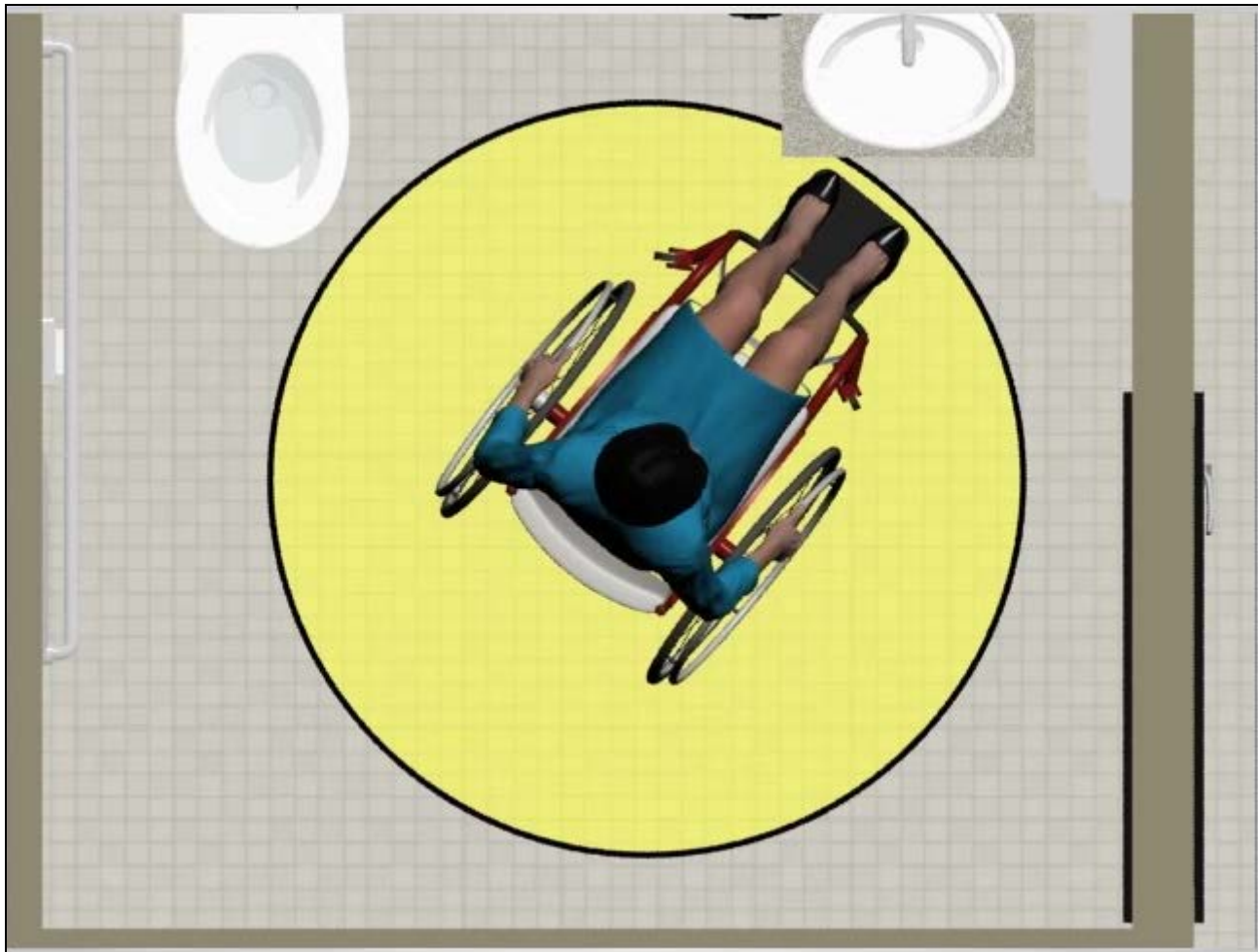
Toilet Rooms

Clear floor space at toilet for approach & transfer



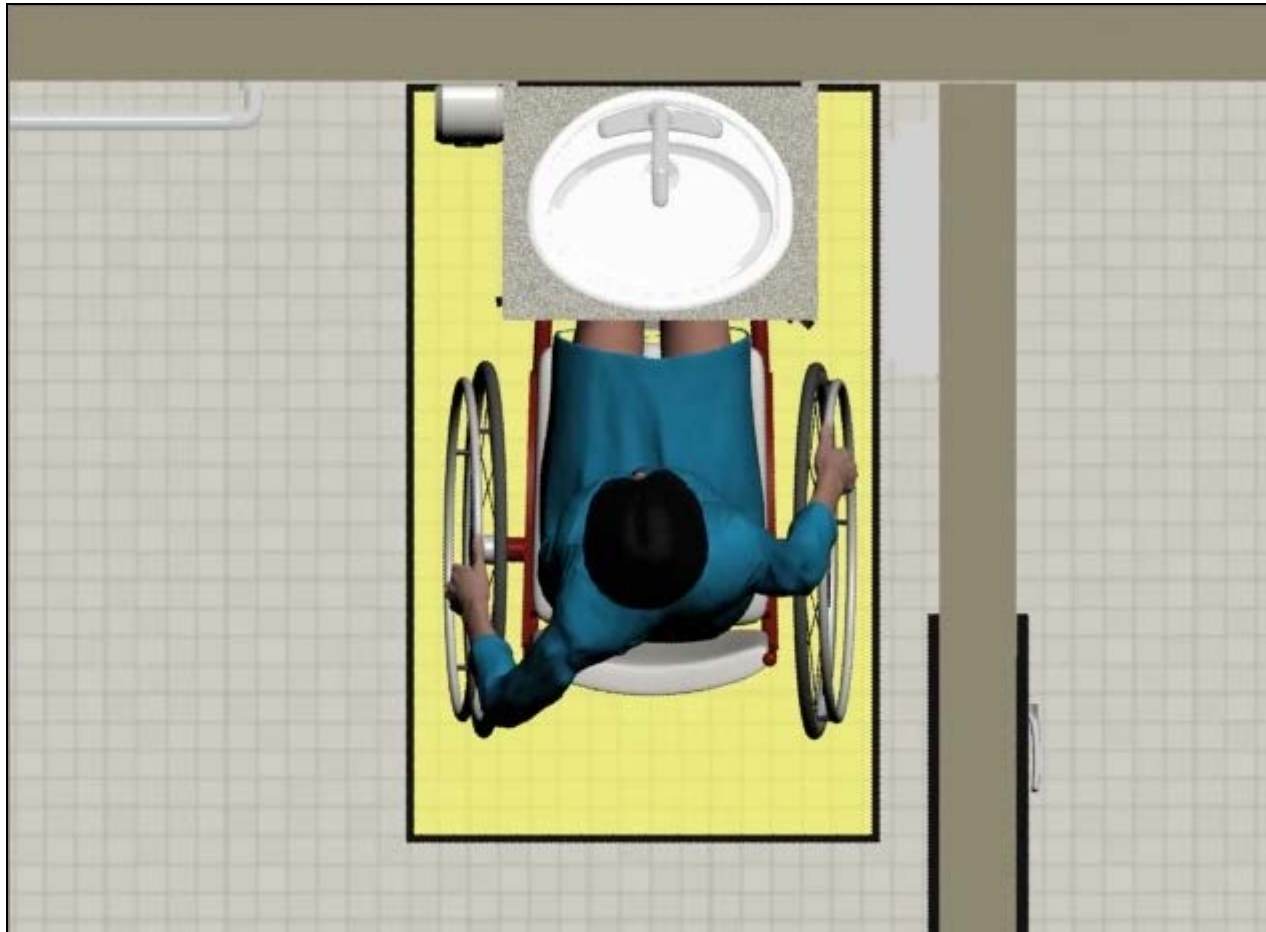
Toilet Rooms

Turning space (circular or T-shaped)



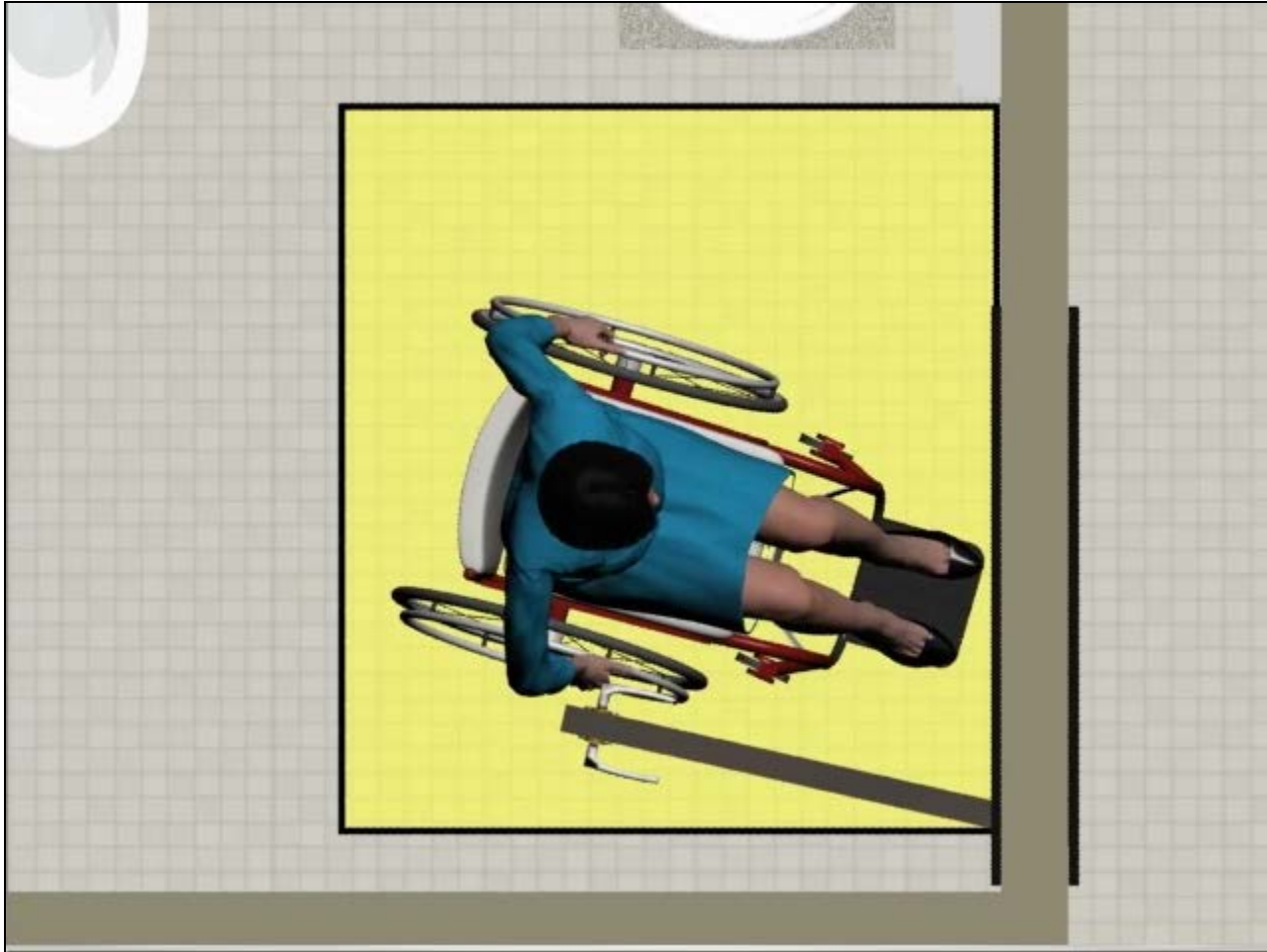
Toilet Rooms

Clear floor space at fixtures & elements



Toilet Rooms

Interior door maneuvering clearance



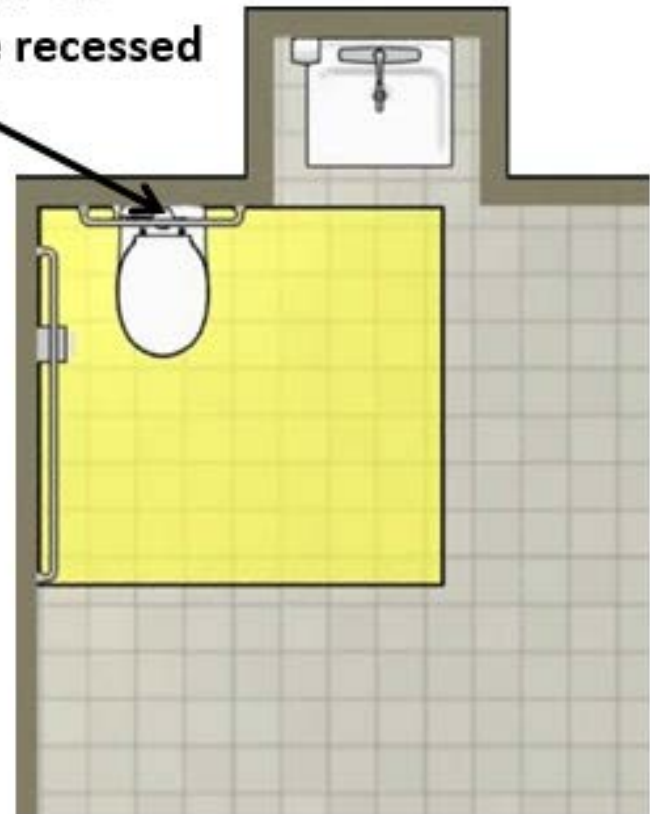
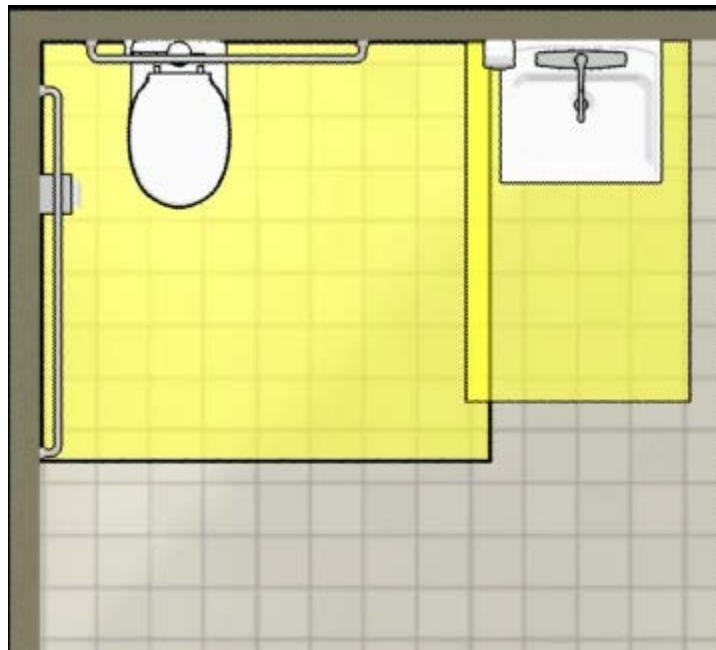
Toilet Rooms

- Size of toilet rooms determined by:
 - Room layout
 - Number & configuration of fixtures
 - Swing of doors
 - Other factors
-
- Overall room dimensions not specified

Toilet Rooms

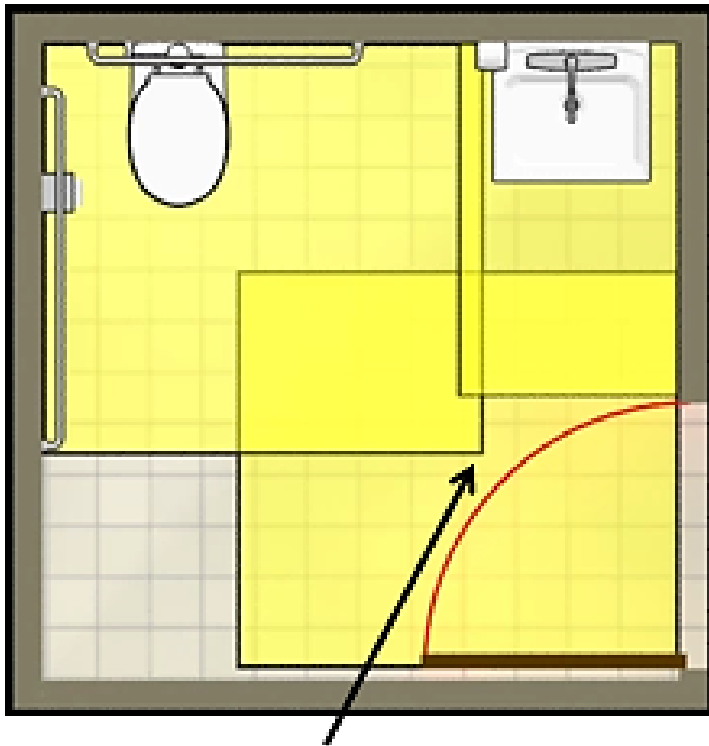
**Lavatory cannot overlap toilet clearance
(except in dwelling units)**

Shorter (24" min.) rear GB
allowed when fixture recessed

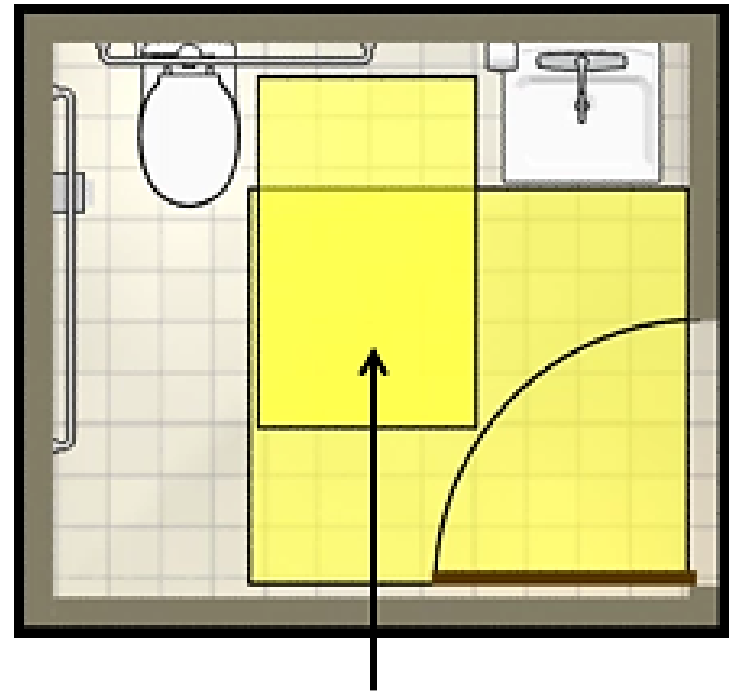


Toilet Rooms

Door maneuvering clearance



Keep swing outside fixture clearances or ...

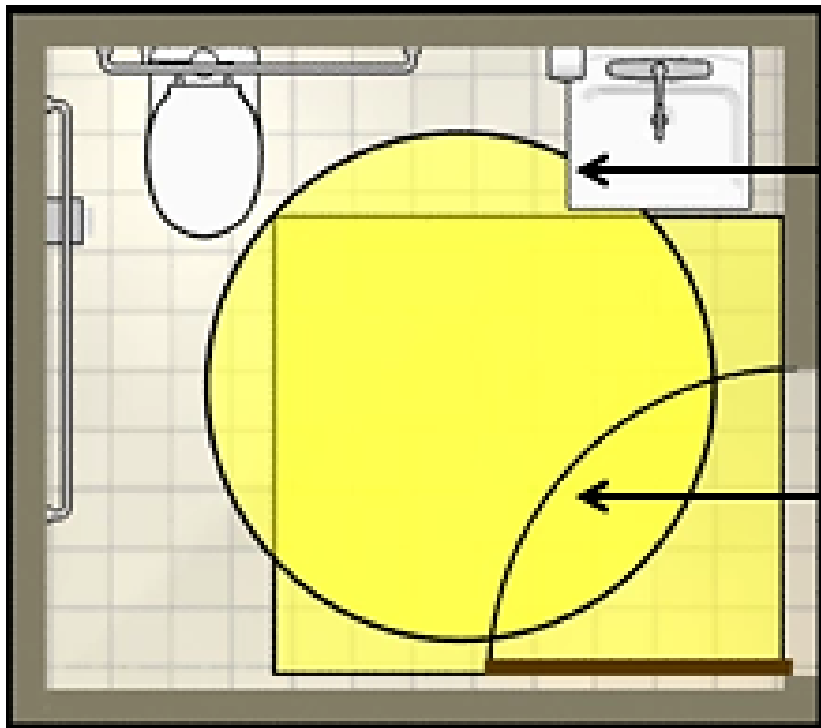


... provide unobstructed clear floor space (30" x 48" min.) outside swing (location not specified)

Toilet Rooms

Turning Space:

60" diameter circle or "T" shaped space

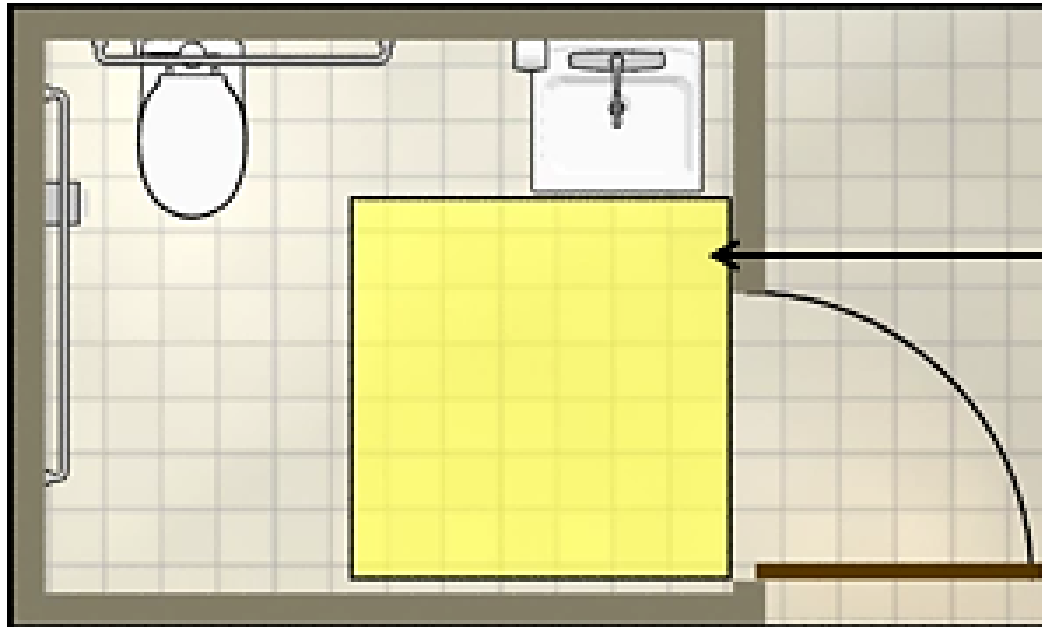


Elements with knee/toe clearance can overlap turning space

Door can always swing into turning space

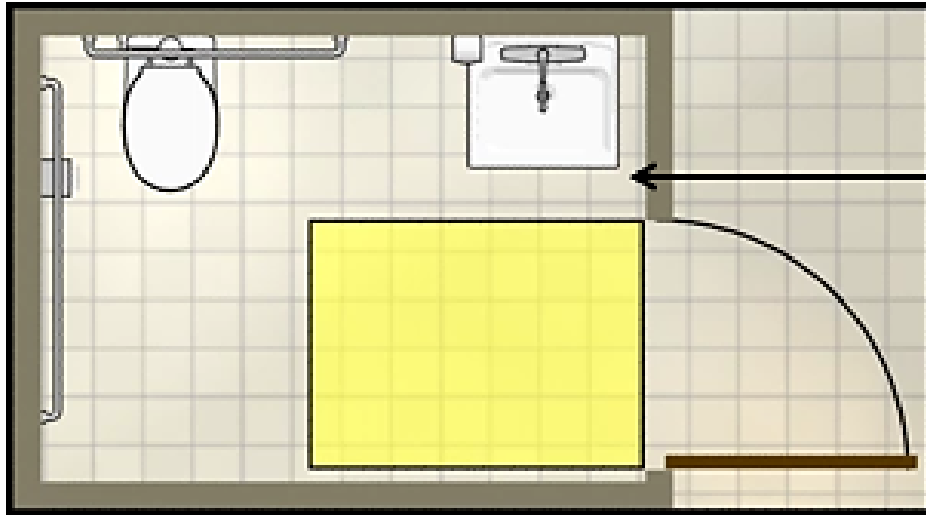
Toilet Rooms

Doors: Out-swinging doors allow smaller room size (require less interior maneuvering clearance)

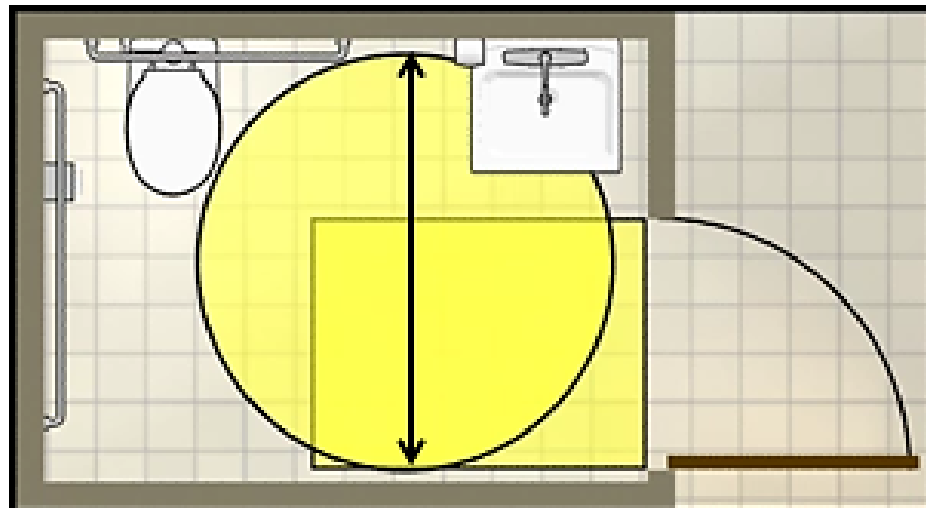


**12" min. latch-side clearance
required on push side
(forward approach) if door
has both a closer & latch**

Toilet Rooms



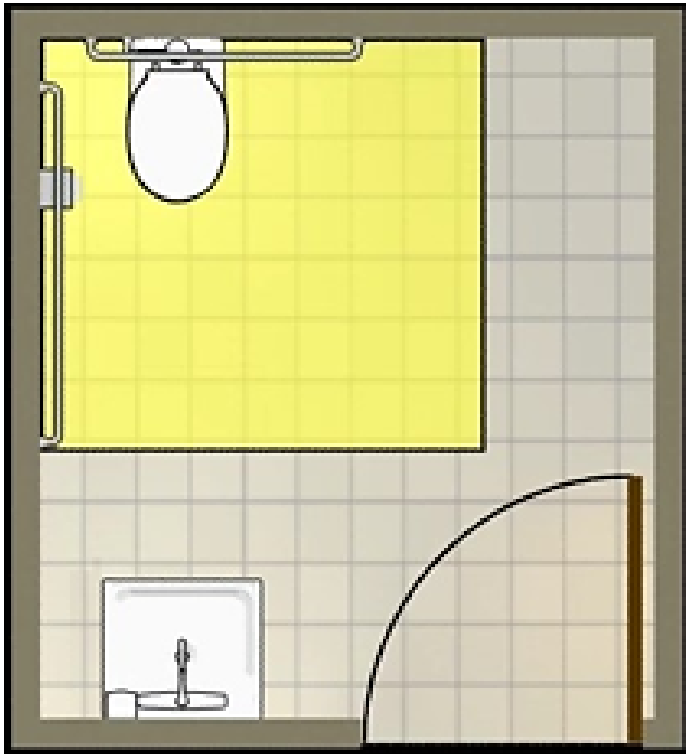
If out-swinging door does not have both a closer & latch, no additional clearance beyond opening required.



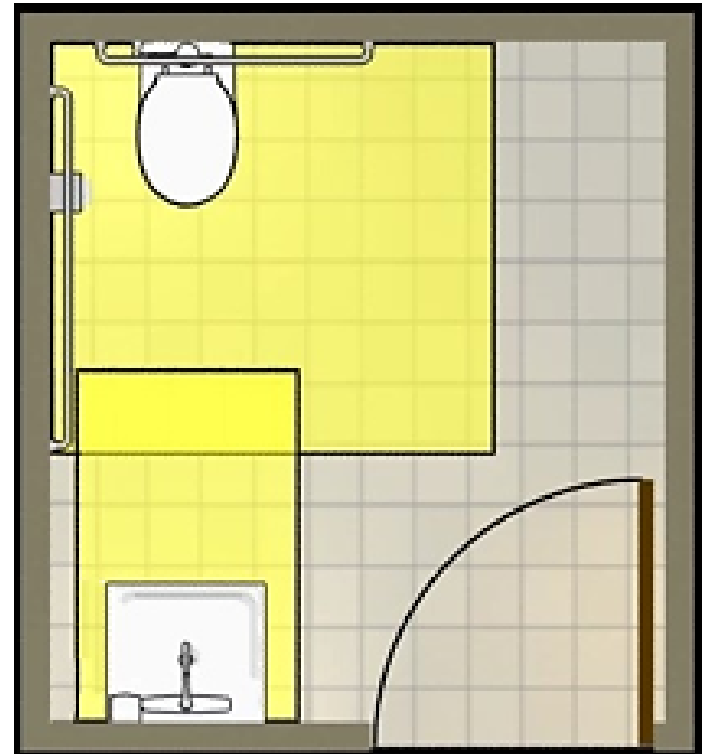
In this case, room depth is usually determined by turning space.

Toilet Rooms

These requirements apply to all types of layouts

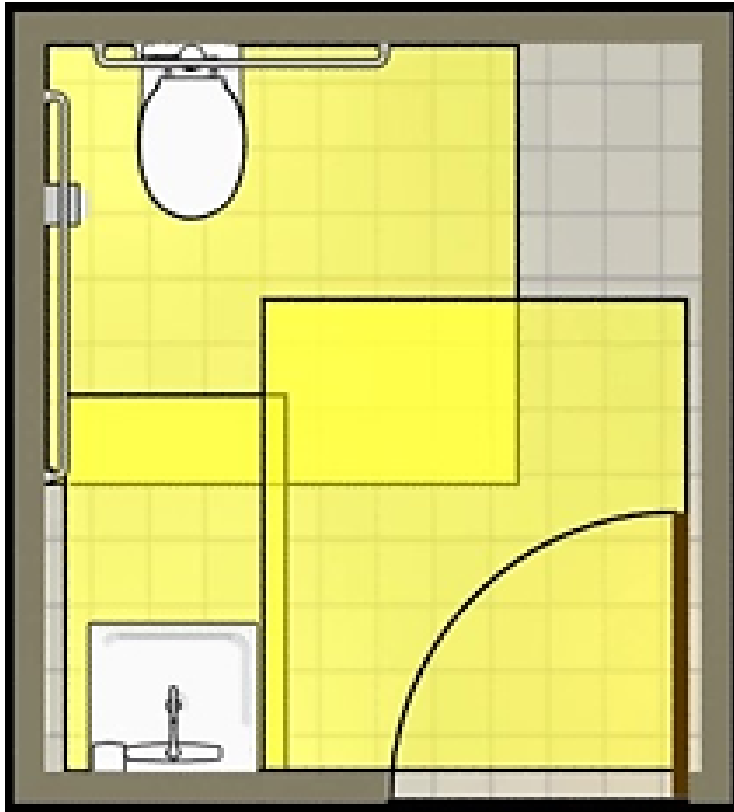


Water closet clearance

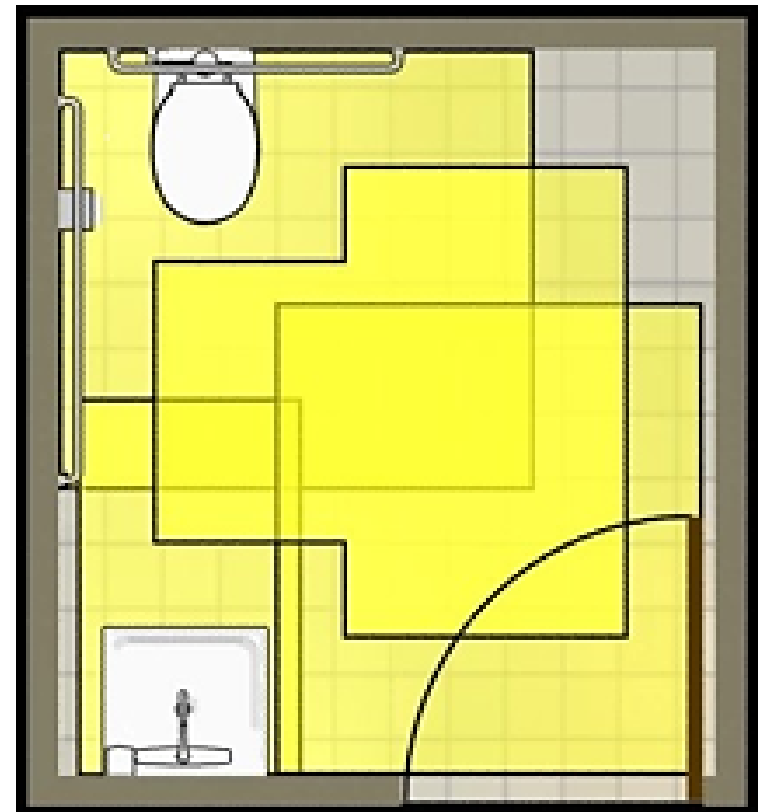


Lavatory clearance

Toilet Rooms



Door maneuvering clearance
(swing outside fixture clearances
unless clear floor space beyond
swing provided)



Turning space
(can overlap fixture
clearances and door swing)

Ch. 6: Plumbing Elements & Facilities

- **Drinking Fountains**
- **Toilet & Bathing Rooms**
- **Water Closets & Urinals**
- **Lavatories & Sinks**
- **Bathtubs & Shower Compartments**
- **Washing Machines & Clothes Dryers**
- **Saunas & Steam Rooms**

Ch. 7: Communication Elements & Features

- **Fire Alarm Systems**
- **Signs**
- **Telephones**
- **Detectable Warnings**
- **Assistive Listening Systems**
- **ATMs & Fare Machines**
- **Two-Way Communication Systems**



Signs (§216, §703)

- Tactile/ visual – labels for permanent rooms & spaces, exit doors
- Visual only – directional or informational signs
- Exempt: temporary signs, building menus, directories, addresses, company names and logos

Tactile Signs

Signs identifying “permanent” rooms & spaces:

- **designations not likely to change over time (or without significant alteration of room/space)**
- **typically located at doorways**



Tactile Signs

- room and floor numbers/letters
- room names
- labels for restrooms, locker rooms, cafeterias, mechanical rooms, and other permanent rooms/spaces
- doors at exit stairways, exit passageways, and exit discharge (label required)
- signs identifying rail stations/entrances



Signs

Tactile & Visual

“Room 123”

“Restroom”

“Mechanical Room”

“Exit” (at certain doors)

“Floor B”

“Ballroom A”

“C. Smith Room”

Visual Only

“Exit →”

“Employees Only”

“Visitors must sign in”

Exempt

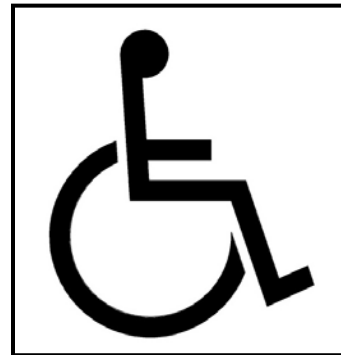
building directory

“Mr. C. Smith, Accountant”

Signs

International Symbol of Accessibility

- entrances
- toilet and bathing rooms
- check-out aisles
- parking
- existing elevators



Not required where *all* are accessible

Ch. 8: Special Rooms, Spaces, & Elements



Assembly Areas



**Dressing, Fitting, &
Locker Rooms**



Kitchens/Kitchenettes



**Medical/ Long-term
Care**



Transient Lodging



Prison Cells



Courtrooms



Dwelling Units



**Transportation
Facilities**



Storage

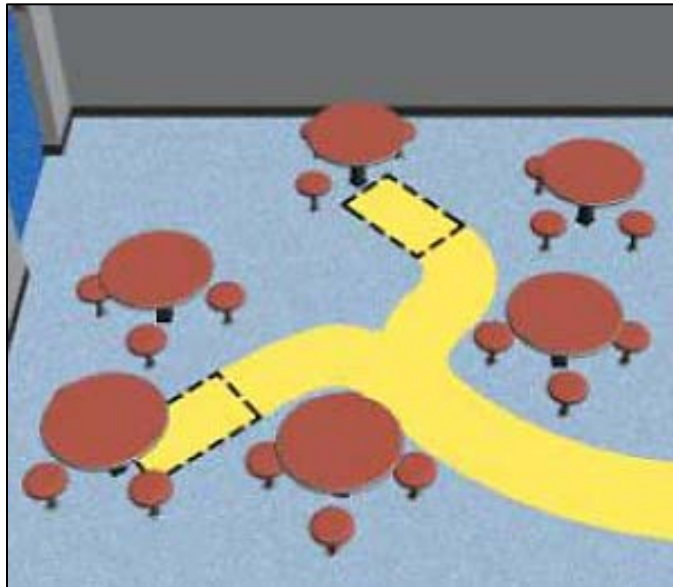
Ch. 9: Built-In Elements

- Dining Surfaces & Work Surfaces
- Benches
- Sales & Service Counters, Check-out Aisles



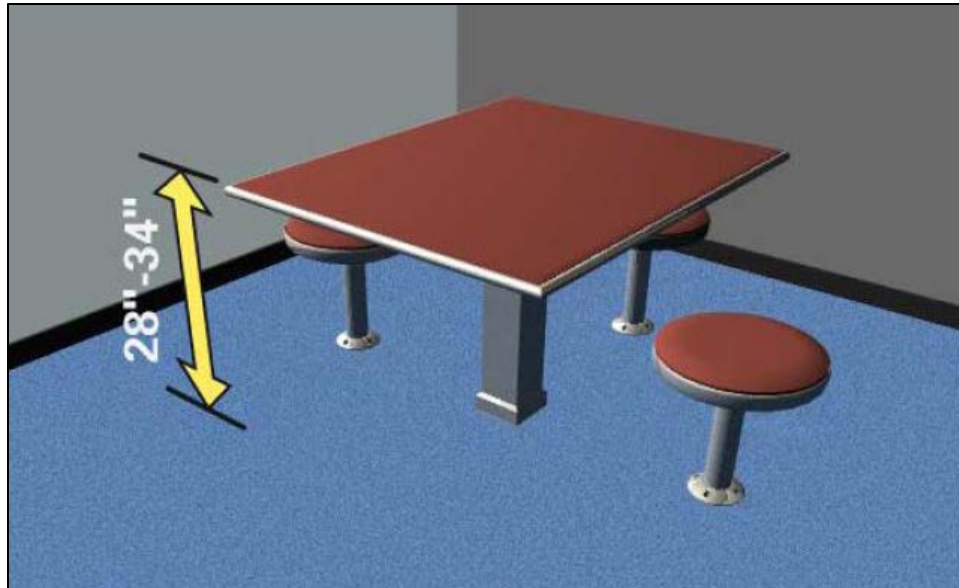
Dining & Work Surfaces (§226)

- Access to at least 5% of seating & standing spaces at dining surfaces
- Access to at least 5% of work surfaces (other than those used by employees)
- Dispersion



Dining & Work Surfaces (§902)

- 28" – 34" surface height
- Forward approach access (knee/toe space)
- Alternative dimensions for children's use



Sales & Service Counters (§227)

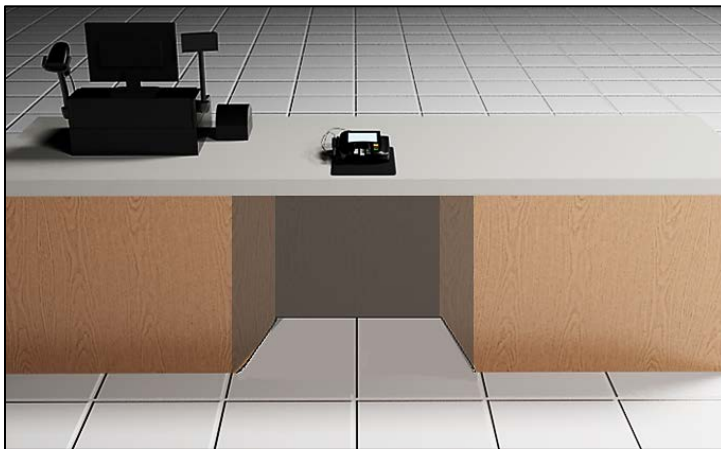
At least one of each type of sales and service counter must comply



Queues/ waiting lines and food service lines also addressed

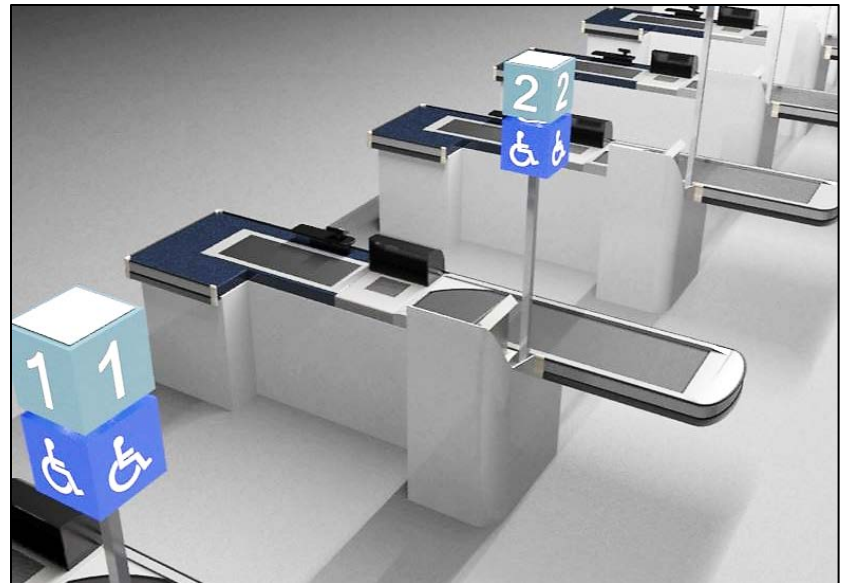
Sales & Service Counters (§904)

- 36" max. height (accessible portion)
- applies to full depth of counter
- forward or side approach
- method to facilitate voice communication required where security glazing provided



Check-out aisles (§227)

- aisle width
- 38" max. counter height (2" max. high edge protection)
- check writing surface 28" – 34" high
- labeled by ISA
(unless all accessible)



Ch. 10: Recreation Facilities

- Amusement Rides
- Recreational Boating Facilities
- Exercise Machines & Equipment
- Fishing Piers & Platforms
- Golf & Miniature Golf Facilities
- Play Areas
- Swimming Pools, Wading Pools, & Spas
- Shooting Facilities



Alterations

Alterations (§F202.3)

“A change to a building or facility that affects or could affect the usability of the building or facility or portion thereof.”

Standards apply based on:

- planned scope of work
- technical feasibility
- primary function areas/ path of travel

Alterations

Including (but not limited to):

- remodeling
- renovation
- rehabilitation/ reconstruction
- historic restoration
- resurfacing of circulation paths/ vehicular ways
- changes/ rearrangement of structural parts, elements, or plan configuration of walls & full-height partitions

Alterations

Not alterations (unless usability affected):

- **normal maintenance**
- **reroofing**
- **painting or wallpapering**
- **changes to mechanical and electrical systems**



Alterations

Example: Parking Lot

Filling potholes = maintenance



Alterations

Example: Parking Lot

Resurfacing and restriping of lot = alteration

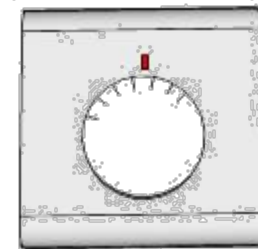
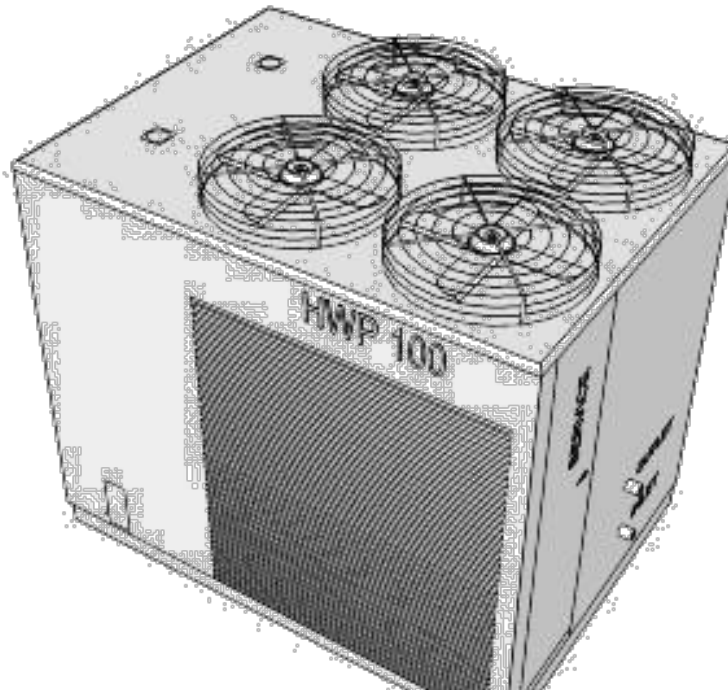


Alterations

Example: Replace HVAC system

Covered where usability affected

(e.g., new thermostats installed – operable parts)



Alterations

Within an altered space, standards apply to those elements that are altered



(accessible route not required unless circulation paths altered or path of travel required)

Alterations

Recommendation:

Maximize opportunities for access beyond minimum required where possible – often more cost-effective when work is already underway.



Specific Provisions

Example (scoping): Elevators

If car altered, all cars programmed to respond to the same hall call also must be altered (§206.6.1)



Specific Provisions

Example (technical): Ramp Slope

Steeper running slopes allowed for short ramps where space is limited (§405.2):

6" max. rise: 1:10 max. slope

3" max. rise: 1:8 max. slope

Alterations

**New construction = basis for alterations
(aside from specific provisions/ exceptions)**



Alterations:

**not required to exceed NC
level of access (§202.3.2)**

NEW CONSTRUCTION LEVEL OF ACCESS



**can't reduce access below
NC level (§202.3.1)**

Technical Infeasibility (§106.5)

Defined as:

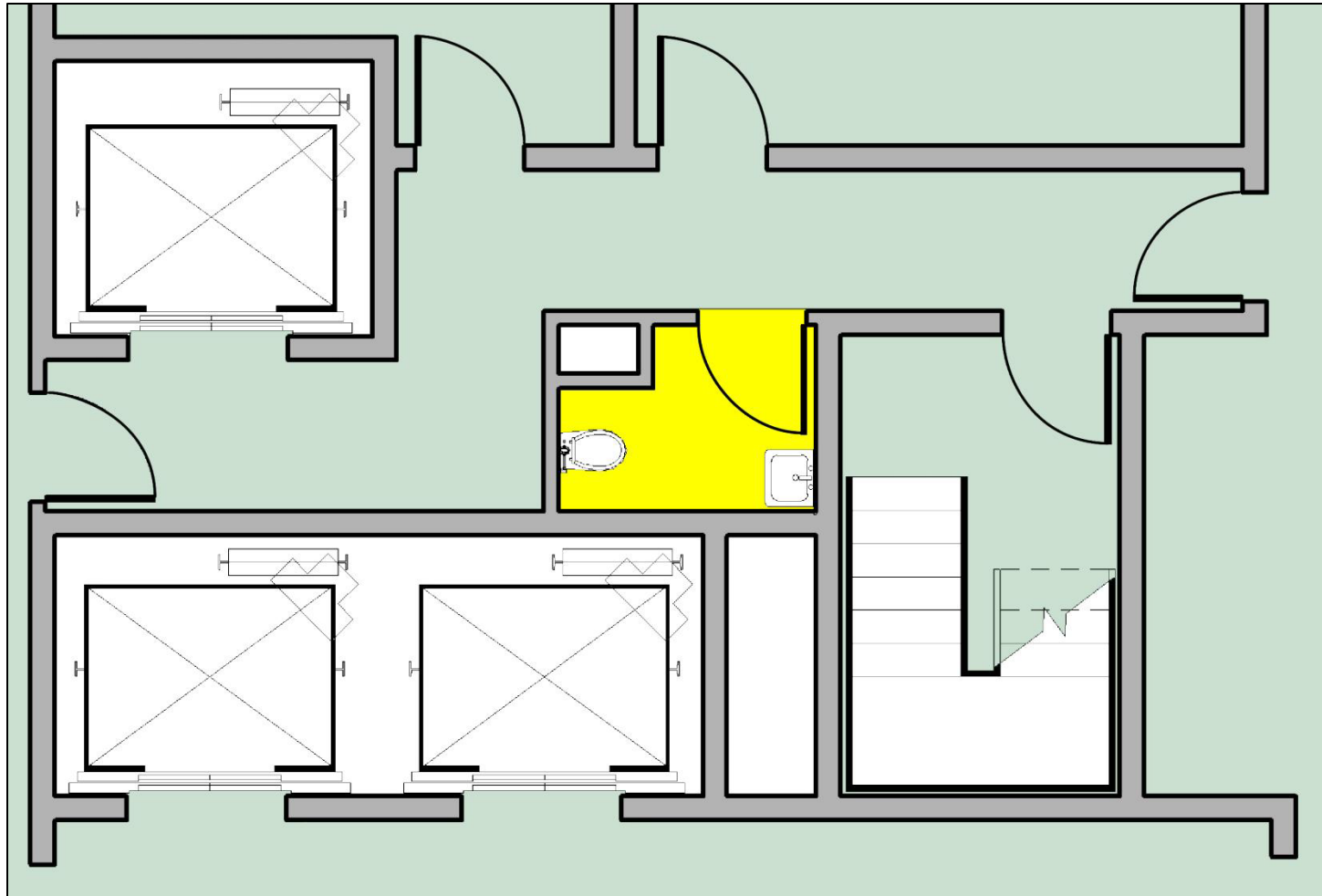
“Something that has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member that is an essential part of the structural frame ...

Technical Infeasibility

“... 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.”

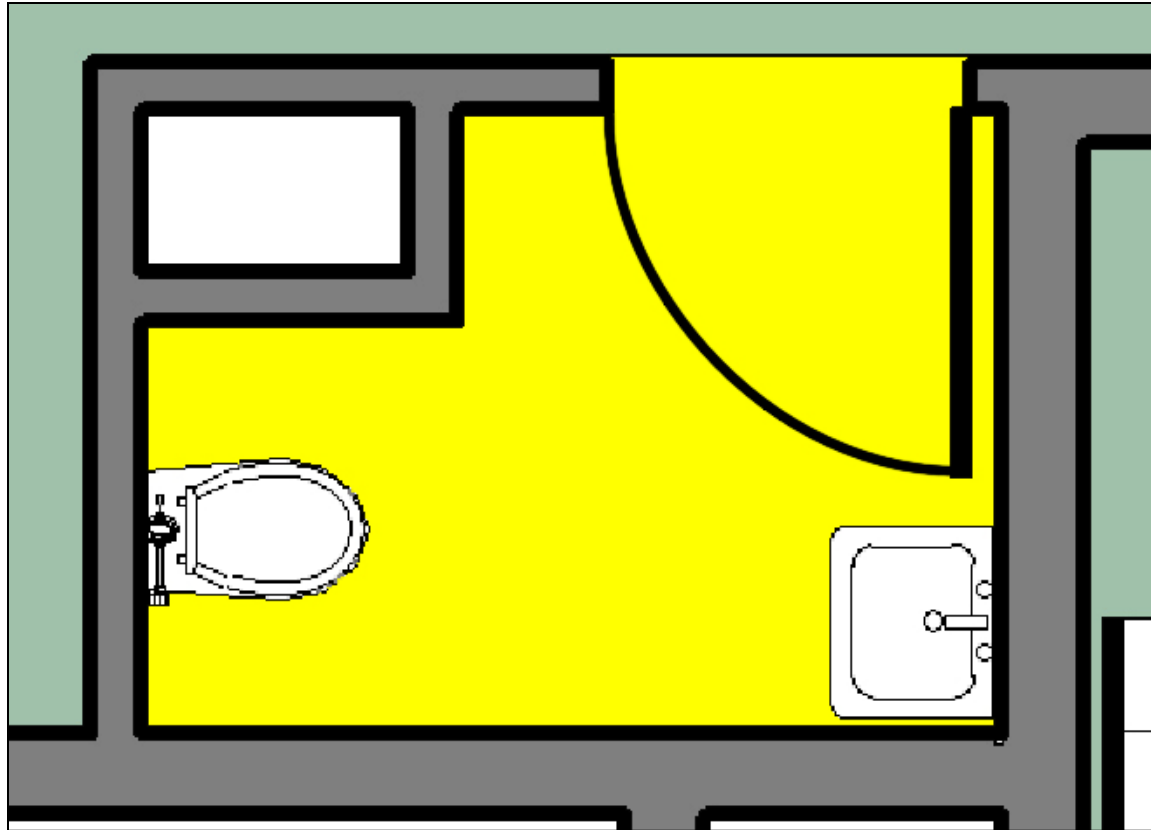
Technical Infeasibility

Space limitations and technical infeasibility



Technical Infeasibility

Compliance required to the
“maximum extent feasible”



Technical Infeasibility



Is relative to scope of work; where renovation = more extensive, technical infeasibility = less likely

Technical Infeasibility

- case-by-case determination
- based on existing constraints/ conditions, scope of work
- compliance required to the maximum extent feasible

Primary Function Areas (§202.4)

Additional requirements for alterations (and additions) that affect or could affect usability of/ access to areas containing a “primary function” (i.e., major activity for which the facility is intended)

Primary Function Areas

Examples include (not limited to):

- dining areas of a restaurant**
- retail space in a store**
- exam rooms in a doctor's office**
- guest rooms in a hotel**
- classrooms in a school**
- offices & other work areas where activities of a covered entity are carried out**

Primary Function Areas

Not primary function areas:

- entrances & corridors
- break rooms & employee locker rooms
- mechanical & electrical closets
- supply storage rooms
- restrooms (unless primary purpose of a facility, e.g., highway rest stop)

Primary Function Areas

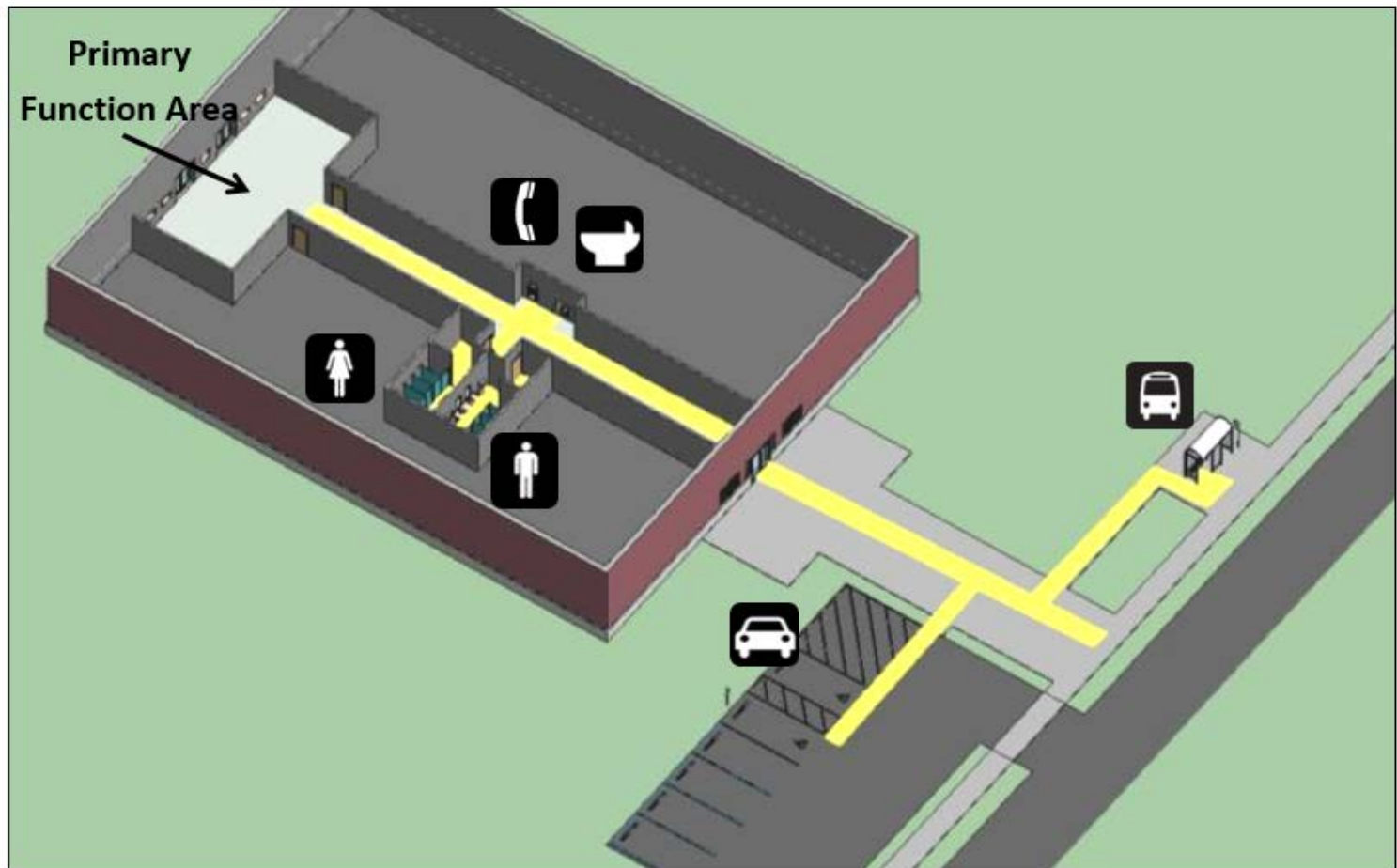
Required: Accessible “path of travel”:

- accessible route from PF area to facility entrance & site arrival points (e.g., parking)
- restrooms (for each sex unless only unisex provided)
- phones
- drinking fountains



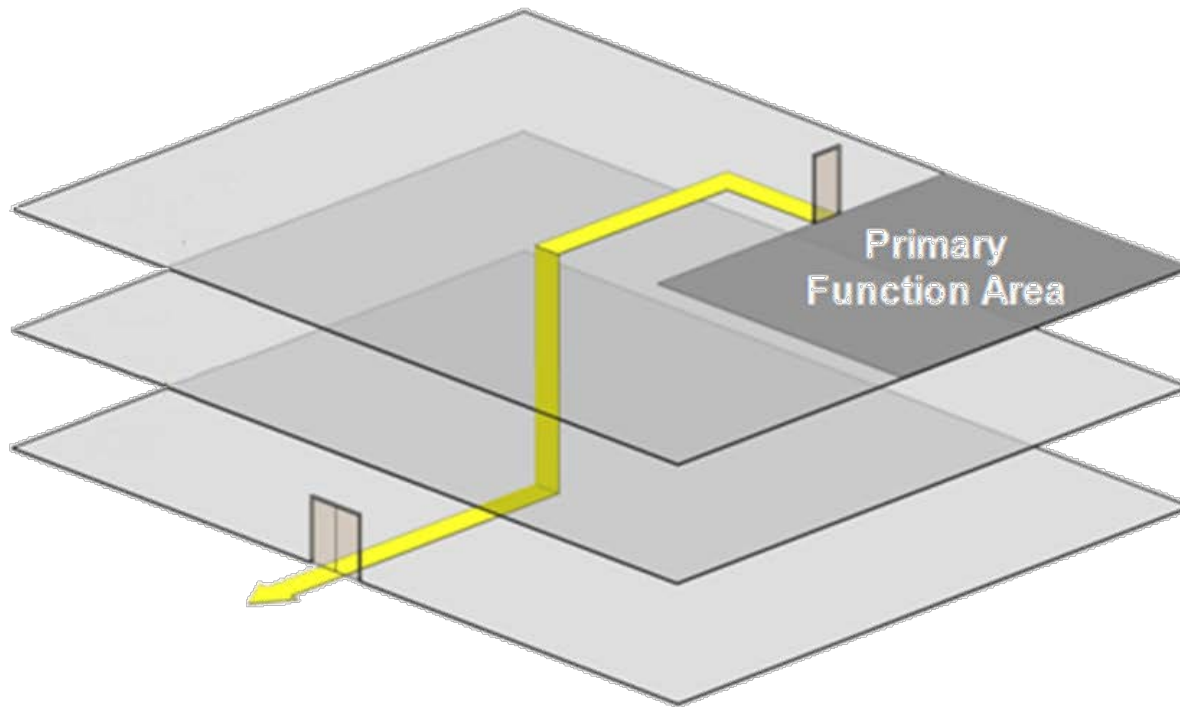
Alterations: Path of Travel

Example of “path of travel”



Path of Travel

Path of travel may require vertical access between floors



Exceptions for vertical access allowed in new construction still apply

Path of Travel

Path of travel is required to the extent that it is not “disproportionate” to the project cost (more than 20%)

Compliance required up to the 20% limit

Path of Travel

Example project calculation:



Total cost of <u>all</u> alterations:	\$200,000
Cost pertaining to <u>PF areas</u> :	\$100,000
Path of travel cost cap:	\$20,000 (20%)

Path of Travel

Recommended prioritization if 20% cap reached:

- 1. entrance**
- 2. route connecting primary function area**
- 3. restrooms**
- 4. phone**
- 5. drinking fountain**
- 6. other elements (e.g. parking, storage, etc.)**

PF Areas & Path of Travel

- **Excluded: alterations to windows, hardware, controls, electrical outlets, signs**
- **POT components that meet earlier standards (e.g., 1991 ADAAG) do not have to be upgraded to the current standards (unless altered)**
- **Series of smaller alterations – costs of alterations over 3 year period must be included in 20% calculation**

Questions?



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