



Americans with Disabilities Act (ADA) History, Updates and Current Design Standards

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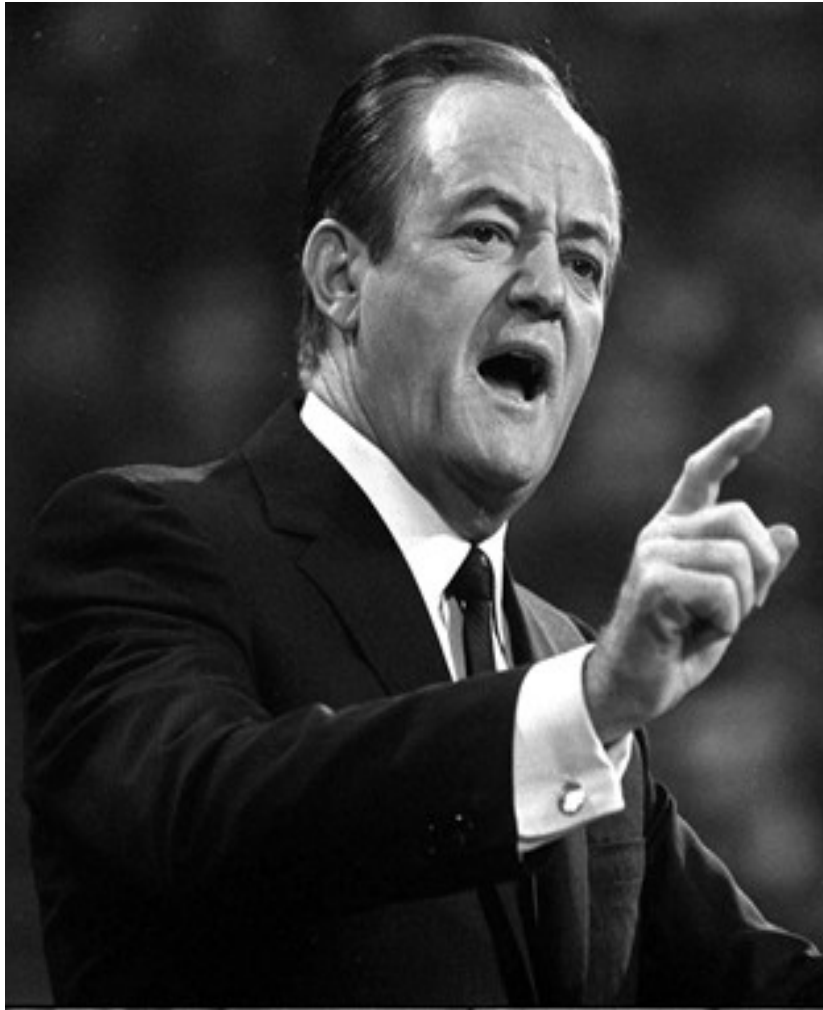


Section 504



- What is it

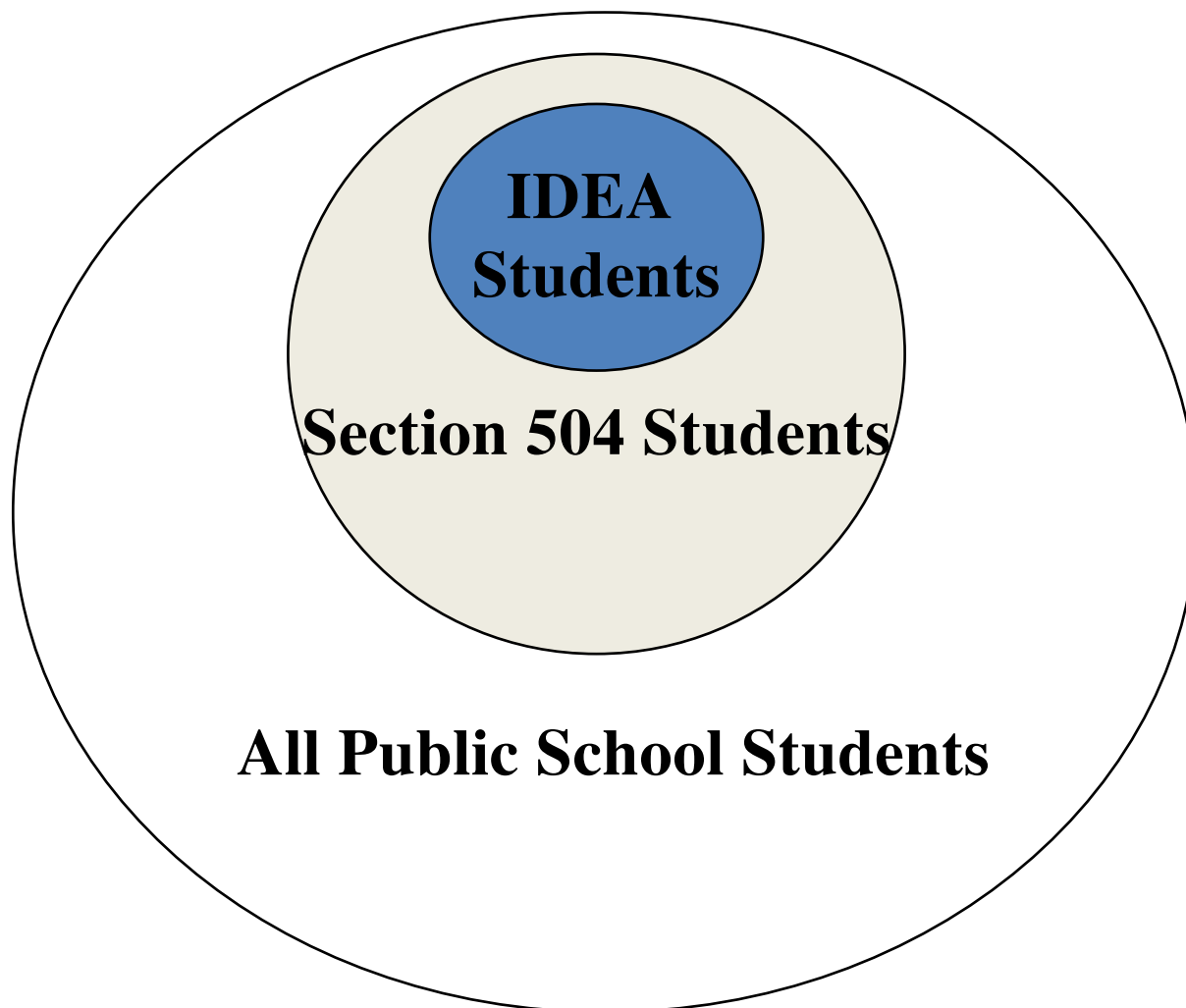
Section 504 History



WHO IS PROTECTED BY SECTION 504?

Any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such impairment, or is regarded as having such an impairment

WHO IS PROTECTED BY SECTION 504?



WHAT DOES SECTION 504 REQUIRE?

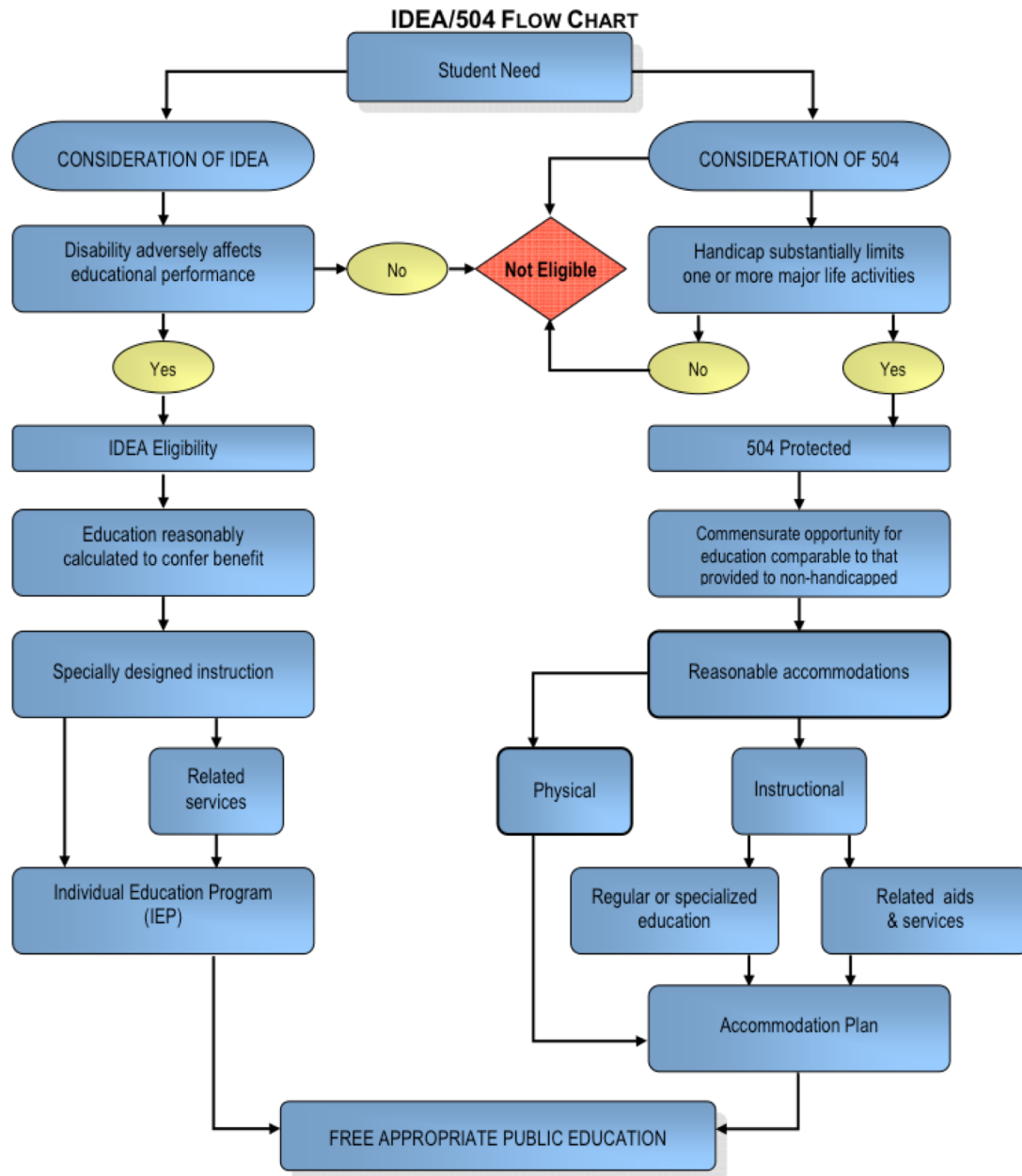
- **Program Accessibility**
- **Comparable Facilities**
- **Free Appropriate Public Education**
- **Procedural Responsibilities**



Enforcement of Section 504

- **Hearings**
- **Litigation**





Council of Administrators of Special Education, Inc. (CASE) - *Student Access, A Resource Guide for Educators, Section 504 of the Rehabilitation Act of 1973*

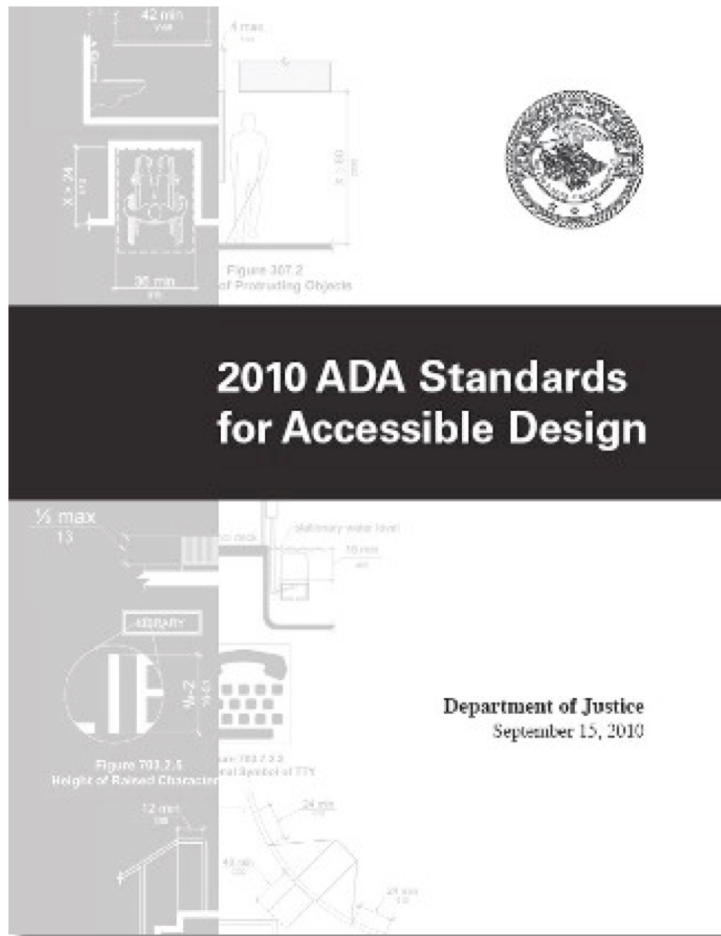
See Special Education Handbook 2003, Appendix I, Classroom Accommodations, IDEA/504 Flow Chart
<http://www.eed.state.ak.us/tls/sped/Handbook03/word/appisec1.doc> (July 19, 2005).

Americans with Disabilities Act



- ✓ ADA Signing
July 26, 1990
- ✓ Amendments
September 25,
2008
- ✓ 20th Anniversary
July 26, 2010

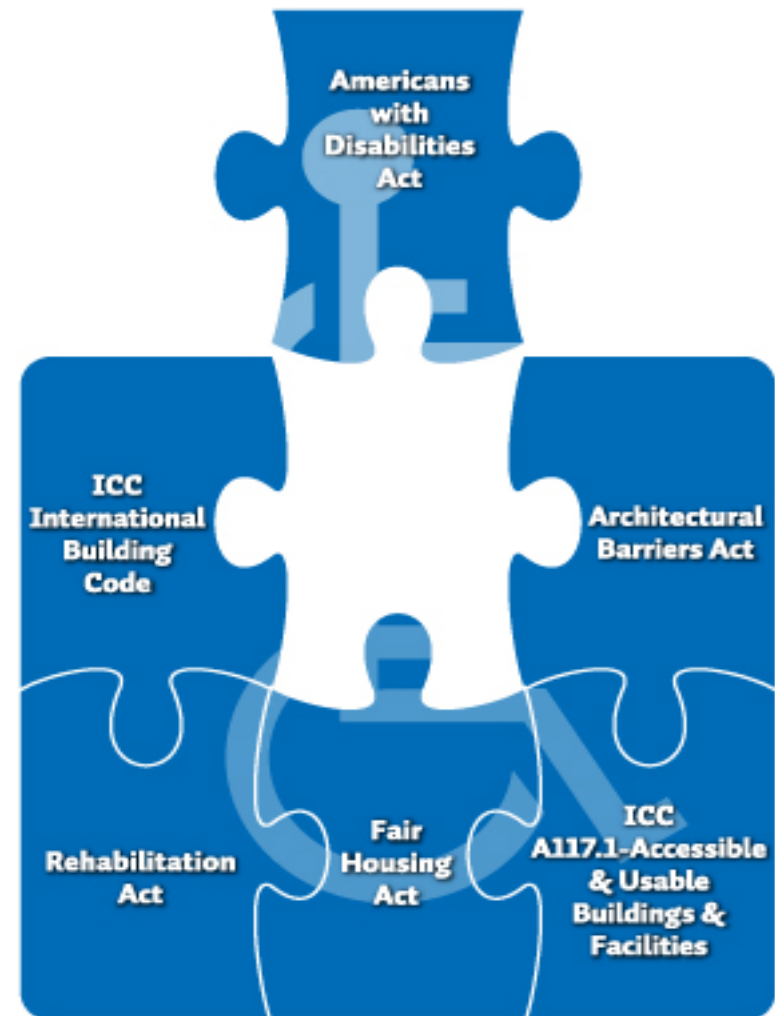
2010 ADA Standards



- Based on the Access Board's ADA-ABA Guidelines (2004)
- DOJ regs include additional requirements
- Effective March 15, 2012

Harmonization

- **ANSI A117.1 – 1961**
- **Architectural Barriers Act – 1968**
- **Fair Housing Act – 1968**
- **Rehabilitation Act – 1973**
- **International Building Code – 1975+**
- **UFAS – 1984**
- **Americans with Disabilities Act – 1990**



Re-Tooling ADA

Referenced Standards

- ✓ ANSI
- ✓ ASME
- ✓ ASTM
- ✓ BHMA
- ✓ ICC/IBC
- ✓ NFPA

Building Blocks

- ✓ Surfaces
- ✓ Space Requirements
- ✓ Knee & Toe Clearance
- ✓ Protruding Objects
- ✓ Operable Parts
- ✓ Reach Ranges

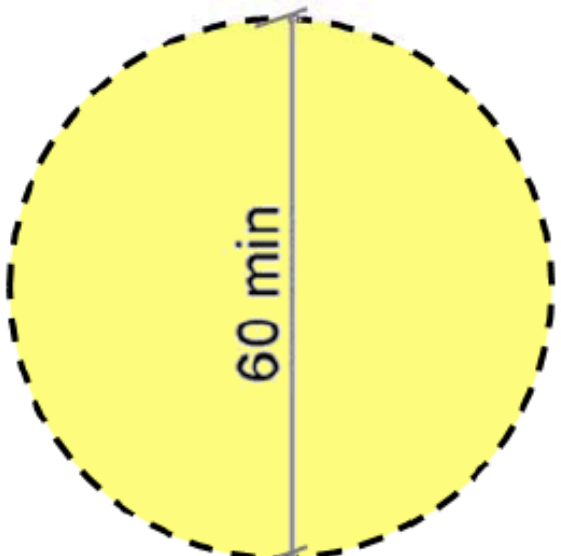


Ground/ Floor Surfaces (§302)

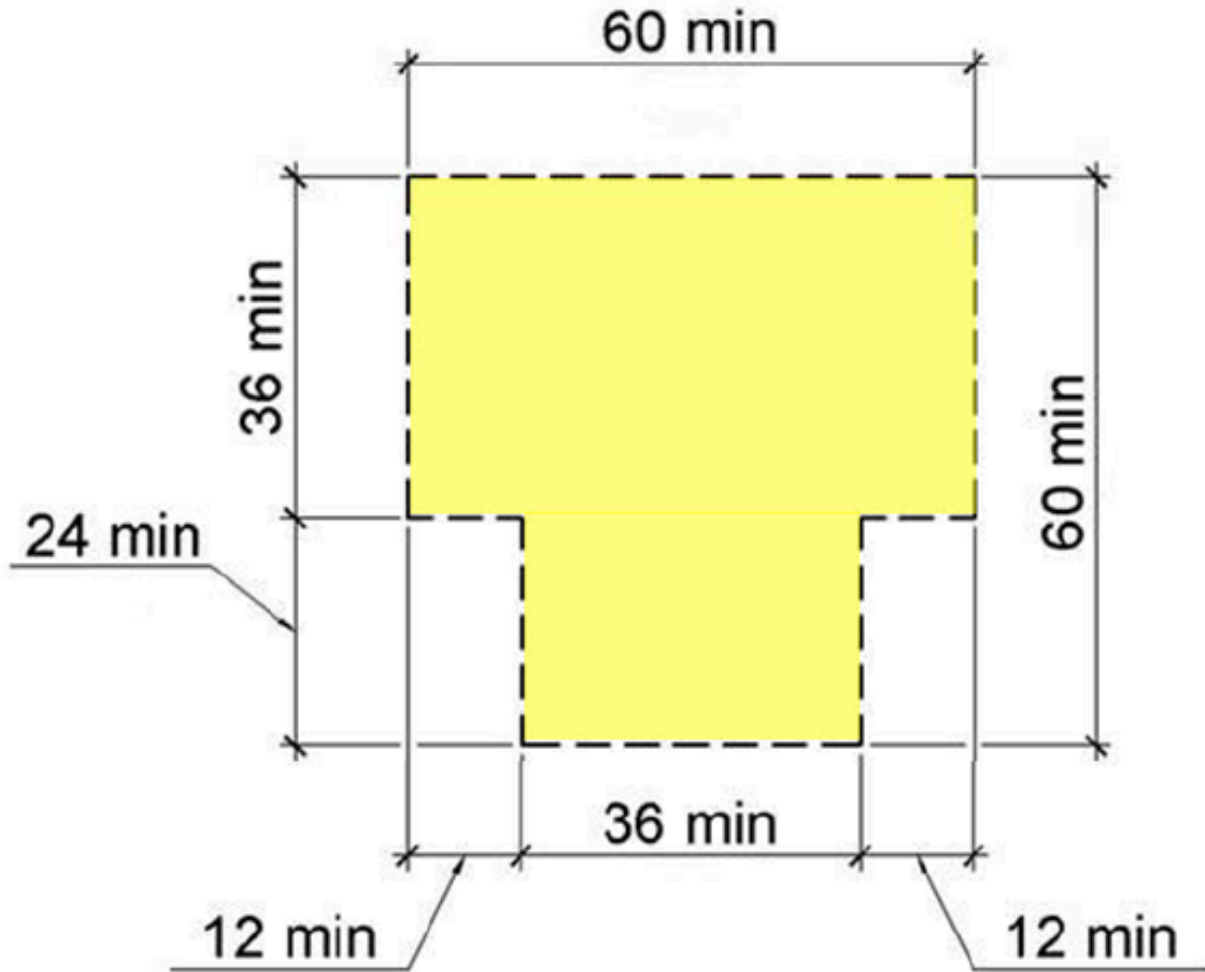


Firm, stable, and “slip resistant”

Turning Space

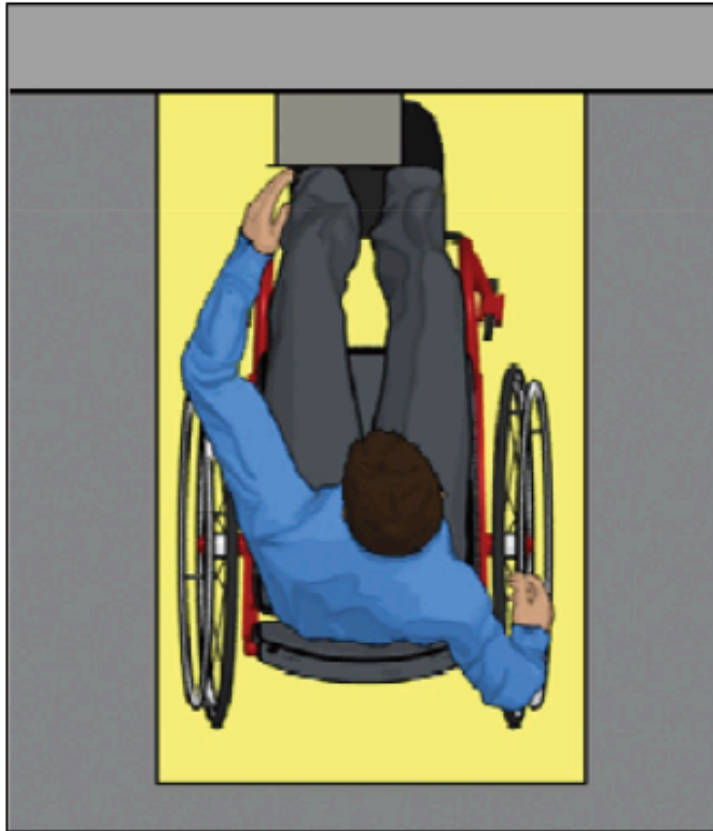


60" Diameter Circle



T-Shaped Space

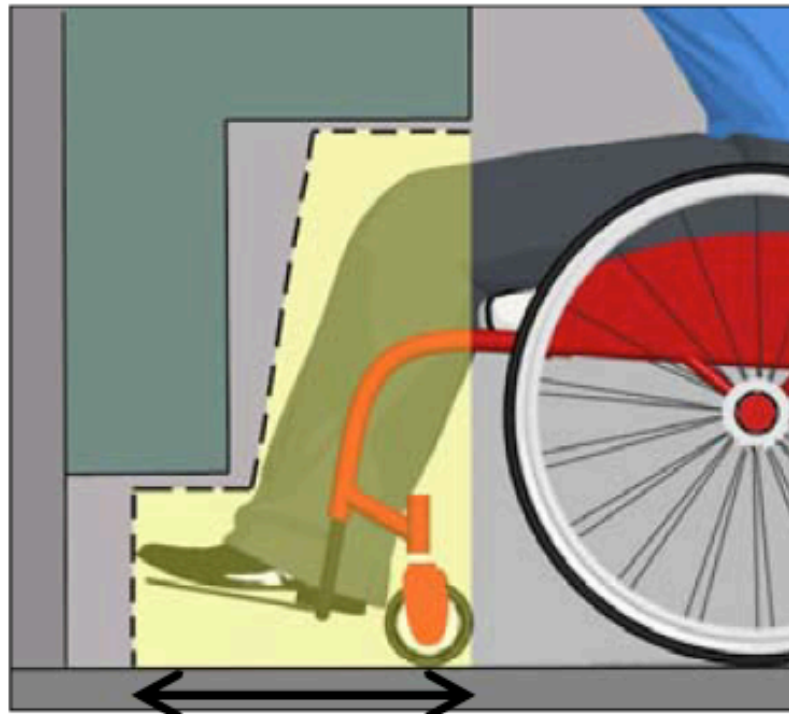
Size/ Centering



**Minimum size:
30" x 48"
(unconfined)**

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

Knee & Toe Space



17" min

9" up AFF

6" deep

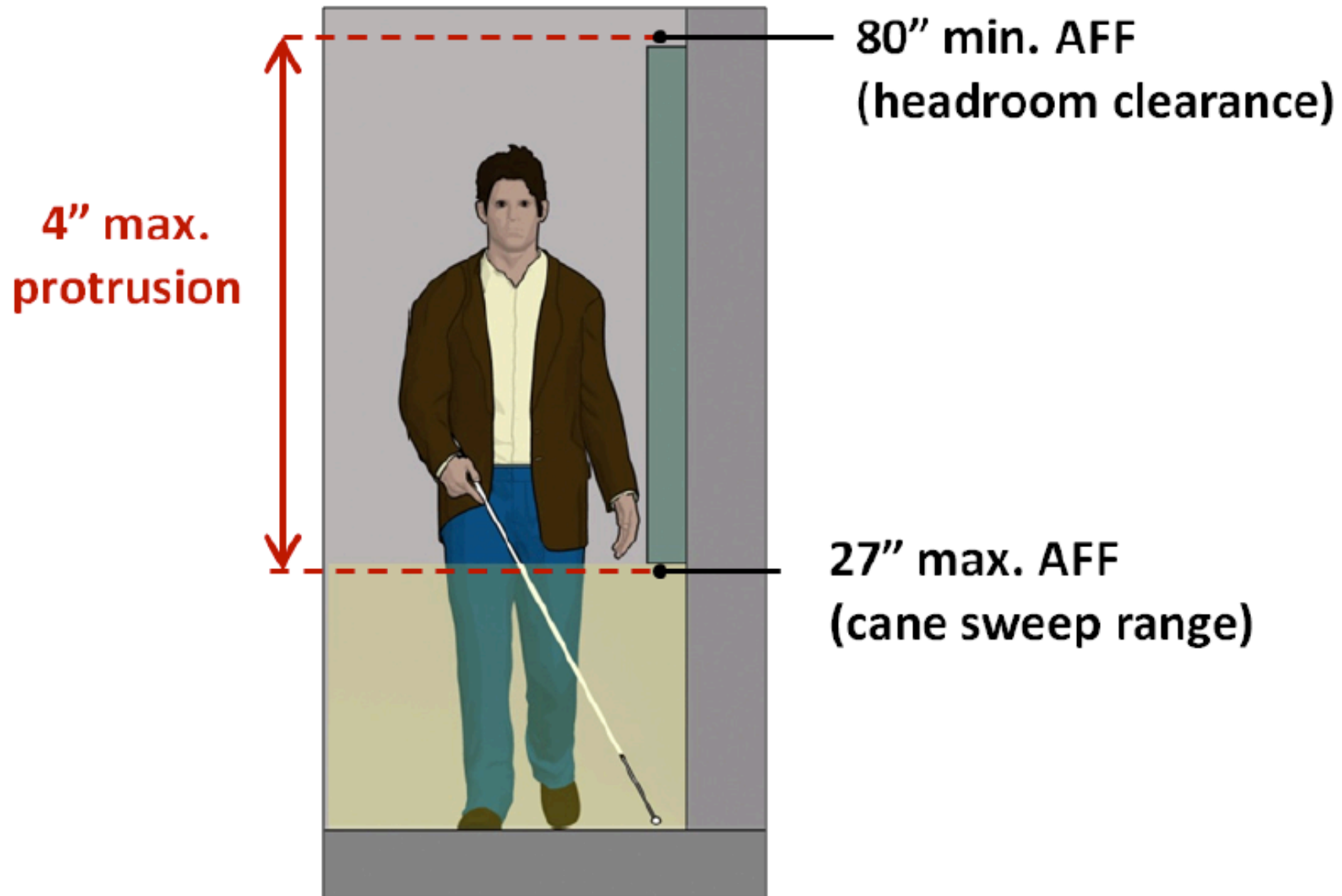
27" up to under side counter / table for knees

25" deep max to wall

**Knee/ toe space required
at certain elements:**

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

Protruding Objects (§307)



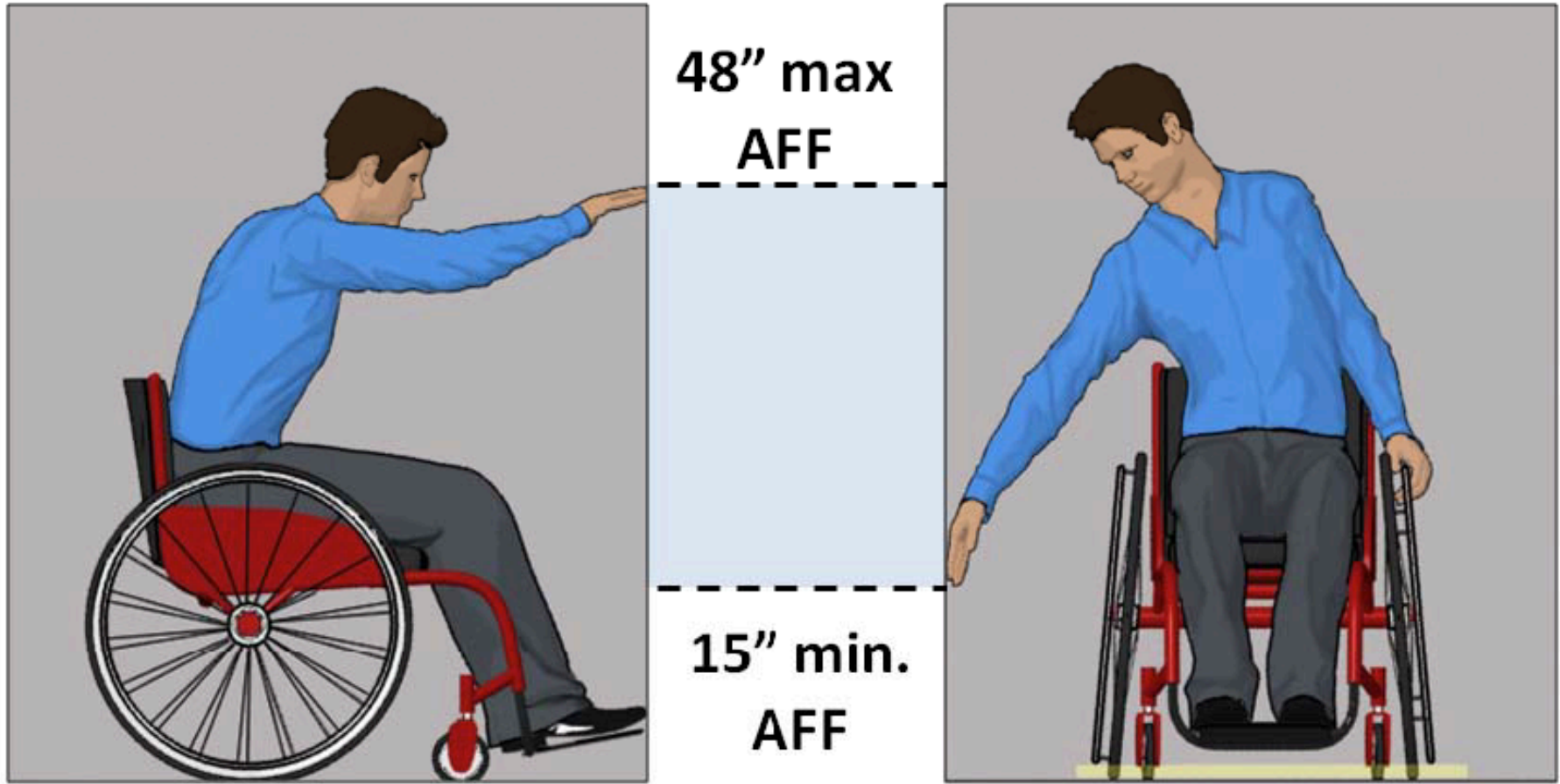
Operability



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

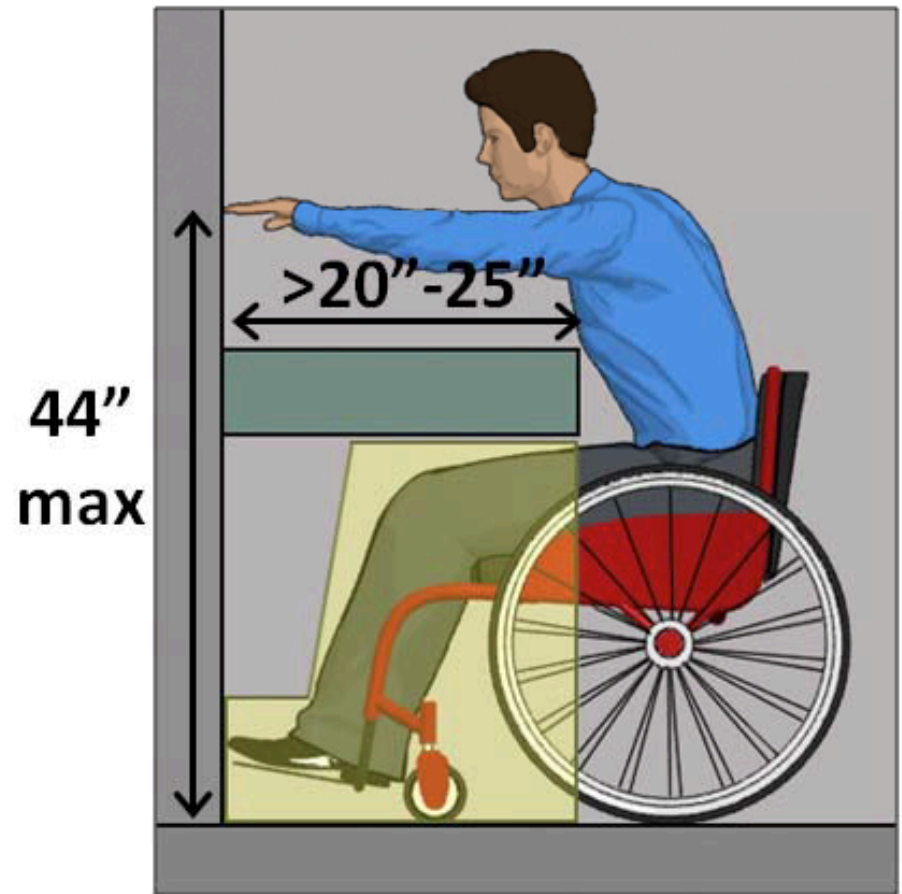
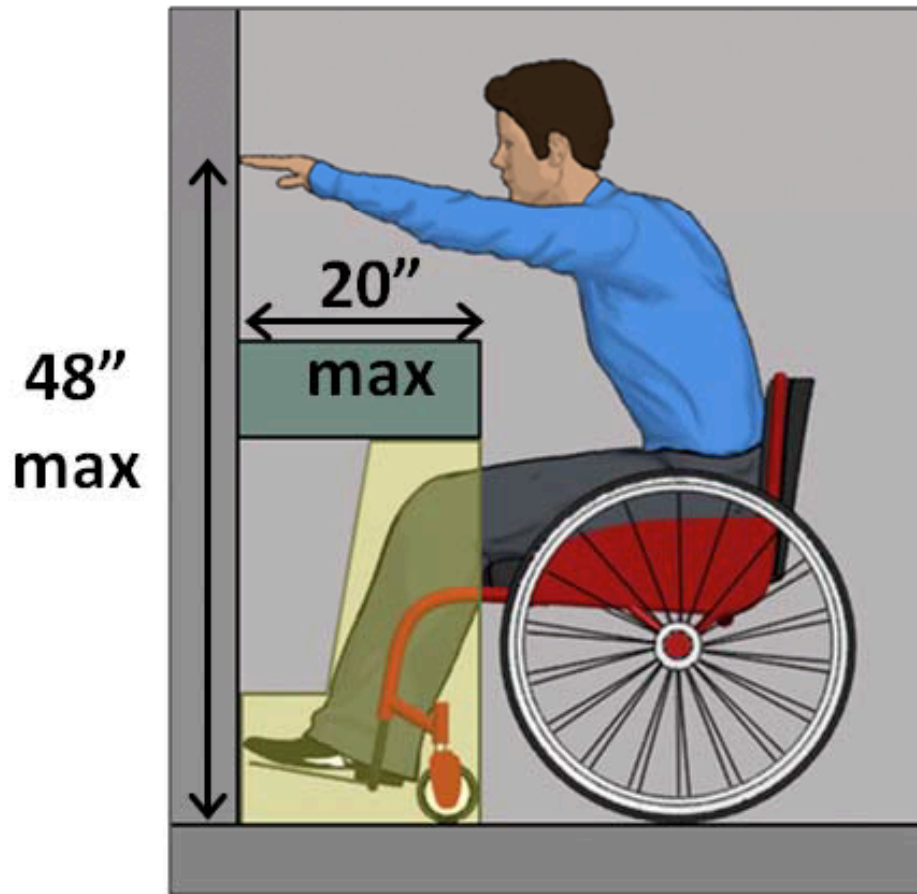


Reach Ranges (§308)



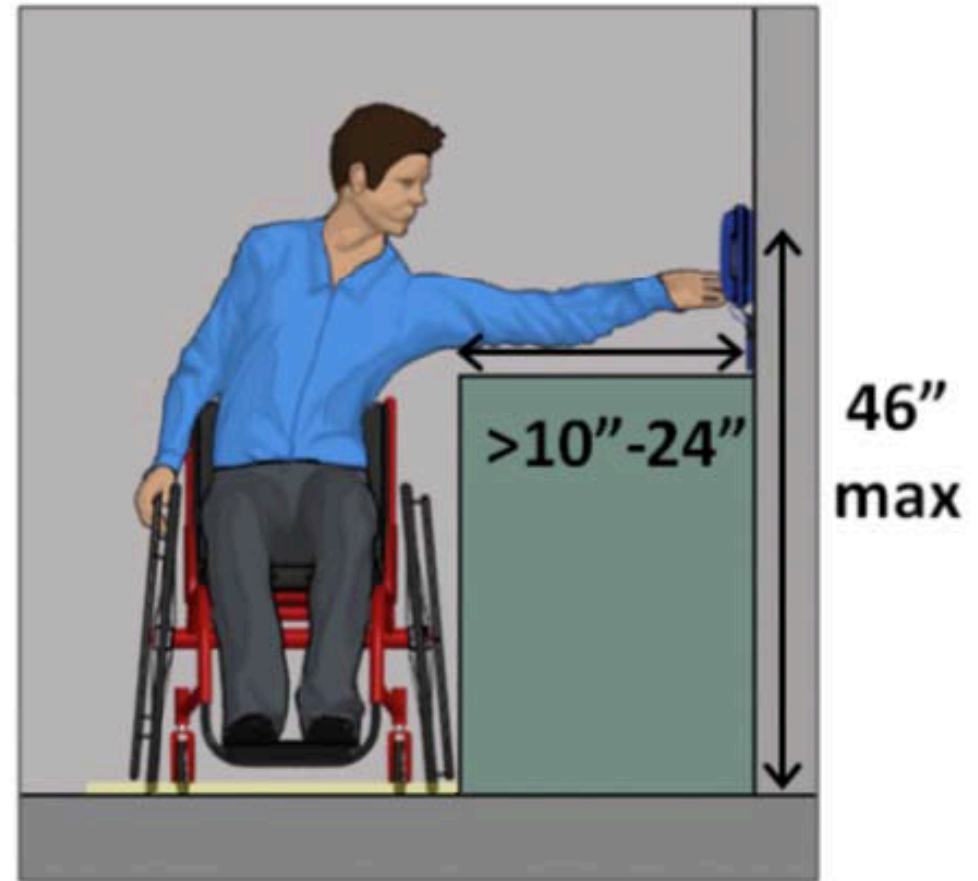
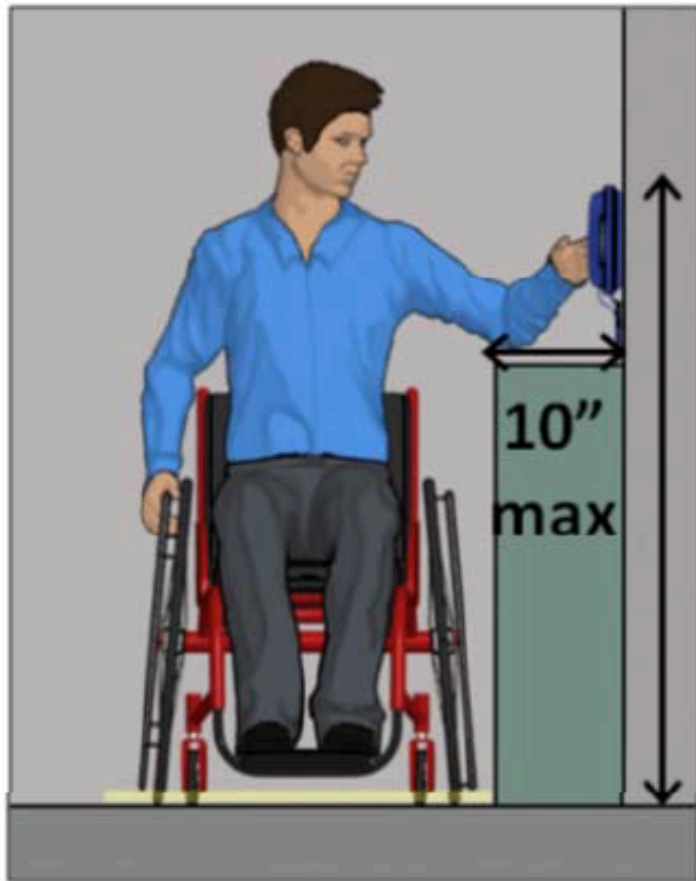
Unobstructed forward and side reaches

Forward Reach (Obstructed)



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

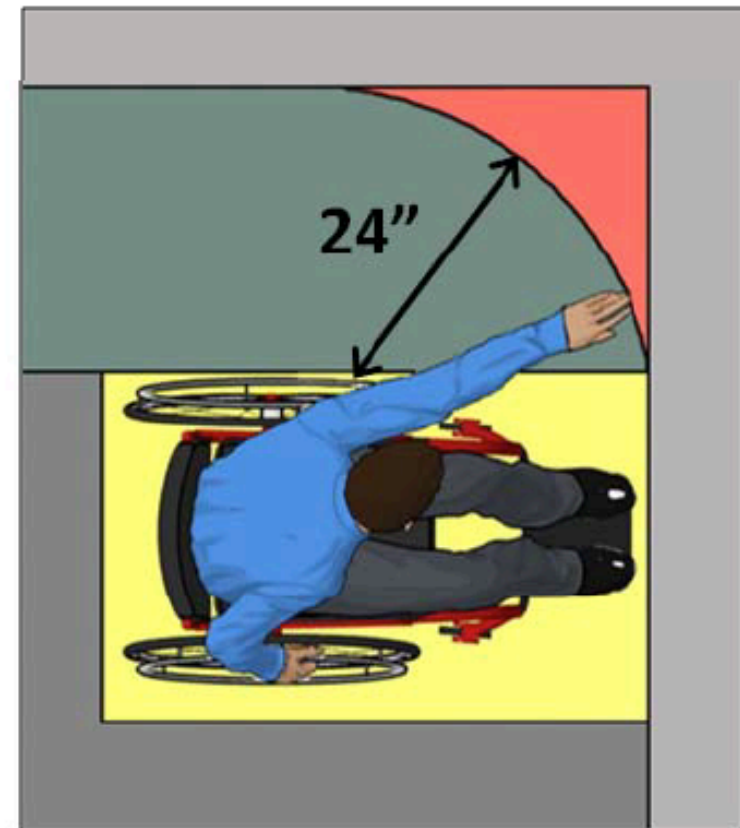
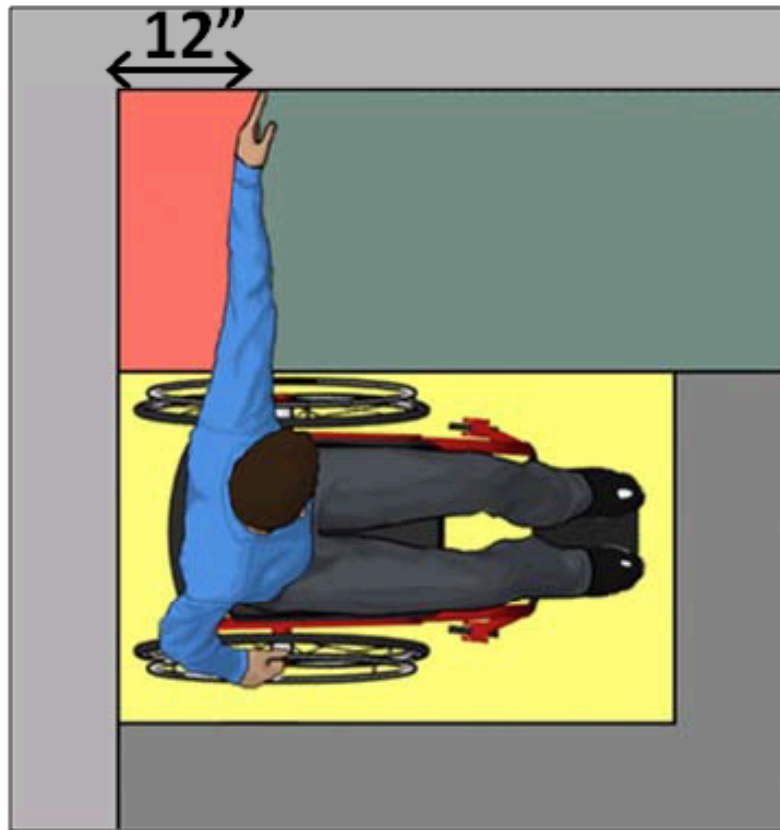
Obstructed Side Reach



Obstructed reach: 46" max. if reach depth exceeds 10"
Kitchen counters are limited to 24" deep where elements must be reached on the wall beyond them.

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

Children's Reach Ranges

Advisory (non-mandatory): Forward & Side

Maximum

● 44" (9 – 12 yrs)

● 40" (5-8 yrs)

● 36" (3 & 4 yrs)

Minimum

● 20" (3 & 4 yrs)

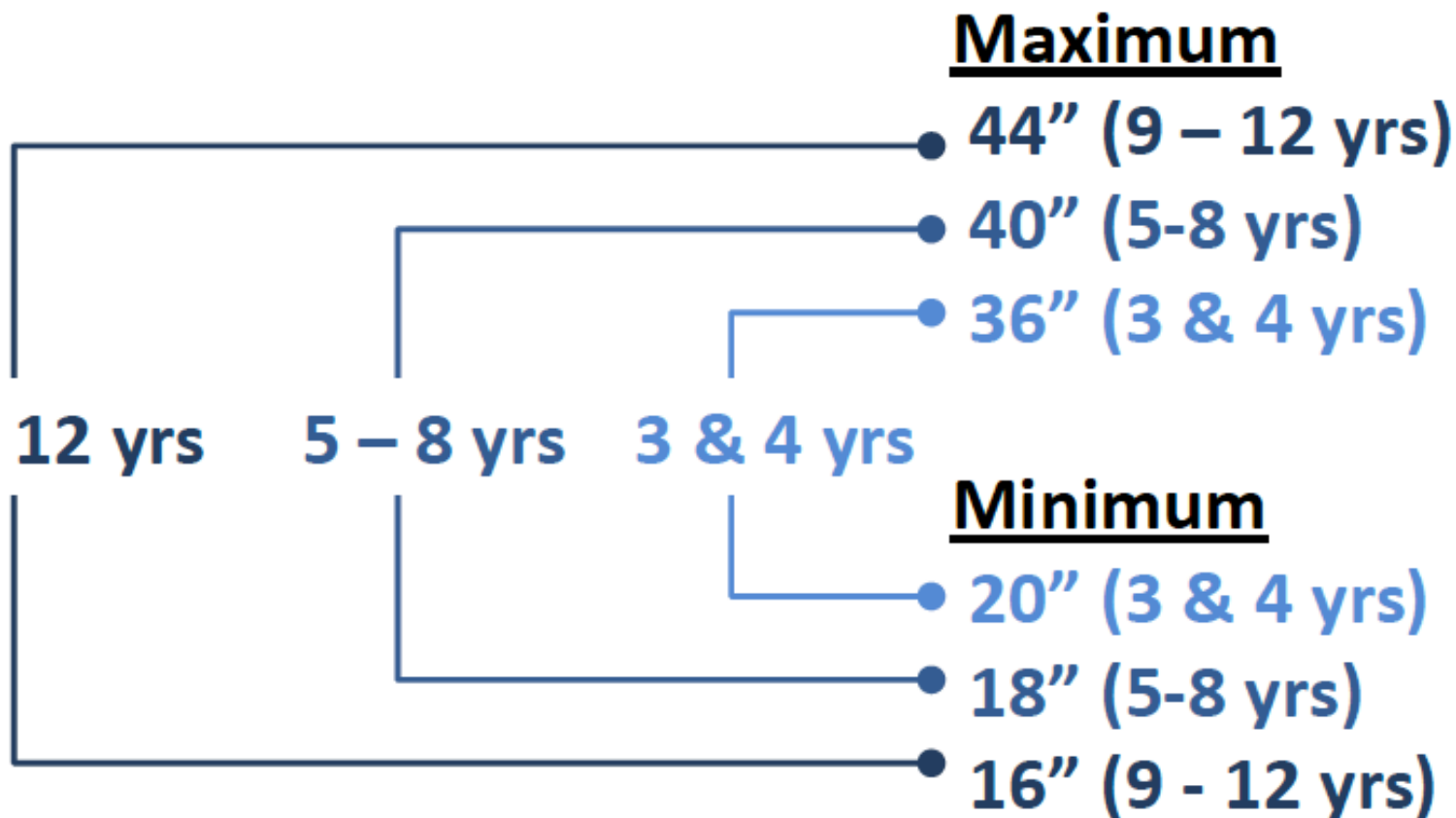
● 18" (5-8 yrs)

● 16" (9 - 12 yrs)

9 – 12 yrs

5 – 8 yrs

3 & 4 yrs



Parking

Clarifications:



- **Scoping calculated lot-by-lot**
- **Exempt: parking for buses, trucks, delivery and law enforcement vehicles, impound**
- **Marking of access aisles**
- **Sign height (60" min.)**
- **Angled vans spaces (aisle on passenger side)**

Accessible Parking Scoping

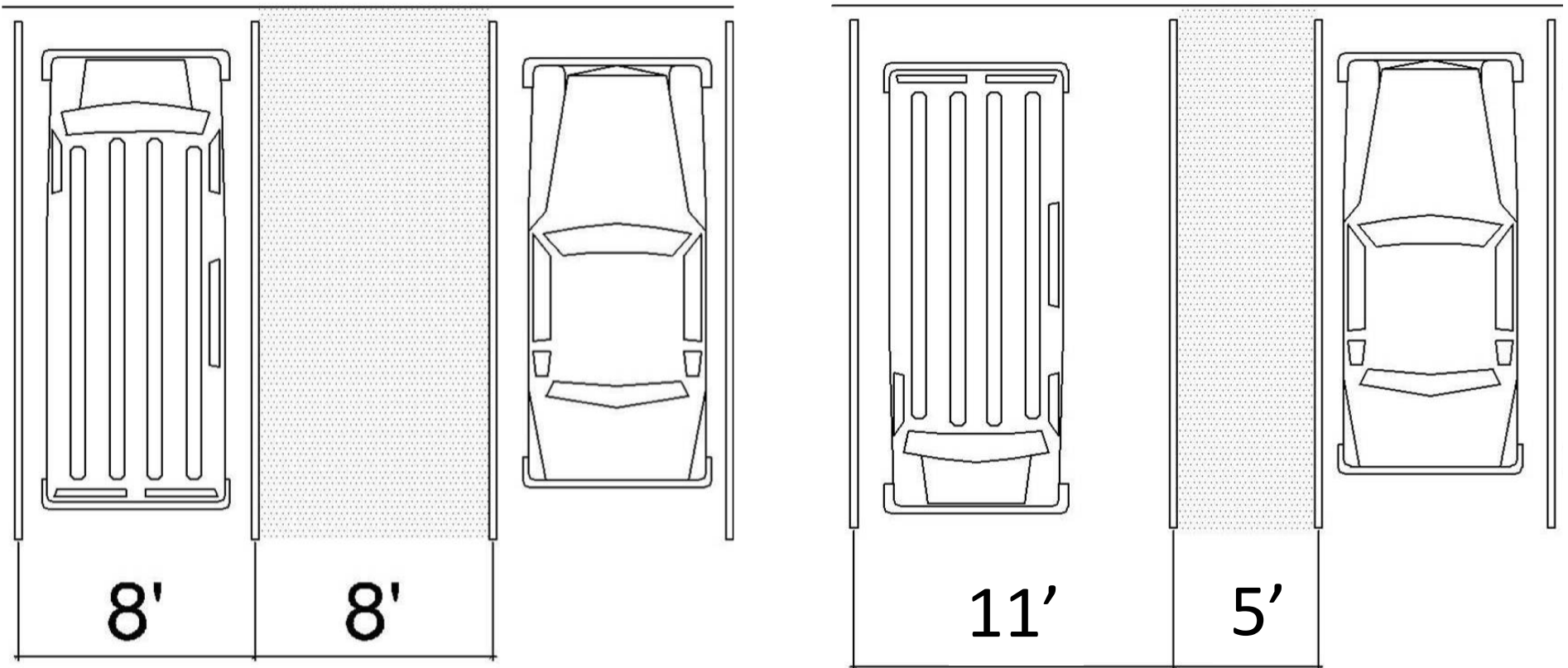
Table 208.2 Parking Spaces

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

Parking

Van Spaces

Additional 3' width can be added to aisle or space

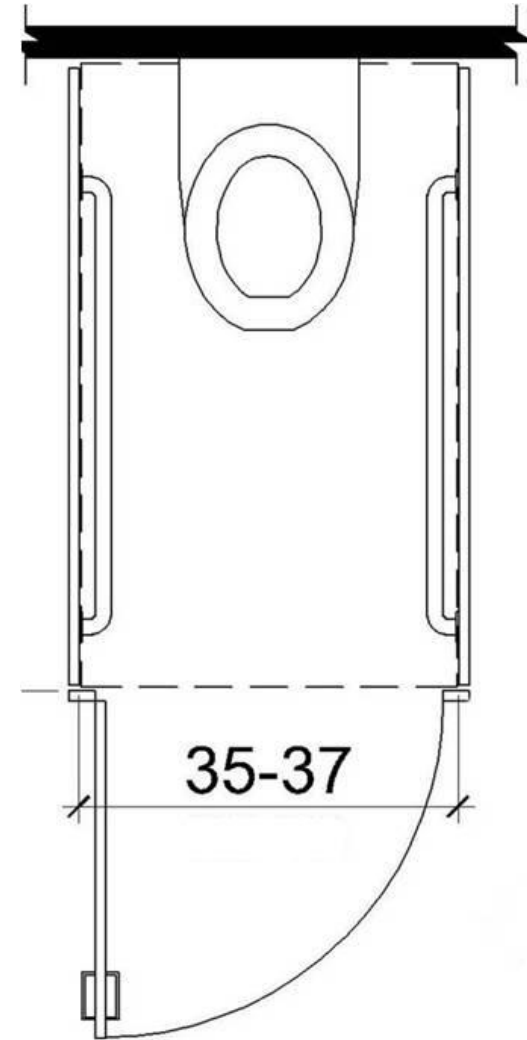
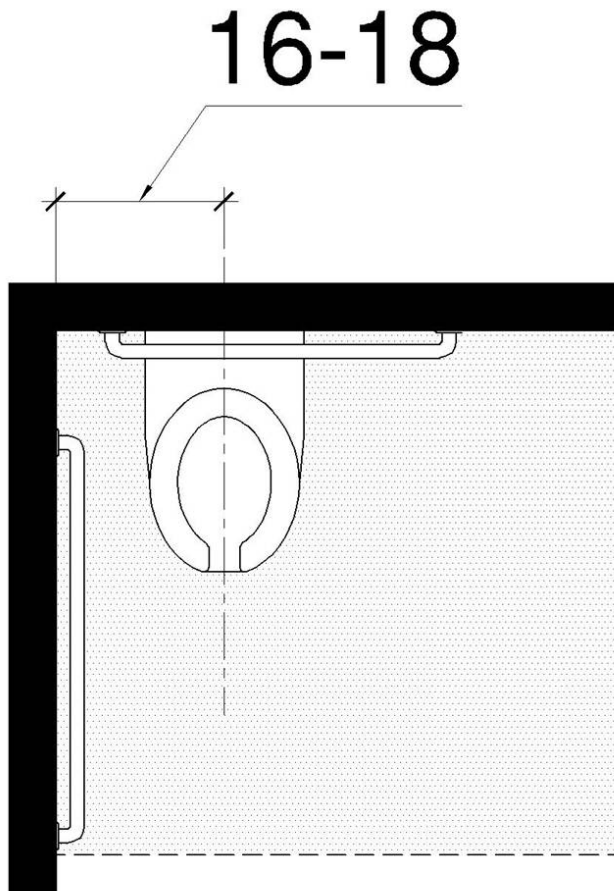


Accessible Routes

- At least 60% public entrances are accessible
- Direct access from parking
- Coincident with routes used by others
- Automatic doors recommended
- Doors in a series maneuvering space



Ranges instead of absolute dimensions

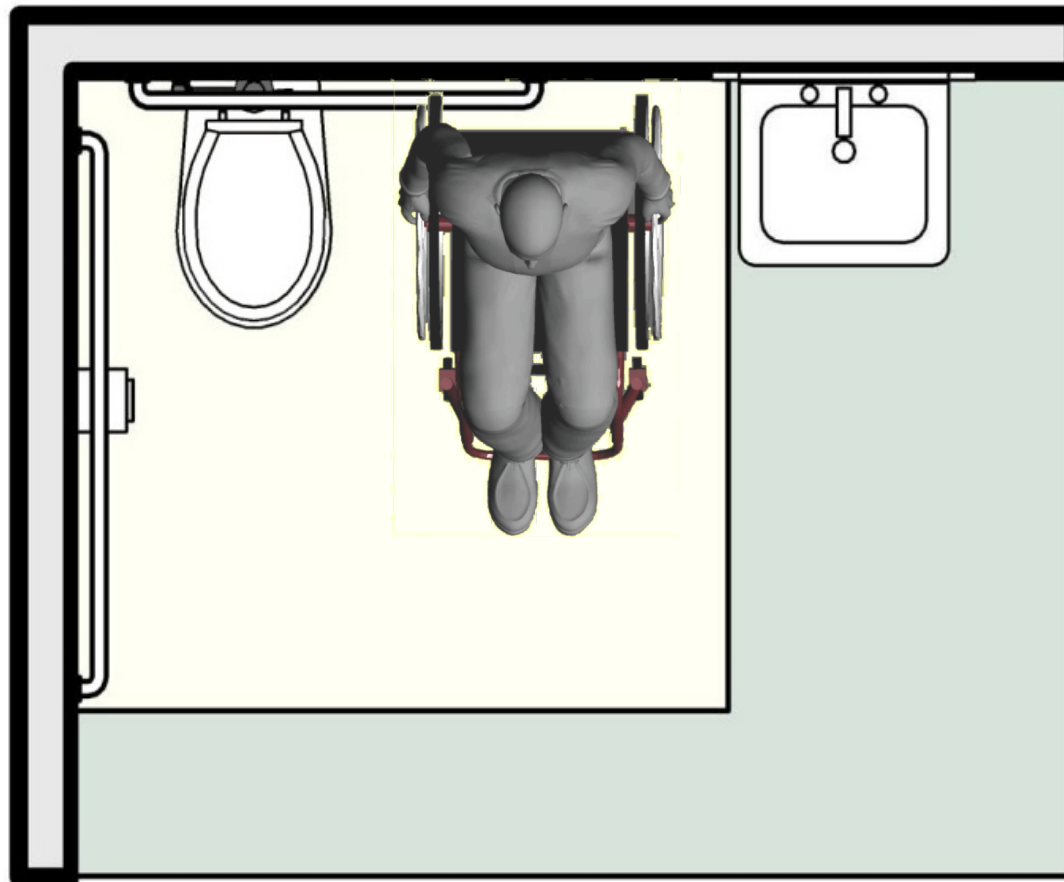


Water closet centerline (16-18")

Width of ambulatory accessible stall (35" - 37")

Toilet Rooms

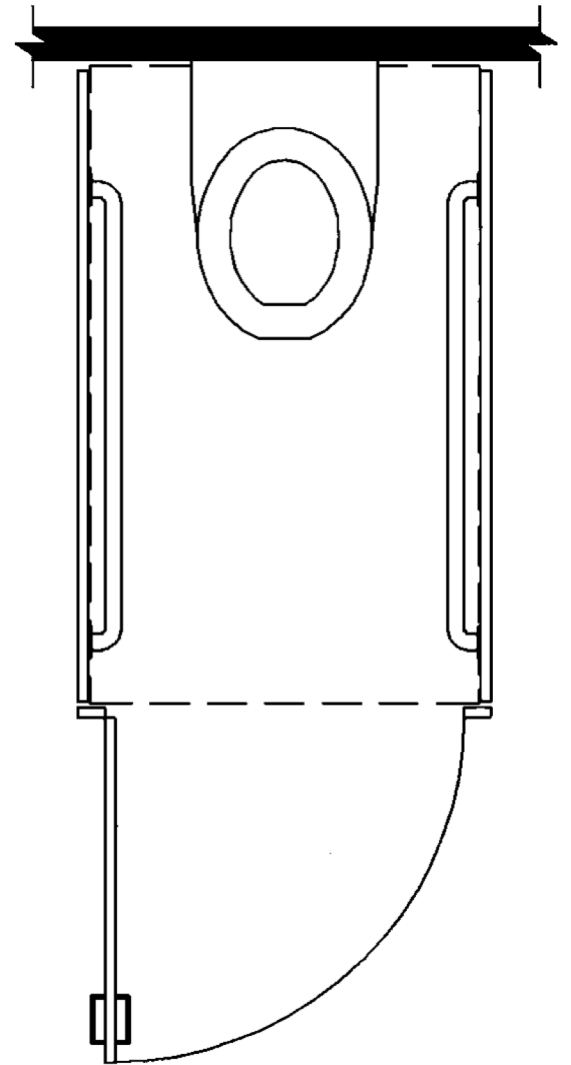
Allows space for side transfers



Ambulatory Stall

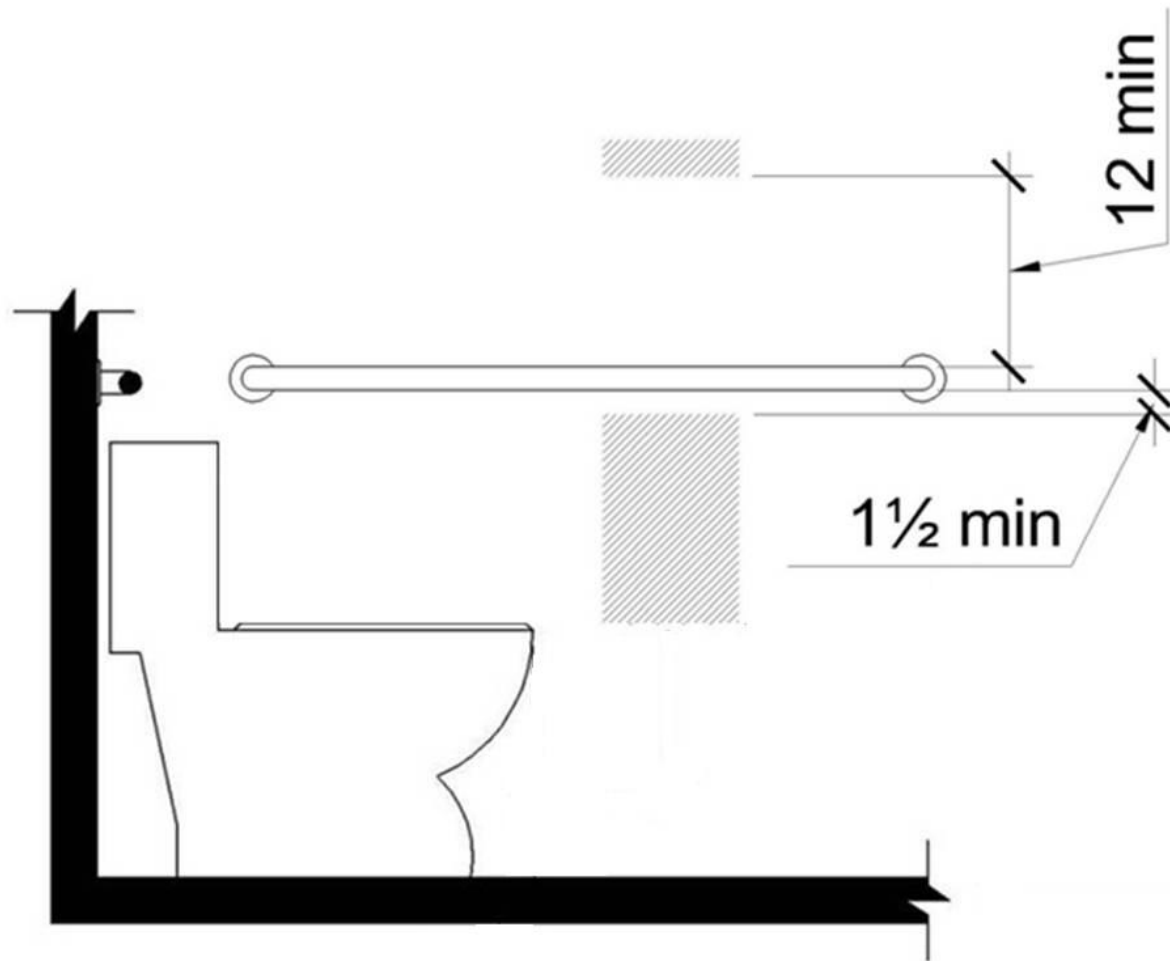
Where 6 or more stalls provided

- parallel grab bars
- width: 35" – 37"
- depth: 60" min.
- doors: out-swinging, self-closing



TP Dispenser

grab bar height (33"-36") and clearances further
limit location of non-recessed dispensers



Children's Toilets

Alternate specifications permitted for toilets designed for children 12 & younger



Children's Toilets

Alternate Specifications:

- WC centerline 12" – 18"
- WC seat height 11" – 17"
- Grab bar height 18" – 27"
- Dispenser height 14" – 19"

Children's Toilets

Advisory information provides guidance according to age group

	Ages 3 & 4	Ages 5 - 8	Ages 9 - 12
WC Centerline	12 in	12 - 15 in	15 - 18 in
Toilet Seat Height	11 - 12 in	12 - 15 in	15 - 17 in
Grab Bar Height	18 - 20 in	20 - 25 in	25 - 27 in
Dispenser Height	14 in	14 - 17 in	17 - 19 in

Children's Lavatories

Exceptions based on age of intended users

Ages 6 - 12:

24" high min. knee clearance allowed
(if lav. 31" high max.)

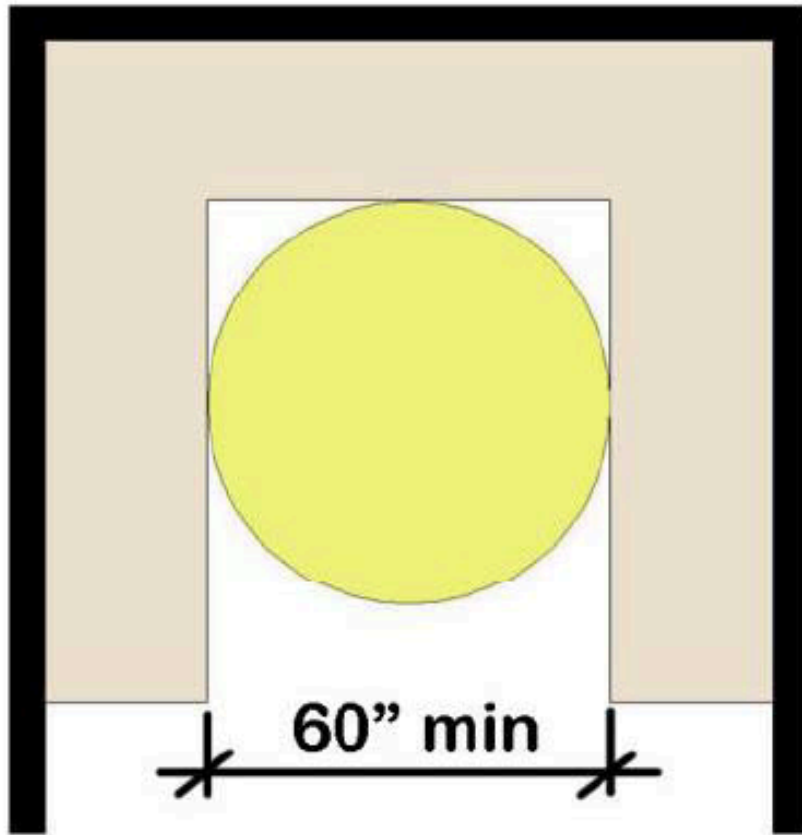
Ages 5 and under:

Side approach permitted

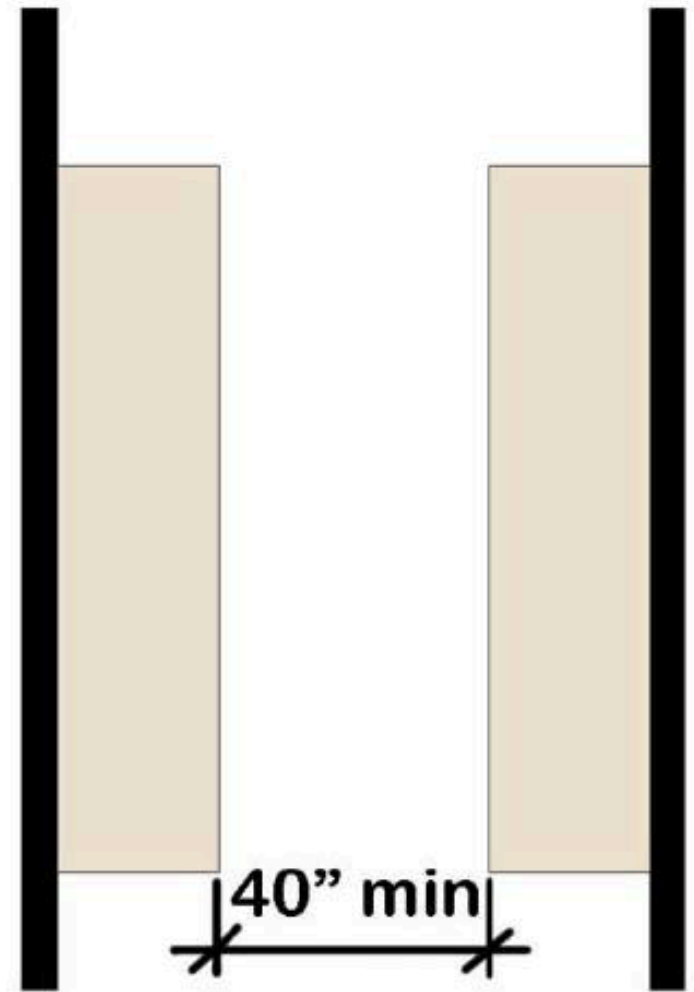
ADA Kitchens

- **Old Adaptable vs. New Universal Design**
- **Old Side Approach vs. New Front Approach**
- **Roll Under Sinks**
- **Increased 9" x 6" toe clearance**
- **50% storage within reach range**
- **SPED Life Skills Training!**
- **FCS Kitchens!**

Kitchen Plan Types

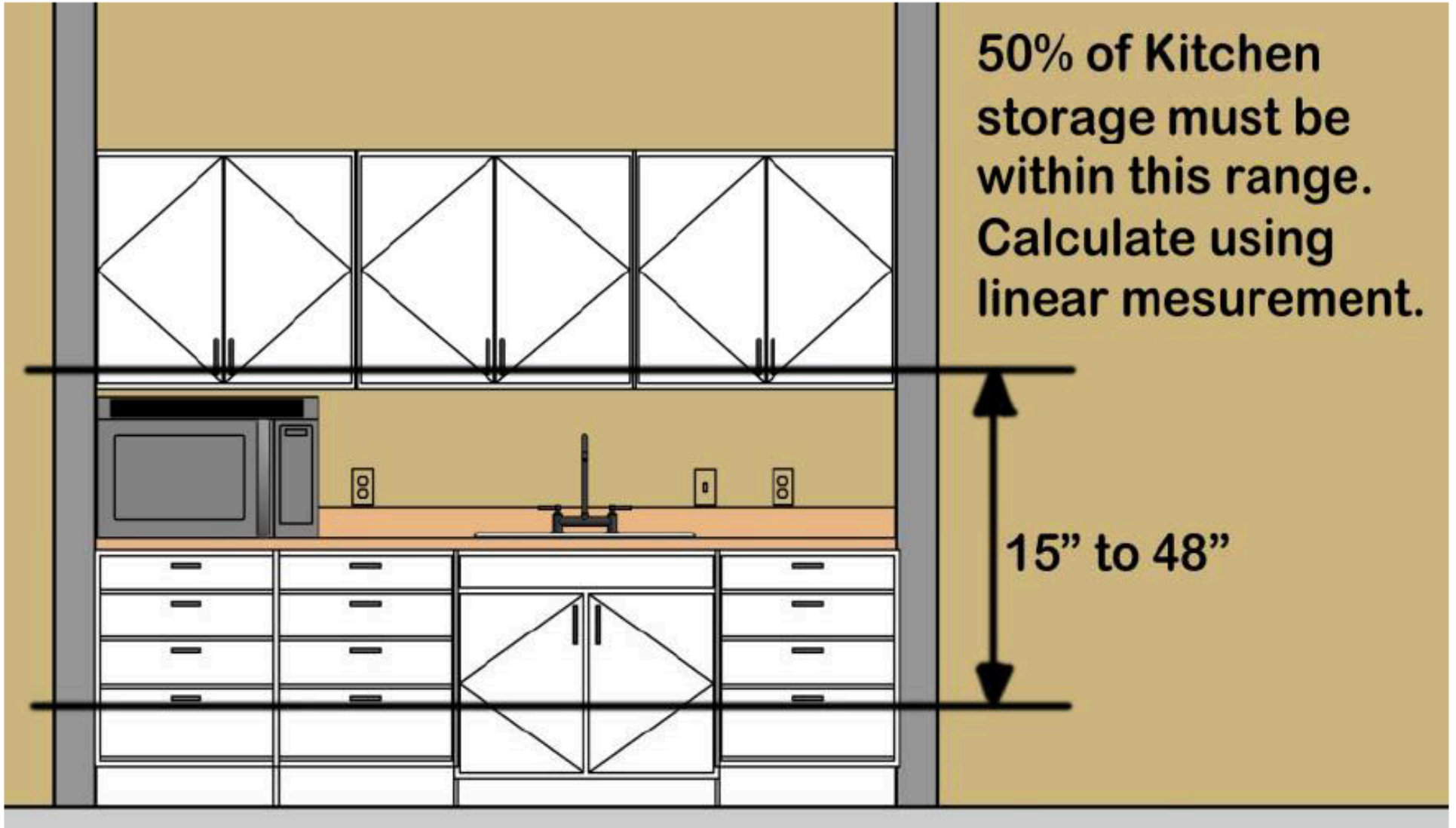


U-Shaped Kitchens

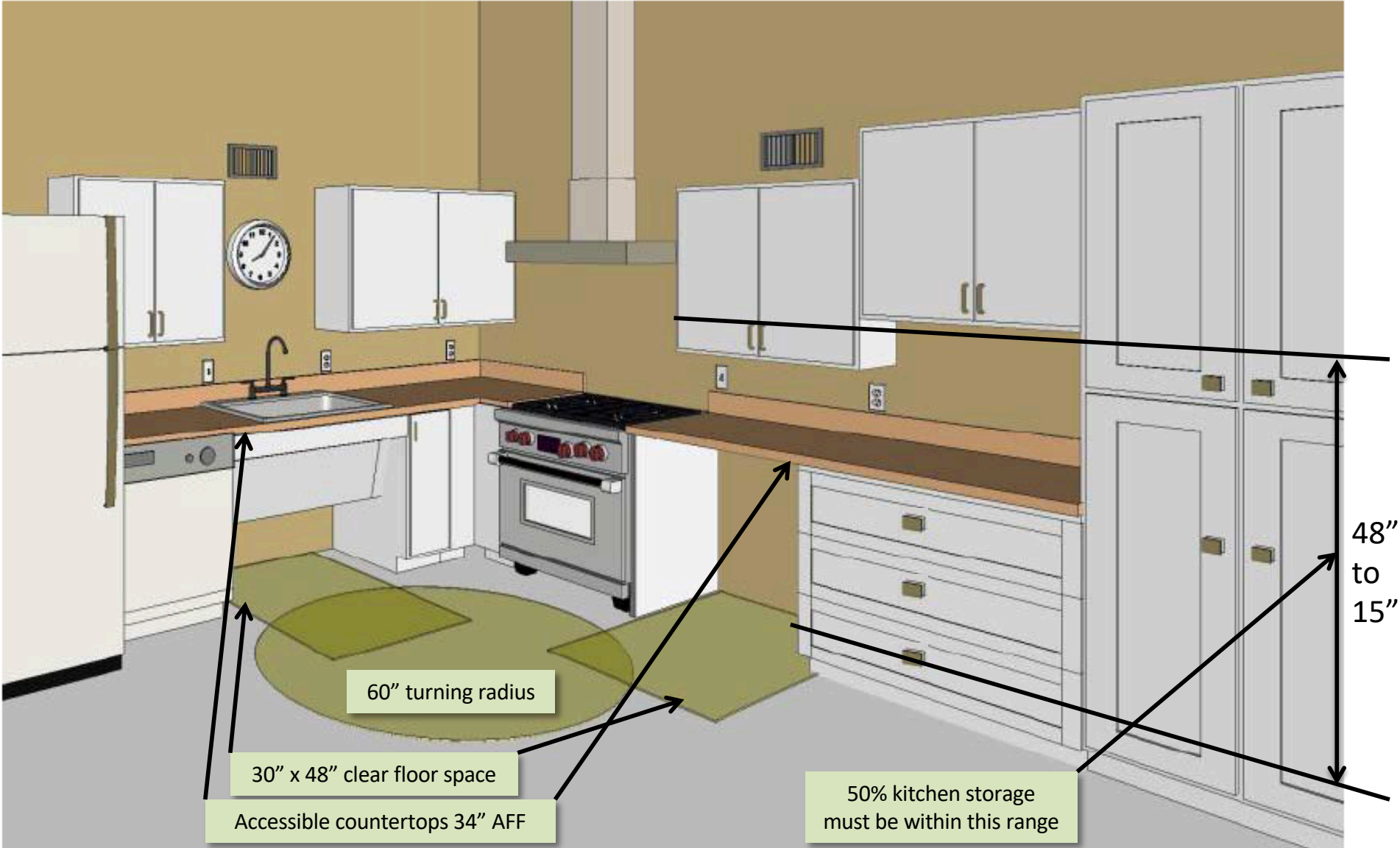


Pass Through Kitchens

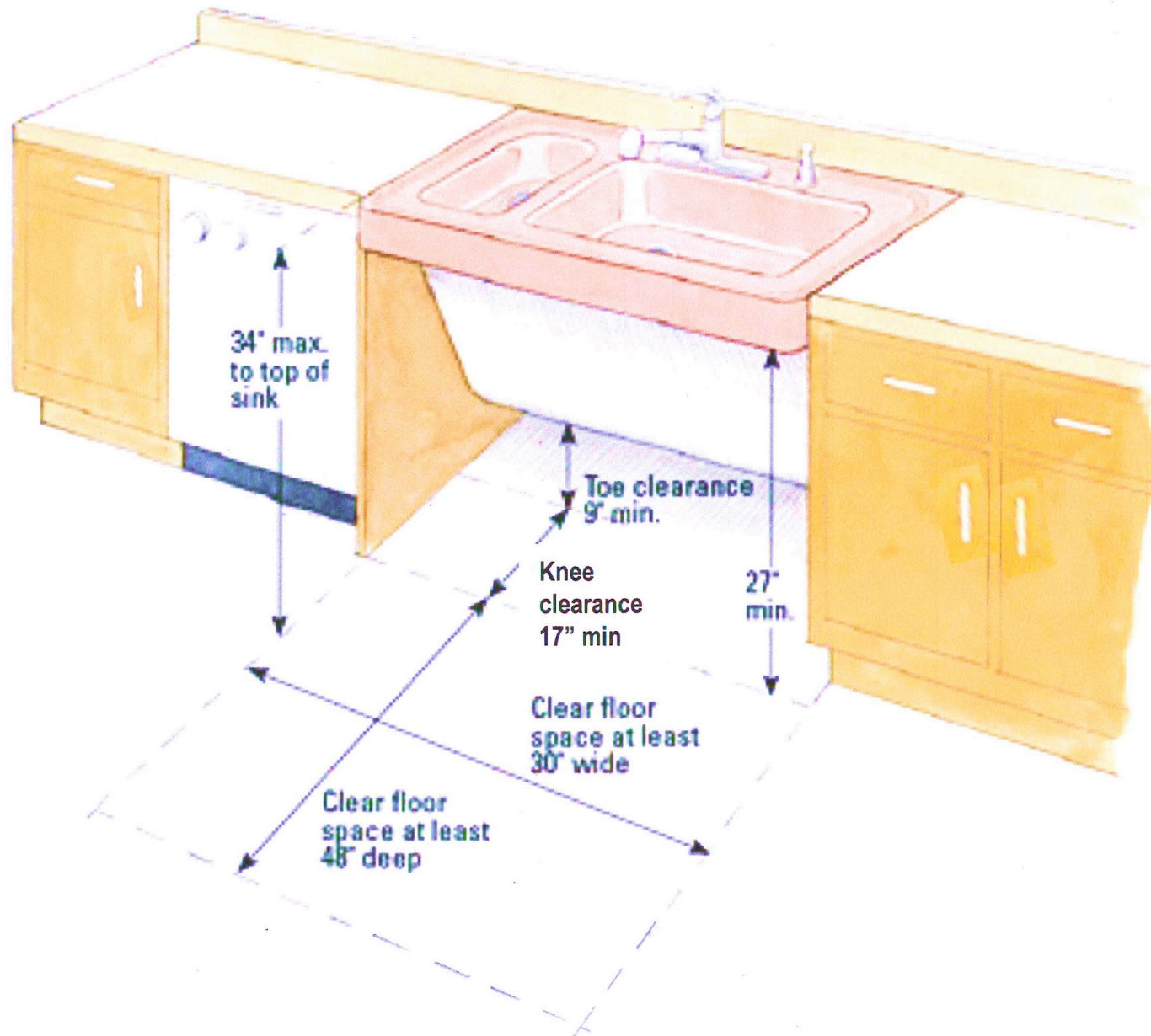
Kitchenettes



Kitchens



Kitchen Sinks



Kitchen Stoves

- **804.6.4 Range or Cooktop.**
Where a forward approach is provided, the clear floor or ground space shall provide knee and toe clearance complying with 306. Where knee and toe space is provided, the underside of the range or cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock. The location of controls shall not require reaching across burners.



Washing Machines & Dryers

- Front reachable controls
- 1 accessible where 3 or fewer provided
- 2 accessible where more than 3 provided

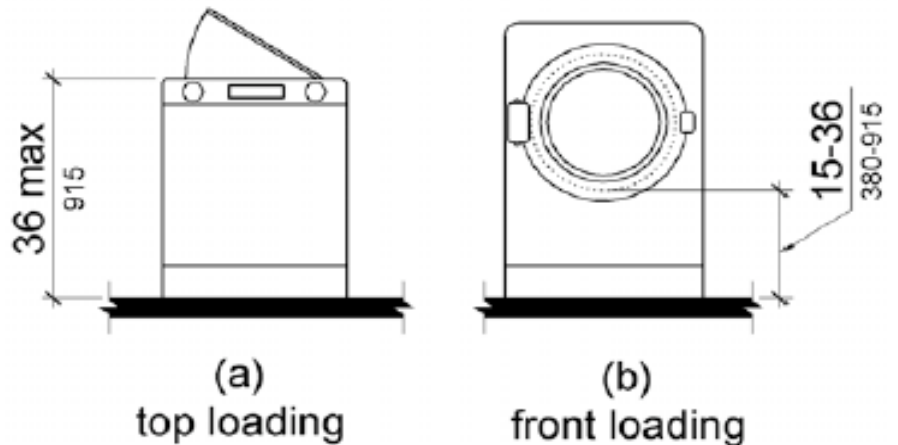


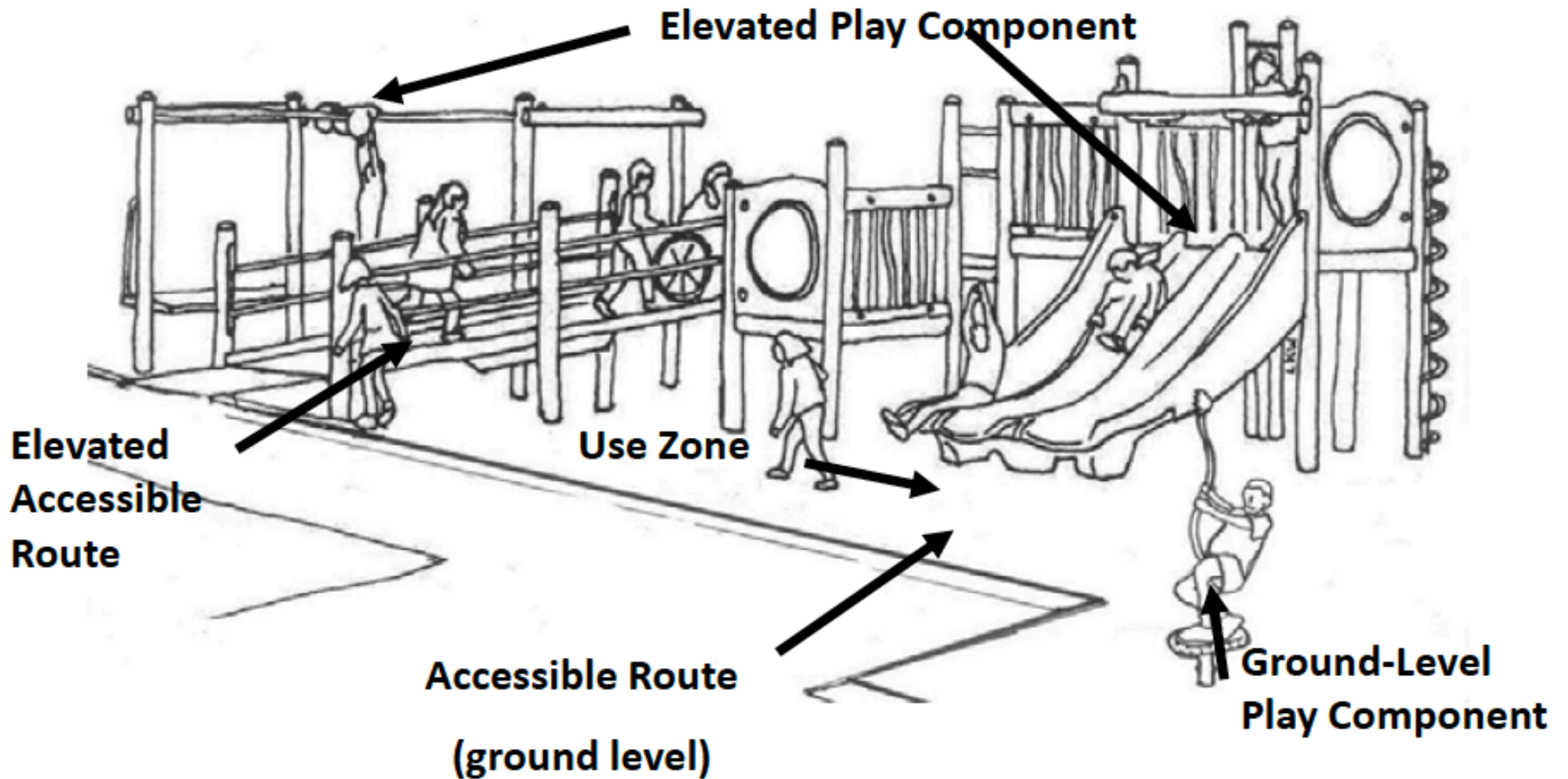
Figure 611.4 Height of Laundry Compartment Opening

Accessible Play Areas

- **Geographically separated play areas for younger & older children**
- **Accessible route connects entry & exit points**
- **Surfaces meet:**
 - **ASTM F 1951 accessibility**
 - **ASTM F 1292 impact attenuation in use zones**



Play Area Terms



Play Types -

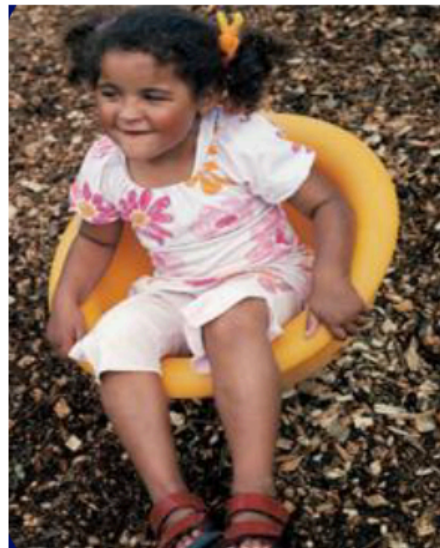
Identified by the experience the play component generally is designed to provide



Rocking



Climbing



Spinning



Swinging

Ground Level Accessible Routes



- Surface
- Clear width
- Clear width reductions
- Changes in level
- Running Slope
- Cross Slope
- Openings
- Protruding Objects

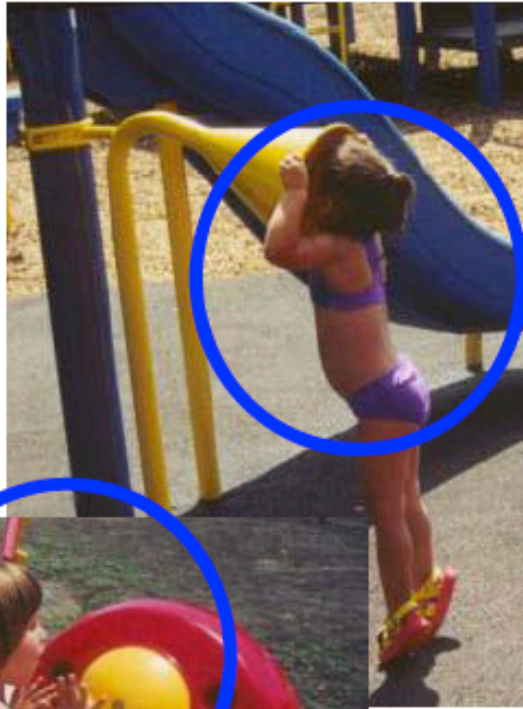
Minimum number based on the number of elevated play components provided

Number and Types of Ground Level Play Components Required to be on Accessible Route

Number of Elevated Play Components	Min. Number of Ground Level Components Required to be on Accessible Route	Min. Number of Different Types of Ground Level Components Required to be on Accessible Route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

- **Minimum quantity of ground-level play components**
- **Minimum number of different types**

Ground-level Requirement One of Each Type



Minimum Number of Elevated Components

50% of all elevated play components in a play area must be reached by an accessible route



Less than 20 elevated components: ramp and/or transfer = 50%



20 or more elevated components: 25 % ramp + 25% ramp and/or transfer = 50%

Elevated Accessible Routes

- Ramps



- Transfer Systems



Swimming Pools

- Required means of access into the water
 - Over 300 linear ft of pool wall = 2 (one primary)
- Less than 300 linear ft of pool wall = 1 lift or sloped entry



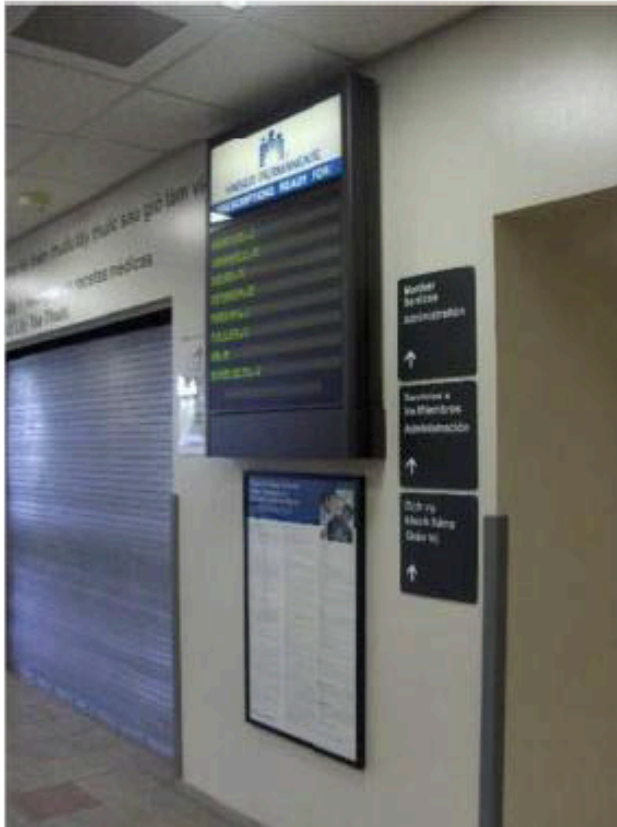
School Office Counters

- **36” max. height (accessible portion)**
- **Applies to full depth of counter**
- **36” min. length (30” min. forward approach)**



Types of Signs

Directional



Exempt Directory



Room Designation

2-Way Communication Systems



**Entrances:
Communication
devices must
have both visual
and audible
signals**

Fire Alarm Systems

NFPA 72 covers:

- **flash rate & pulse duration**
- **location - wall & ceiling**
- **minimum intensity**
- **larger coverage thru fewer appliances**
- **many spaces (other than corridors) can be covered by 1 appliance**
- **synchronization of multiple appliances**



Assistive Listening Systems

Required where (219.2):

- audible communication integral to use of space
- where no audio amplification exception
- courtrooms do not get exception



Not triggered by fixed seating or occupant load

UNITED STATES ACCESS BOARD

Assistive Listening Systems

219.3 Receivers

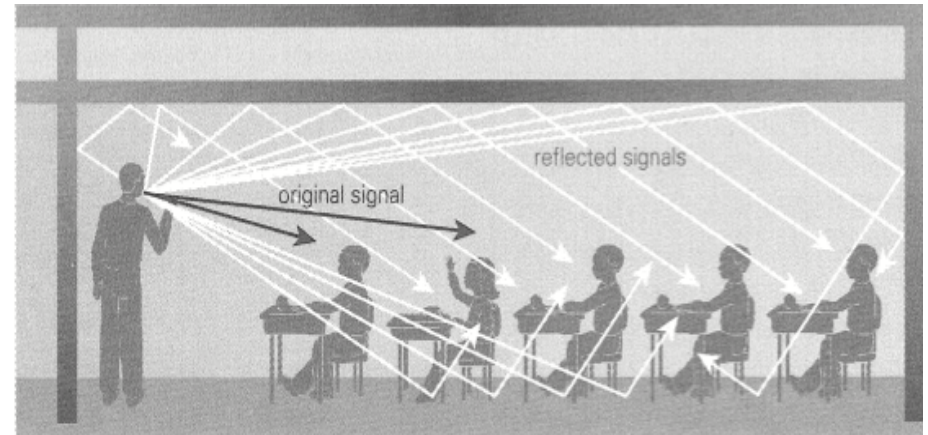
Table 219.3 Receivers for Assistive Listening Systems

Capacity of Seating in Assembly Area	Minimum Number of Required Receivers	Minimum Number of Required Receivers Required to be Hearing-aid Compatible
50 or less	2	2
51 to 200	2, plus 1 per 25 seats over 50 seats ¹	2
201 to 500	2, plus 1 per 25 seats over 50 seats ¹	1 per 4 receivers ¹
501 to 1000	20, plus 1 per 33 seats over 500 seats ¹	1 per 4 receivers ¹
1001 to 2000	35, plus 1 per 50 seats over 1000 seats ¹	1 per 4 receivers ¹
2001 and over	55 plus 1 per 100 seats over 2000 seats ¹	1 per 4 receivers ¹

1. Or fraction thereof.

Classroom Acoustics

- ANSI/ASA SF12.60-2010 – American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools
- Part 1 – Permanent Schools
- Part 2 – Relocatable Schools
- <https://acousticalsociety.org/classroom-acoustics/>



Classroom Acoustics

- One amendment to ensure coverage of special education classrooms
- Can be used elsewhere

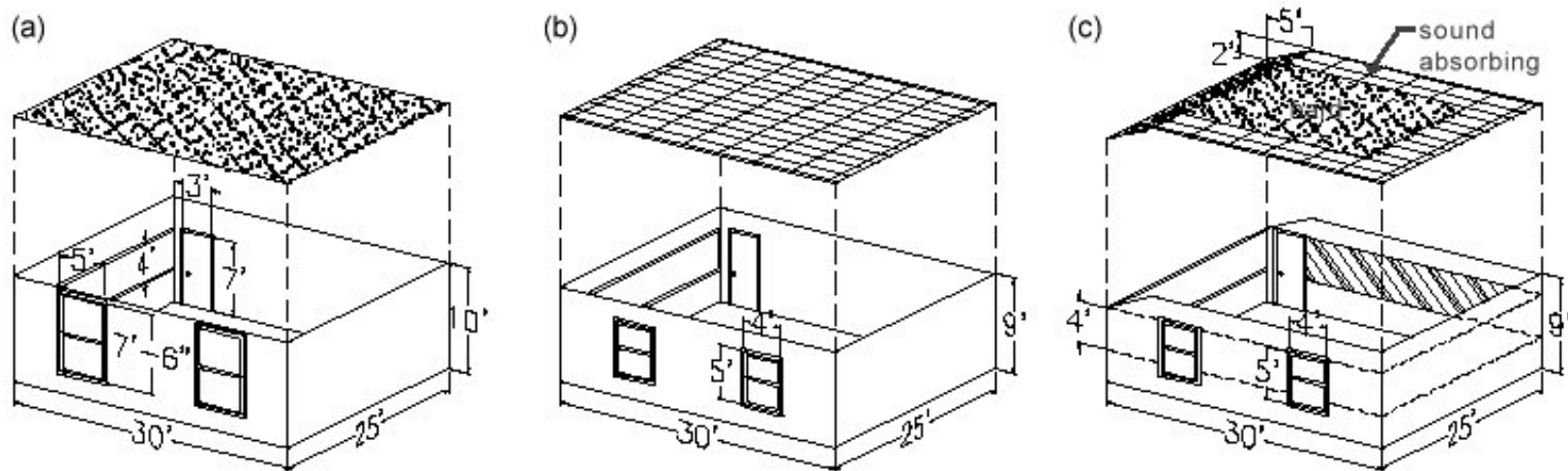


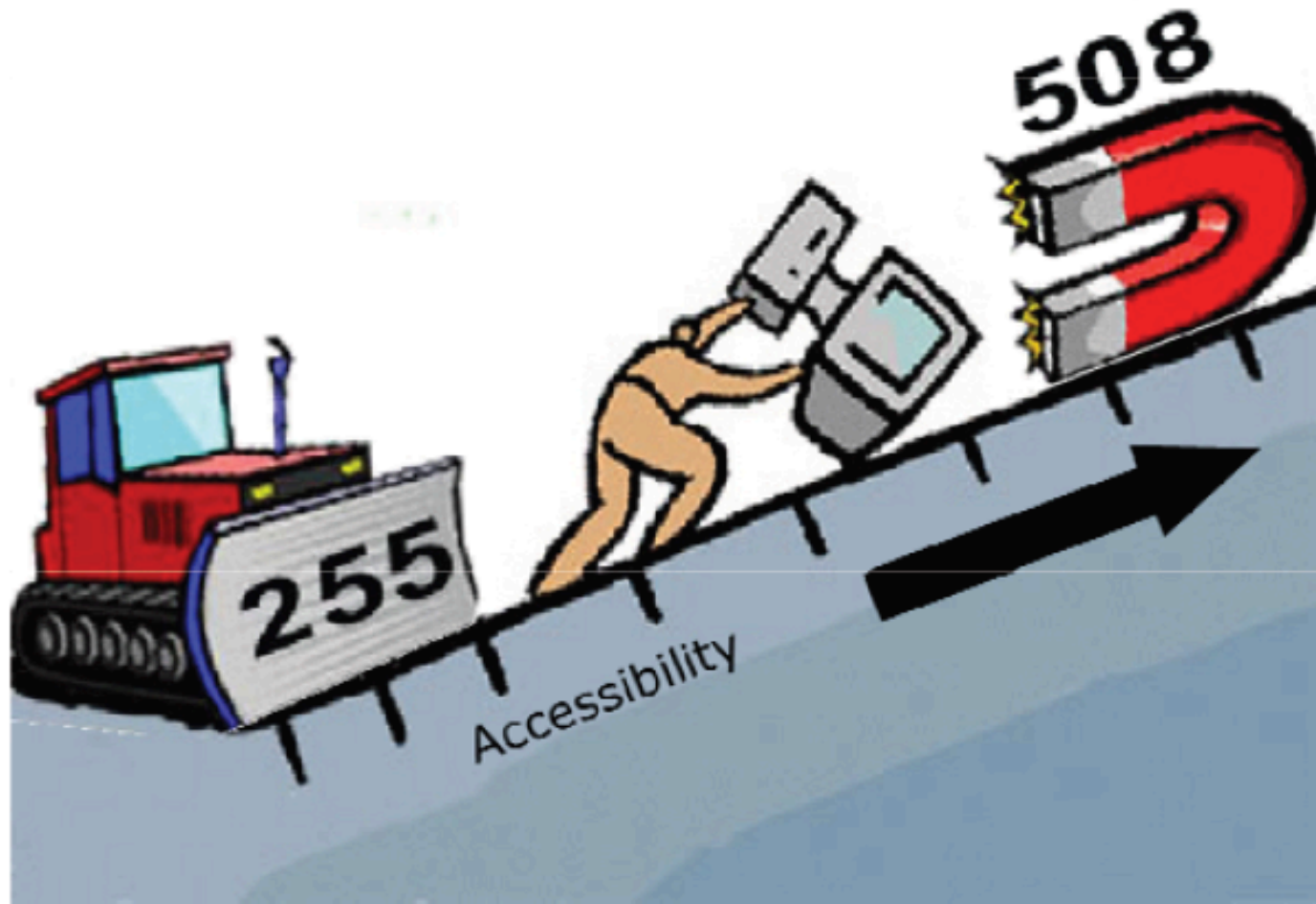
FIGURE 10. Classroom Layouts Classroom (a) is a typical undesirable room with no sound absorbing material and no useful reflection patterns. Classroom (b) is better with an acoustical lay-in, sound absorbing ceiling and thin carpeting. Classroom (c) is a desirable room with sound absorbing wall treatment on three walls, thin carpet, a sloped ceiling reflector at the front, and a ceiling with reflecting surfaces in the center and sound absorbing surfaces around the perimeter.

Section 508

Rehabilitation Act amended in 1998 to address accessible electronic & IT procurement of federal agencies

- Software applications and operating systems
- Web-based intranet and internet information and applications
- Telecommunications products
- Video and multimedia products
- Self contained, closed products
- Desktop and portable computers

Two Drivers of IT Accessibility



What I Do ...

- **Per GMS ... consult**
- **Resource: Advise & Research, Site Walk Thru**
- **Facilities Access Improvements**
- **Review SPED vehicles**
- **Things Connected**
- **Write Provisional Letter**
- **Write Completion Letter**
- **Collect & Take Lots of Pictures**

Further Information

- US Department of Justice ADA page: <http://www.ada.gov/>
- US Access Board: <http://www.access-board.gov/>
- ADA Facilities Checklists: <http://www.adachecklist.org/>
- US Department of Education Office for Civil Rights: <http://www2.ed.gov/about/offices/list/ocr/index.html>
- Section 508: <http://www.section508.gov>
- Web Content Accessibility Guidelines: <http://www.w3.org/TR/WCAG20/>
- FCC Accessibility Clearinghouse: <http://apps.fcc.gov/accessibilityclearinghouse/>
- Buy Accessible Product & Services Directory: <http://www.buyaccessible.gov/>
- Web Accessibility in Mind: <http://webaim.org/>

ADA Questions?

- Lilly Blase
- Lincoln ATP Office
- (531) 207-2426
- E-mail:
lilly.blase@nebraska.gov
- <https://atp.nebraska.gov>



SPED Answers :-)

- **Pete Biaggio**
- **NDE SPED Office**
- **(402) 471-4308**
- **E-mail:**
pete.biaggio@nebraska.gov

Special Thanks for this Information to
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Education*, by Pearson Education, Inc.

