

The Americans with Disabilities Act (ADA) and Accommodations in the Laboratory

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Session Information



- **PAPER ID:** 2501722
- **PAPER TITLE:** Overview of the Federal regulations that require physical accessibility in labs & the *Building Blocks of Accessibility* that apply in lab settings
- **Final Paper Number:** CHAS 6
- **DIVISION:** Division of Chemical Health and Safety
- **SESSION:** Americans with Disabilities Act & Accommodations in the Laboratory
- **SESSION TIME:** 1:30 PM - 4:15 PM
- **DAY & TIME OF PRESENTATION:**
Monday, August, 22, 2016 from 1:35 PM - 1:55 PM

Today's Presenter



Jennifer Perry

Access Specialist

Northeast ADA Center

K. Lisa Yang and Hock E. Tan

*Institute on Employment and
Disability*

ILR School, Cornell University

800.949.4232

Direct: 732.449.3621

jl359@cornell.edu

www.northeastada.org

Northeast ADA Center



1-800-949-4232

Northeast ADA Center

...providing training, technical assistance, consultation, and materials on a broad range of topics related to disability in the United States.

www.northeastada.org
northeastada@cornell.edu

Disclaimer



Information, materials, and/or technical assistance are intended solely as informal guidance, and are neither a determination of your legal rights or responsibilities under the ADA, nor binding on any agency with enforcement responsibility under the ADA.

The Northeast ADA Center is authorized by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) to provide information, materials, and technical assistance to individuals and entities that are covered by the ADA. The contents of this presentation were developed under a grant from NIDILRR, grant number 90DP0071-01-00. NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.

Part I – Regulatory Overview

Key Federal Accessibility Laws

- The Architectural Barriers Act (ABA) -1968
- Section 504 of the Rehabilitation Act (504) -1973
- The Americans with Disabilities Act (ADA) -1990



5 Titles of the ADA



- Title I – Employment
- Title II – State & Local Government Entities
- Title III – Places of Public Accommodation
- Title IV – Telecommunications
- Title V – Miscellaneous Provisions

2010 ADA Standards for Accessible Design



Apply to:

- State/ local gov't facilities
- Places of public accommodation
- Commercial facilities



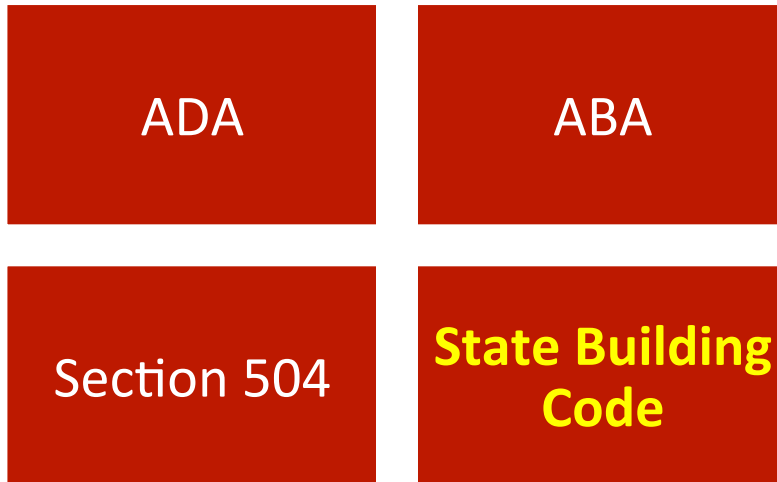
http://www.ada.gov/2010ADASTandards_index.htm

Federal facilities covered by ABA Standards

The Building Code



In addition to the previously mentioned Federal laws that impact accessibility, the state/local building code also typically applies accessibility requirements to the built environment.





Accessibility laws are often cumulative.



Note to Designers:

Building officials enforce the building code, while designers are responsible for meeting all applicable requirements.



Existing Facilities

Other mandates may require retrofits
(whether or not alterations are planned)



ADA:

- Barrier removal at places of public accommodation
- Program access by state/local governments

Rehabilitation Act (§504):

- Program access in federally funded programs

2010 ADA Standards for Accessible Design

Employee Work Area Requirements at Time of Construction

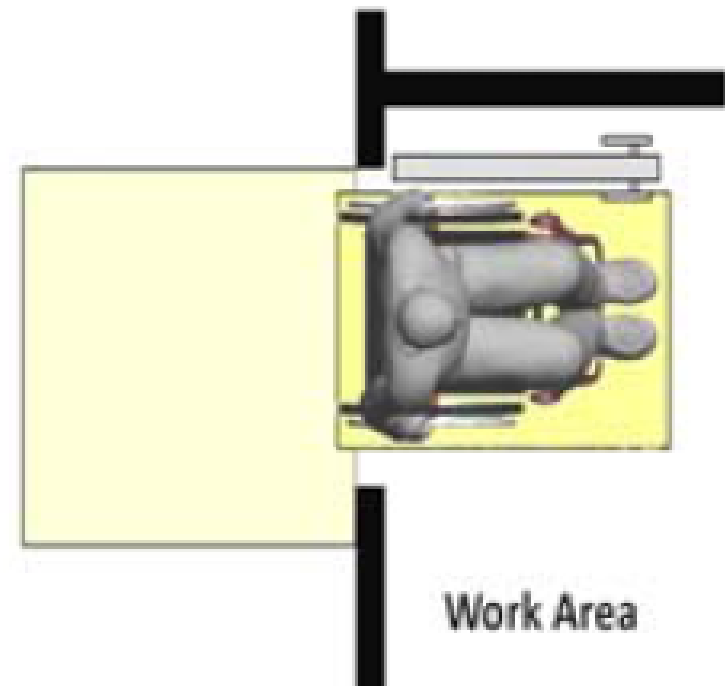


- Common Use Circulation Paths must meet requirements for an accessible route
- Wiring in place for future installation of visible appliances
- Accessible Means of Egress

Work Areas (ADA)

Access for “approach, entry, & exit

- Door man. clearance (exterior)
- Compliant door (clear width, hardware, opening force, etc.)
- Clear floor space
- Recommended:
- Interior door man. clearance
- Turning space



Employee Work Areas

- Controls and fixtures used by staff - exempt



ADA & Sinks



Public/ Common Use: full access to 5%

- Classrooms
- Research laboratory
(if used for instruction)
- Break room*
- Preschool classroom*

Work Areas: access not required (recommended)

- Commercial laboratory
- Research laboratory
(employee use only)
- Restaurant kitchen
- Janitor's sink *(exempt)*

* side approach access allowed

**It's not just about physical
accessibility during design and
construction...don't forget about
Title I of the ADA...**



- Anti-discrimination law enforced by EEOC
- Remove barriers to equal employment opportunities
- Reasonable Accommodations

What is Reasonable Accommodation?



Any **change** in the **work environment** or in the way things are customarily done that enables an individual with a disability to ***enjoy equal employment opportunities***

-29 C.F.R. pt. 1630 app. § 1630.2(o) (1997)

Part II



A Quick Primer:

Accessibility “Building Blocks”

ADA Checklist



Produced by the New England ADA Center,
A Project of the Institute for Human Centered Design

<http://www.adachecklist.org/>



Elements of an Accessible Route

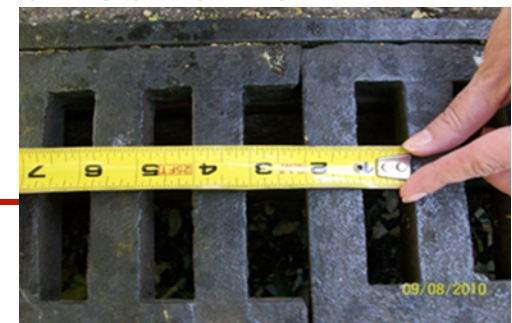


- 80 inches minimum clear head room
- 36 inches clear width (32 inches at accessible doors)
- Passing space at least 5 ft. minimum X 5 ft. minimum provided at reasonable intervals, if less than 60 inches of clear width is provided along an accessible route.
- Firm, stable, slip resistant surfaces
- Slope may not exceed 5% (1:20) for walking surfaces; cross slope may not exceed 1:48 (2%).

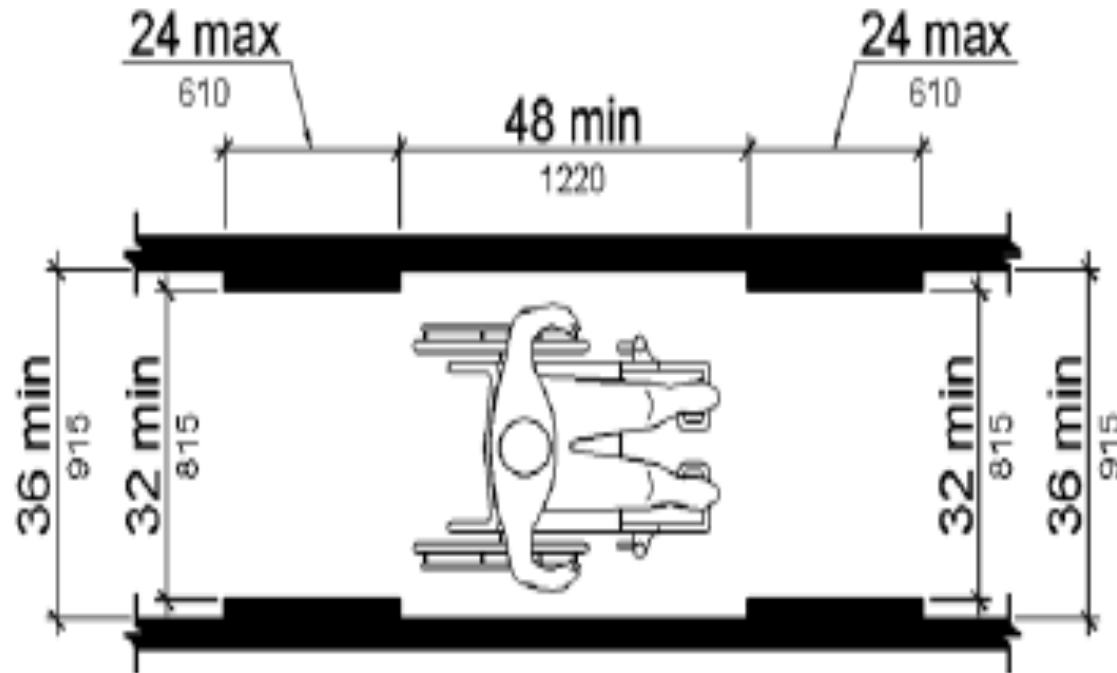
Accessible Route Elements Continued-



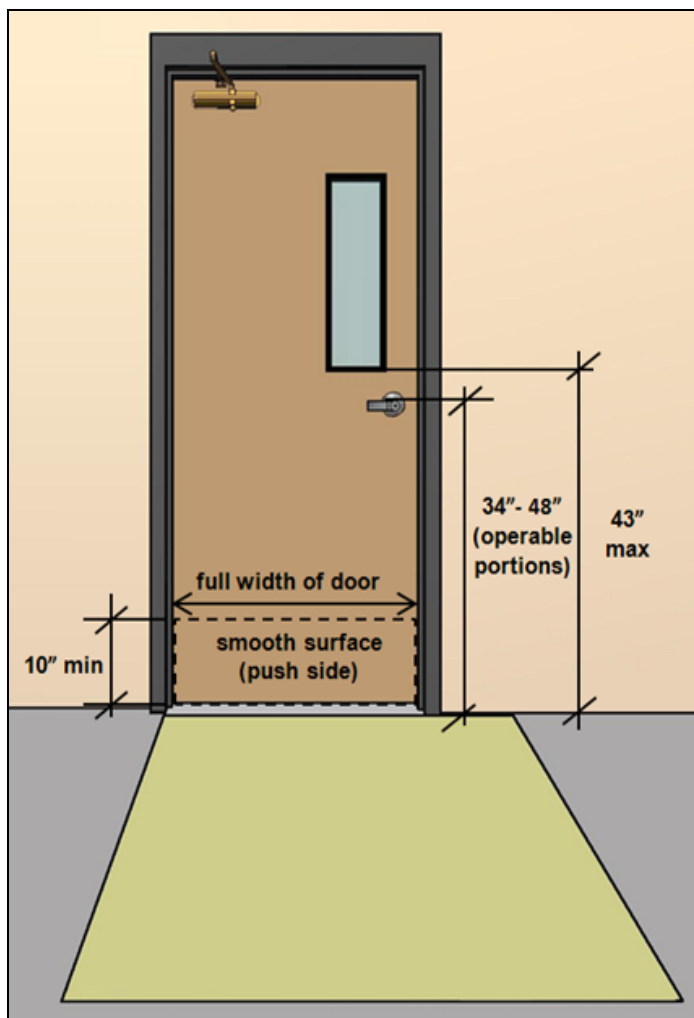
- Changes in level between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch must be beveled with a slope no greater than 1:2.
- Carpeting shall be securely attached, maximum pile thickness of $\frac{1}{2}$ inch, exposed edges attached to ground
- Gratings – shall have spaces no greater than $\frac{1}{2}$ inch wide in one direction. Gratings shall be placed so that the long dimension is perpendicular to the prominent direction of travel



Allowance for Reducing Accessible Route Clear Width for Walking Surfaces

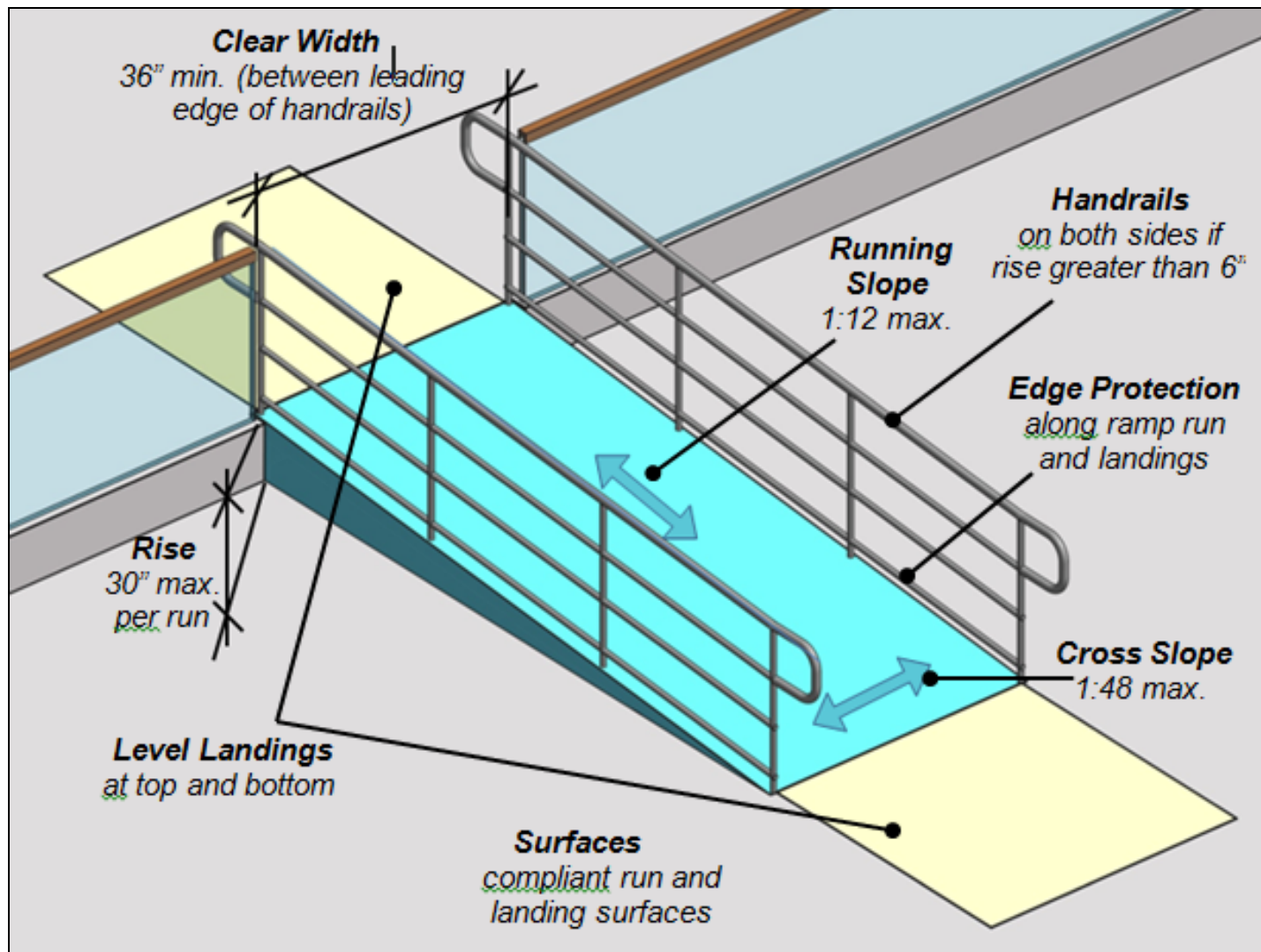


Accessible Door “Basics”



- Clear Width (32" min.)
- Opening Force (5 lbf max)
- Vision/ Side Lights
- Compliant Hardware
- Smooth Surface (bottom, push side)
- Thresholds (1/2" max)
- Maneuvering Clearance

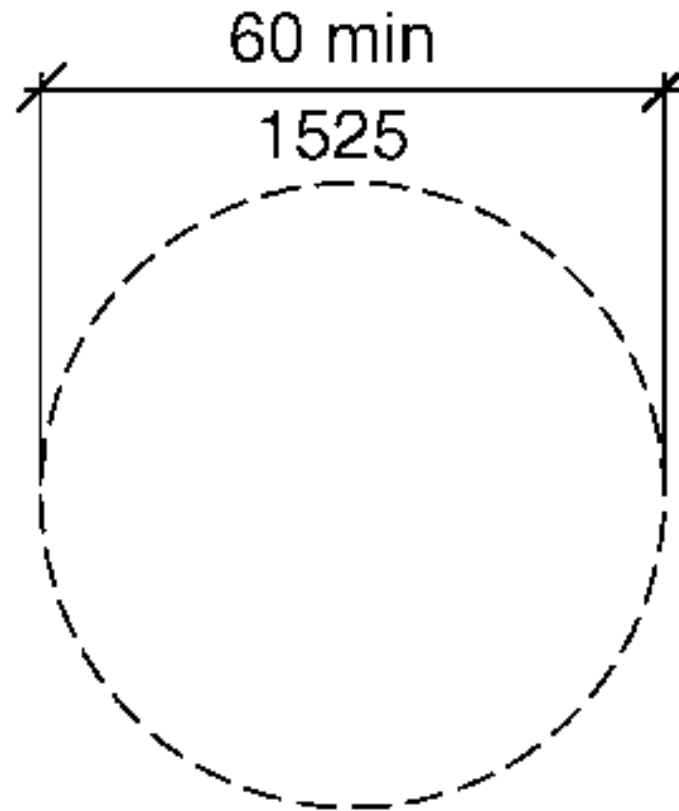
Ramp Requirements



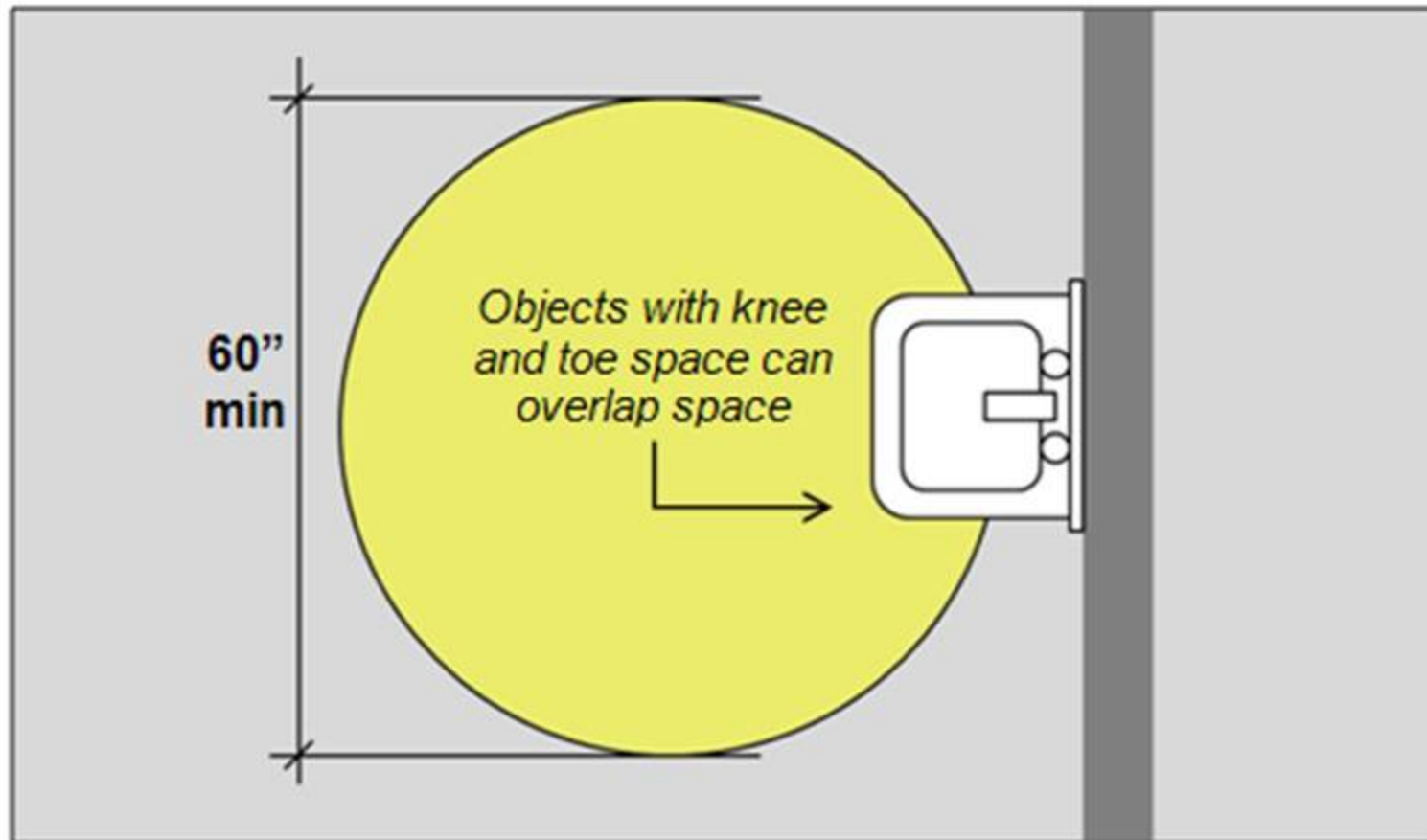
*304.3.1 Circular Wheelchair Turning Space



*Citations throughout this presentation are from the 2010 ADA Standards.



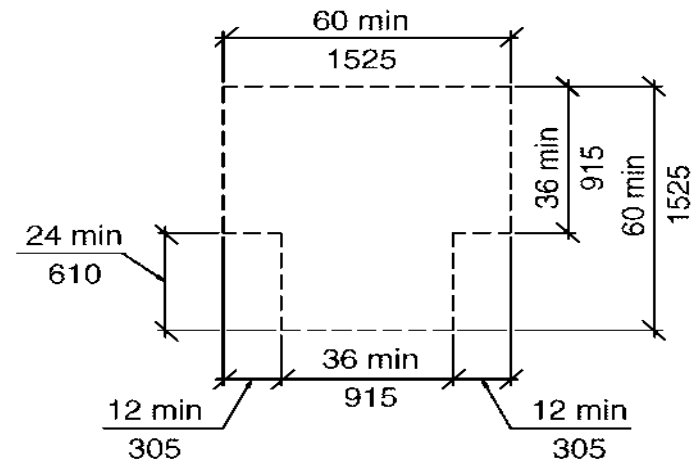
Turning Space



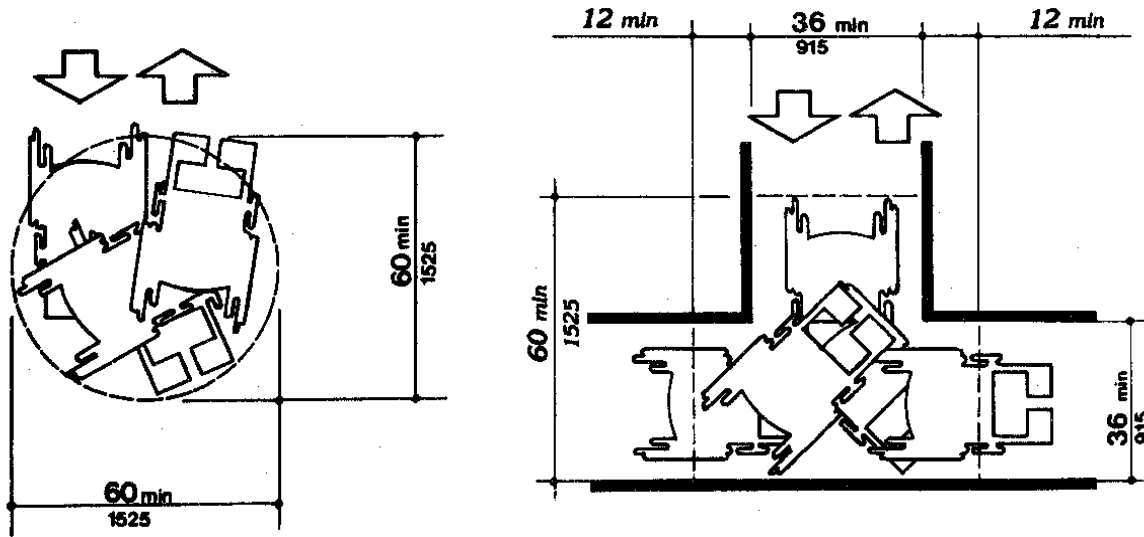
304.3.2 T-shaped Wheelchair Turning Space



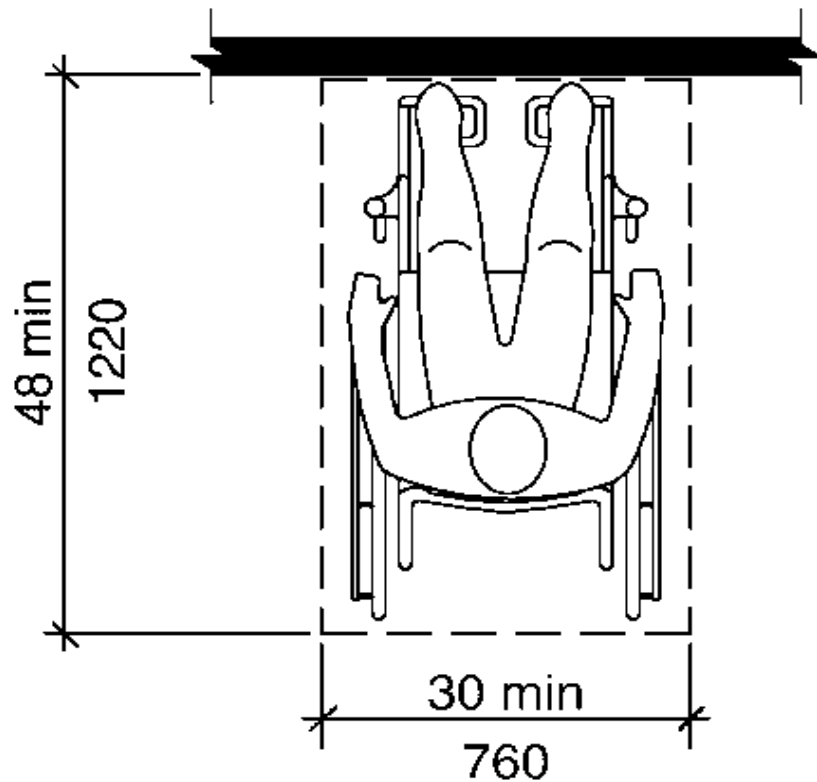
- **Common Error –**
- The 5 ft. turning diameter is not the only option for providing a wheelchair turning space. T-shaped spaces are also permitted.



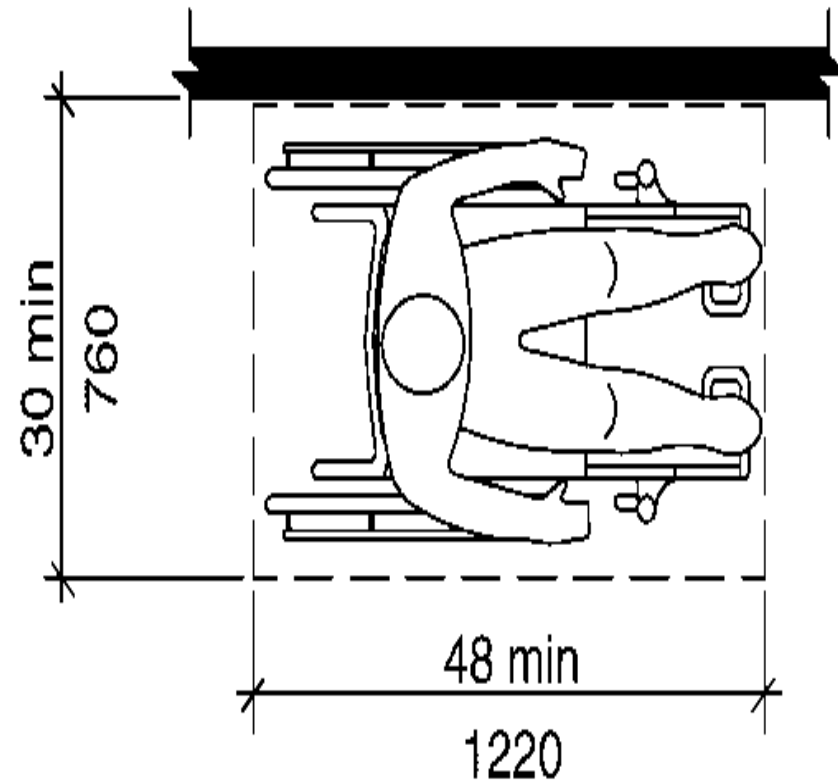
304.3 Wheelchair Turning Space



305.5(a) Forward Clear Floor or Ground Space

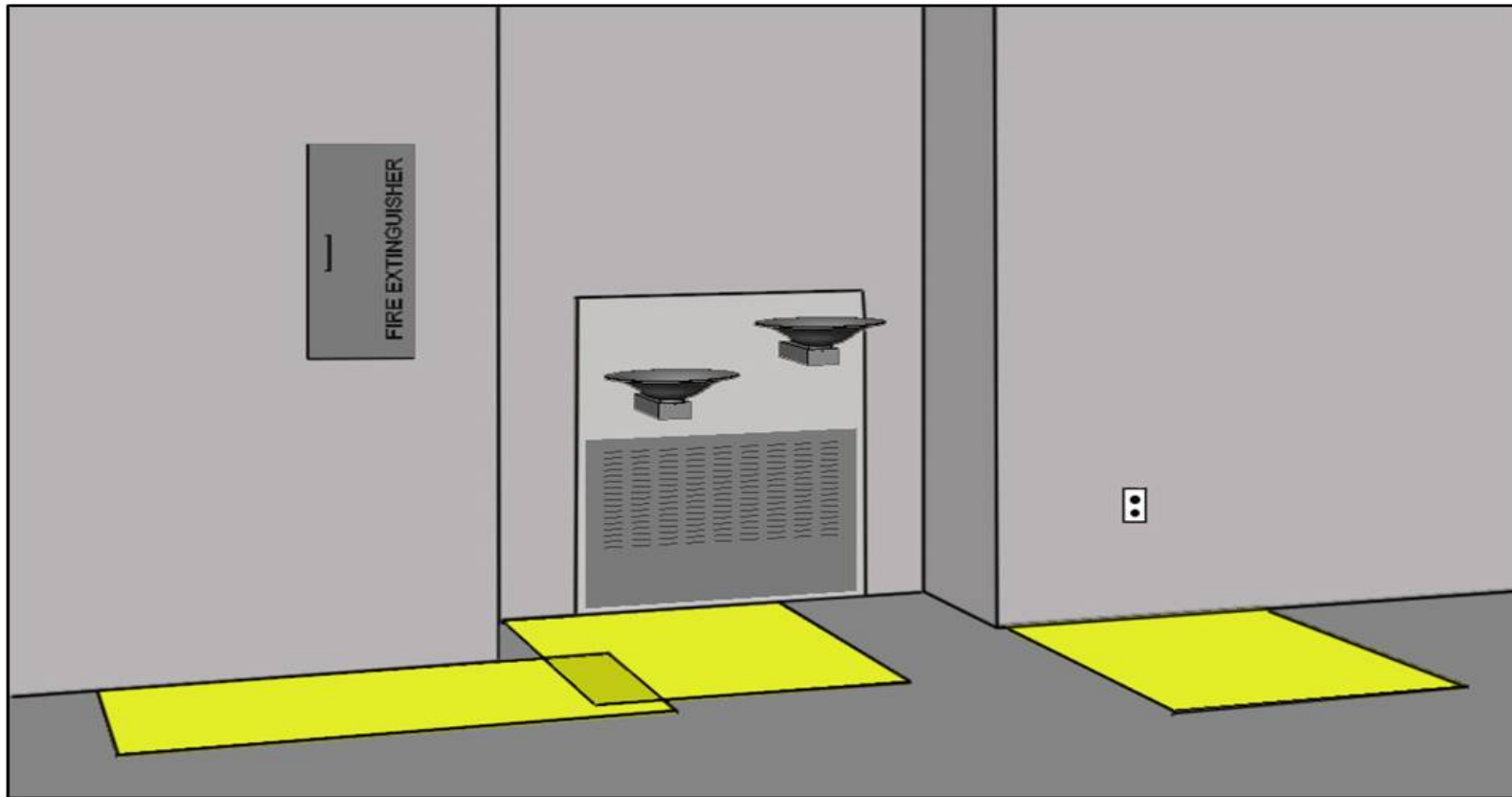


305.5(b) Parallel Clear Floor or Ground Space





Clear Floor Space at Elements



Clear Floor Space (305)

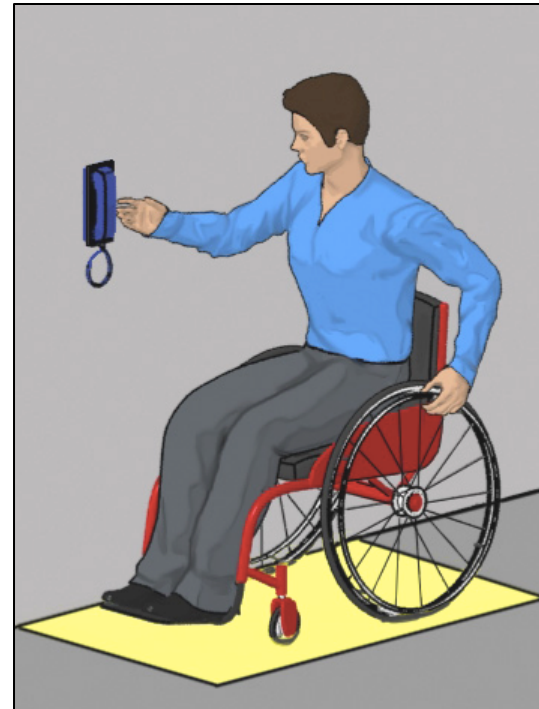
Forward Approach



Required at:

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

Side Approach

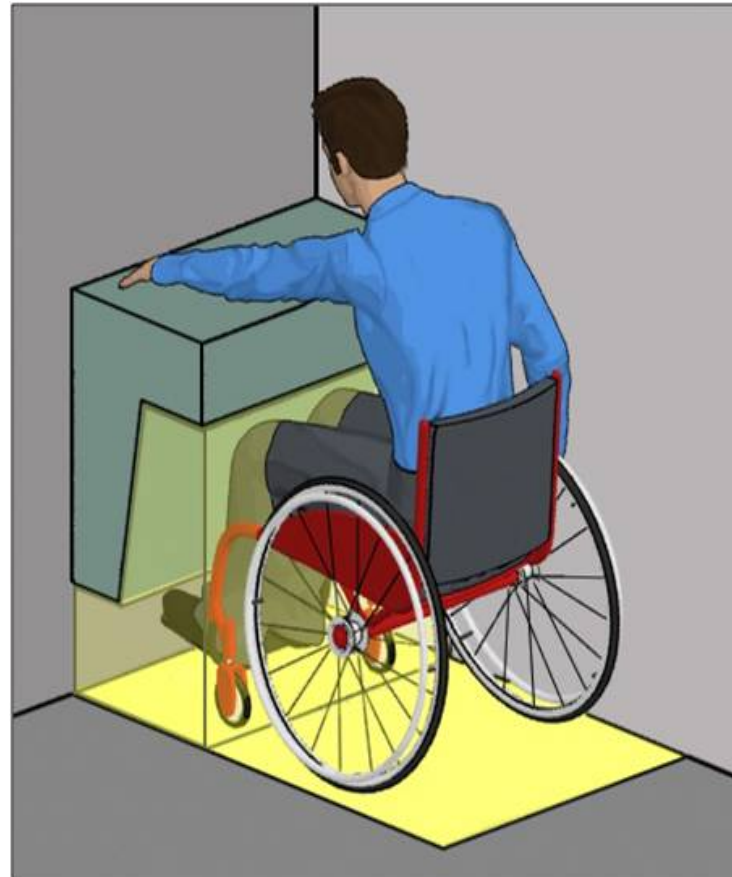


Allowed at other elements (including sales/service counters), specified for: beds & most appliances

Toe Clearance

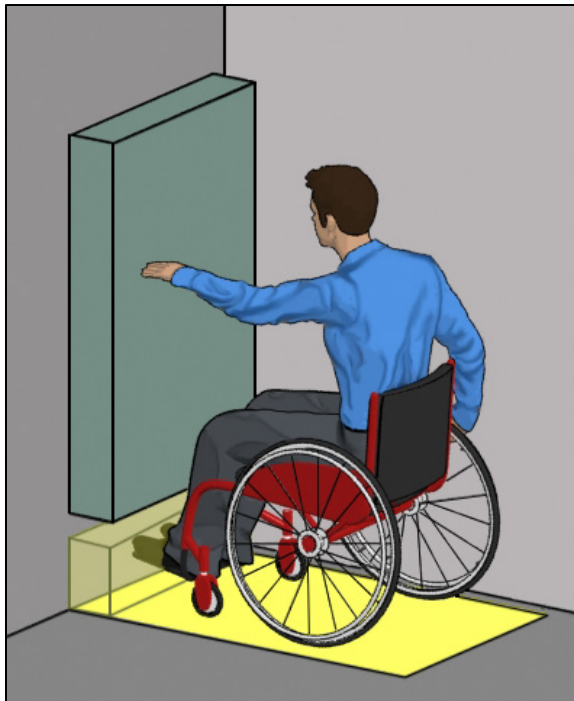


Knee Clearance

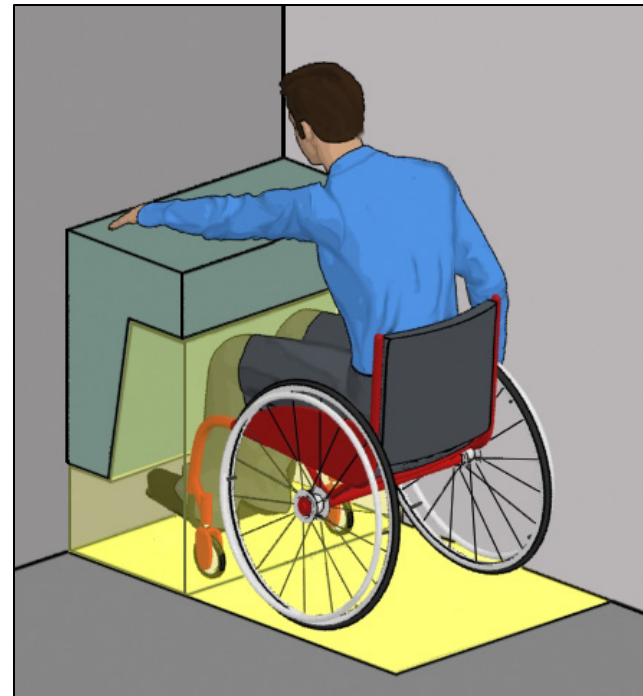


Clear Floor Space (306)

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



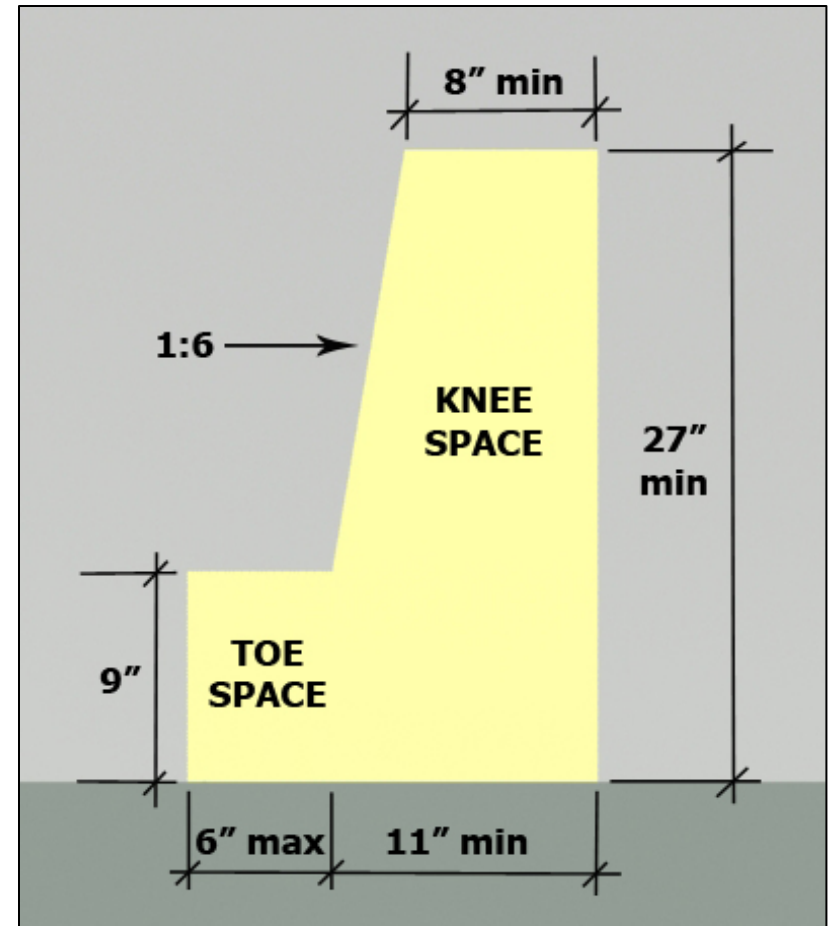
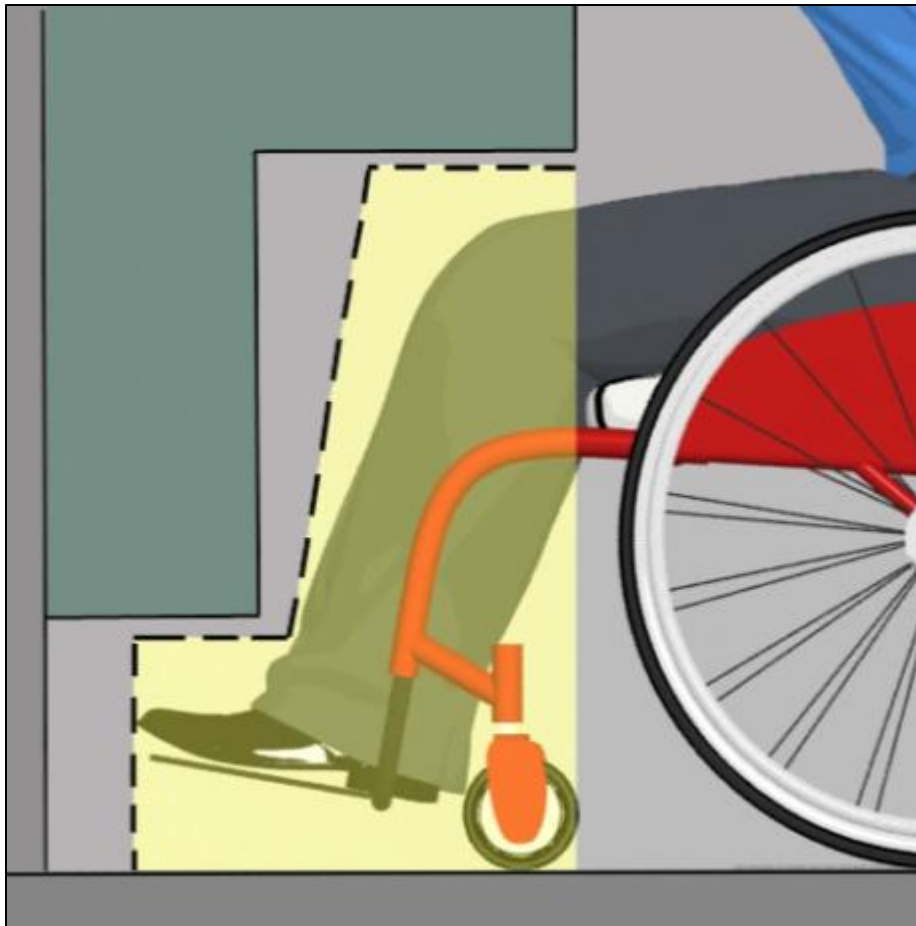
**Toe space (9" high min.):
Max. depth 6"**



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

Knee & Toe Space (306)

Knee and Toe Clearances



Accessible Work Surfaces

5% Scoping



- Clear floor space for forward approach with knee/toe clearance.
- The tops of dining surfaces and work surfaces shall be 28 inches minimum and 34 inches maximum aff.
- **902.4 contains requirements for children's use**



Accessible Work Bench



***Credit:** Designing Beyond the ADA - Creating an Accessible Research Laboratory for Students and Scientists with Physical Disabilities- RESNA ANNUAL CONFERENCE – 2013*



Accessible tables above



Pedestal style legs typically do not provide adequate knee clearance



Computer tables that do not provide sufficient knee clearance underneath desk (25 inches high) and computer tower/racking system interferes with required 30 inches of width.

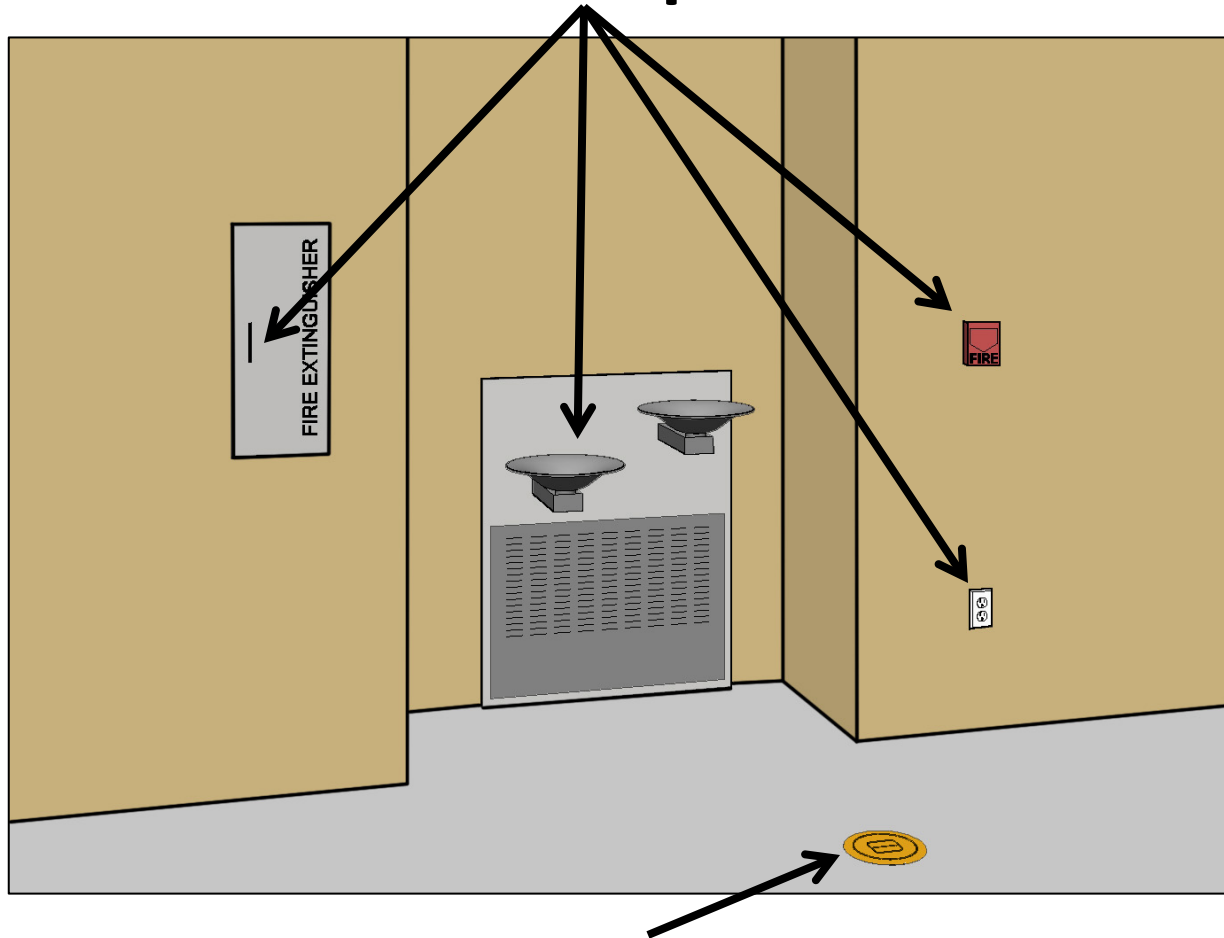
Lab Sink



Credit: Designing Beyond the ADA - Creating an Accessible Research Laboratory for Students and Scientists with Physical Disabilities- RESNA ANNUAL CONFERENCE – 2013-

Operable Parts (205)

Examples



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

Operable Parts (309)

- Operability
- Reach range
- Clear floor space



Reach Ranges (308)

**Unobstructed Side Reach
Range Reduced:**

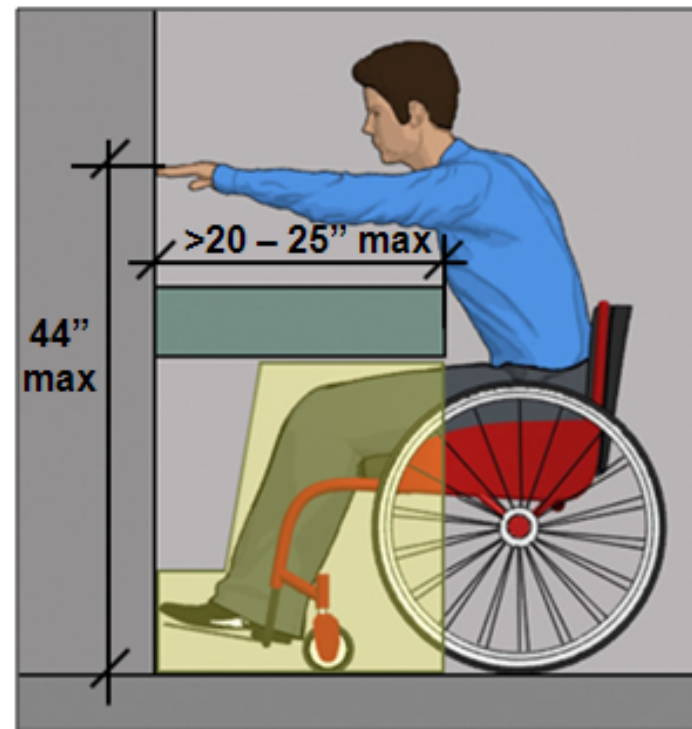
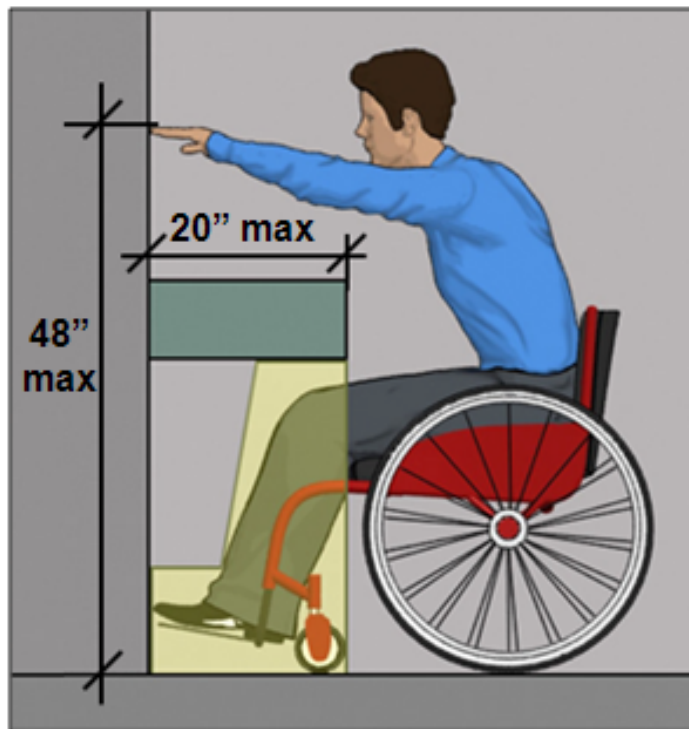
48" – 15"

(same as forward reach)



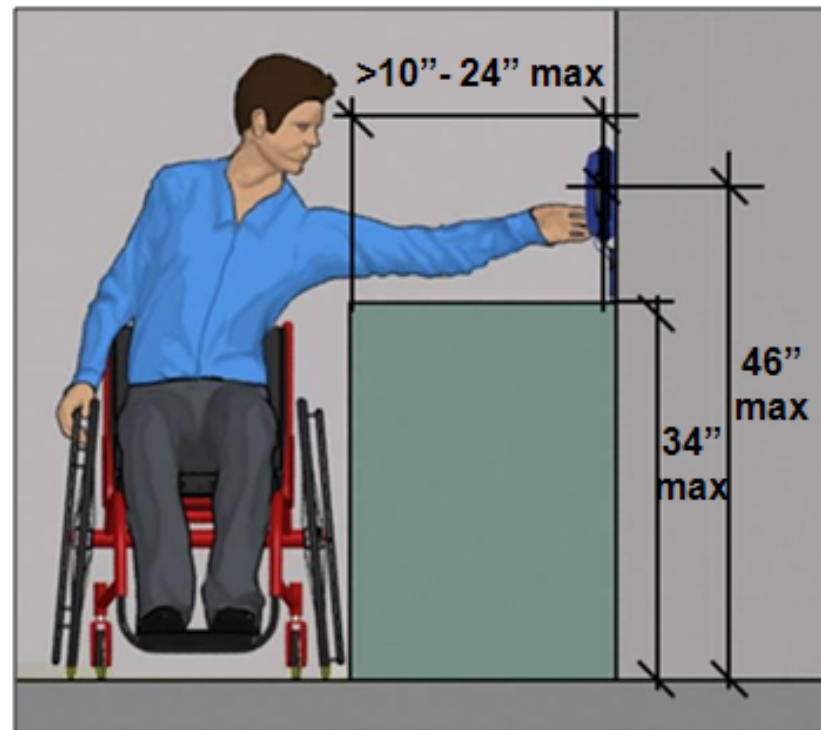
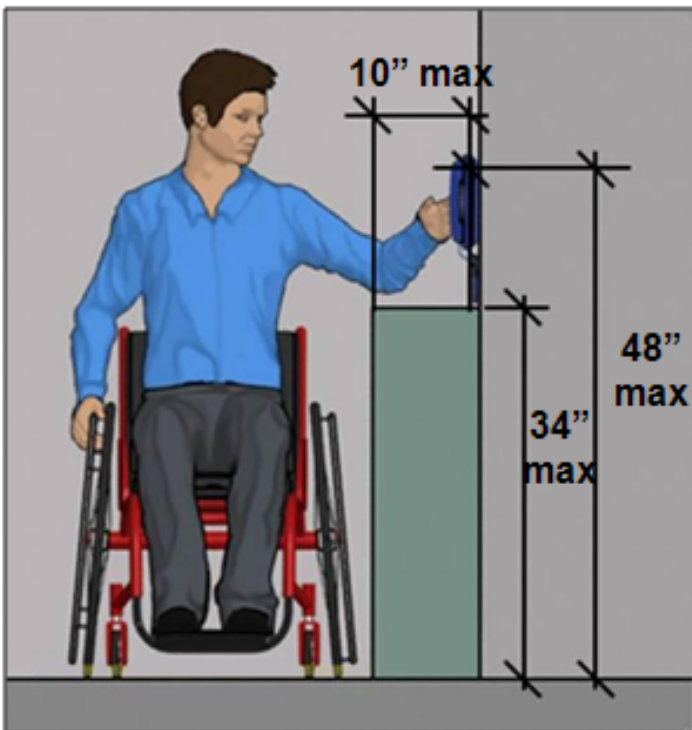
Reach Range (308)

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



Reach Range

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



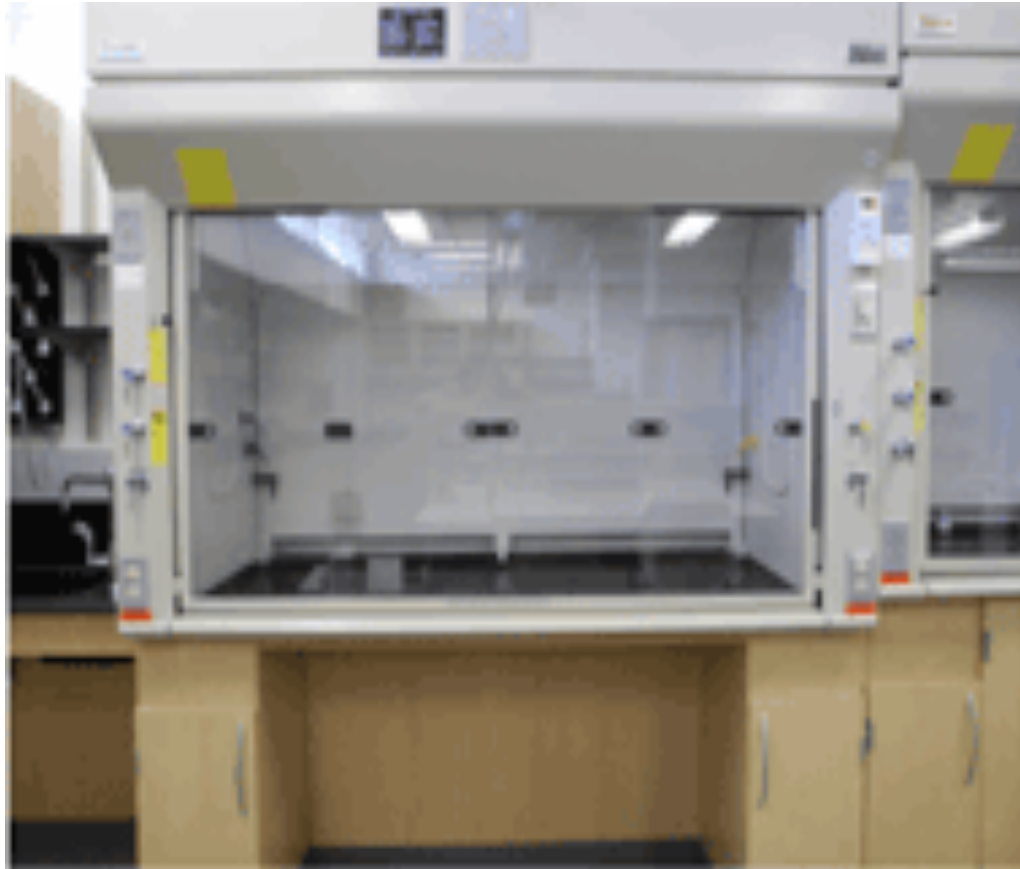


Eyewash Station



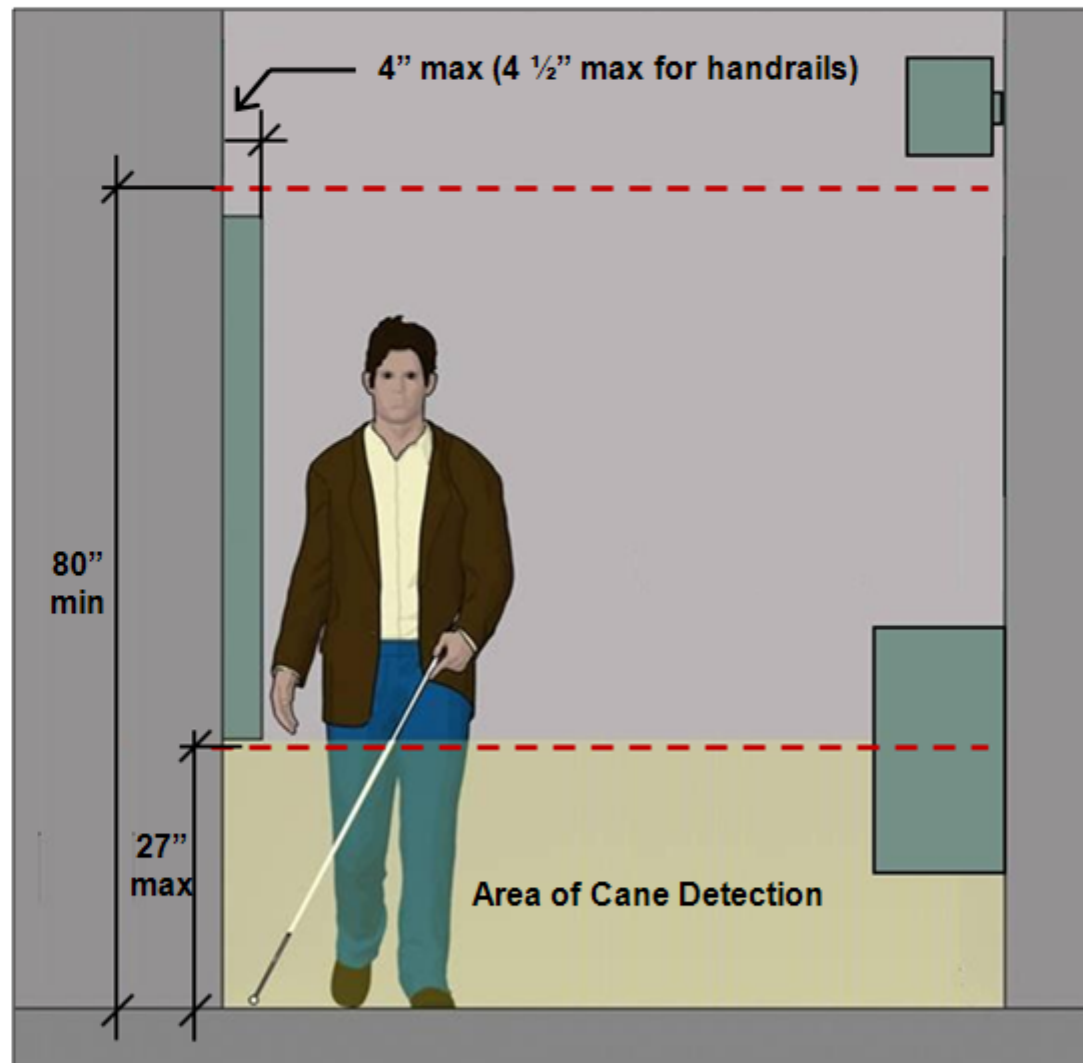
*Credit: Designing Beyond
the ADA - Creating an
Accessible Research
Laboratory for Students
and Scientists with
Physical Disabilities-
RESNA ANNUAL*

CONFERENCE – 2013



Credit: Designing Beyond the ADA - Creating an Accessible Research Laboratory for Students and Scientists with Physical Disabilities- RESNA ANNUAL CONFERENCE – 2013

Protruding Objects (307)



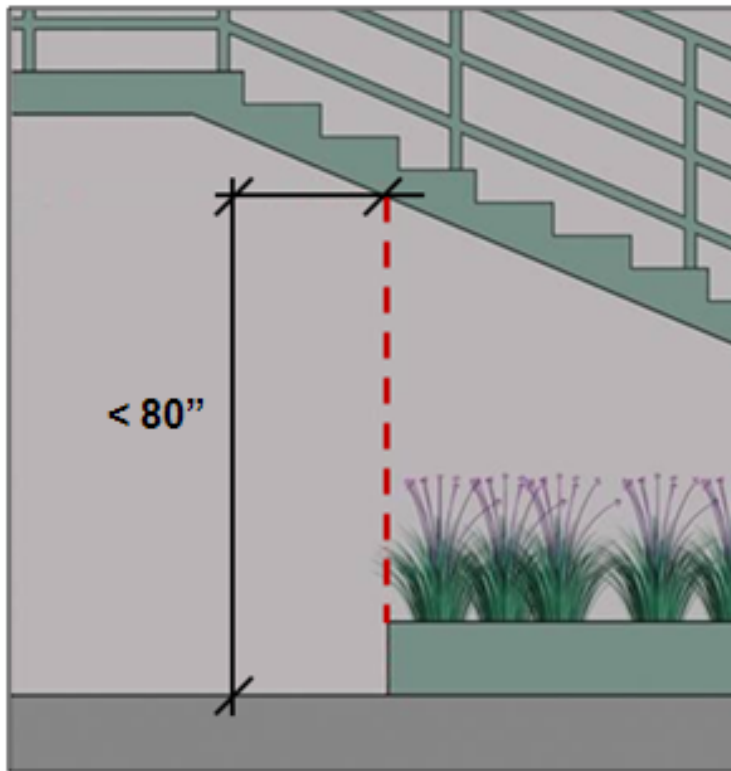




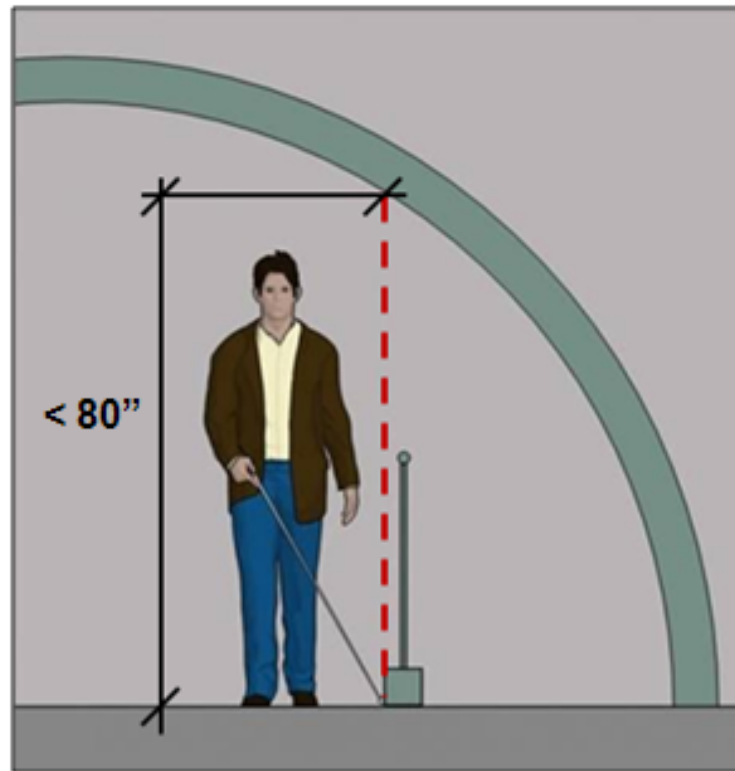
Protruding Objects

Protruding Objects

Barriers at circulation areas with reduced vertical clearance



Reduced Clearance
Below Stairway



Clearance Reduced at
Curved (or Sloped Walls)

Resources:



- Designing Beyond the ADA - Creating an Accessible Research Laboratory for Students and Scientists with Physical Disabilities- RESNA ANNUAL CONFERENCE – 2013
- <https://www.resna.org/sites/default/files/legacy/conference/proceedings/2013/JEA/Hilliard.html>
- U.S. Access Board – www.access-board.gov
- U.S. Dept. of Justice – www.ada.gov

Northeast ADA Center

K. Lisa Yang and Hock E. Tan

Institute on Employment and Disability

School of Industrial and Labor Relations

Cornell University

201 Dolgen Hall

Ithaca, NY 14853

800.949.4232 in NY, NJ, PR and the U.S. VI

607.255.6686

northeastada@cornell.edu

www.northeastada.org

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