

# Accessibility: Design and Disconnects

Course Number SA315

Saturday, June 23, 2018 12:00-1:00PM

Learning Units 1.0

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Questions related to specific products and services may be addressed at the conclusion of this presentation.

# Acknowledgements/Credits

Special thanks to Richard Zellmer AIA CASp of Sutter Health for photos.

# Speakers List

Michael D. Chambers FAIA FCSI CCS

HGA Architects & Engineers, San Francisco, CA

# Course / Learning Objectives

- Apply principles of Universal Design to accessible design.
- Review accessibility priority systems from DOJ and others
- Examine the primary reasons why accessible designs fail in the field
- Review examples of field failures and design disconnects despite correct drawings.

# Program Outline

A quick review of Universal Design

Code changes

Drawing issues



# UNIVERSAL DESIGN



# Universal Design

© 1997 North Carolina State University, The Center for Universal Design



***Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.***

*– Ron Mace FAIA*

# Universal Design Principles

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size and Space for Approach and Use

# Who is the focus of applying Universal Design principles?

- Older adults
- Persons with some type of disability
  - Physical
  - Visual
  - Cognitive
- Sometimes, children

# Mace's Hierarchy of Interaction

- Designs requiring the least amount of interaction are the most universally usable

# Hierarchy of Interaction Example: Doors

- For a door, the hierarchy of interaction is:
  - No door; just an opening in a wall
  - An “air door”; an opening in a wall where heat or air conditioning stops
  - A powered door with a motion detector
  - A powered door with a pressure sensor mat

# Hierarchy of Interaction Example: Doors

- For a door, the hierarchy of interaction is:
  - A powered door with a remote button that must be pressed to open the door
  - A non-powered door with no latch, which swings open when pushed
  - A door with a lever door handle
  - A door with a doorknob

# Hierarchy of Interaction Example: Doors

- For a door, the hierarchy of interaction is:
  - A door with an automatic closing mechanism and no latch
  - A door with an automatic closing mechanism and a lever door handle
  - A door with an automatic closing mechanism and a doorknob
  - A revolving door

**“The important thing for people to understand is the concept of universal design is about ability, not disability”**

Adrienne C. Hamilton

HANDBOOKS  
McGraw-Hill

# UNIVERSAL DESIGN HANDBOOK



CD-ROM INCLUDED

Foreword by Robert Ivy, FAIA, Editor in Chief, *Architectural Record*  
**WOLFGANG F. E. PREISER**, Editor in Chief  
**ELAINE OSTROFF**, Senior Editor

# UNIVERSAL DESIGN HANDBOOK

SECOND EDITION

**WOLFGANG F. E. PREISER**, Editor-in-Chief  
**KORYDON H. SMITH**, Senior Editor

Foreword by Robert Ivy, FAIA, Vice President and Editorial Director,  
McGraw-Hill Construction Media, and Editor-in-Chief, *Architectural Record*

**Ecologically [sustainable] minded design  
has become second nature – and good  
business.**

**Why hasn't accessibility?**



## 2010 ADA Standards

# 2010 ADA Standards

- Effective March 15, 2012
- Construction and manufacturing tolerances
- Advisories & Figures – informational
- Text governs

**28 CFR  
Part 36  
Subpart D**

**+**

**2004  
ADAAG**

**=**

**2010 ADA  
Standards  
for  
Accessible  
Design**

<b>Chapter 1: Application and Administration</b> .....	37
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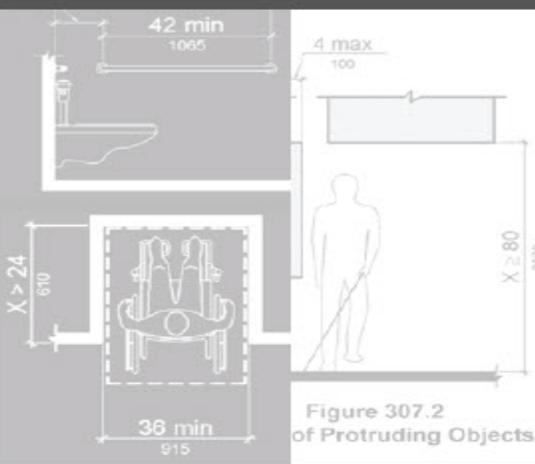


Figure 307.2  
of Protruding Objects

# 2010 ADA Standards for Accessible Design

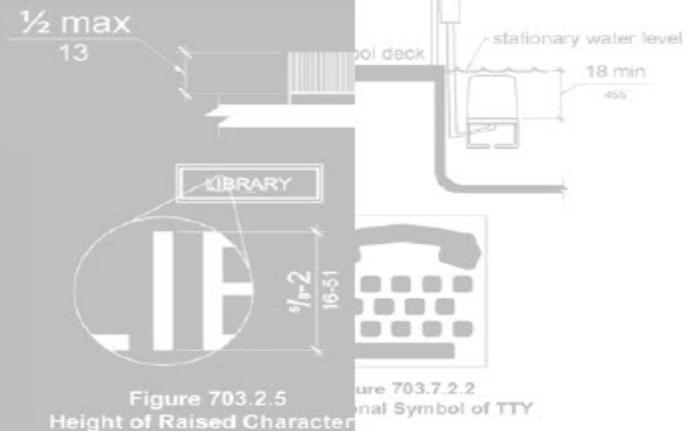


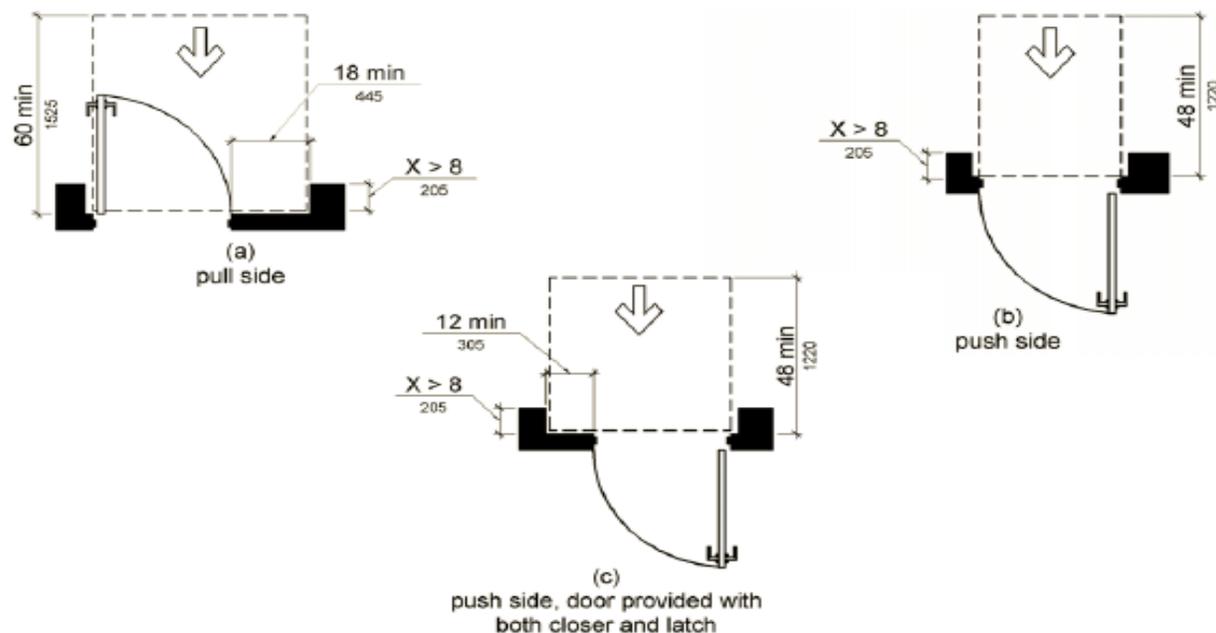
Figure 703.2.5  
Height of Raised Character

Figure 703.7.2.2  
Signal Symbol of TTY

Department of Justice  
September 15, 2010

**404.2.4.3 Recessed Doors and Gates.** Maneuvering clearances for forward approach shall be provided when any obstruction within 18 inches (455 mm) of the latch side of a doorway projects more than 8 inches (205 mm) beyond the face of the door, measured perpendicular to the face of the door or gate.

**Advisory 404.2.4.3 Recessed Doors and Gates.** A door can be recessed due to wall thickness or because of the placement of casework and other fixed elements adjacent to the doorway. This provision must be applied wherever doors are recessed.



**Figure 404.2.4.3**  
Maneuvering Clearances at Recessed Doors and Gates

**404.2.4.4 Floor or Ground Surface.** Floor or ground surface within required maneuvering clearances shall comply with 302. Changes in level are not permitted.

- EXCEPTIONS:**
1. Slopes not steeper than 1:48 shall be permitted.
  2. Changes in level at thresholds complying with 404.2.5 shall be permitted.

**404.2.5 Thresholds.** Thresholds, if provided at doorways, shall be ½ inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.

**EXCEPTION:** Existing or *altered* thresholds ¾ inch (19 mm) high maximum that have a beveled edge on each side with a slope not steeper than 1:2 shall not be required to comply with 404.2.5.

**307.4 Vertical Clearance.** Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground.

**EXCEPTION:** Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

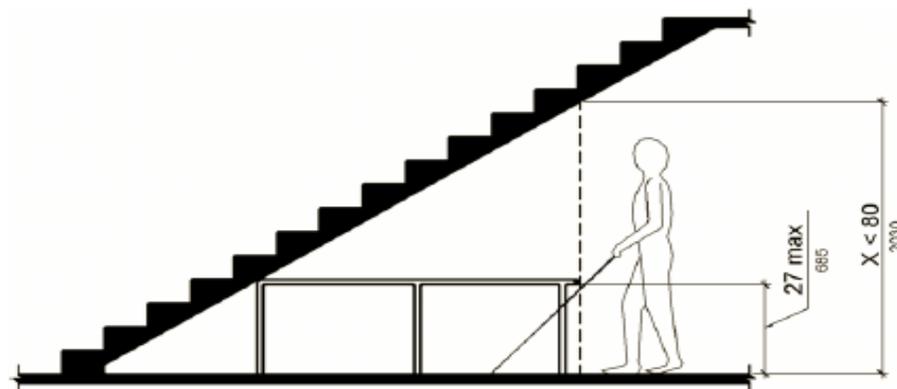


Figure 307.4  
Vertical Clearance

**307.5 Required Clear Width.** Protruding objects shall not reduce the clear width required for *accessible* routes.

### 308 Reach Ranges

**308.1 General.** Reach ranges shall comply with 308.

**Advisory 308.1 General.** The following table provides guidance on reach ranges for children according to age where building elements such as coat hooks, lockers, or operable parts are designed for use primarily by children. These dimensions apply to either forward or side reaches. Accessible elements and operable parts designed for adult use or children over age 12 can be located outside these ranges but must be within the adult reach ranges required by 308.

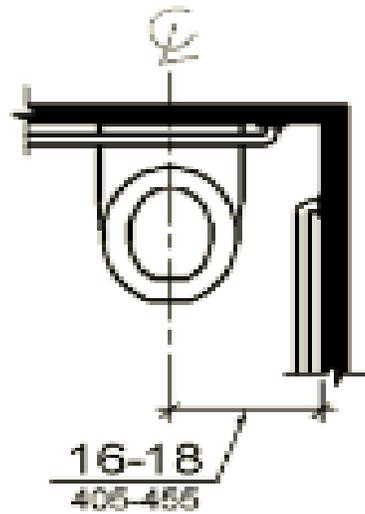
Children's Reach Ranges			
Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1120 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

# 2010 ADA Standards

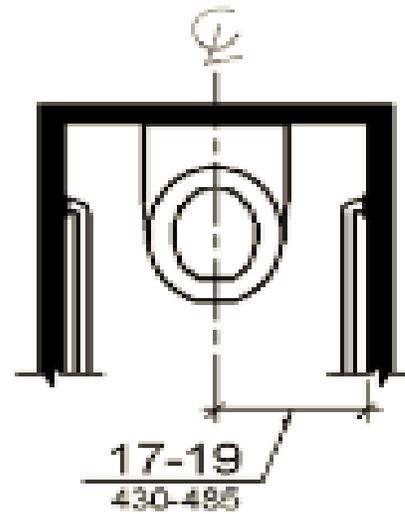
- New format is easier to use and matches ANSI A117.1.
  - (IBC Chapter 11)

# 2010 ADA Changes

- Construction Tolerances
  - Toilets 16-18 inches from wall to centerline
  - Wall signs 48-60" AFF
- Single reach range
  - 48 inches
- Signage Mounting Heights
  - Range not fixed



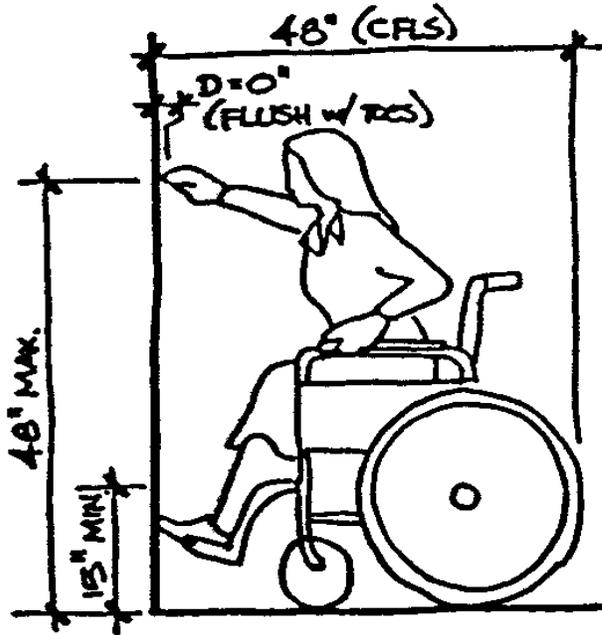
(a)  
wheelchair  
accessible  
water closets



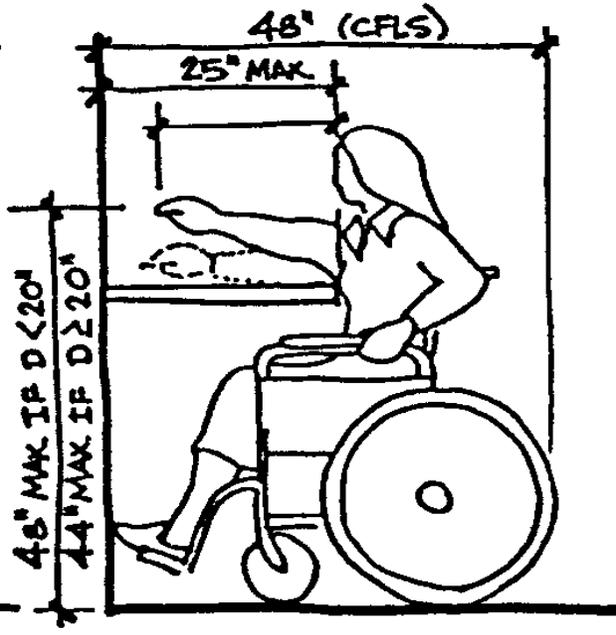
(b)  
ambulatory  
accessible water  
closets

**Figure 604.2**  
**Water Closet Location**

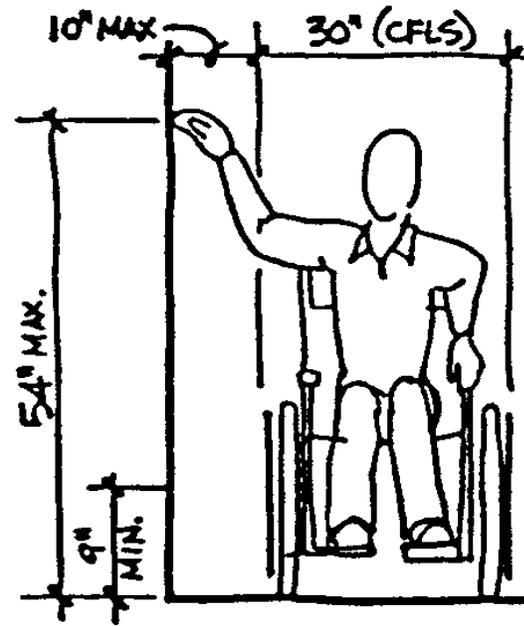
# REACH RANGE



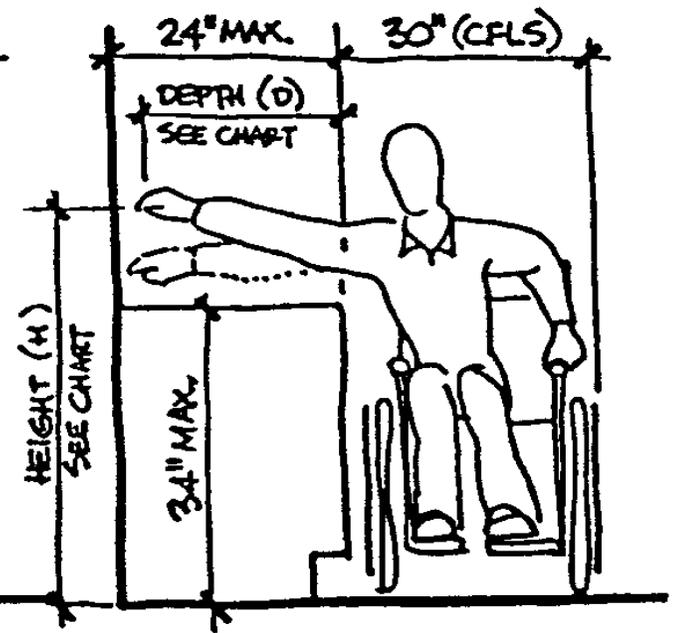
Forward Reach  
Unobstructed



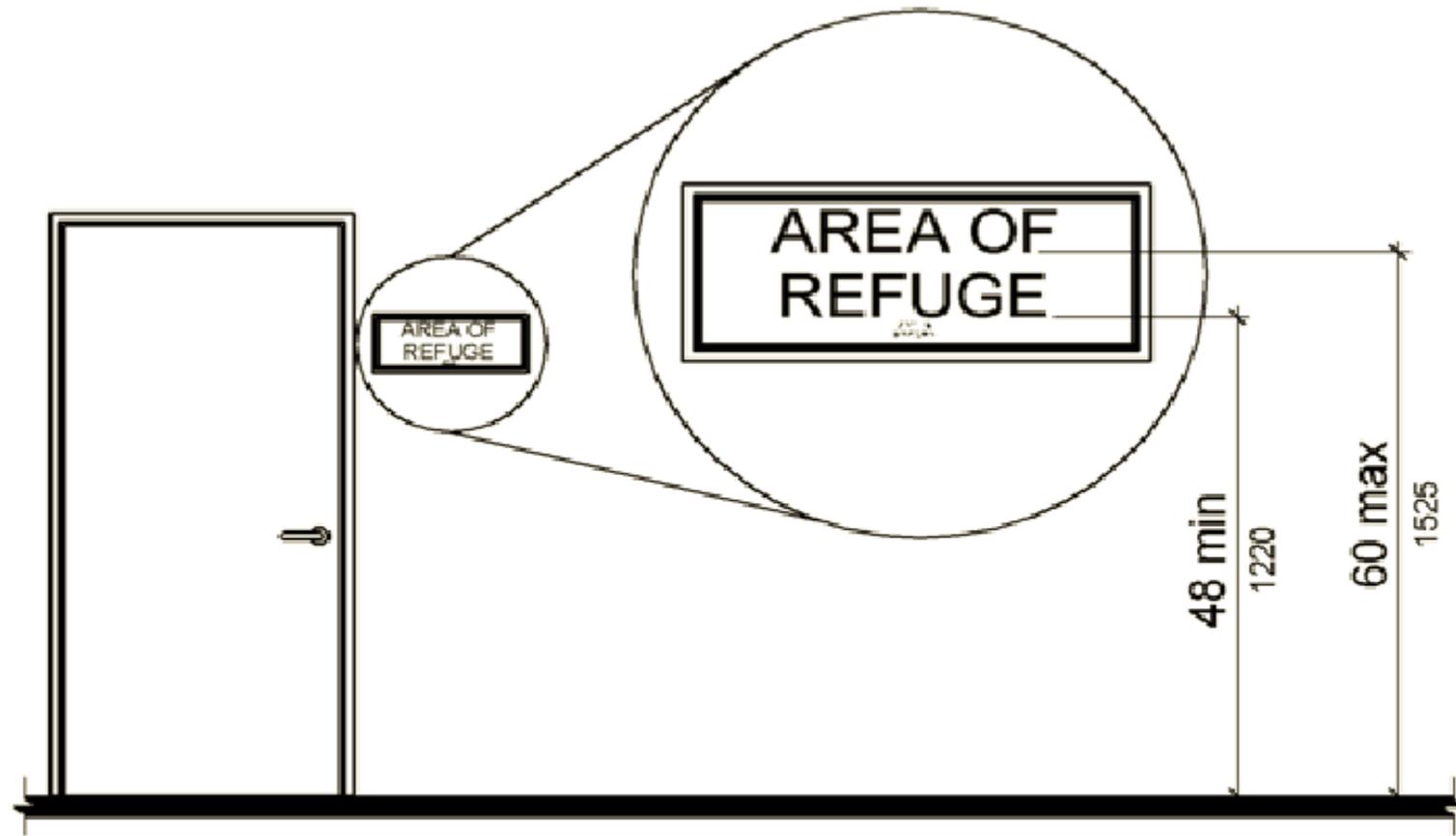
Forward Reach  
Over Obstruction



Side Reach  
Unobstructed



Side Reach  
Over Obstruction  
[See Chart for Limits]



**Figure 703.4.1**  
**Height of Tactile Characters Above Finish Floor or Ground**

# 2010 ADA Changes

- 104.1.1 Construction and Manufacturing Tolerances.
  - All dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points.

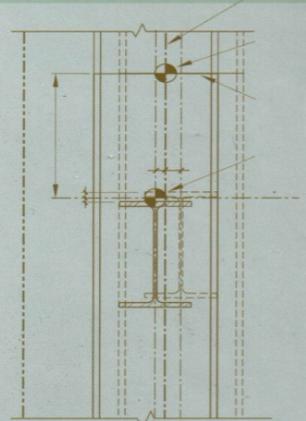
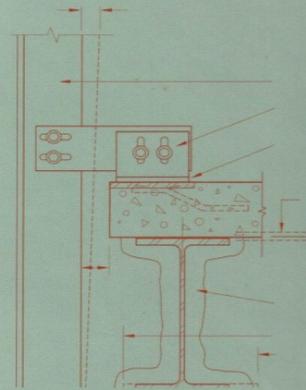
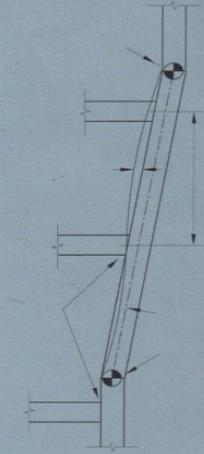
**Advisory 104.1.1 Construction and Manufacturing Tolerances.** Conventional industry tolerances recognized by this provision include those for field conditions and those that may be a necessary consequence of a particular manufacturing process. Recognized tolerances are not intended to apply to design work.

It is good practice when specifying dimensions to avoid specifying a tolerance where dimensions are absolute. For example, if this document requires "1½ inches," avoid specifying "1½ inches plus or minus X inches."

Where the requirement states a specified range, such as in Section 609.4 where grab bars must be installed between 33 inches and 36 inches above the floor, the range provides an adequate tolerance and therefore no tolerance outside of the range at either end point is permitted.

Where a requirement is a minimum or a maximum dimension that does not have two specific minimum and maximum end points, tolerances may apply. Where an element is to be installed at the minimum or maximum permitted dimension, such as "15 inches minimum" or "5 pounds maximum", it would not be good practice to specify "5 pounds (plus X pounds) or 15 inches (minus X inches)." Rather, it would be good practice to specify a dimension less than the required maximum (or more than the required minimum) by the amount of the expected field or manufacturing tolerance and not to state any tolerance in conjunction with the specified dimension.

Specifying dimensions in design in the manner described above will better ensure that facilities and elements accomplish the level of accessibility intended by these requirements. It will also more often produce an end result of strict and literal compliance with the stated requirements and eliminate enforcement difficulties and issues that might otherwise arise. Information on specific tolerances may be available from industry or trade organizations, code groups and building officials, and published references.



SECOND EDITION

# HANDBOOK OF Construction Tolerances

David Kent Ballast, AIA, CSI

# Construction Tolerances

- AIAU
  - 2014 AIA National Convention in Chicago.
  - [www.aiau.aia.org](http://www.aiau.aia.org)
- ADA Tolerances and Acceptable Measurements
  - David Ballast, William Heckler, Mark Mazz, & James Terry

Instructors

**David K. Ballast**

[View profile >](#)

**William F. Hecker**

[View profile >](#)

**Mark J. Mazz**

[View profile >](#)

**James L.E. Terry**

[View profile >](#)

**Course details**

**Contents**

Video, quiz, evaluation

**Expiration**

One year after purchase

**Duration**

1:30

# ADA Tolerances and Acceptable Measurements

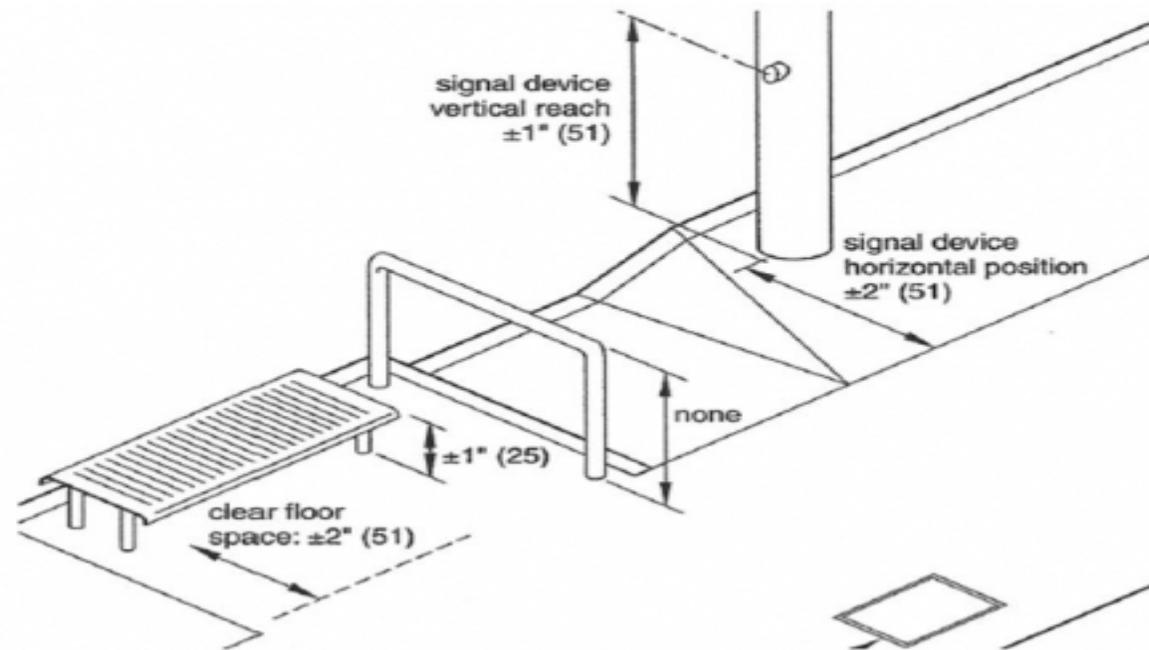
1.50 LUs

ADA

HSW

RIBA

User rating: ●●●●○



**Learn how to analyze and apply ADA and other accessibility tolerance language where it is different from building code tolerance language.**

# 2010 ADA Standards

- Some reach ranges have changed
- Dimensions for adults and children
- Doors may swing into the CLFS of some fixtures
- Toe clearance under toilet partitions
- Insulate hot and cold pipes under sink

# 2010 ADA Standards

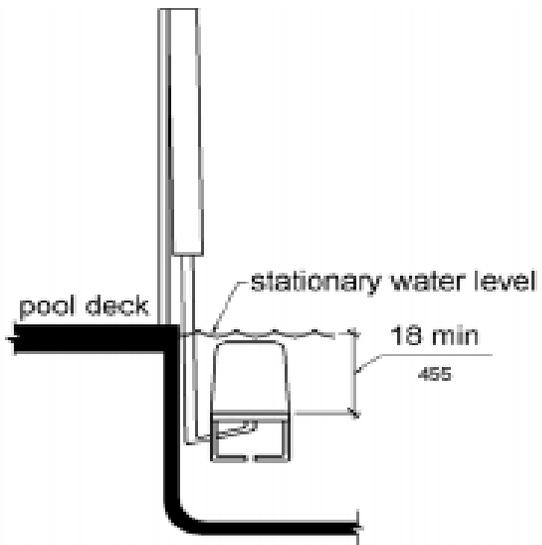
- Special Rooms, Spaces, and Elements
  - Auditorium seating (line of sight)
  - Prison cells
  - Courtrooms
  - Transportation Facilities
  - Recreation Facilities

# 2010 ADA Standards

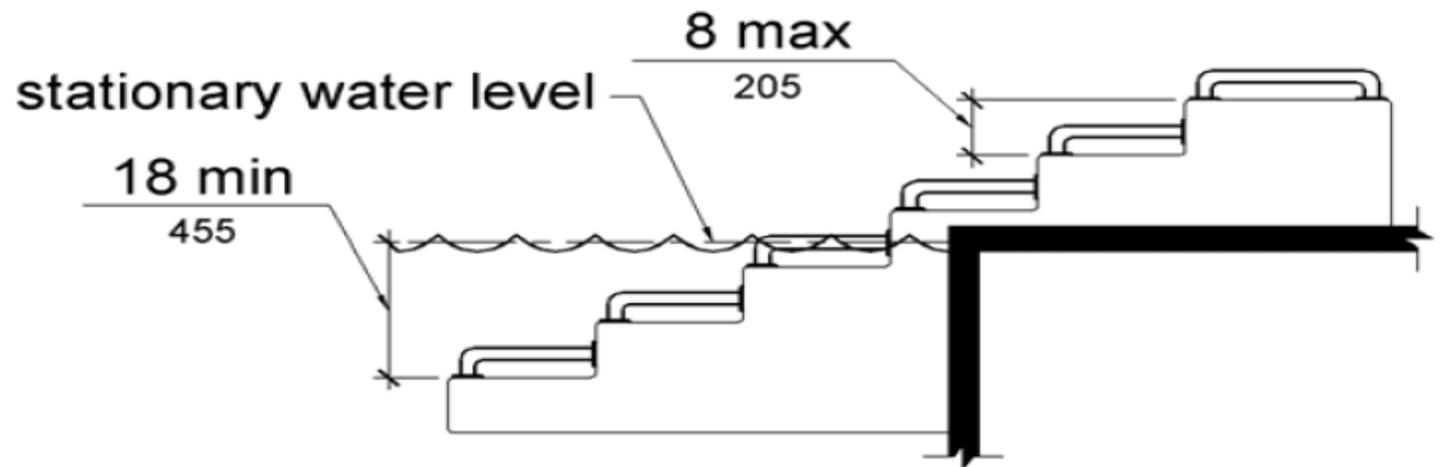
- Built-in Elements
  - Dining
  - Benches
  - Checkout aisles
  - Sales and Service counters
  - Food Service

# 2010 ADA Standards

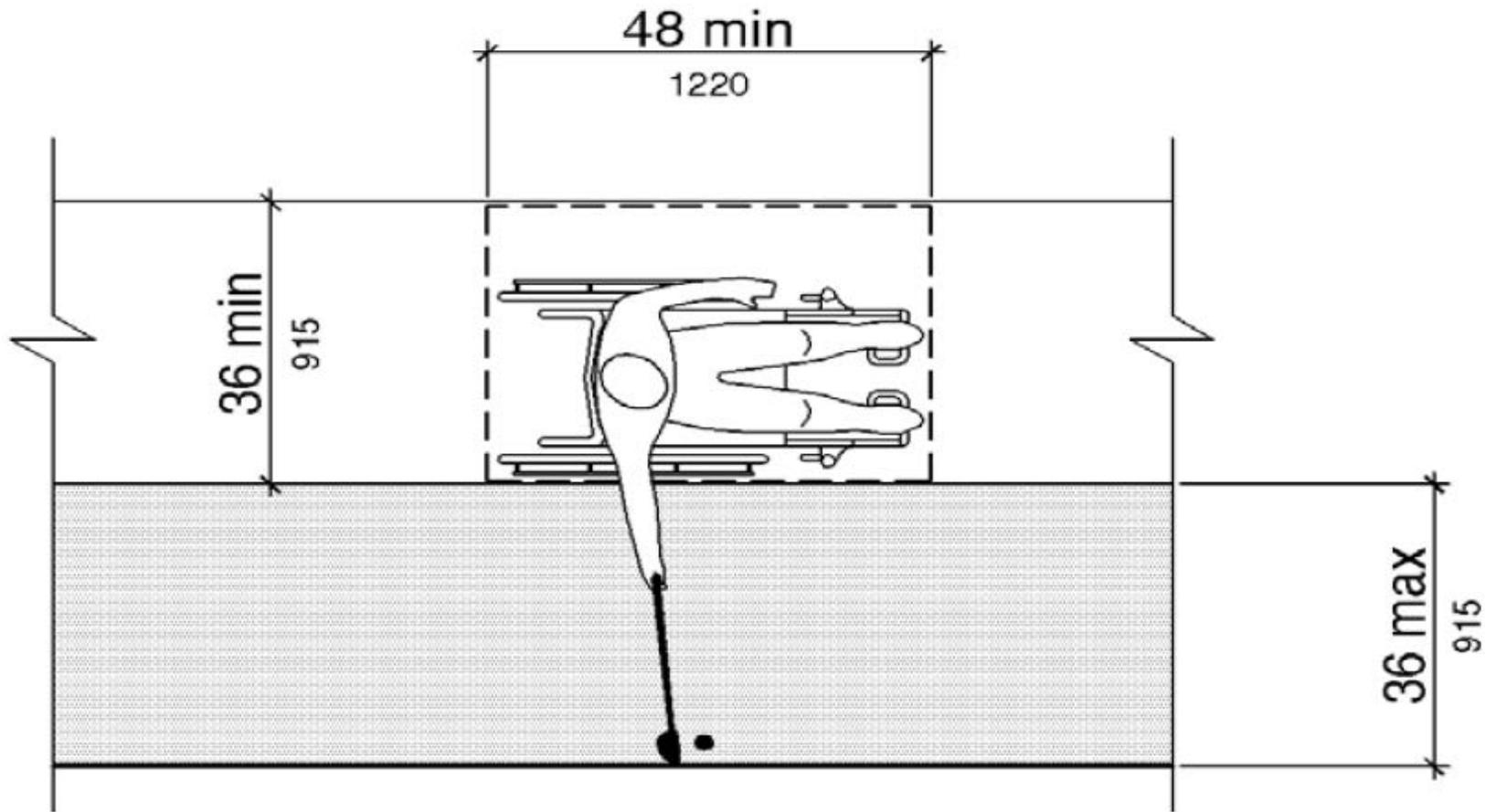
- Recreation Facilities
  - Amusement Rides
  - Boating Facilities
  - Fishing Piers
  - Golf Facilities
  - Swimming Pools & Spas



**Figure 1009.2.8**  
Pool Lift Submerged Depth



**Figure 1009.5.4**  
Transfer Steps



Note: Running Slope of Clear Floor or Ground Space Not Steeper Than 1:20

**Figure 1007.3.2**  
**Golf Club Reach Range Area**

# 2010 ADA Standards

- Turning circles in saunas & recreation areas
- Detectable warnings no longer required on curb ramps
  - Except public right-of-way, transit facilities, or hazardous vehicle areas
- Passenger loading zones
  - Very specific requirements
  - No clear direction on how to implement

# Turning Circles

- Toilet Rooms
- Dressing, fitting, & Locker Rooms
- Patient Bed Rooms
- Exam, diagnostic & treatment rooms
- Guest Rooms
- Accessible Cells

# Turning Circles

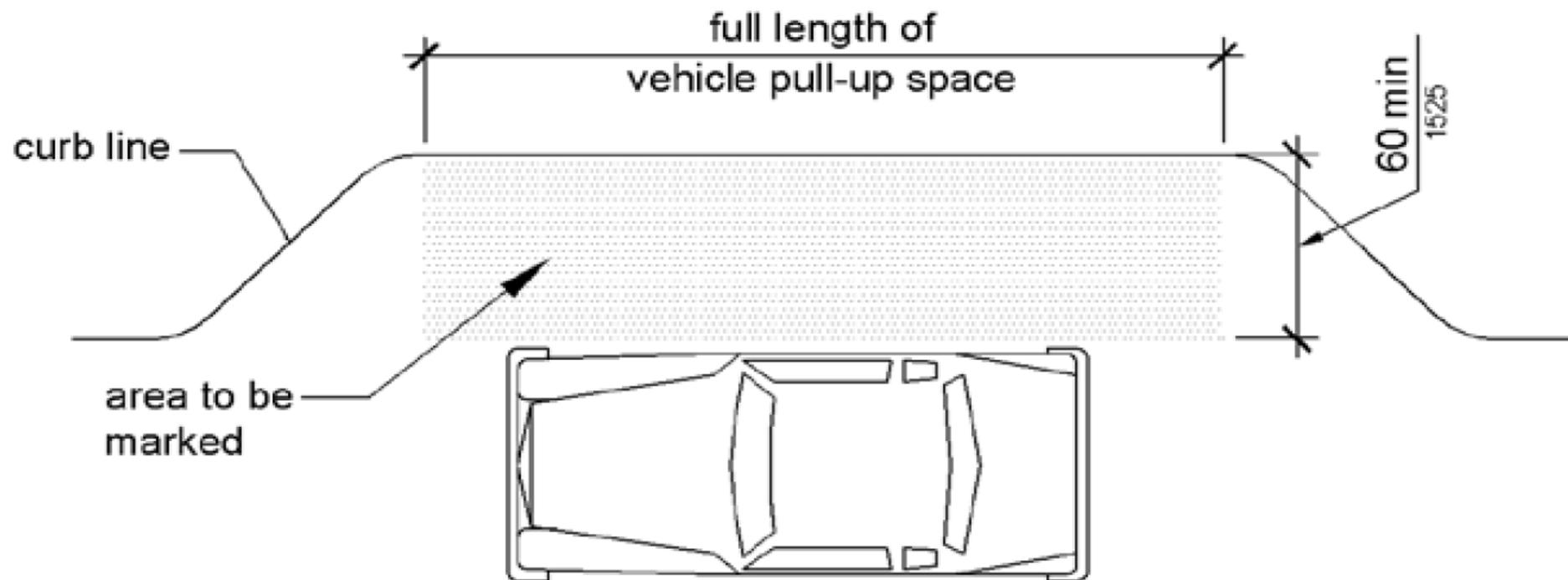
- Courtrooms
- Saunas (moveable bench OK)
- Loading/unloading areas
- Fishing Piers
- Play Components

# Turning Circle Changes??

- ICC (ANSI A117.1) Committee has recommended increasing turning circle diameter from 60 inches to 67 inches.
- Increase in response to more use of larger, powered chairs.
- ANSI A177.1 is Chapter 11 of ICC. CA has does not use ICC.
- US Access Board committee approved recommendation in 2017.

# Entry / Drop-Off / Loading Zone





**Figure 503.3**  
**Passenger Loading Zone Access Aisle**



Photo courtesy of Richard Zellmer AIA CASp, Sutter Health

# Entry / Drop-Off / Loading Zone

The Loading Zone Stripes...Leave people in harms way.



Photos courtesy of Richard Zellmer AIA CASp, Sutter Health







## Critical issues

# Critical Issues

- Inconsistent interpretations by AHJs
- Inherent limits of installation processes
- Blind reliance on code language
- Use of code diagrams as “typical details”

# Critical Issues

- Informal surveys of recent toilet rooms, a significant number continue not comply with ADA
- Inadequate and inexperienced construction administration
- Incomplete document quality control
- Incomplete or no field quality control

# Critical Issues

- Construction tolerances
  - Do not design to minimum or maximum dimensions
  - Provide flexibility for varying site conditions
  - Build in tolerances where ever possible
  - Review ADAS 104 Conventions



## Accessibility and design

# Accessibility and Design

- A strategy for prioritizing and interpreting
  - Universal design principles as a checklist
  - Establishing accessibility priorities
  - Developing a rational severity code based on level of accessibility and safety
  - Cost

# Access Severity Systems

(Retrofit, Renovation, and Maintenance)

- Department of Justice (DOJ)
- Practical Severity Assessment System



# DOJ Severity Codes

- 1: Exterior
  - Parking, ramps, accessible way
- 2: Interior
  - Accessible way, doors, protruding objects, stairs, elevators
- 3: Toilet rooms
- 4: Accessories
  - Telephones & Drinking Fountains

# Practical Severity System

- Hazardous-Health/Safety
- Blocks Access
- Major Inconvenience
- Minor Inconvenience



# Accessibility Disconnects

- A holistic view of accessibility in the design process
- Integration into the design and construction process
- TMI – Too Much Information!!
- Be pro-active rather than reactive
- Plan check: Why are we renovating our designs before they are even built?



SPECIALIZED

H9420

DAF-14





**Design errors are 90% failing to detail conditions and leaving it up to the Contractor to understand the Code and trade standards and 10% is designing the envelope to leak.**

Dennis Hall FAIA FCSI



drawings

# Drawings

- Refrain from using “ADA” sheets
- Poor practice to repeat the code “verbatim” on the drawings
- Put the information correctly on the plans, elevations, and details
- Reference the appropriate code sections on the drawings

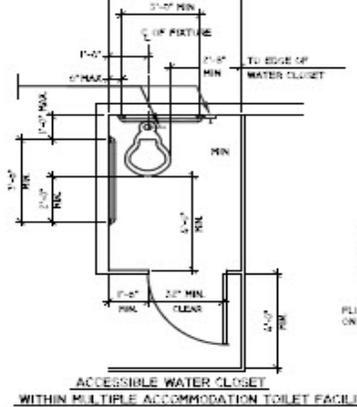
# Drawings

- Accessibility elements **MUST** be drawn in **CONTEXT**
- Using typical sheets creates a false sense of security and completeness
- Bad practice to ask the contractor to design-build accessible elements

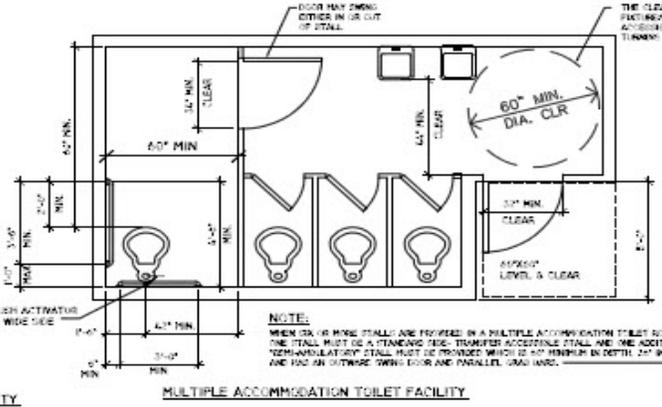


# Drawings

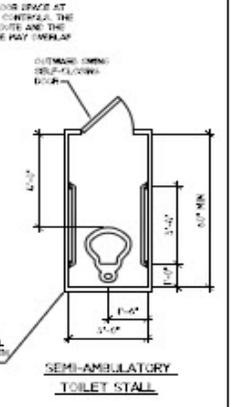
- Do not rely on “ADA” sheets to get toilet rooms constructed correctly.
- Toilet rooms must be designed and drawn as large scale plans and elevations.
  - 1/2”-1-0” minimum
- Do not expect the contractor to design and install your project



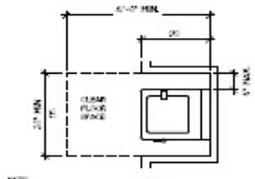
ACCESSIBLE WATER CLOSET  
WITHIN MULTIPLE ACCOMMODATION TOILET FACILITY.



NOTE:  
WHEN TWO OR MORE STALLS ARE PROVIDED IN A MULTIPLE ACCOMMODATION TOILET ROOM, ONE STALL MUST BE A STANDING RES. TRANSFER ACCESSIBLE STALL AND ONE ADDITIONAL SEMI-AMBULATORY STALL MUST BE PROVIDED WHICH IS 60\"/>

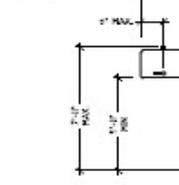


SEMI-AMBULATORY  
TOILET STALL



PLAN

IF ALL THE DRINKING FOUNTAIN TRAYS ARE GREATER THAN 10\"/>



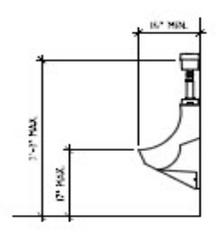
SIDE ELEVATION

DRINKING FOUNTAIN SHALL COMPLY WITH THE FOLLOWING NOTES:

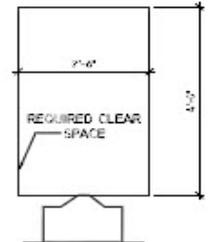
DRINKING FOUNTAIN NOTES:

1. DRINKING FOUNTAINS ARE TO BE LOCATED WITHIN ACCESSIBLE PATHWAYS TO RESTROOMS TO BE USED BY ALL HANDICAPPED INDIVIDUALS.
2. WHEN PROVIDED AS PART OF A STALL, THE FOUNTAIN SHALL HAVE A TRAY AND SURFACE AREA OF 10\"/>

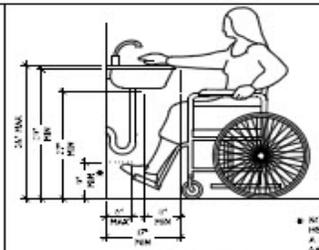
5 FIXTURE PLAN VIEWS



SIDE ELEVATION

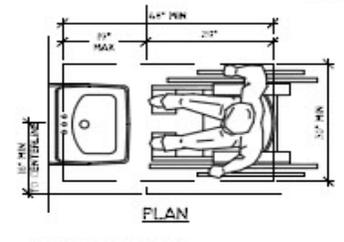


PLAN VIEW



SIDE ELEVATION

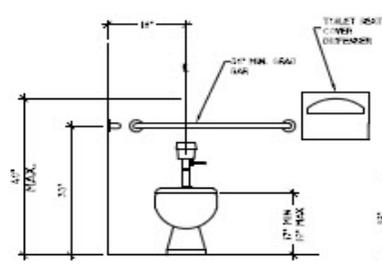
NOTE: IF A PERSON IS SEATED, HEIGHT OF THE CLEARANCE IS PROVIDED A MINIMUM OF 3\"/>



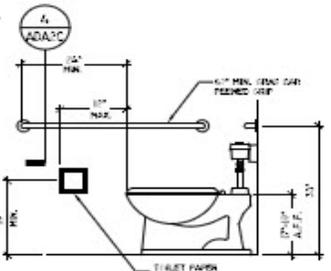
PLAN

NOTE: IF USER APPROXIMATELY 5'10\"/>

6 URINALS

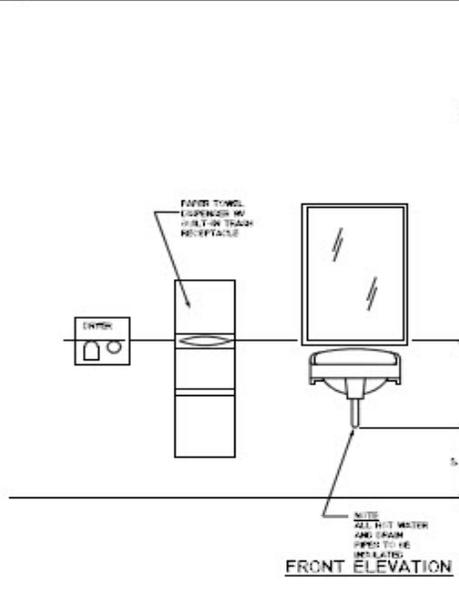


FRONT ELEVATION

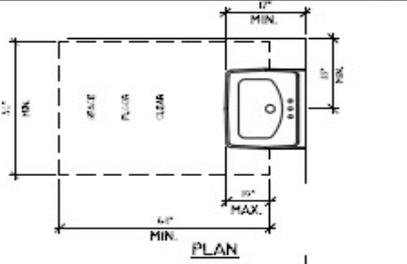


SIDE ELEVATION

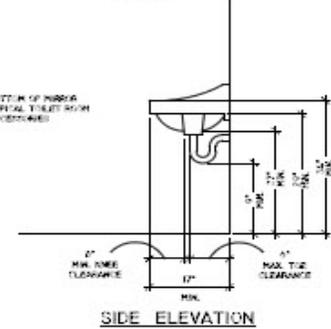
3 MINIMUM CLEAR WORKSPACE UNDER WORK SURFACE



FRONT ELEVATION



PLAN

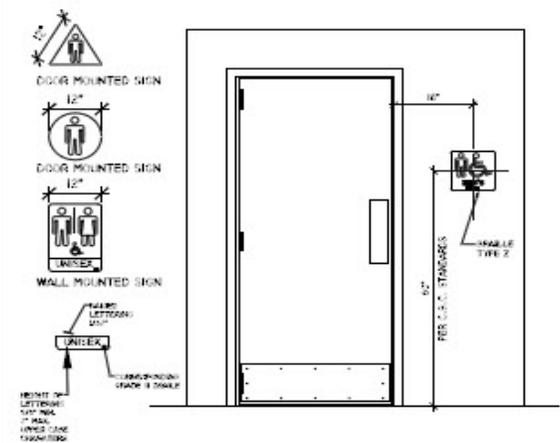


SIDE ELEVATION

7 FIXTURE ELEVATIONS

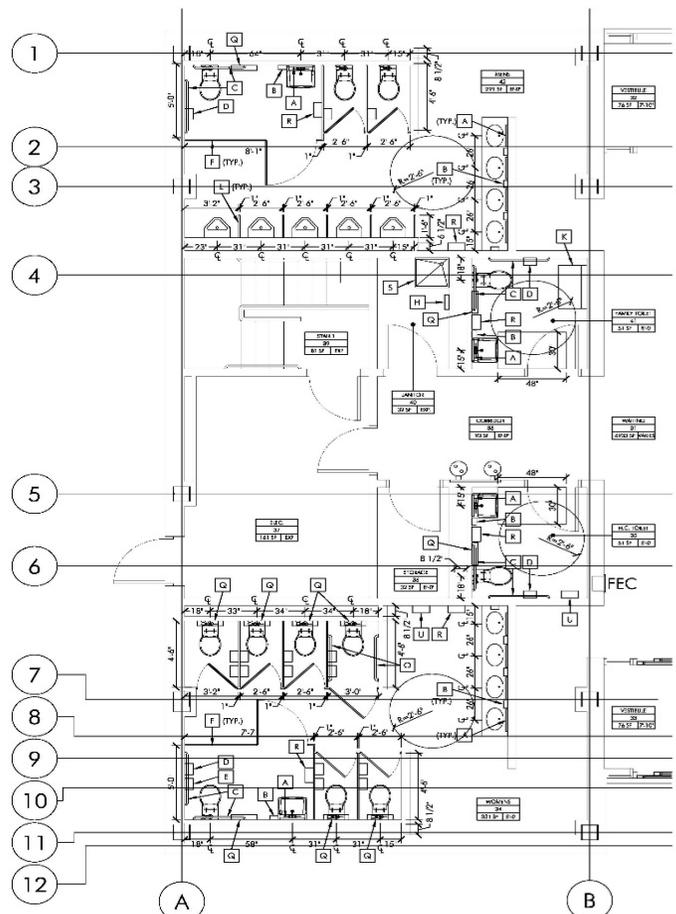
4 LAVATORIES

1

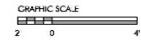


2 ACCESSIBILITY SIGNAGE DETAIL

SCALE: 1/8\"/>



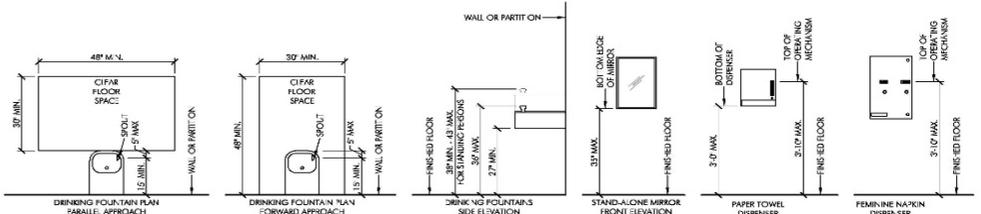
**1 PASSENGER TOILET ROOMS**  
 SCALF. 1/4" = 1'-0"



- NOTES**
1. ALL BARRIER FREE TOILET STALL DOORS TO HAVE A CLEAR OPENING OF 32"
  2. SLOPE CONCRETE SLABS TO FLOOR DRAINS (1/8" PER FT. MAX.)

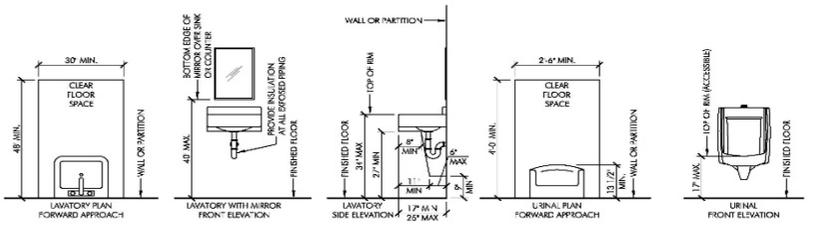
**NOTES**

1. THE PLUMBING FIXTURES AND ACCESSORIES SHOWN FOR THESE MOUNTING HEIGHTS ARE GENERIC IN NATURE. REFER TO SPECIFICATIONS AND SCHEDULES FOR THE EXACT MODELS AND TYPES USED.
2. THE TOP OF OPERATING MECHANISMS OF SANITARY NAPKIN DISPENSERS, PAPER TOWEL DISPENSERS, HAND DRYERS, AND OTHER ACCESSORIES SHALL BE MOUNTED NO HIGHER THAN 48" A.F.F.



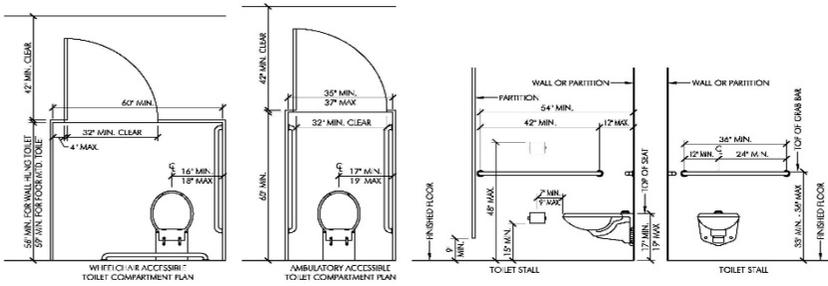
**DRINKING FOUNTAINS**

**MISCELLANEOUS**



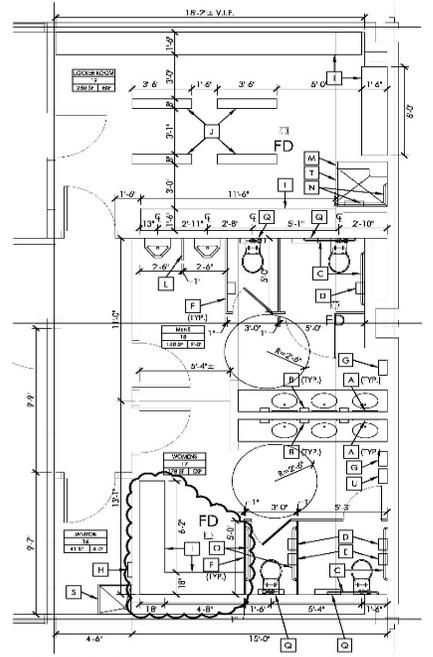
**LAVATORIES**

**URINALS**



**WATER CLOSETS AND WATER CLOSET COMPARTMENTS**

**TYPICAL ACCESSIBLE PLUMBING FIXTURE MOUNTING HEIGHTS AND LOCATIONS**



**2 OFFICE TOILETS / LOCKER ROOMS**  
 SCALE: 1/4" = 1'-0"

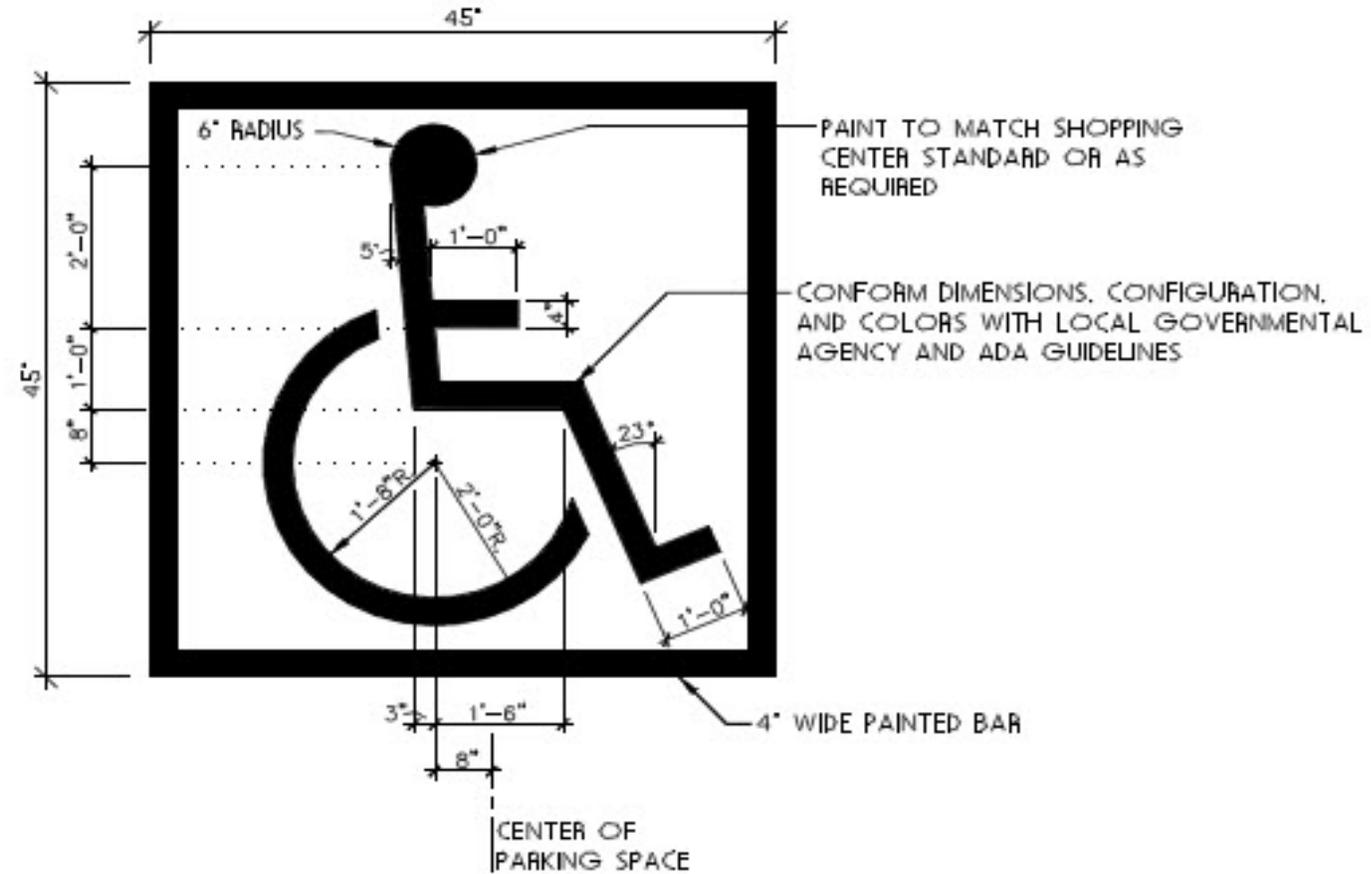
**TOILET ACCESSORY LEGEND**

- |  |   |
|--|---|
| <b>A</b> MIRROR - STAINLESS STEEL - BRADLEY MODEL #780, 18" x 36"  | <b>L</b> URINAL SCREEN, MODEL TO BE DETERMINED                                      |
| <b>B</b> SOAP DISPENSER - FURNISHED & INSTALLED BY OWNER   | <b>M</b> SHOWER SEAT, MODEL TO BE DETERMINED  |
| <b>C</b> GRAB BAR - BRADLEY MODEL #32, SAFETY GRIP FINISH, CONCEALED MTD. (SEE FIXTURE ELEVATION FOR SIZE) | <b>N</b> SHOWER GRAB BAR, BRADLEY MODEL TO BE DETERMINED                            |
| <b>D</b> TOILET TISSUE DISPENSER - BRADLEY MODEL #5224   | <b>O</b> AMBULATORY STALL GRAB BARS, BRADLEY MODEL TO BE DETERMINED                 |
| <b>E</b> NAPKIN DISPOSAL - BRADLEY MODEL #4722-15 SURFACE MOUNTED  | <b>P</b> BRADLEY MULTIPURPOSE UNIT MODEL 130-11 (MIRROR / TOWEL DISP. / SOAP DISP.) |
| <b>F</b> FLOOR STICURD TOILET PARTITIONS - SANTANA OR EQUAL WITH FULL TOP / BOTTOM CHANNEL & WALL MOUNT.   | <b>Q</b> SPAT COVER DISPENSER, BRADLEY MODEL TO BE DETERMINED                       |
| <b>G</b> PAPER TOWEL DISPENSER   | <b>R</b> PAPER TOWEL DISPENSER / TRASHCAN, MODEL TO BE DETERMINED                   |
| <b>H</b> MOP HOLDER - BRADLEY MODEL 9955   | <b>S</b> FLOOR MOP SINK   |
| <b>I</b> LOCKERS   | <b>T</b> SHOWER CURTAIN ROD   |
| <b>J</b> BENCHES   | <b>U</b> FEMININE NAPKIN DISPENSER  |
| <b>K</b> DIAPER CHANGING STATION   |   |



# Drawings

- What is drawn is not what gets installed
  - Indicating “hard” dimensions
  - Door CLFS and dimensions
  - Clear floor space overlap
  - Mounting heights
  - Signage
- Develop an accessibility punchlist



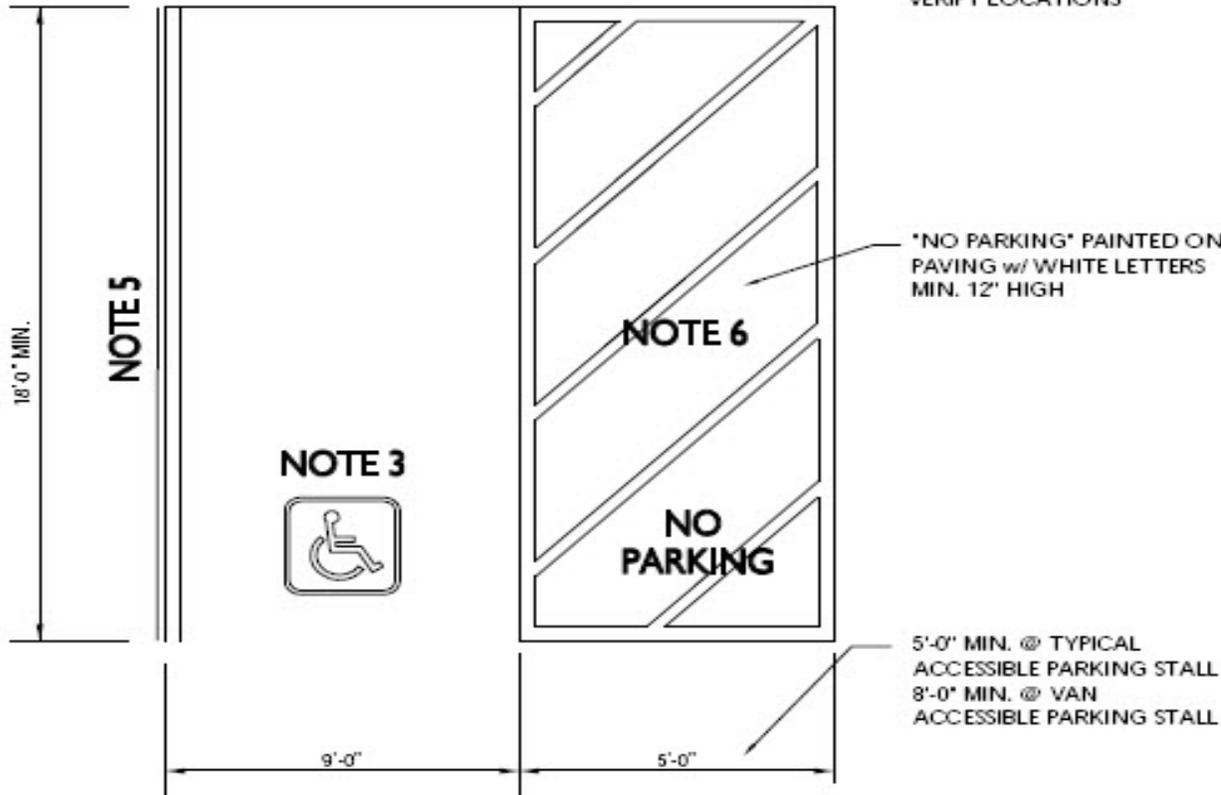
7

# ACCESSIBLE PARKING SYMBOL

SCALE: NONE

### NOTE 10 -

PLACE ON BUILDING WALL OR ON A 2"x2" GALVANIZED POST SET INTO CONG. VERIFY LOCATIONS



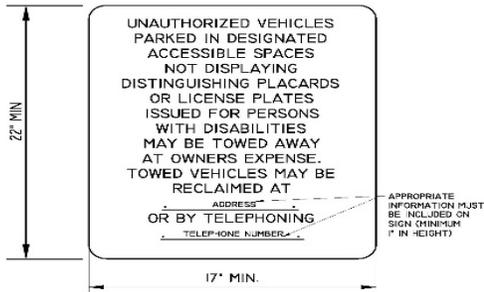
### NOTES

1. TYPICAL PAVED PATH OF TRAVEL SLOPES NOT TO EXCEED 1 TO 20, UNLESS DESIGNED AS A RAMP 1. PROVIDE CONTROL JOINTS ( C.J.) IN CONCRETE AS SHOWN & AS NEEDED TO MINIMIZE CRACKING. ALL PATHS SHALL BE A MIN. 48" IN WIDTH AND A MAXIMUM 1/2" CHANGE IN ELEVATION. THE FINISH SHALL BE THE SAME AS THE LOCAL MUNICIPAL STANDARD FOR SIDEWALKS.
2. CROSS PITCH WALKS ONE PERCENT FOR DRAINAGE. VERIFY w/ CIVIL DRAWINGS
3. 3' x 3' INTERNATIONAL SYMBOL OF ACCESSIBILITY, PAINTED WHITE FIGURE ON BLUE BACKGROUND
4. UNAUTHORIZED VEHICLE SIGN (MIN 17"x22") W/ 1" MIN. HIGH LETTERING. INCLUDE INFORMATION. \*UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES MAY BE TOWED AWAY AT THE OWNER'S EXPENSE. VEHICLES MAY BE RECLAIMED AT \_\_\_\_\_ OR BY TELEPHONING \_\_\_\_\_. OWNER TO FILL IN BLACK SPACE W/ APPROPRIATE INFORMATION. ADJUST THE SIGN LOCATION TO FIT LANDSCAPING AND TO BE VISIBLE FROM THE DRIVEWAY ENTRY
5. 2" WHITE STRIPING FOR PARKING SPACES
6. 2" THICK BLUE STRIPING @ 36" O.C. WITH A 45 DEGREE ANGLE
7. INTERNATIONAL 6"x6" (SIGN) SYMBOL OF ACCESSIBILITY ON THE BUILDING
8. ACCESSIBLE PATH OF TRAVEL - ARROWS ARE FOR BUILDING DEPARTMENT COMPLIANCE REFERENCE ONLY. DO NOT PAINT ARROWS ON PAVING
9. ACCESSIBLE PATH OF TRAVEL - ARROWS ARE FOR BUILDING DEPARTMENT COMPLIANCE REFERENCE ONLY. DO NOT PAINT ARROWS ON PAVING
10. MANAGEMENT PRACTICES AT THIS FACILITY WILL PROVIDE DESIGNATED ACCESSIBLE PARKING SPACES AT THE DWELLING UNIT UPON REQUEST FROM DISABLED RESIDENTS ON THE SAME TERMS AND WITH THE FULL RANGE OF CHOICES (e.g SURFACE SPACES, COVERED SPACES, ETC.) AS PROVIDED FOR OTHER RESIDENTS. COMPLIANCE WITH THIS REQUIREMENT IS MANDATED UNDER STATE MULTI-FAMILY DISABLED ACCESS REGULATIONS
11. ONE PERMANENTLY POSTED SIGN CENTERED BETWEEN 36" AND 60" ABOVE THE PARKING SURFACE AT THE HEAD OF THE SPACE WHICH INCLUDES THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATES "RESERVED". POST A SIGN DISPLAYING "VAN" UNDERNEATH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.

3

### ACCESSIBLE PARKING STALL

SCALE: 1 1/2" = 1'-0"



(SIGN TO BE MOUNTED ON 2" DIA. G.I. PIPE POST)  
SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO THE OFF-STREET FACILITY, NOT LESS THAN 17'x22" IN SIZE, WITH LETTERS NOT LESS THAN 1" IN HEIGHT WITH CLEARLY AND CONSPICUOUSLY STATES THE ABOVE.

**UNAUTHORIZED VEHICLE SIGNS**

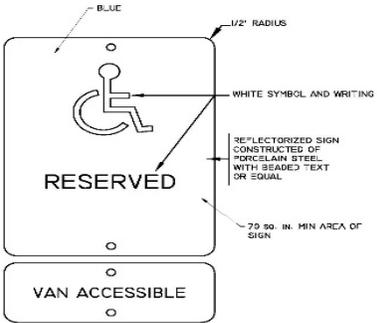


UNIVERSAL ACCESSIBLE SYMBOL



NOTE: POST THIS SIGN AT ENTRANCE TO PROPERTY & ALONG ACCESSIBLE ROUTE

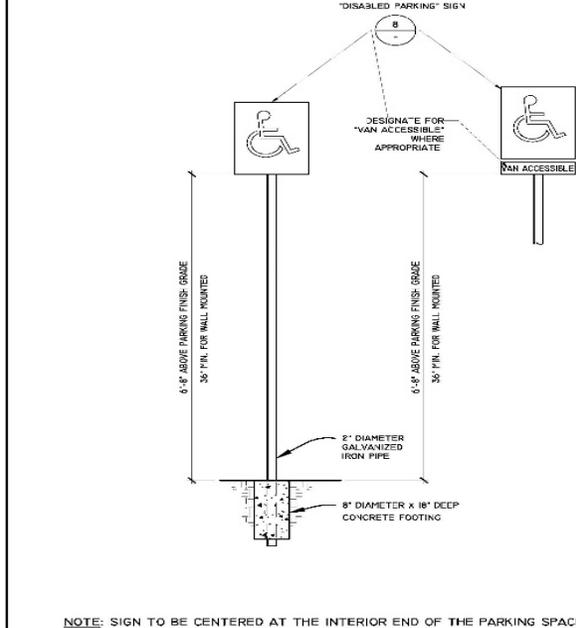
**SITE ACCESSIBLE ROUTE**



"DISABLED PARKING" SIGN

SEE 6 POST MOUNTING DETAIL

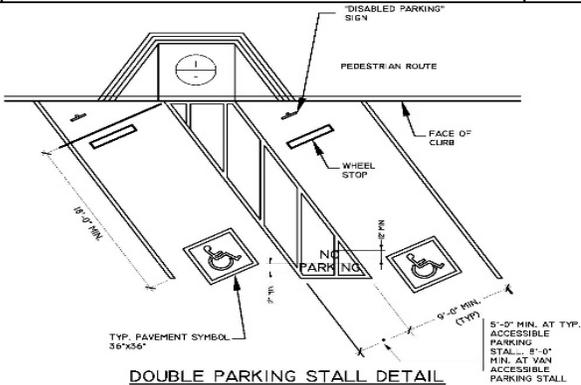
N.T.S.



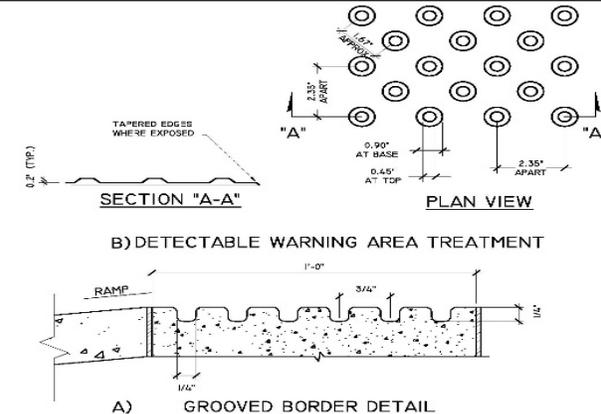
NOTE: SIGN TO BE CENTERED AT THE INTERIOR END OF THE PARKING SPACE

**6 SIGNAGE- POST MOUNTING DETAIL**

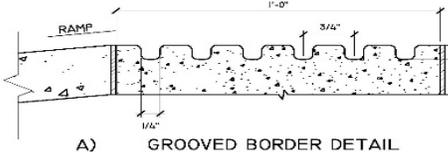
N.T.S.



DOUBLE PARKING STALL DETAIL



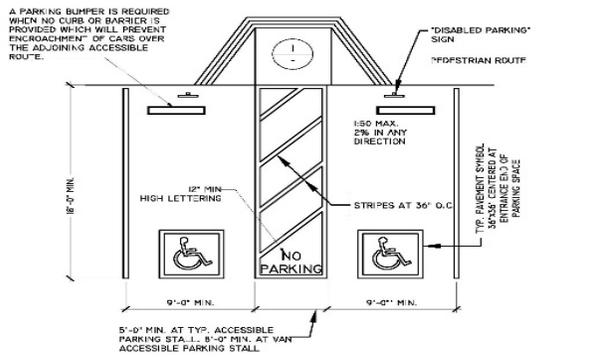
**B) DETECTABLE WARNING AREA TREATMENT**



A) GROOVED BORDER DETAIL

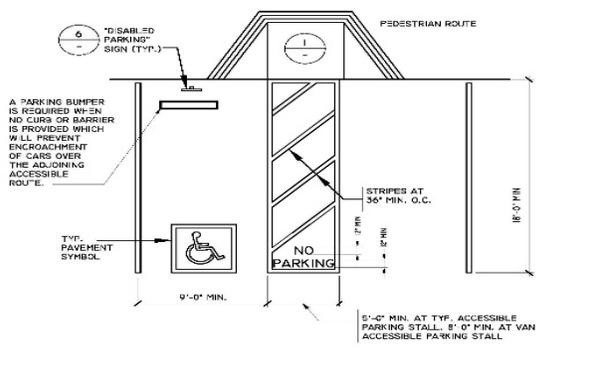
**3 RAMP DETAIL**

N.T.S.

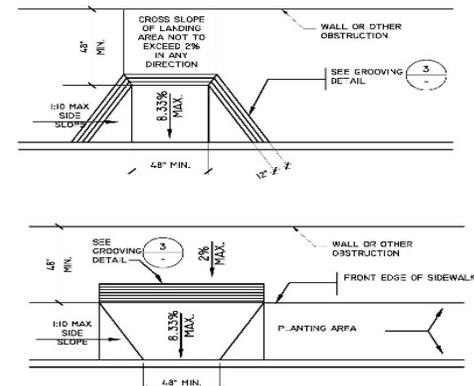


**4 DOUBLE PARKING STALL DETAIL**

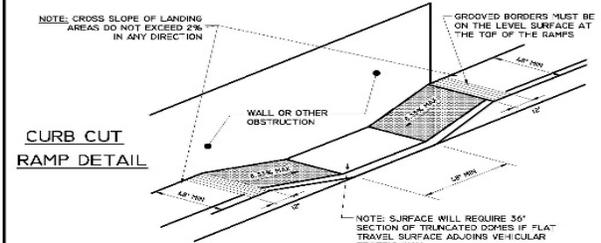
N.T.S.



N.T.S.



**1 CURB CUT RAMP DETAIL - PLAN VIEW**



**ACCESSIBILITY ROUTE NOTES**

1117A.4 [FOR HCD 1/AC & DSA/AC] CURB RAMP  
1117A.4.2 [FOR HCD 1/AC & DSA/AC] WIDTH OF CURB RAMP  
1117A.4.3 [FOR HCD 1/AC & DSA/AC] SLOPE OF CURB RAMP  
1117A.4.4 [FOR HCD 1/AC & DSA/AC] LEVEL LANDING  
1117A.4.5 [FOR HCD 1/AC & DSA/AC] BEVELED LIP  
1117A.4.6 [FOR HCD 1/AC & DSA/AC] FINISH  
1117A.4.7 [FOR HCD 1/AC & DSA/AC] DETECTABLE WARNINGS

**1120A.6 [FOR HCD 1/AC & DSA/AC] WALKS AND SIDEWALKS**

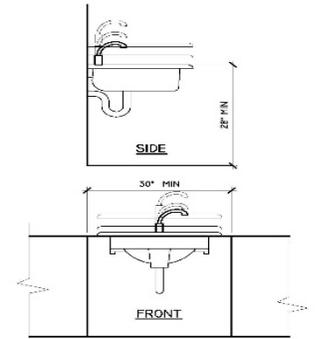
1120A.6.1 [FOR HCD 1/AC & DSA/AC] CONTINUOUS SURFACE  
1. SLOPES LESS THAN 6 PERCENT  
2. SLOPES 6 PERCENT OR GREATER  
3. SURFACE CROSS SLOPES

N.T.S.

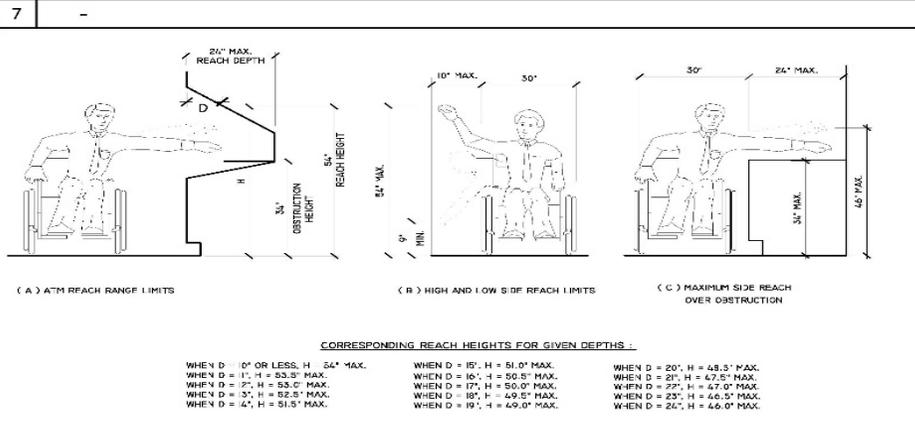
**COUNTERTOPS**

A MINIMUM LINEAR LENGTH OF 30 INCHES OF COUNTERTOP SHALL BE PROVIDED FOR THE KITCHEN SINK, AND A MINIMUM LINEAR LENGTH OF 30 INCHES OF COUNTERTOP SHALL BE PROVIDED FOR A WORK SURFACE. BOTH OF WHICH SHALL BE DESIGNED TO ENABLE REPOSITIONING TO A MINIMUM HEIGHT OF 28 INCHES. THE SINK AND WORK SURFACE MAY BE A SINGLE INTEGRAL UNIT OR BE SEPARATE COMPONENTS. THE BASE CABINETS DIRECTLY UNDER SINK AND WORK SURFACE COUNTER AREAS, WHICH ARE DESIGNED FOR REPOSITIONING, SHALL BE REMOVABLE TO PROVIDE CLEARANCE FOR A WHEELCHAIR.

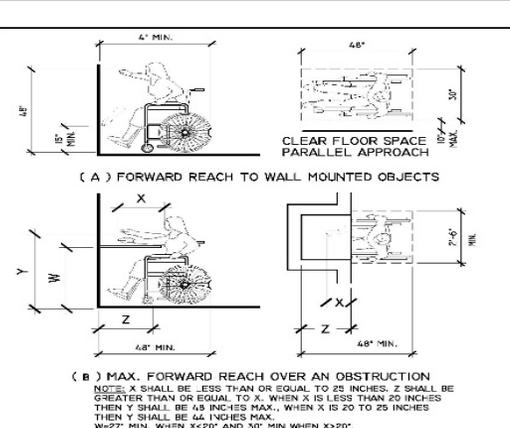
THE SIDES AND BACK OF ADJACENT CABINETS, WHICH MAY BECOME EXPOSED TO MOISTURE OR FOOD HANDLING WHEN A COUNTERTOP IS LOWERED, SHALL BE CONSTRUCTED OF DURABLE, NONABSORBENT MATERIALS APPROPRIATE FOR SUCH USES. FINISHED FLOORING SHALL BE INSTALLED ON THE PATH SURFACE OF SUCH COUNTERTOPS. EXCEPTION: STONE, CLUTTER STONE AND TILED COUNTERTOPS MAY BE USED WITHOUT MEETING THE REPOSITIONING REQUIREMENTS.



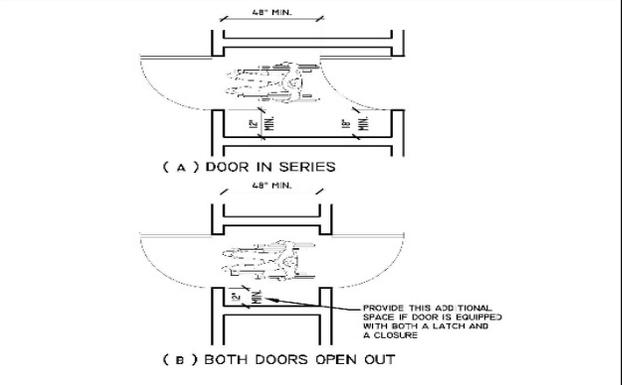
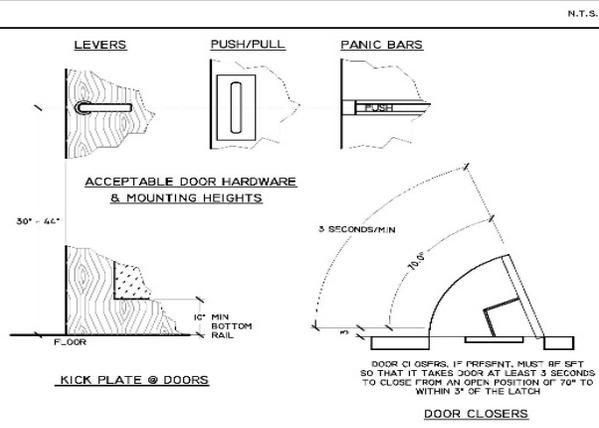
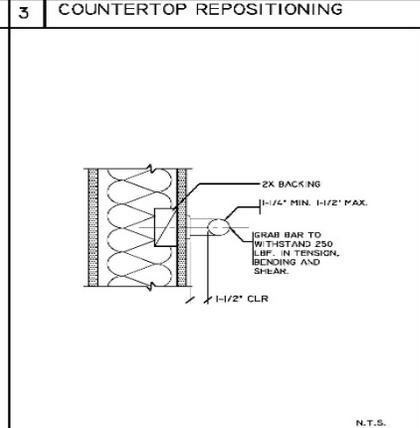
**CABINETS AND BASE REMOVED AND HEIGHT ALTERNATIVES**



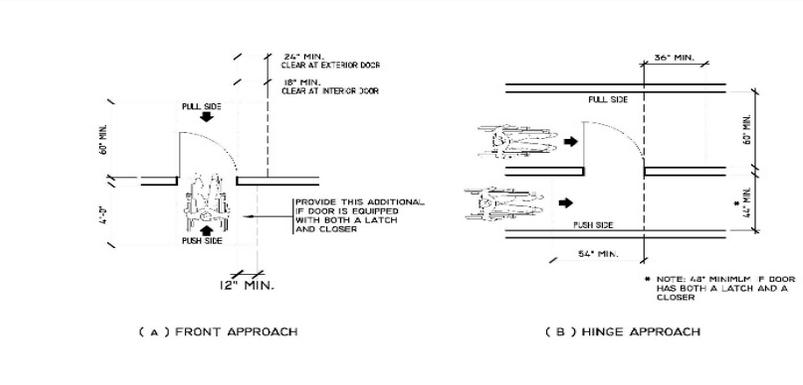
**8 SIDE REACH DETAIL** N.T.S.



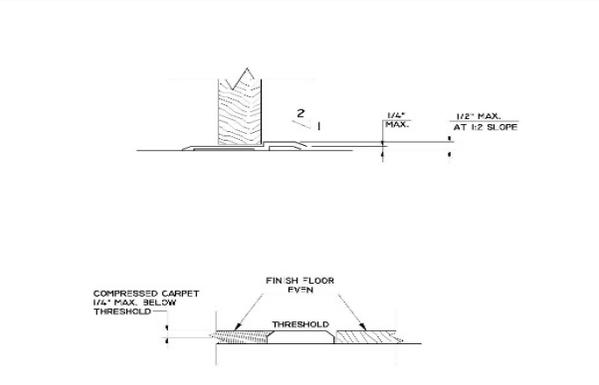
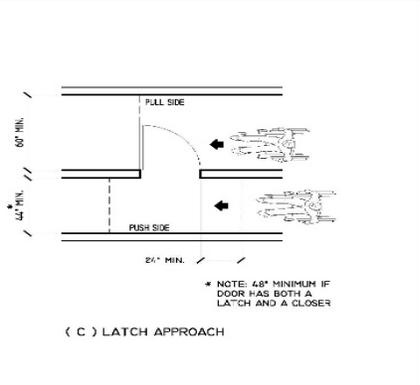
**5 FORWARD REACH DETAIL** N.T.S.



**9 VESTIBULE** N.T.S.

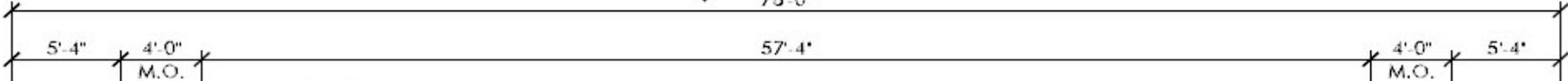


**6 LEVEL MANEUVERING CLEARANCE AT DOORS** N.T.S.



4  
A-4.0

76'-0"



10  
A-4.2

NEW ALUM.  
WINDOW W/ 1"  
INSUL. GLAZING  
(TYP.)

OPEN OFFICE  
106  
265 SF 9'-0"

5  
A-4.1

ELEC / MDF  
104  
43 SF EXP

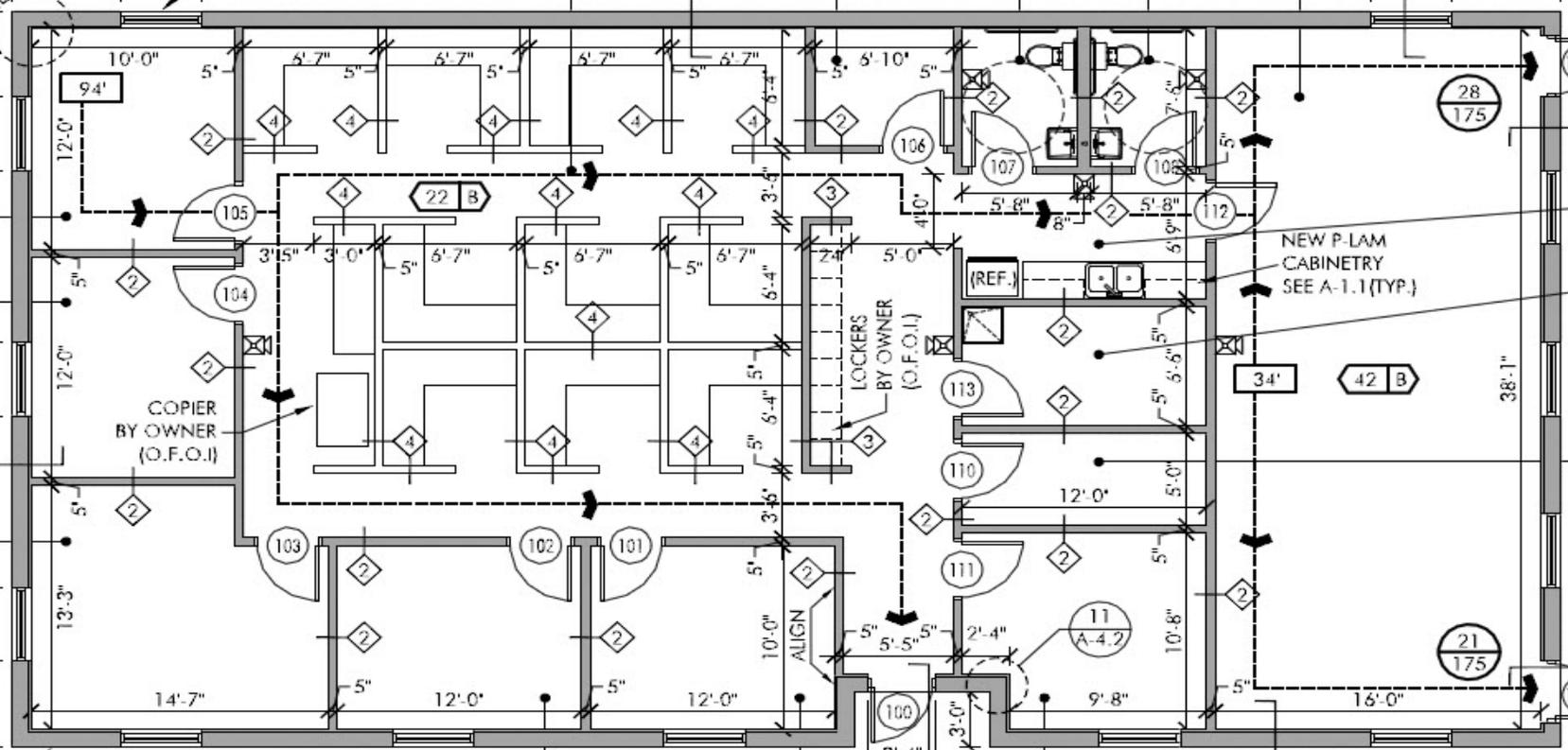
TOILET ROOM  
107  
43 SF 9'-0"

TOILET ROOM  
108  
43 SF 9'-0"

TRAINING RM  
112  
602 SF 9'-0"

6  
A-4.1

NEW EXT. H.M.  
DOOR W/ 1"  
INSUL. GLAZING  
(TYP.)



OFFICE  
105  
120 SF 9'-0"

OFFICE  
104  
120 SF 9'-0"

OFFICE  
103  
178 SF 9'-0"

COPIER  
BY OWNER  
(O.F.O.I.)

LOCKERS  
BY OWNER  
(O.F.O.I.)

NEW P-LAM  
CABINERY  
SEE A-1.1 (TYP.)

BREAK ROOM  
109  
81 SF 9'-0"

MECH RM  
113  
78 SF 9'-0"

STORAGE  
110  
60 SF 9'-0"

3  
A-4.0

7  
A-4.1

2  
A-4.0

NEW 1 HR RATED  
CMU EXTERIOR  
WALL (TYP)

OFFICE  
102  
120 SF 9'-0"

OFFICE  
101  
120 SF 9'-0"

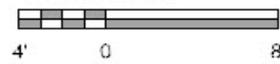
OFFICE  
111  
121 SF 9'-0"

1  
A-4.0

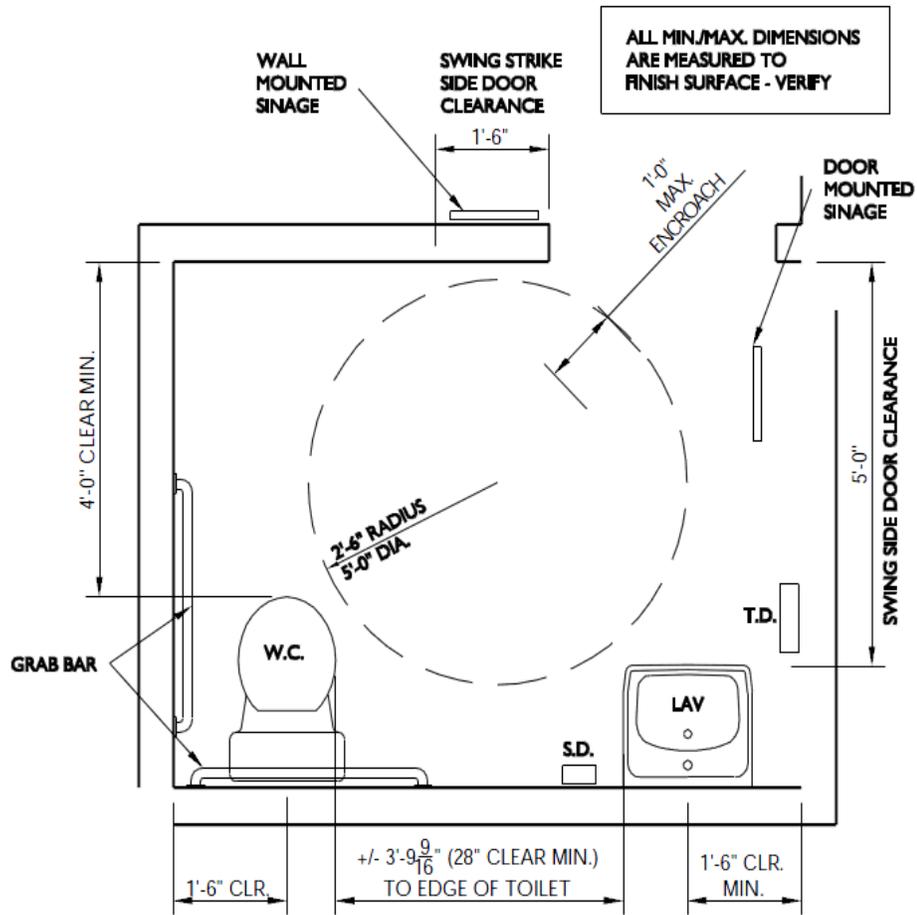
9  
A-4.2

# FLOOR PLAN

GRAPHIC SCALE



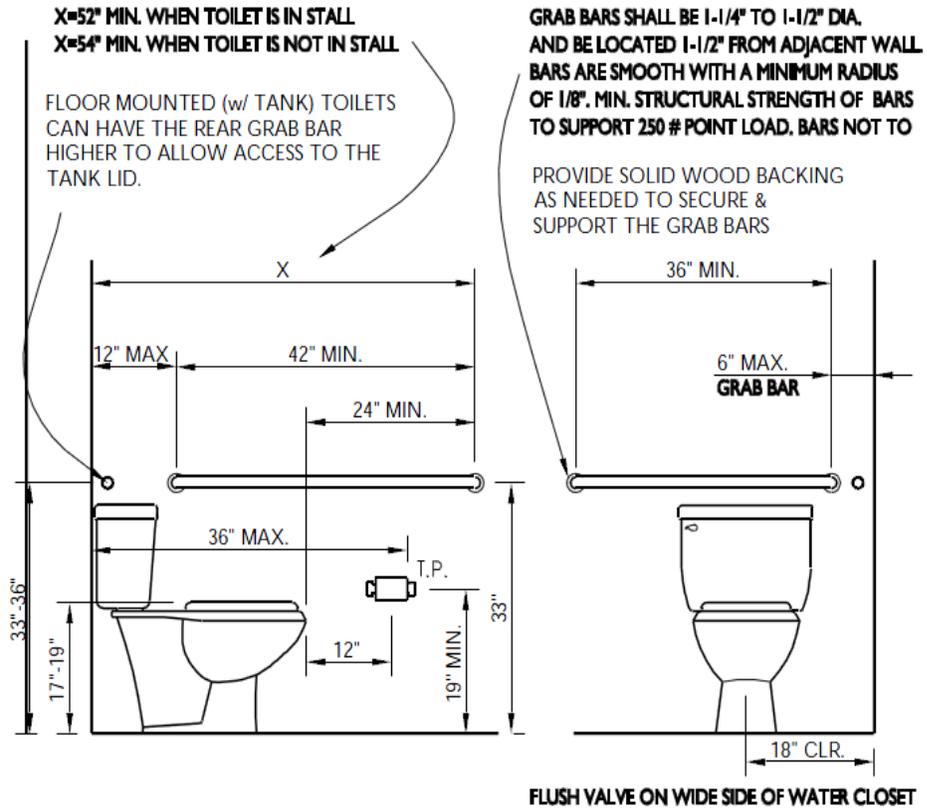
SCALE: 1/8" = 1'-0"



36

## TYPICAL ACCESSIBLE REST ROOM

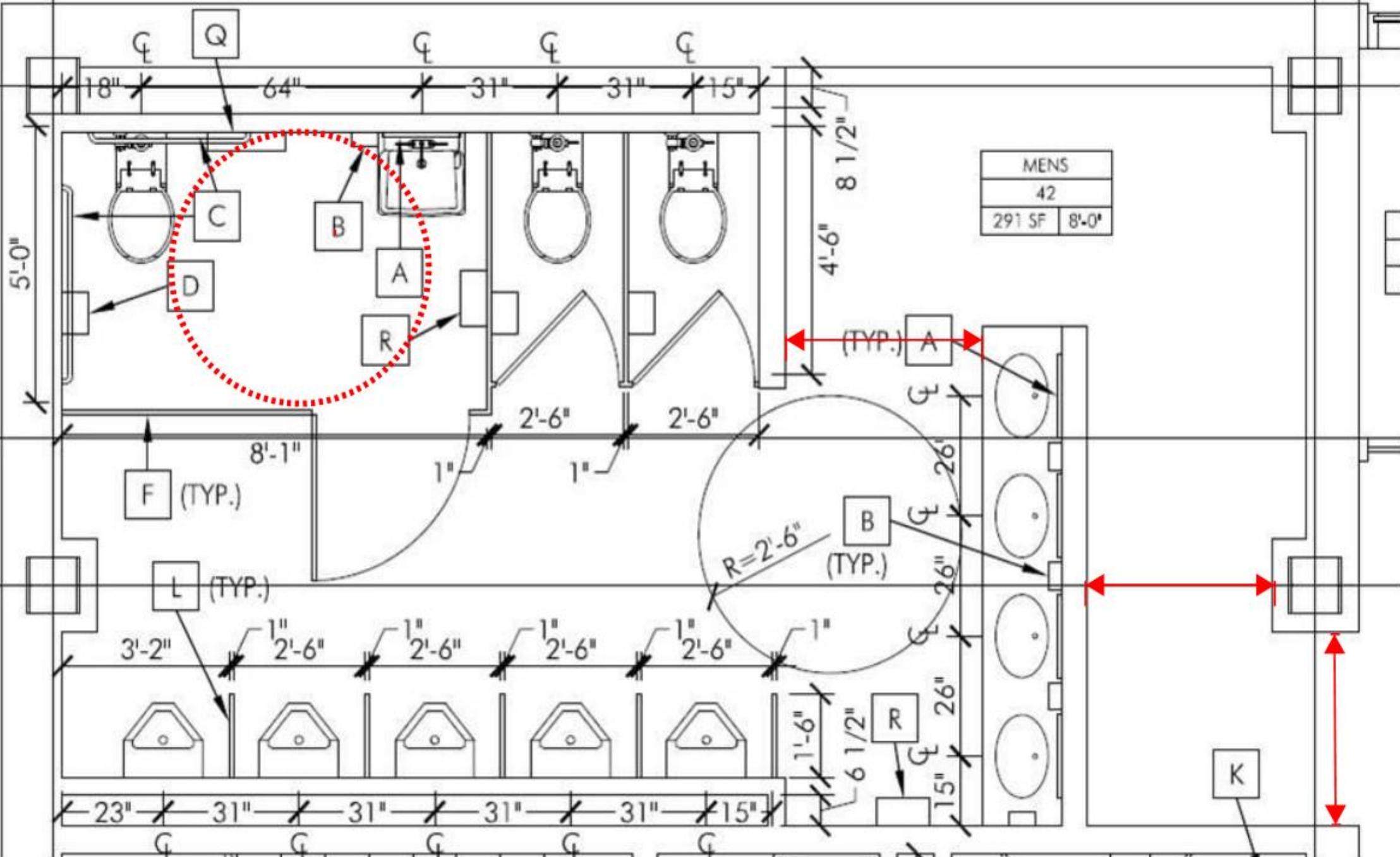
SCALE: 1/2"=1'-0"

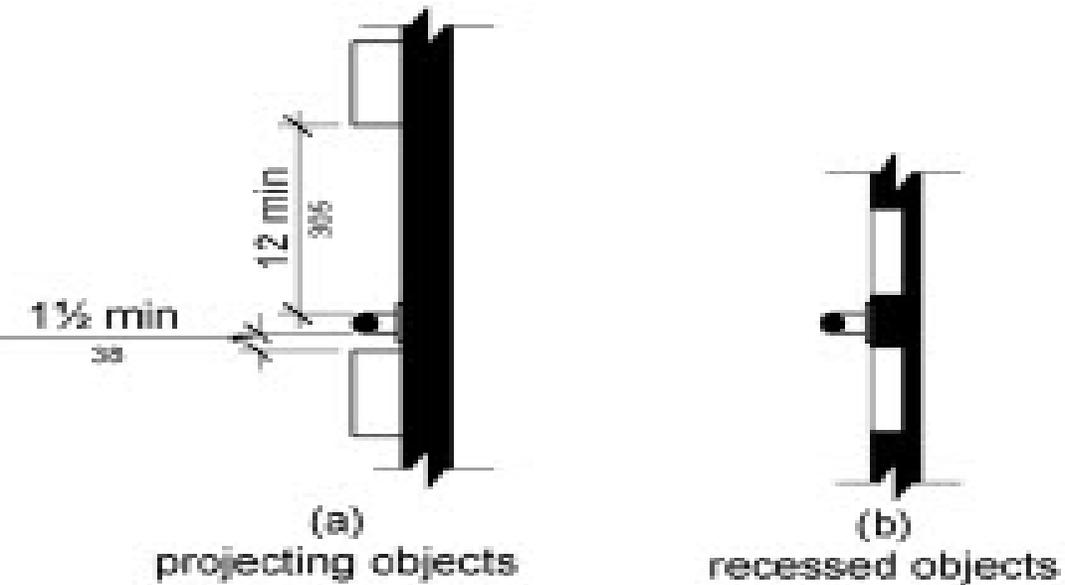


38

## ACCESSIBLE TOILET

SCALE: N.T.S.





**Figure 609.3**  
**Spacing of Grab Bars**

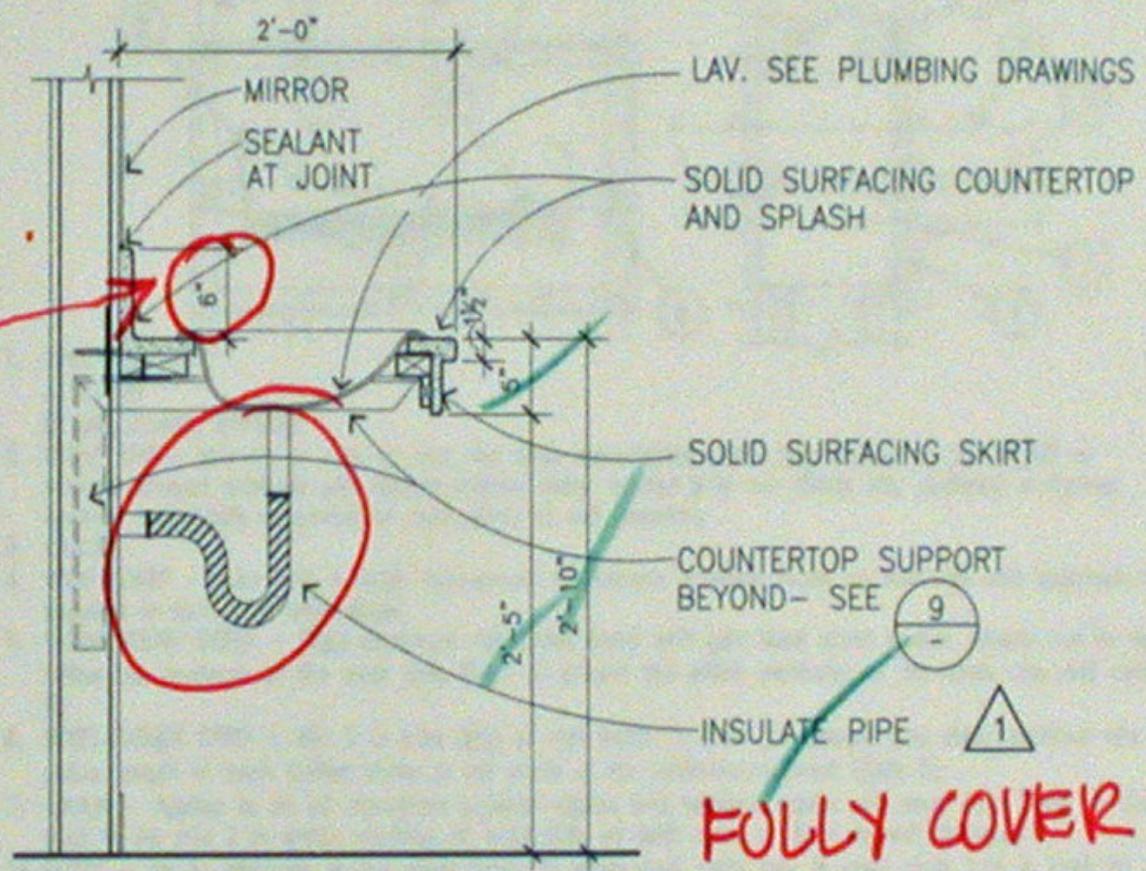


DOES I  
SHOU

DOOR  
CERAMIC TILE  
RUBBER REDUC  
RESILIENT FLOOR

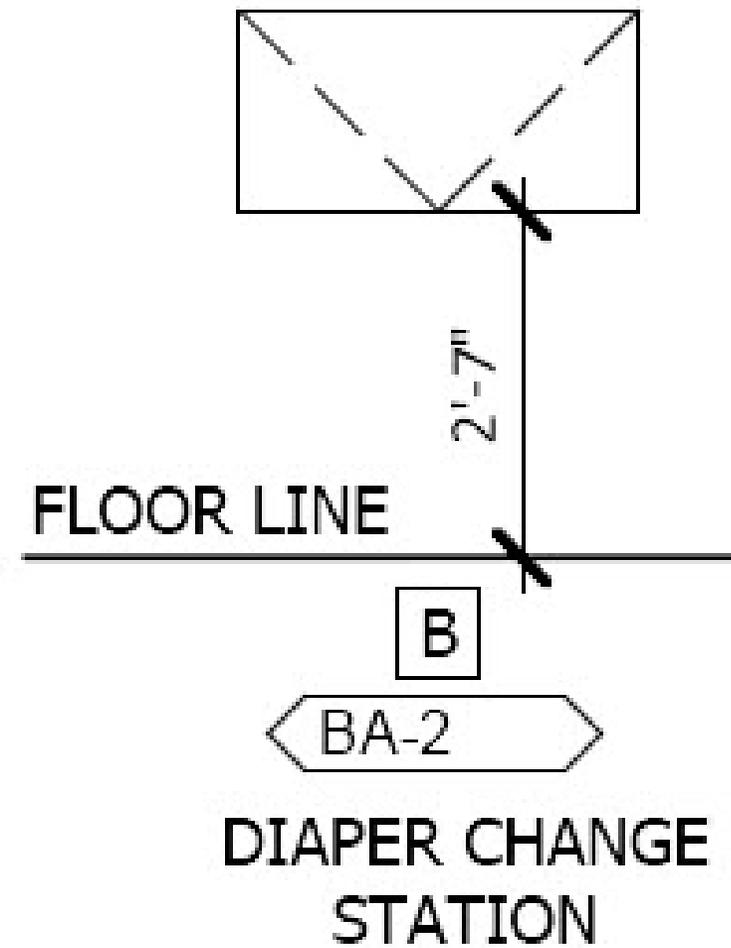
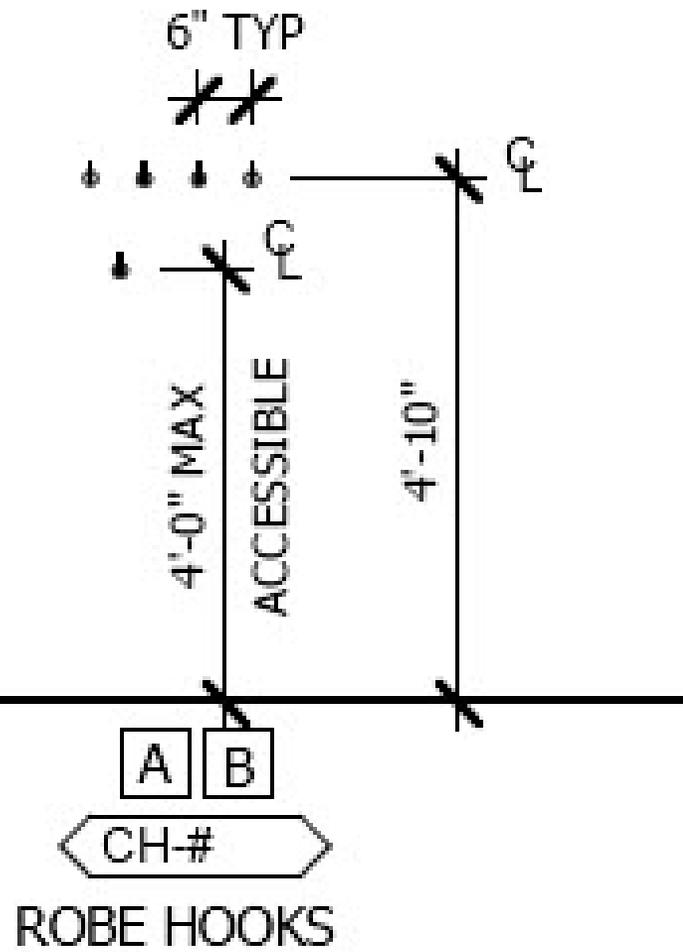
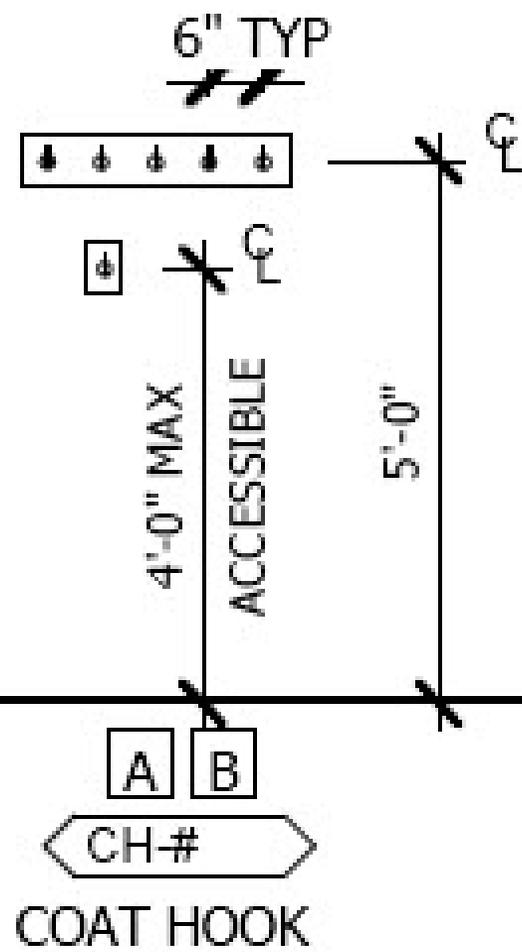
DEPRESSED S  
MODIFIED CONC  
DEPRESSED SLA

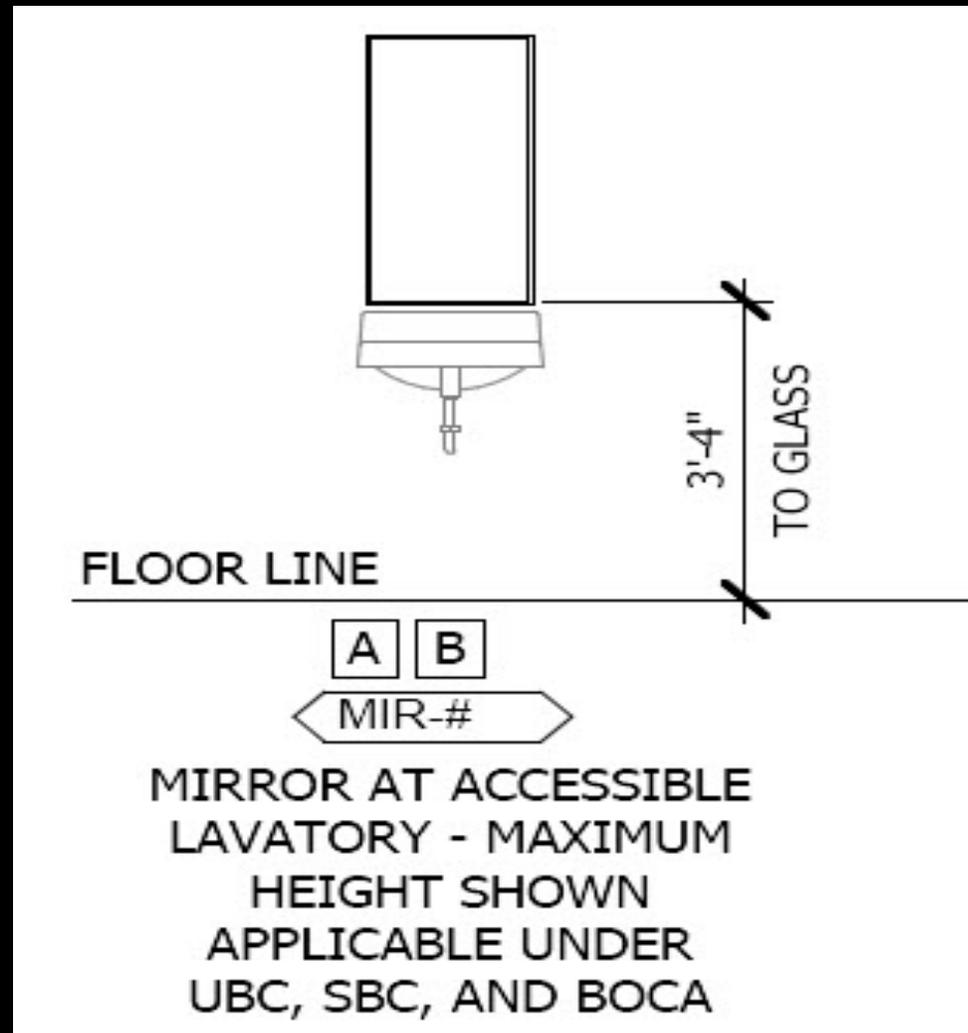
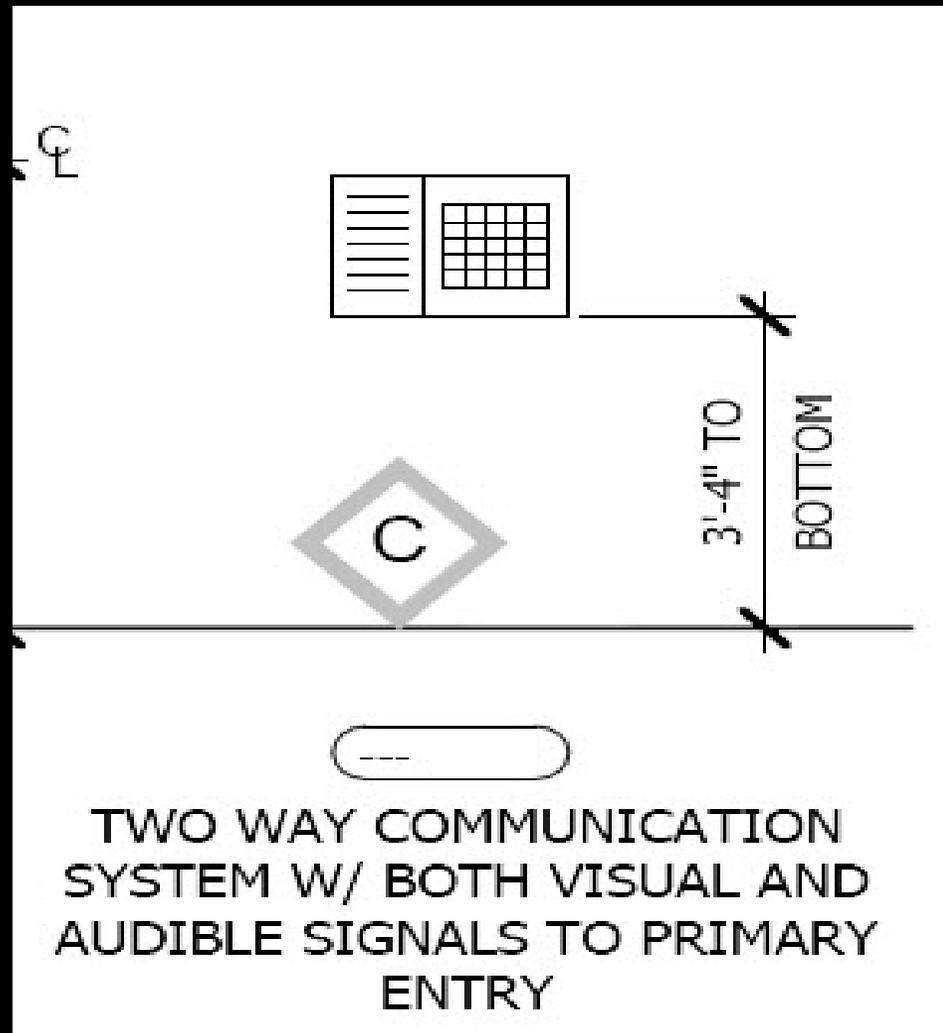
ADJUST THIS DIMENSION  
TO ASSURE BOTTOM OF  
REFLECTING SURFACE  
OF MIRROR IS NOT  
HIGHER THAN 40" AFG  
4.19.6

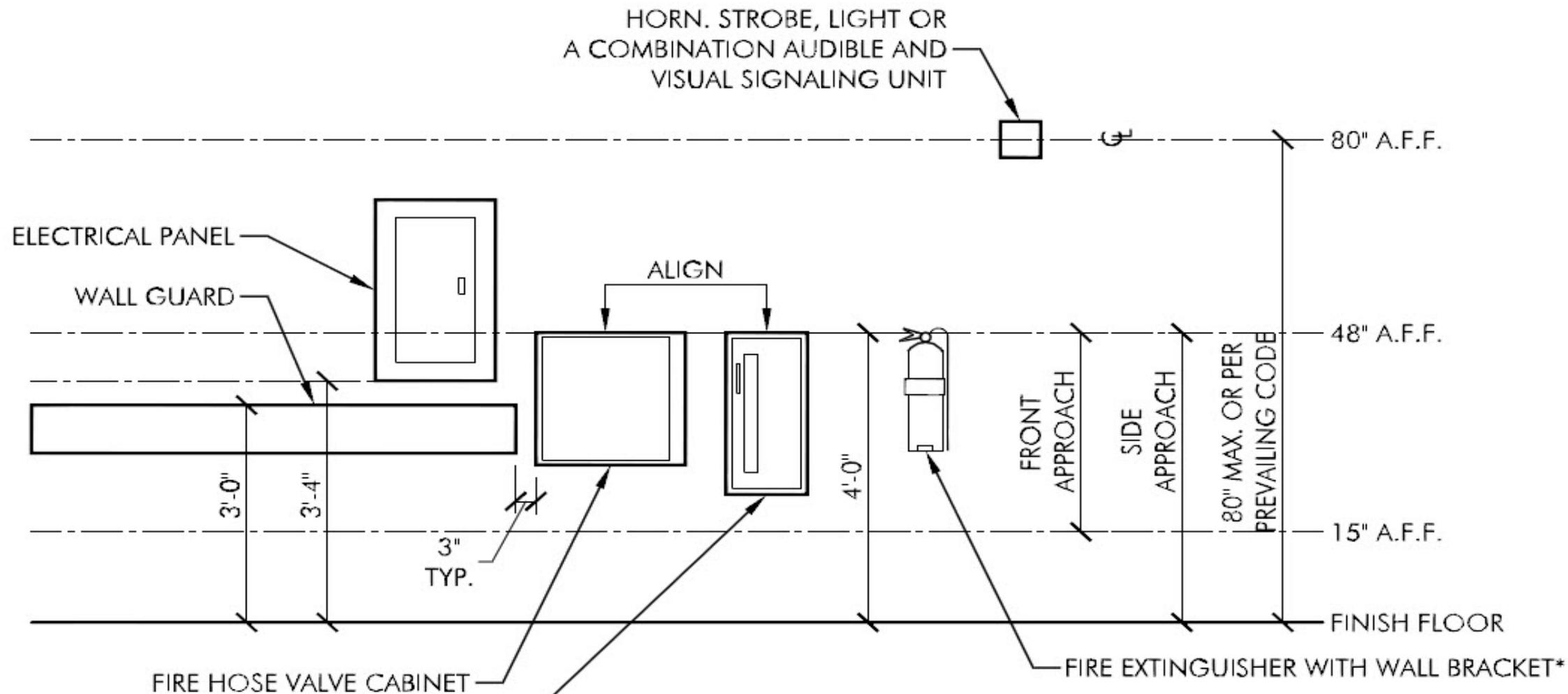


FULLY COVER PIPES  
TO PREVENT CONTACT







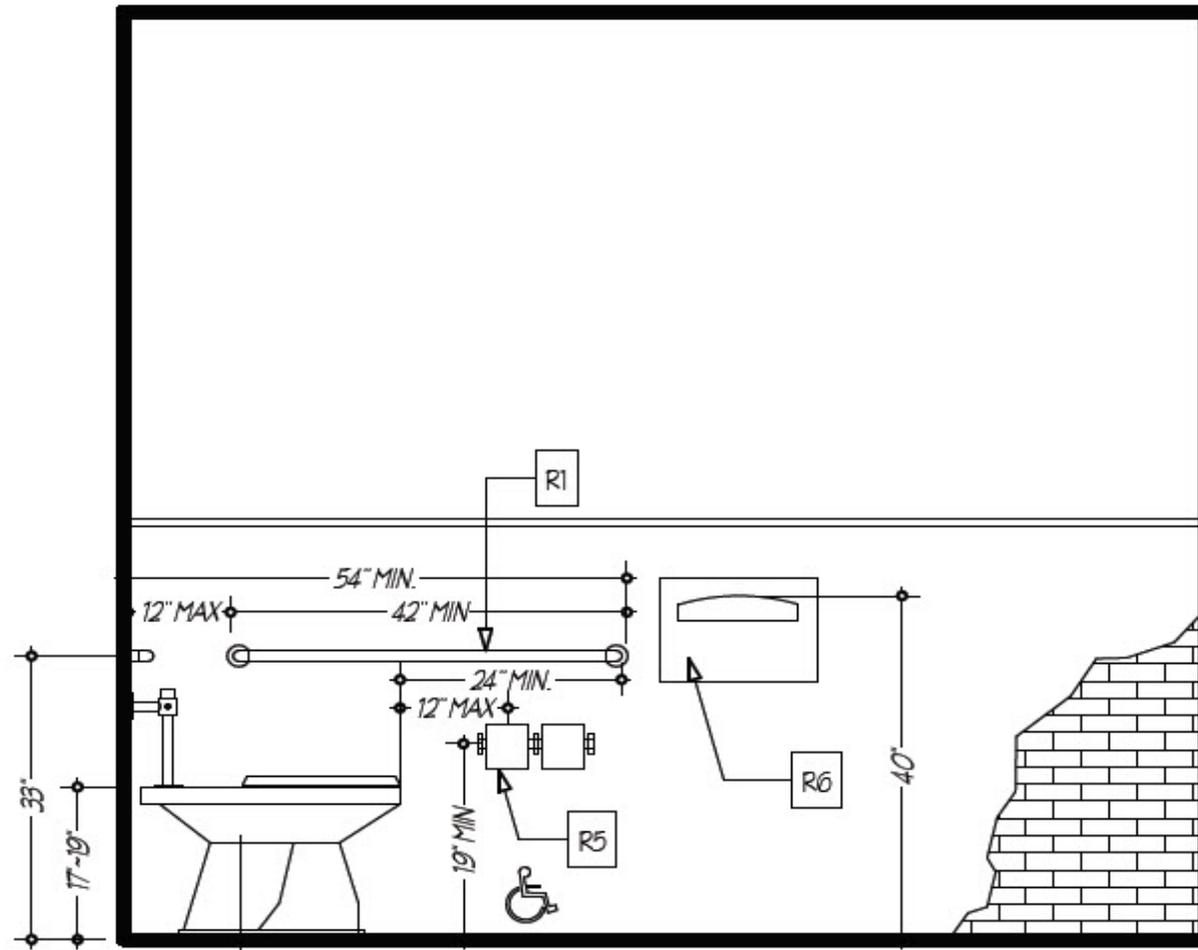


\*4'-0" FOR EXTINGUISHERS WEIGHING UNDER 40 LBS.  
 3'-4" FOR EXTINGUISHERS WEIGHING OVER 40 LBS.

## FRONT ELEVATION

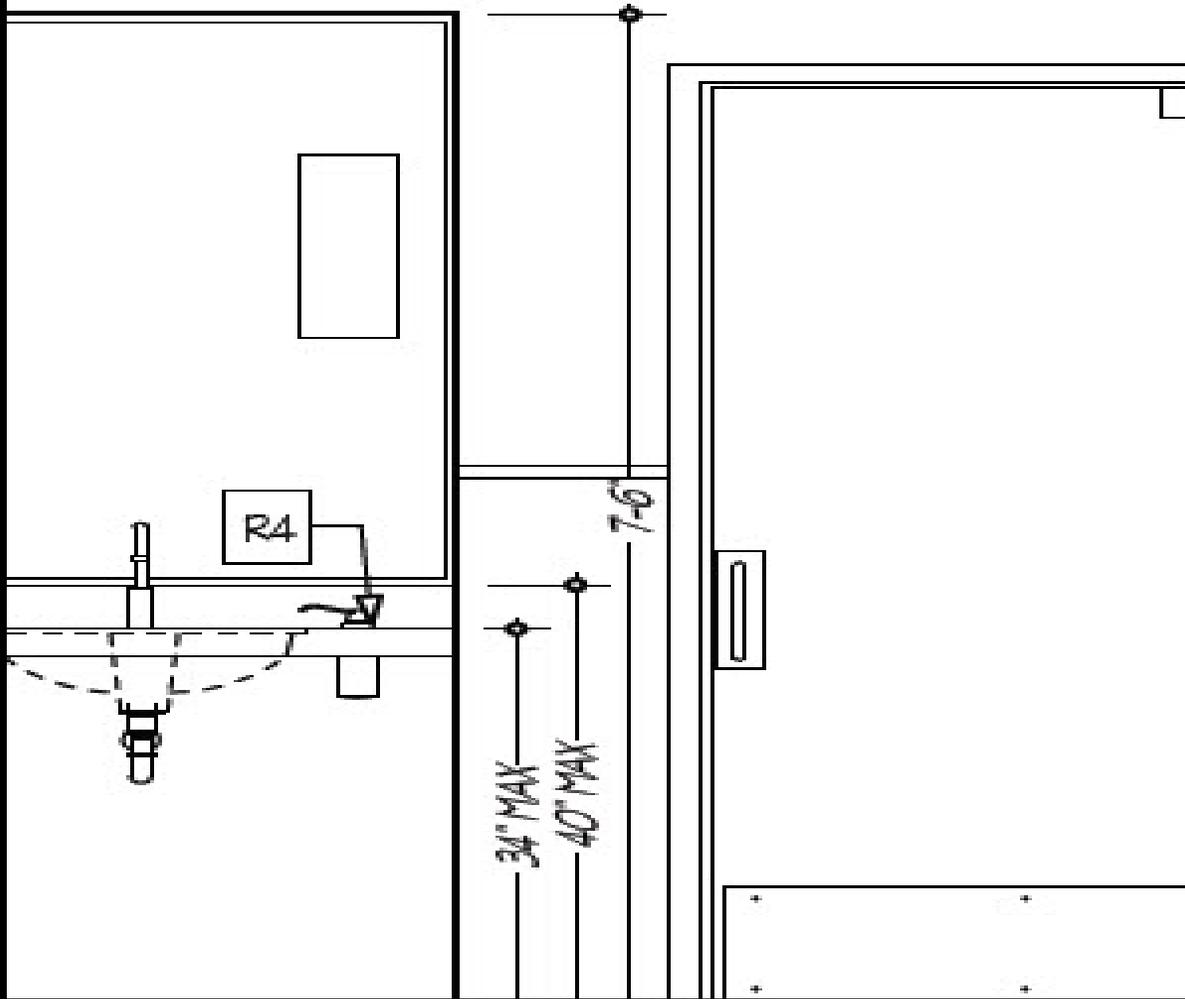
## MISCELLANEOUS MOUNTING HEIGHTS

(\* NOTE: NOT ALL ELEMENTS APPLY TO THIS PROJECT)

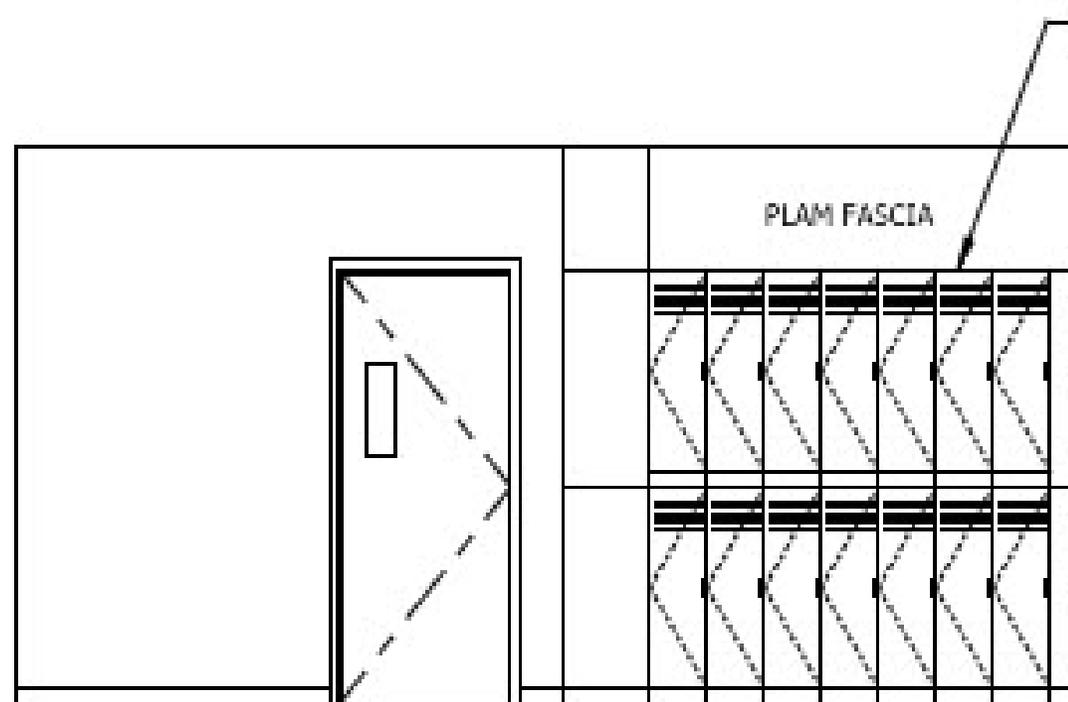


1  
A-5.1

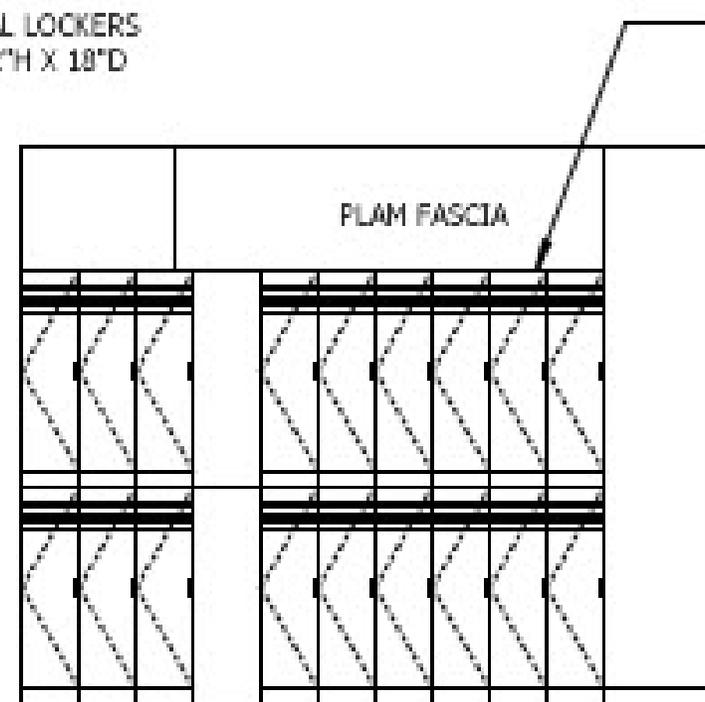
2 MENS ROOM







(14) METAL LOCKERS  
12"W X 42"H X 18"D



(18) METAL LOCKERS  
12"W X 42"H X 18"D

9

2325 ICU STAFF BREAK - SOUTH

1/4" = 1'-0"

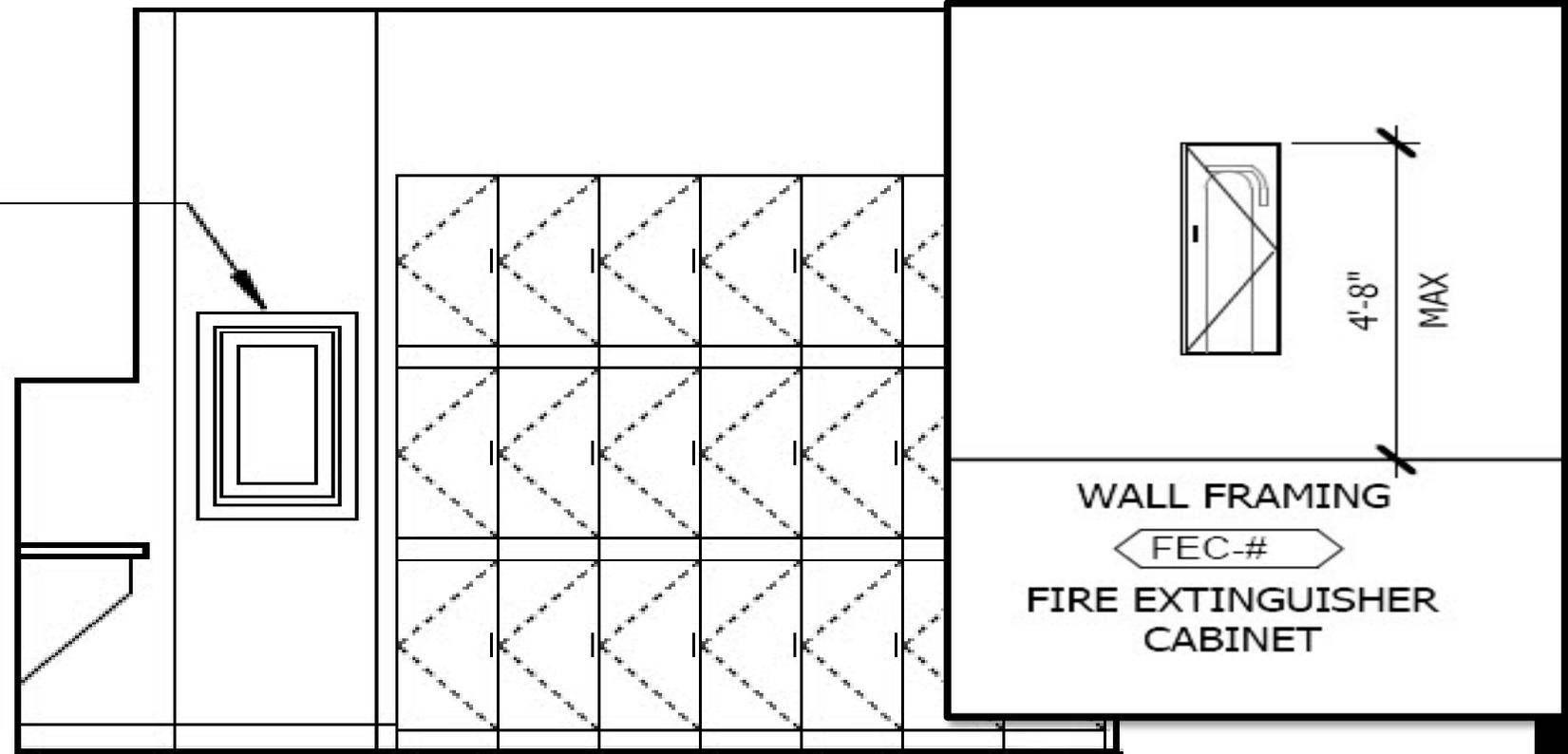
10

2325 ICU STAFF BREAK - WEST

1/4" = 1'-0"

21 LOCKERS @ 12"W X 24"D X 25"H

FIRE  
EXTINGUISHER  
CABINET



21

1631-TECH WORK-SOUTH

1/4" = 1'-0"

4' - 0" MIN.

2' - 9" TYP.

2' - 0" MIN.

1' - 6" MAX.

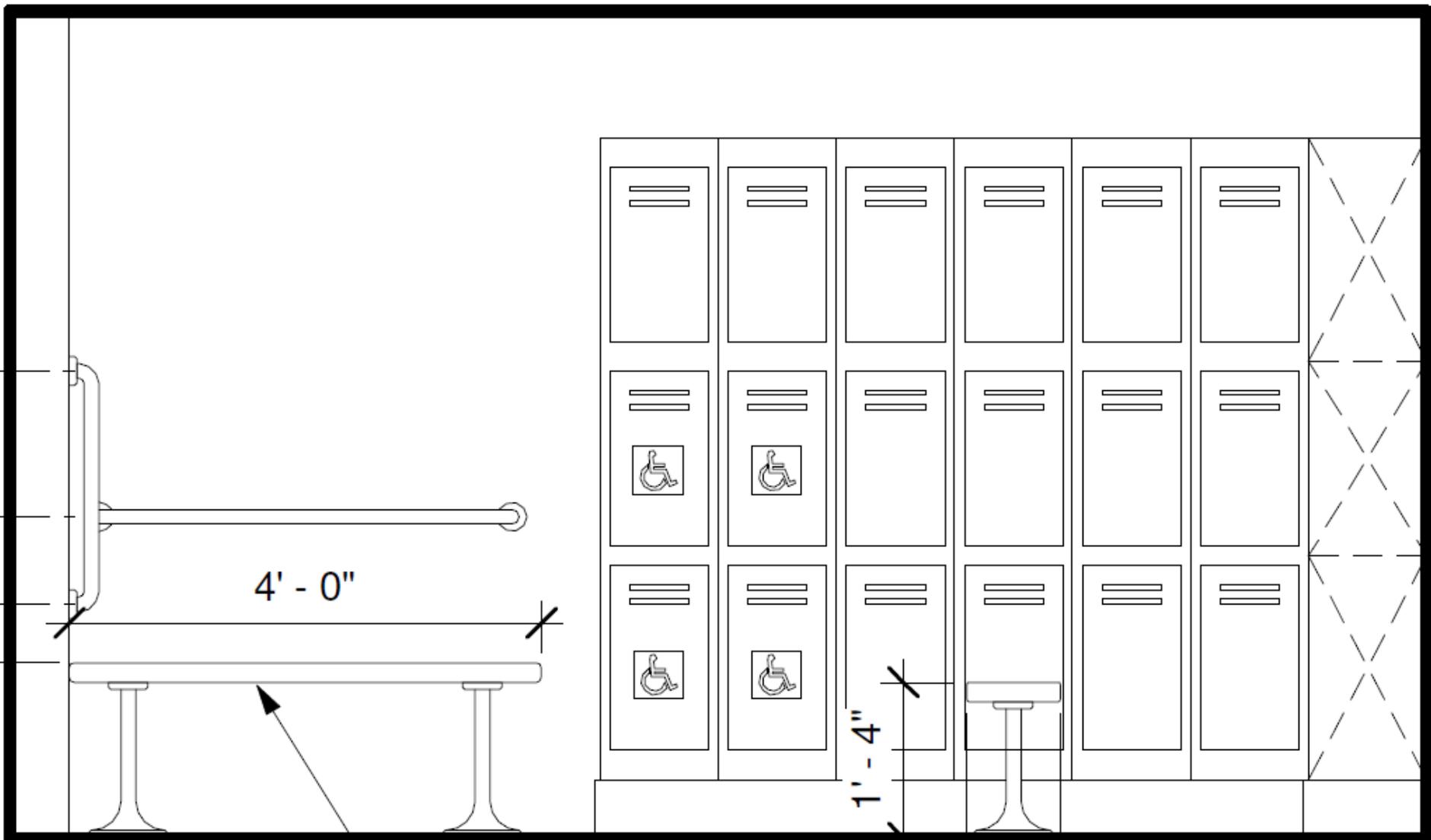
4' - 0"

1' - 4"

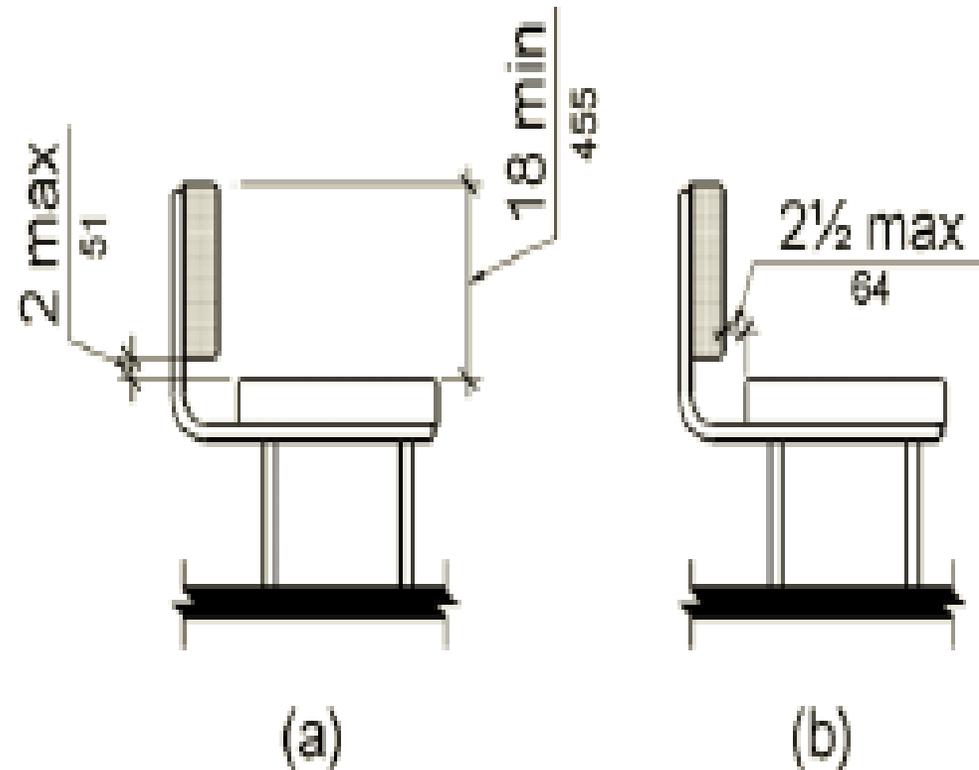
6"

ADA BENCH

9 1/2"



**Advisory 903.4 Back Support.** To assist in transferring to the bench, consider providing grab bars on a wall adjacent to the bench, but not on the seat back. If provided, grab bars cannot obstruct transfer to the bench.

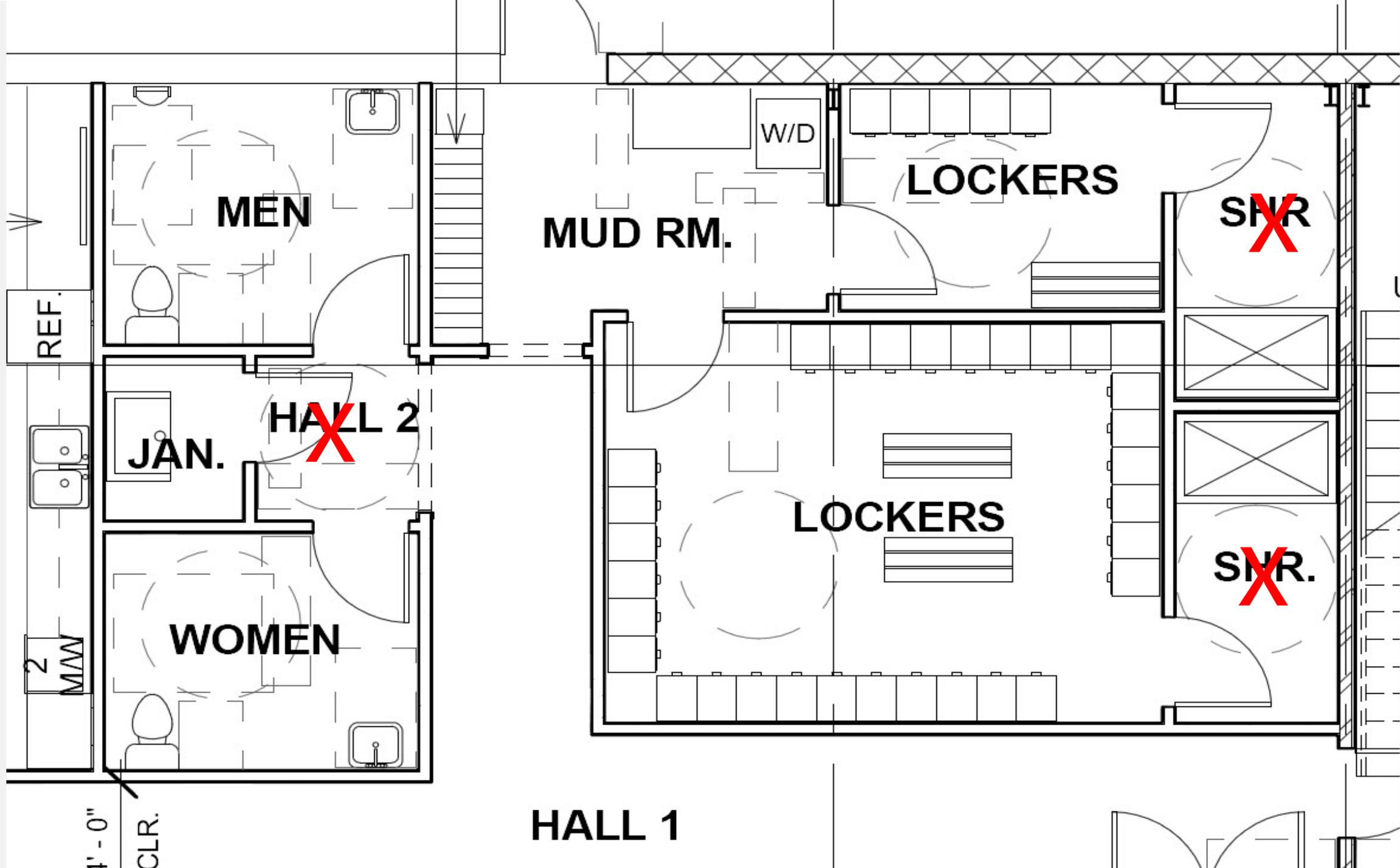


**Figure 903.4**  
**Bench Back Support**

# Turning Circles (ADAS 304)

- Toilet Rooms
- Dressing, Fitting, & Locker Rooms
- Patient Rooms
- Saunas/steam Rooms
- Cells
- Recreation/Amusement Load & Unload Spaces
- Fishing Piers
- Playground Components
- Shooting Positions
- Housing





**MEN**

**REF.**

**JAN.**

**HALL 2**

**WOMEN**

**2 M/W**

**4'-0"**  
**CLR.**

**MUD RM.**

**W/D**

**LOCKERS**

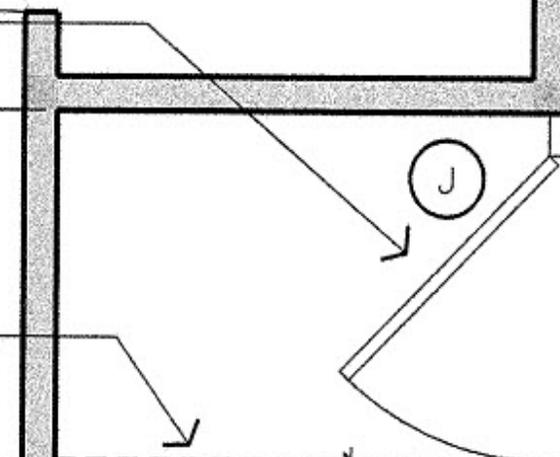
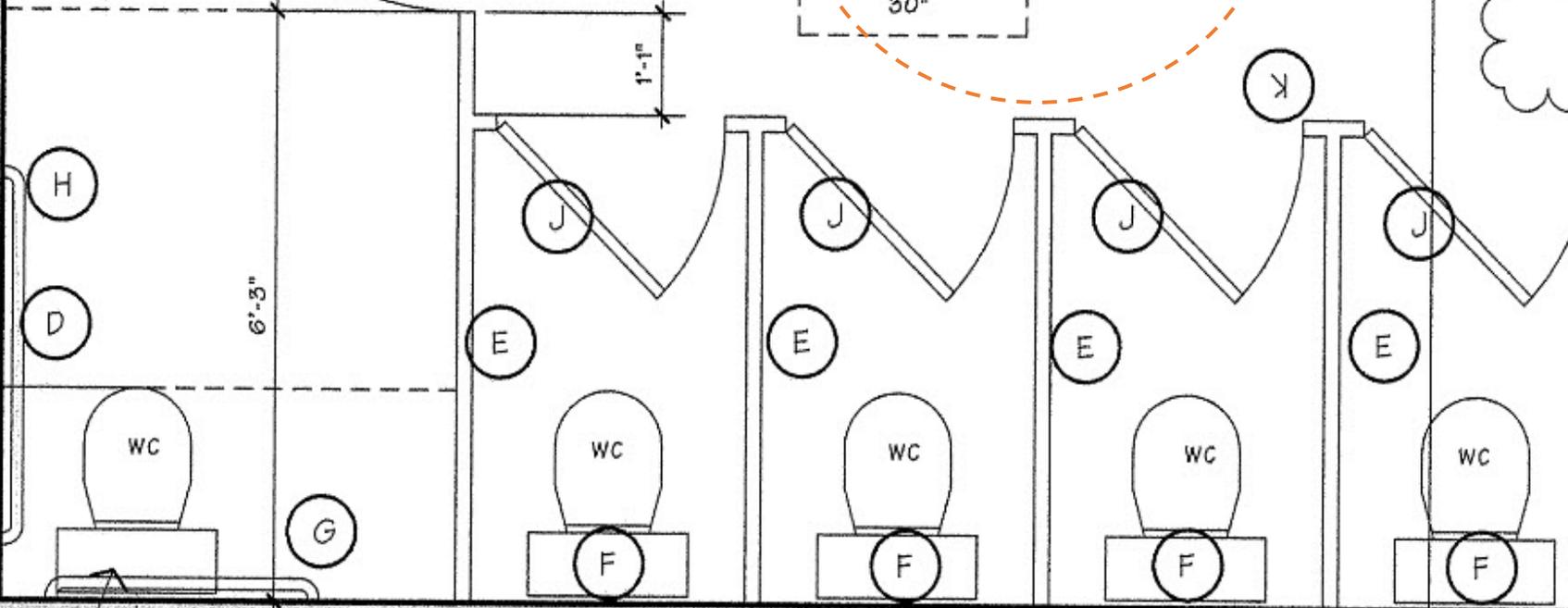
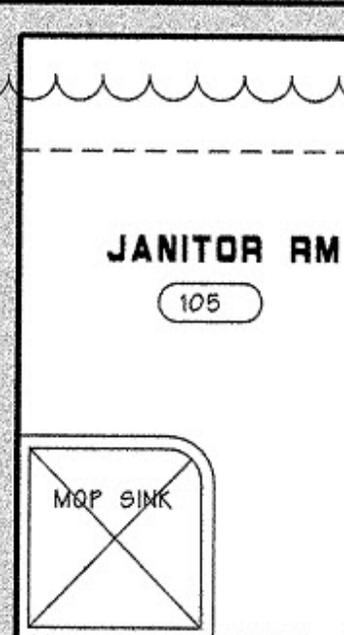
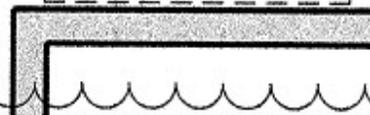
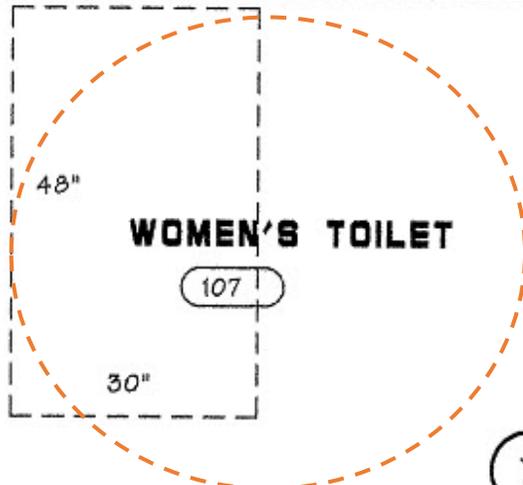
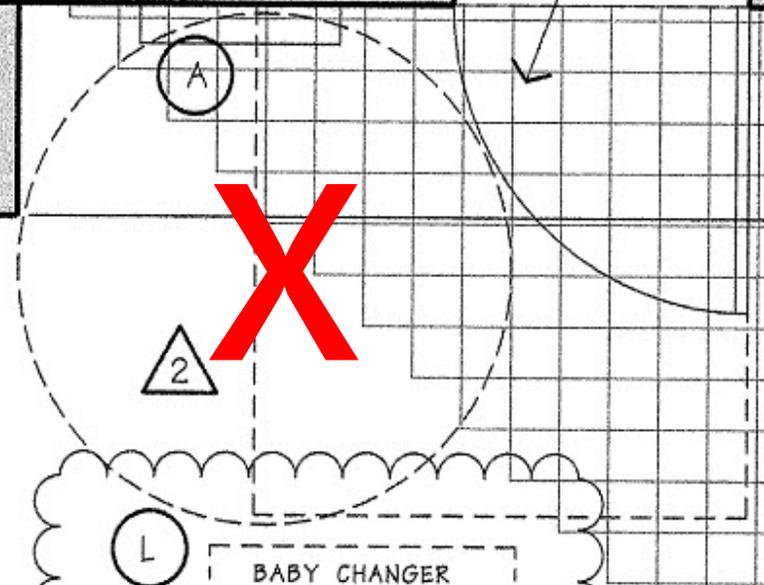
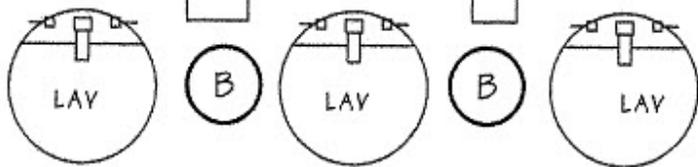
**SNR**

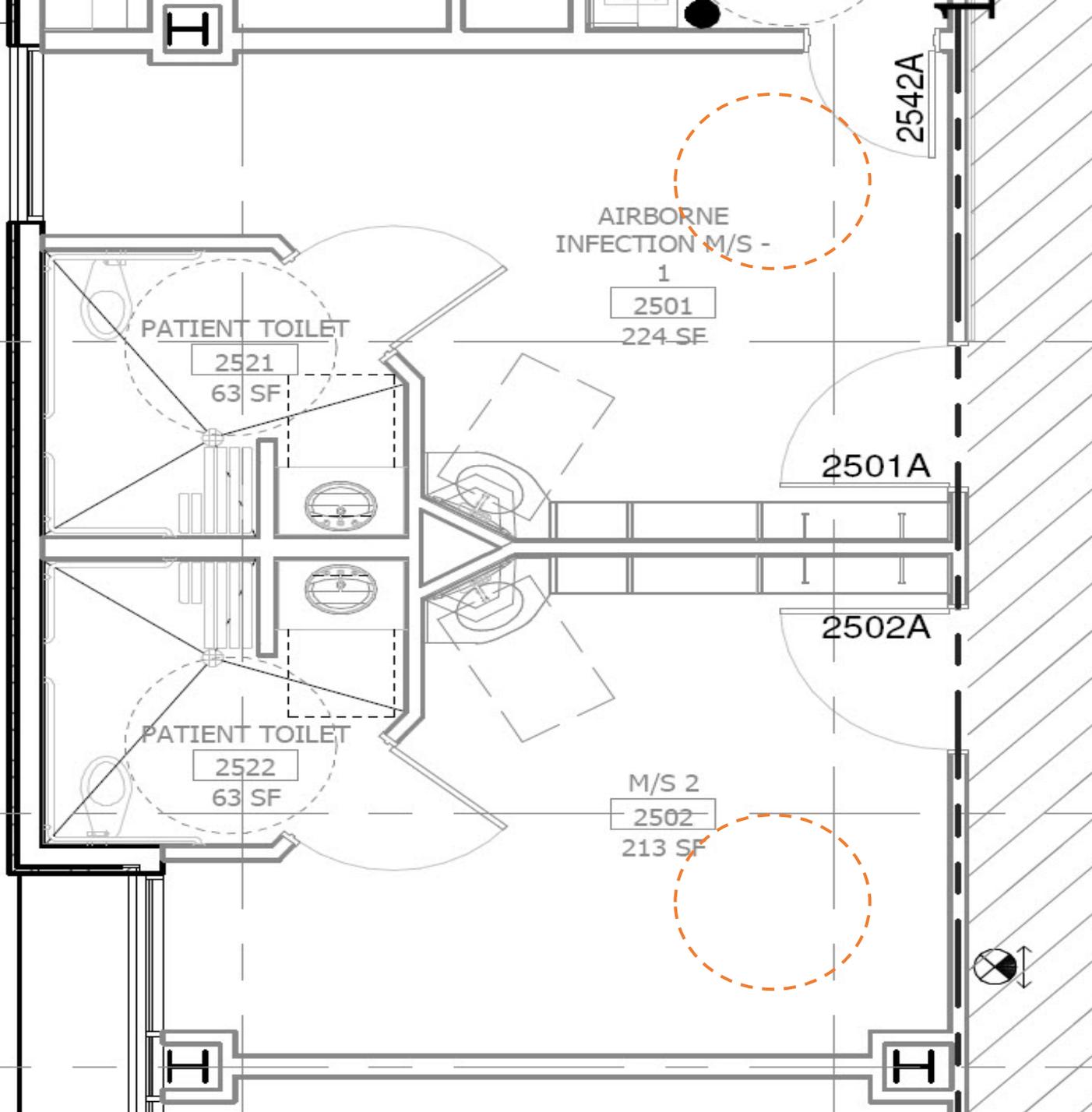
**LOCKERS**

**SNR.**

**HALL 1**

2X8 STUD WALL





H

2542A

AIRBORNE  
INFECTION M/S -

1

2501  
224 SF

PATIENT TOILET

2521  
63 SF

2501A

2502A

PATIENT TOILET

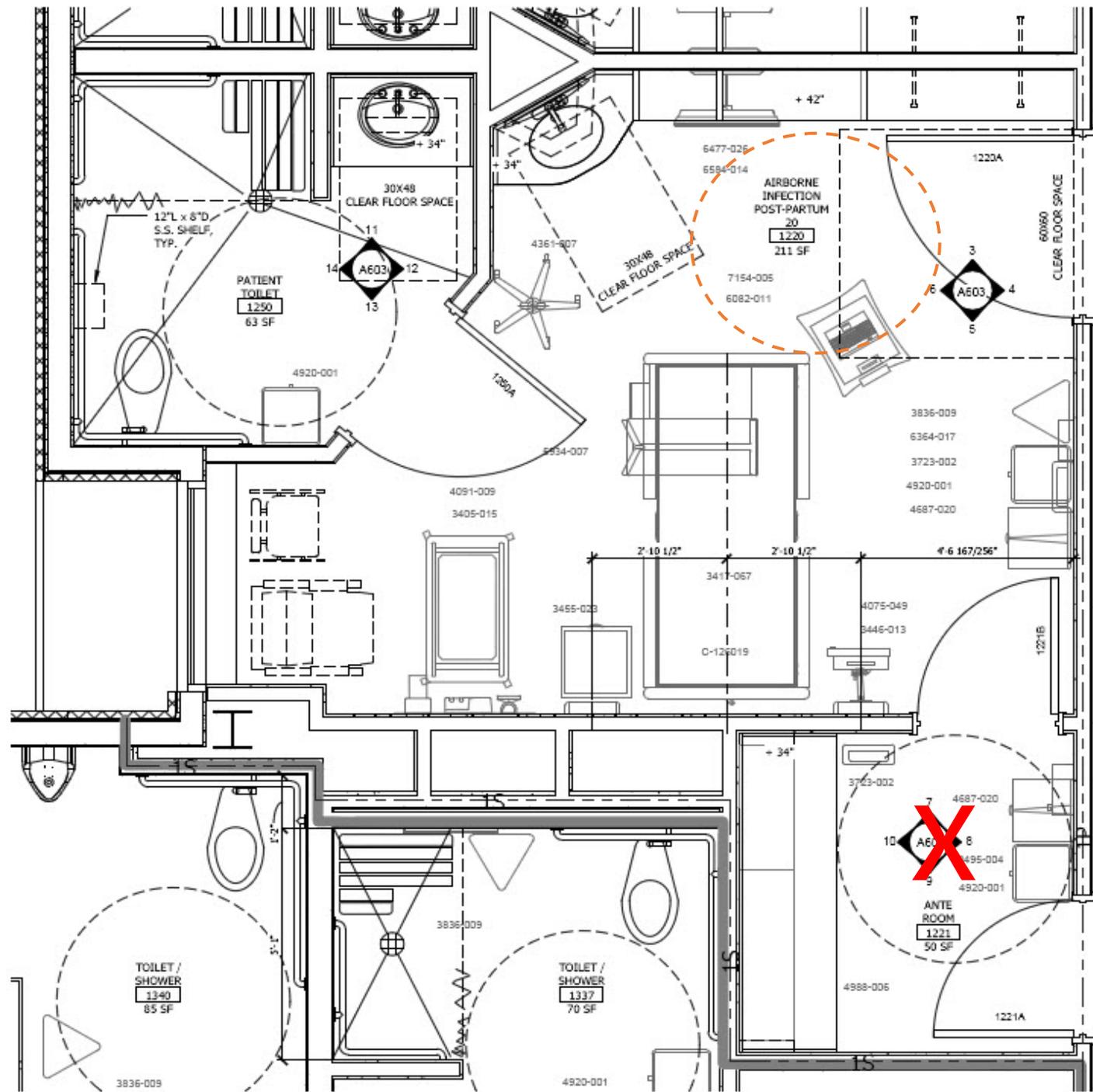
2522  
63 SF

M/S 2  
2502  
213 SF



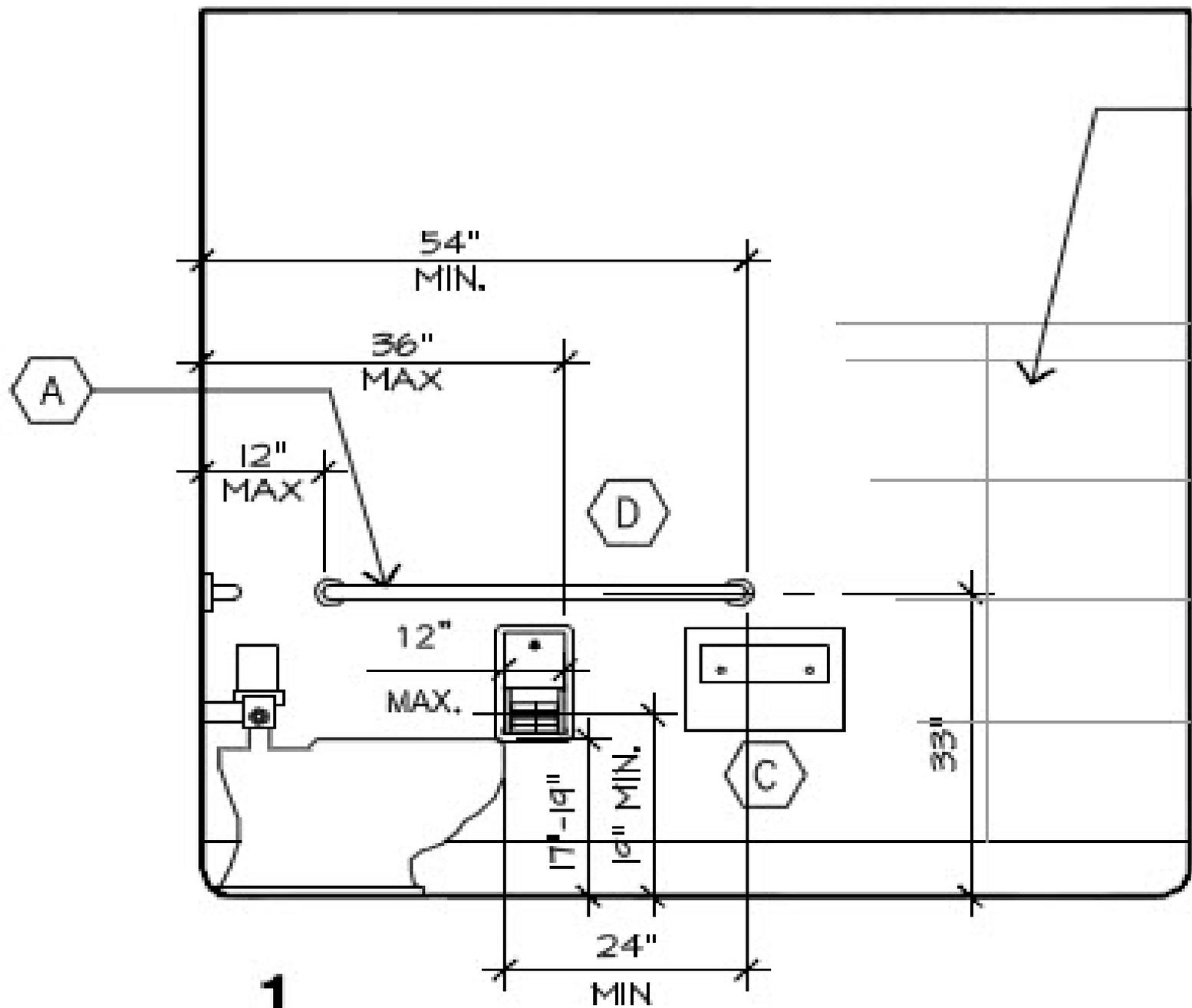
H

I









FOR FINISHES  
-SEE DECOR DWGS

SLOAN WES-5000  
WATERLESS  
URINAL

6" HIGH COVERED  
TILE BASE

1



# Reach Range at Lavatories



# Reach Range at Lavatories



Photo courtesy of Richard Zellmer AIA CASp, Sutter Health





# Contact Information

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Thank you!