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## Webinar Series



A collaborative program between the  
ADA National Network and the  
US Access Board



The Session is Scheduled to begin at 2:30pm Eastern Time  
We will be testing sound quality periodically

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## Webinar Features



- **Closed captioning** – click **CC** icon (top of screen) or control-F8 and adjust the captioning screen as needed
- **Customize your view** – choose “View” from the menu bar at the top of the screen and choose the layout you prefer from the dropdown menu.
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- **Emotions/Hand-raising:** Please do not use these features during this session

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## Presenters



Jim Pecht



Dave Yanchulis

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# ADA Standards: "The Basics"

## Session Agenda

### Chapter 3: Building Blocks

- Floor or Ground Surfaces (§302 & 303)
- Space Requirements (§304 & 305)
- Knee and Toe Clearance (§306)
- Protruding Objects (§307)
- Operable Parts/ Reach Ranges (§308 & 309)

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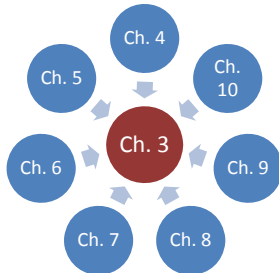
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## "Building Blocks"



Other technical chapters reference Ch. 3 provisions

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# Floor & Ground Surfaces

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## Ground/ Floor Surfaces (§302)



Firm, stable, and "slip resistant"

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## Ground/ Floor Surfaces



Loose surface materials:

- most do not comply unless properly treated (e.g., binders, consolidants, compaction, and grid forms)
- repeated maintenance often required

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## Slip Resistance

Slip resistance – minimum level ("coefficient of friction") not specified



- Standard practices for minimizing slipperiness often suffice
- Specify according to likely conditions (e.g. exposure to moisture)

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## Surface Smoothness



Surface smoothness – changes in level  
Avoid rough surfaces composed of  
cobblestones, Belgian blocks, etc. = difficult  
or painful to negotiate

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## Carpet

- 1/2" max. pile height (measured to the backing, cushion, or pad)
- Texture: level or textured loop, level cut pile, or level cut/uncut pile
- Firm backing, cushions, pads (avoid cushions/ pads for greater firmness)
- firm securement, edging

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## Carpet



Securement/ attachment to prevent rolling or  
buckling (which makes maneuvering difficult)

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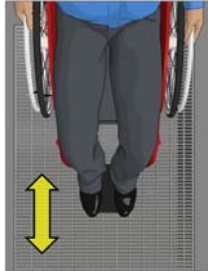
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## Openings

½" max. in one dimension

Long dimension = perpendicular to travel direction



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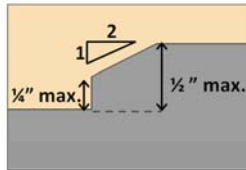
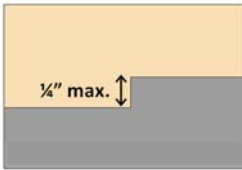
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## Changes in Level (§303)



¼" maximum – no treatment

½" maximum – 1:2 max. bevel

> ½" – treatment as ramp/ other means of vertical access

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## Changes in Level



Apply to all level changes along accessible routes, including thresholds

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# Turning Space

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**Turning Space (§304)**  
Wheelchair Turning



Manual Wheelchair      Power Chair

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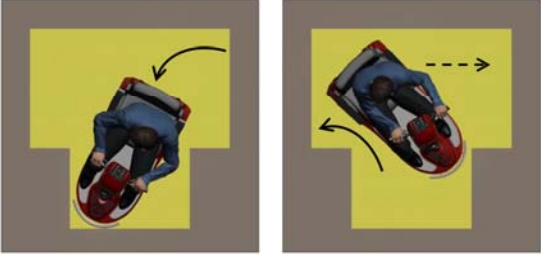
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**Turning Space (§304)**  
3-point turn



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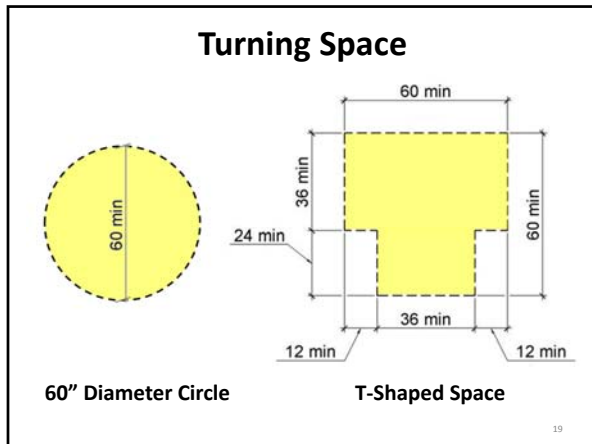
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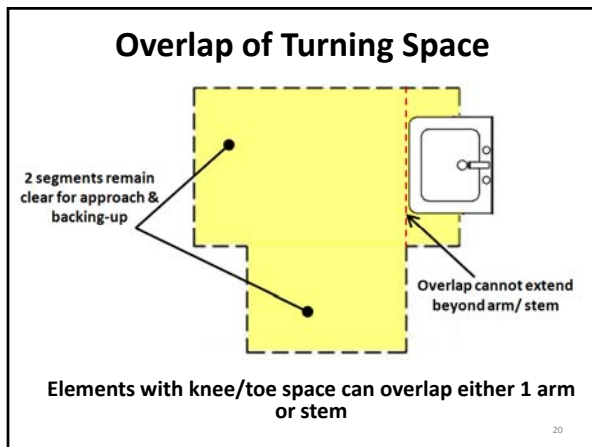
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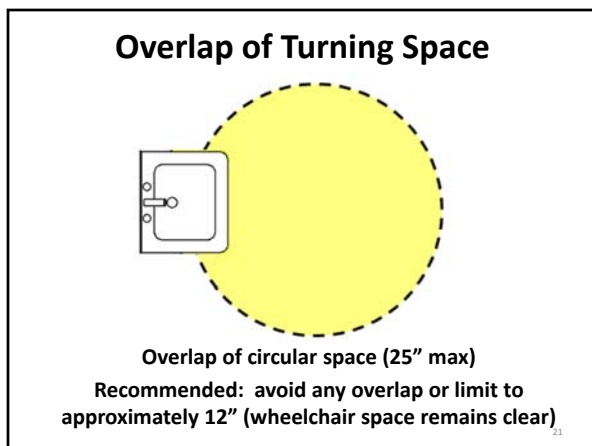
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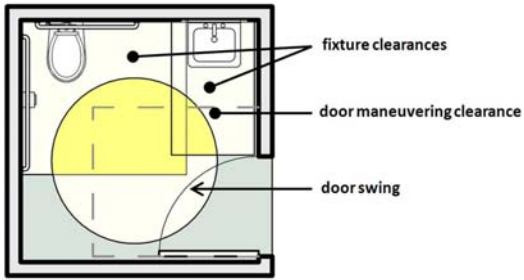
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## Turning Space



Turning space can overlap other clearances; door can swing into turning space

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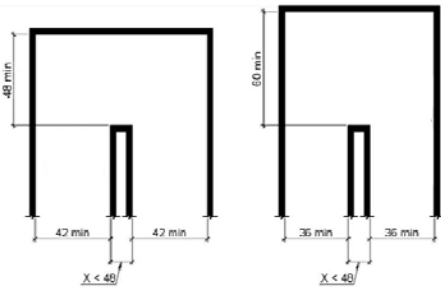
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## Turning Space along Routes



Required at 180 degree turns around narrow obstructions (< 48" long) unless route width at least 42" wide

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## Turning Space in Rooms and Spaces

- toilet/ bathing facilities
- dressing/ fitting/ locker rooms
- transient lodging guest rooms
- dwelling units (all rooms on accessible routes)
- patient bedrooms
- holding and housing cells
- saunas and steam rooms
- courtrooms (raised stations served by ramps)
- certain recreation spaces



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# Clear Floor/Ground Space

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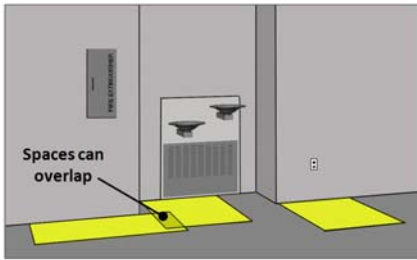
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## Clear Floor/ Ground Space (§305)



Clearances required at all accessible elements (e.g., storage cabinets, drinking fountains, outlets, etc.)

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## Clear Floor/ Ground Space



**Forward Approach:**  
Required at dining/ work surfaces, DFs, lavatories, most sinks, urinals



**Side Approach:**  
Specified/ usually provided at sales & service counters, beds, and most appliances

Either approach allowed at other elements

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## Size/ Centering



Minimum size:  
30" x 48"  
(unconfined)

Centering = required at only certain elements  
(DFs, kitchen work surfaces, washers/ dryers)

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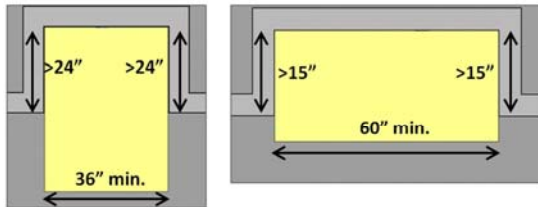
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## Size (Confined)



Additional clearance where space confined on 3 sides  
(and more than half of space depth confined)

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## Knee & Toe Space

Elements providing knee/ toe clearance can overlap space;  
can help reduce reach to operable parts



Toe Space:  
9" high  
6" deep max



Knee & Toe Space:  
27" min. high (knee)  
25" deep max

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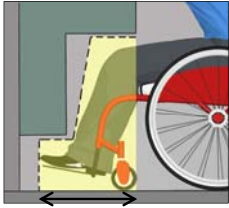
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## Knee & Toe Space



17" min  
(where knee/toe  
space required)

Knee/ toe space required  
at certain elements:

- DFs,
- lavatories
- most sinks,
- dining/ work surfaces

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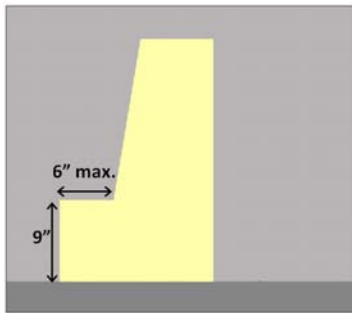
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## Knee & Toe Space



Toe space

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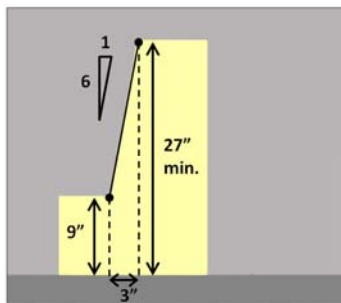
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## Knee & Toe Space



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

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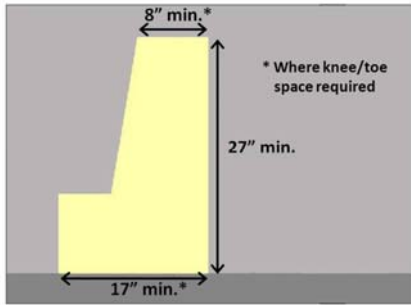
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### Knee & Toe Space



Remainder of space must provide full clearance for knees (27" min.)

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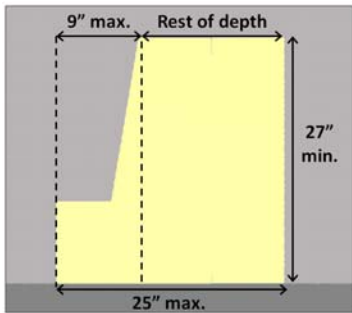
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### Knee & Toe Space



Additional depth must provide 27" min. clearance (9" of depth can be less than 27")

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### Knee & Toe Space



Knee/ toe space must be at least as deep as the reach to any operable parts (both limited to 25" depth)

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# Operable Parts & Reach Ranges

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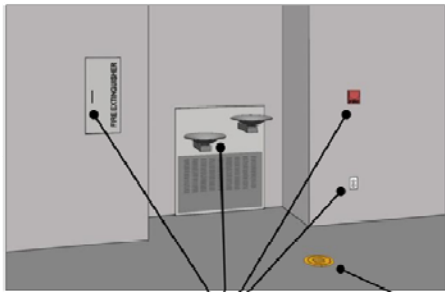
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## Operable Parts (§309)



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## Operable Parts

- Operability
- Reach range
- Clear floor space
- Connected by accessible route



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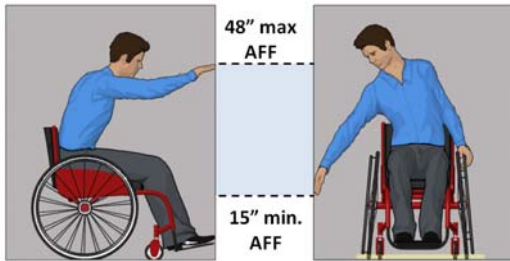
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### Reach Ranges (§308)



Unobstructed forward and side reaches

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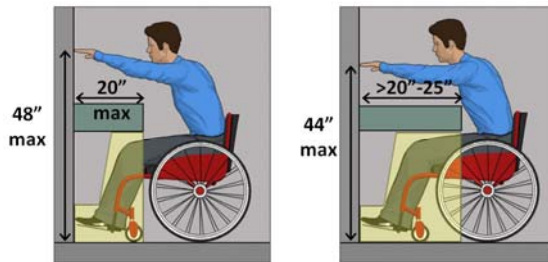
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### Forward Reach (Obstructed)



Obstructed reach: 44" max. if reach depth exceeds 20"

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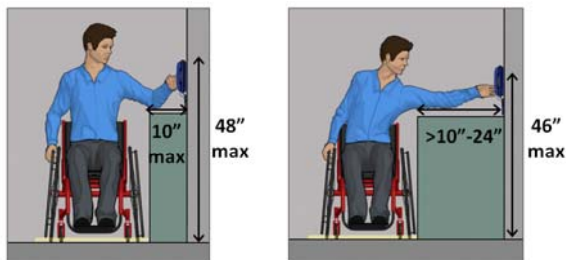
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### Side Reach (Obstructed)



Obstructed reach: 46" max. if reach depth exceeds 10"

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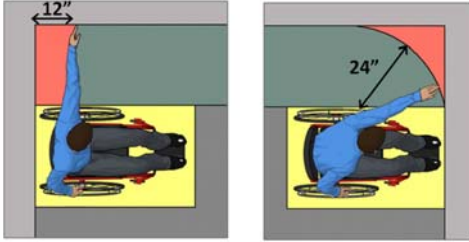
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## Side Reach (Obstructed)

Recommendation: consider standard reach radius in locating operable parts accessed from side approach



Elements in corners can be hard to reach from side approach

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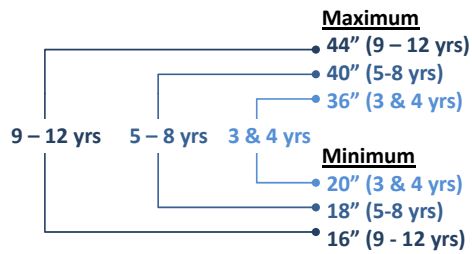
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## Children's Reach Ranges

Advisory (non-mandatory): Forward & Side



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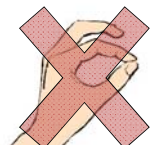
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## Operability



- 1 hand operation
- no tight grasping, pinching, or twisting of wrist
- 5 lbf maximum



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## Operability

Closed fist operation = good, but not mandatory  
Many other types comply (e.g., U-shaped pulls)



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## Operability

Recommended:

- buttons - raised/flush (not recessed)
- no simultaneous action/ movement
- hand or finger dexterity not required



Not required to comply: non-fixed portions  
(e.g., keys, access cards)



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## Protruding Objects

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### Protruding Objects (§307)

80" min. AFF (headroom clearance)

4" max. protrusion

27" max. AFF (cane sweep range)

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### Protruding Objects

Examples of protruding objects

Protrusion limits apply to all areas of circulation  
– not limited to accessible routes

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### Protruding Objects

Drinking Fountains

Elements often recessed to comply (e.g., drinking fountains at standard heights)

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## Protruding Objects

Post-mounted objects



Protrusion limits also apply to objects mounted on posts

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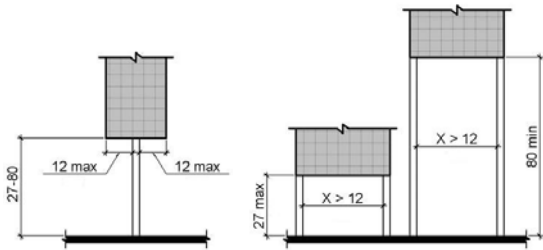
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## Protruding Objects

Post-mounted objects



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## Questions?

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in today's webinar



Next scheduled session:

*Accessible Communication Elements and Features*  
May 3, 2012

2:30 - 4:00 (ET)

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