



## ADA REPAIR GUIDE

### 1. Designer's reference for ADA Compliance Remediation.

**Updated August 2014**

#### **Corrections for non-compliant building elements at University Campuses**

The details referenced in this guide are found in two codes – either the 1991 ADA Accessibility Guidelines (ADAAG-91), the older federal code, or the 2010 Standards for Accessible Design (SAD-10), the most recent version.

**For ADAAG-91 details**, go to the federal 1991 Standards at this ADA.gov link:

<http://www.ada.gov/reg3a.html#Anchor-Appendix-52467> , and use the table-of-contents hyperlinks to navigate the older code. You can save this code to your own system for offline browsing if you like.

**For SAD-10 details**, browse the federal 2010 Standards at this other ADA.gov code link:

<http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#titleIII> , and use the table-of-contents hyperlinks to navigate the updated code. You can also save this code to your own system if you like.

For TBR Guide for Facilities and Managers at Public Universities in Tennessee-link:

[http://www.apsu.edu/sites/apsu.edu/files/physical-plant/006.1 College and University Guide for Spending ADA Funds MASTER COPY.pdf](http://www.apsu.edu/sites/apsu.edu/files/physical-plant/006.1%20College%20and%20University%20Guide%20for%20Spending%20ADA%20Funds%20MASTER%20COPY.pdf)

#### **Abbreviations**

HOP= Highest Operable Part. This is the highest user-operable part of any device or machine or dispenser. For instance, a paper towel dispenser HOP is either the electric eye, or the pull handle or the towel slot, whichever the user operates to get a paper towel. On a microwave the HOP is the highest touch control. For a coat hook, the HOP is the top of the hook.

**Abbreviations: See abbreviation section at beginning of report.**

## Typical Issues bt element and recommended action

### A. Toilet Rooms

1. **No turning radius circle (TRC):** Reconfiguration is necessary. See SAD-10 sections 304.3.1 and 304.3.2 at SAD-10 website link above and illustrations. Also refer to note G-1 below.
2. **Lavatory/sink height higher than 34" max AFF:** Lower lavatory to max 34" AFF to top of front rim. If the lavatory is mounted in a counter top then it must be max 34" to the top of rim or counter, whichever is higher. See text at 606.3 at our website link above.
3. **Flush control on wrong side of toilet:** The flush control must be on the open side of the toilet – not the wall side. Replace tank with correct type or, if the flush valve is piped, have plumber flip the handle. See SAD-10 604.6 at SAD-10 website link above.
4. **Rear grab bar not 36" long as required:** Replace with 36" long bar if space is available behind toilet. See figure 604.5.2 at SAD-10 website link above.
5. **The side grab bar is not compliant:** The side grab bar must extend so the round connecting plate furthest from rear wall behind the toilet is at least 54" from the rear wall. The round connector closest to the corner must be no more than 12" away from the corner. So if you have a 42" bar you mount it with one end 12" from the back wall and the other end 54" from the back wall. See detail at SAD-10 604.5.1. Remount correctly. Please note that blocking is usually necessary behind the drywall to provide the required structural strength.
6. **Grab bars higher than 36" AFF:** Must be no higher than 33"-36" from floor to top of bar. Lower bar accordingly. See text at 609.4 at SAD-10 website link above.
7. **Lavatory does not have compliant knee space:** If you currently have a cabinet style vanity lavatory it must be replaced with a wall hanging style with knee space below. If the lavatory already has knee space below but it is less than 27" high, then raise existing lavatory to provide min 27" knee space. See figure 306.3 attached. Note that the knee space must be 30" wide minimum to be compliant and provide toe clearance per figure SAD-10 306.2 at SAD-10 website link above.
8. **Drain and water lines not insulated:** Drainage pipes under lavatory or sinks with wheelchair knee space must be insulated or shielded. See SAD 10 606.5 at SAD-10 website link above.
9. **Toilet Paper dispenser location not compliant:** The dispenser (centerline) may not be farther out than 9" forward of the toilet rim. The highest operable part (HOP) of dispenser or roll must not be lower than 15" or higher than 48" above the floor. Relocate per figure at SAD-10 604.7 at SAD-10 website link above.

10. **Toilet height too low or too high:** must be 17"-19" AFF. Replace toilet with an ADA compliant commercial type. See SAD-10 section 604.4 at SAD-10 website link above
11. **Urinal flush control too high:** If the urinal has a flush handle or button it must not be higher than 48" above the floor. See SAD-10 section 605.2, 605.4 and figures 308.2.1 and 308.2.2 at SAD-10 website link above.
12. **The faucet is not complaint:** Faucets valves cannot have knobs; they must be a paddle or wing handle that complies with SAD- 309.4 at SAD-10 website link above.
13. **Toilet Clear Floor Space width:** If built after before March 15, 2012 the CFS must comply with 1991 standards figures 28 and 29 [ADA.gov](http://ADA.gov). If built after March 15, 2012 must comply with SAD-10 figures 604.2 and 604.3.1 at SAD-10 website link above.
14. **Toilet stall door pulls:** For outswing stall doors you must have U-pulls both sides. For inswing stall doors you must at least have a U-pull on the inside.
15. **Diaper change station height** must be maximum 34" above the floor to the top of baby table. See SAD-10 figure 308.2.2 (in operable position) See the detail attached to this report.
16. **Toilet clear floor space:** If built after before March 15, 2012 it must comply with 1991 standards figures 28 and 29 [ADA.gov](http://ADA.gov) If built after March 15, 2012 must comply with SAD-10 figures 604.2 and 604.3.1 at SAD-10 website link above.
17. **Transfer shower-transfer Clear Floor Space** must comply with SAD-10 figures 608.2.1 and figure 305.7.2 when area outside of shower is less than 60" min. width. See figures at SAD-10 website link above.
18. **No grab bars:** Install grab bars per SAD-10 figure 604.5.1 and 604.5.2 at SAD-10 website link above.
19. **Shelf height:** If shelves are provided then the top of at least one shelf shall be within the range of 40"-48" above the floor per SAD-10 603.4 at SAD-10 website link above.
20. **Toilet too far from the side wall:** The centerline of a toilet built before March of 2012 must be within the range of 17" to 19" from the wall. Non-compliant toilets must be repaired over time. Repair at the next change of tenant or other alteration or add to the remediation schedule.
21. **Clear Floor Space encroachments:** "Clear" floor space must be clear. You may not place trash cans, shelf units, storage unit cabinets, tables or anything else in a Clear Floor Space. Clear floor spaces are the wheelchair user areas around the toilets and lavatories and in front of soap dispensers, towel dispensers and other things that people use. Merchandise and supplies may not be stored in Clear Floor Spaces.
22. **Rear grab bar not installed with 24" to open side:** A compliant rear grab bar is 36" long with 24" to the open side of the toilet centerline and 12" to the wall side. If your wall space is only 36" wide behind the toilet then you will use the longest bar that will fit --

30" or 24". As much length as possible should be mounted towards the open side of the toilet so it can be reached by a person trying to make a transfer.

23. **Side grab bar is less than 42" long:** A side grab bar may be longer than 42" but not shorter. See the illustration at SAD-10 604.5.1 at SAD-10 website link above.
24. **Stall door swings out but does not have enough clearance on the pull side:** If you approach the ADA stall by passing the other stalls first then arriving at the latch side of the door the passage width must be minimum 42" wide from face of stall door to the opposite wall. In all other cases you must use the clearance rules for regular doors found at SAD-10 404.2.4.1.
25. **Stall door swings into the toilet Clear Floor Space:** Stall doors may not swing into the toilet Clear Floor Space. For pre 2012 stalls that means a minimum CFS size of 48" wide by 59" deep. For post 3/13/2012 alterations that means minimum 60" wide by 56" deep. The solution to this problem is often to simply swing the stall door out instead of in.
26. **The stall latch is not an accessible type:** Like all other operable parts, toilet stall latches must be operable with one hand without tight grasping, tight pinching or twisting of the wrist. You may not use the small slide bolts like those on old screen doors. You may not use J-hooks. Replace with easy-to-open hardware.
27. **The ADA urinal is too high:** If you have more than one urinal in a toilet room then at least one must be accessible, no higher than 17" above the floor to the front rim. Lower the ADA urinal to the compliant height.
28. **Accessible urinal is in an alcove deeper than 24":** Elements mounted in certain alcoves must have extra maneuvering space. Urinal alcoves deeper than 24" must be minimum 36" wide, not the usual 30". Either remove one privacy panel, move the urinal wall outward toward the room, remove the urinal or otherwise reconfigure the room. An architect usually has to provide a design consult in these situations.

## **B. Doors**

1. **Door hardware (knob) not compliant type:** Cannot require tight grasping or twisting. Replace all locations on doors that are part of an accessible path to spaces and elements that must be accessible to the public. Replace with lever type hardware. See text at 404.2.7 at SAD-10 website link above.
2. **Door threshold is higher than ½":** If the door was installed before January 26, 1992 then disregard. If installed after March 15, 2012 then switch out threshold for max ½" threshold. See text at 404.2.5 and figures 303.2 and 303.3 at SAD-10 website link above.
3. **Door does not have enough maneuvering clearance:** Consider reversing the door to swing the opposite way or hinging on the opposite jamb to create the required 18" of

door side clearance. For a straight ahead approach the pull side door maneuver space must match the drawing shown at SAD-10 Figure 404.2.4.1(a).

4. **Door not wide enough:** Door clearance widths must be 32" clear when open 90 degrees. A 36" door is typically required to provide the 32" clear width. See SAD-10 section 404.2.3 at SAD-10 website link above. Double-leaf doors- the operable leaf must have a minimum 32" width when open 90 degrees. See 404.2.2 at SAD-10 website link above. Installing offset hinges to widen doorways sometime can solve a door width issue.
5. **Door opening force too hard:** Door closing force must comply with SAD-10 section 404.2.9 at our website link above. The maintenance of door closers is usually the maintenance department's responsibility.
6. **The pull/side latch side of doors must have a side clearance of 18":** See SAD-10 figure 404.2.4.1 (a) pull side and 404.2.4.3 (a) pull side and the other various door maneuvering configurations at section 404 at SAD-10 website link above.
7. **The required door maneuver space is encroached by cabinets, shelves, stored merchandise or equipment:** The encroaching items must be removed from the required Door Maneuvering Space (DMS). Note: The maintenance department should be responsible for keeping all CFS, DMS and Accessible Routes clear of encroaching items so that the all public elements and programs are accessible to disabled patrons at all times.

### C. Reach Ranges

1. **Coat hook is too high:** Where provided at least one must be maximum 48" high AFF. Make sure the hook is located in a place where a wheelchair CFS 30"x48" is possible for either a forward or side approach. See text at 603.4 at SAD-10 website link above.
2. **Mirror higher than 40" to the reflective surface:** Lower to 40" max AFF to reflective surface of mirror glass (not frame). See text at 603.3 at SAD-10 website link above.
3. **Soap dispenser too high:** lower to 46" max AFF to HOP. Make sure it is located in a place where wheelchair CFS 30"x48" (side or forward approach) is possible. See figures 308.2.1, 308.2.2, 308.3.1 at SAD-10 website link above.
4. **Paper towel dispenser too high:** Lower to 48" max AFF to HOP. Make sure it is located in a place where wheelchair CFS 30"x48" (side or forward approach) is possible. See figures 308.2.1, 308.2.2, 308.3.1 at SAD-10 website link above.
5. **Other public element(s) too high or too low:** All elements used by the public such as check-in stations, transaction tables or shelves, ice machines, etc. must be mounted no higher than 48" AFF to highest operable part (HOP), no lower than 15" AFF, and must have a clear wheelchair space at least 30" x 48".

## D: Signs

1. **Toilet room signs either not provided or not compliant.** Check sign at accessible toilet rooms to make sure it complies with figures 703.6.1 and is installed per figures 703.3.2, 703.4.1 & 703.4.2 at SAD-10 website link above. Non-compliant toilets should never have the ADA symbol as part of the room signage.
2. **Permanent Room Door Signs are not the correct height:** Reinstall per figure 703.4.1 and 703.4.2 at SAD-10 website link above.

## E: Transaction counters and other type of accessible surfaces

1. **ADA Transaction Counter (sales and/or service) not provided:** At least one accessible transaction counter is required where the public interacts with the staff. At sales or service counters you must provide a 36" long portion maximum 36" high from the floor to top of counter.

The Department of Justice considers information a service, so a reception counter in a department office lobby or info booth in a main lobby for instance, must have an accessible portion of counter so person's in wheelchairs can see the attendant's face.

To comply with the ADA transaction counter rule, lower a portion of the counter to 36". If the counter was installed prior to 1992 then you may provide a fold down shelf on front or side, 30" – 34" in height.

See exception to rule 904.4 at SAD-10 website link above for 24" long accessible section at certain counters. Also see **Service Counter Fix.-detail #68** in details folder.

2. **Dining surfaces and work surfaces** must comply with SAD-10 section 902 at SAD-10 website link above. A minimum of 5% of the seating or standing spaces must be 28"-34" high and must have a wheelchair Clear Floor Space with knee clearance.
3. **Check writing surfaces** must be 28"-34" high from the floor to the writing surface.

## F. Changing areas and rooms

1. **Missing dressing bench:** Where clothes are changed such as in intramural or sports locker rooms, theater dressing rooms, retail dressing rooms or medical exam areas then a bench complying with SAD-10 section 903 is required with a CFS located at the end of the bench. See SAD-10 sections 903.2, 903.3 and 903.4 and figure, at SAD-10 website link above. One dressing room of each distinct type must be accessible. Types include

coach – male/female or unisex, sports male and female or intramural male/female or unisex.

## **G. General Notes**

1. **Room is undersized; the required 60” turning circle (TRC) or T will not fit in the room:**  
A wheelchair user must be able to turn around to open the door and leave the room. The turning space must be either a 60” circle or a T shape that fits inside a 60” square. You are allowed limited use of the knee and toe space under elements. This is required rooms that have a door and where a wheelchair person would be required to turn around to operate the door from a frontal approach to the door: i.e. a dressing cubicle with a curtain does not require a TRC. An architect or an ADA consultant will be needed to provide guidance about this complex issue.
2. **Operating mechanisms:** Handles, switches, latches and other operating mechanisms must be operable with one hand without tight pinching, tight grasping or twisting of the wrist. The height of operating mechanisms must be within the accessible reach range, that is, 15” to 48” above the floor or ground.

## **H. Drinking fountains**

1. **Must provide knee clearance** per SAD-10 section 602.2 and figure 306.3, at the SAD-10 website link above.
2. **Drinking fountain heights:** Must comply with SAD-10 section 602.4- also see, 602.5 and 602.6 at the SAD-10 website link above.
3. **Drinking fountain may not be a protruding object:** See SAD-10 section 307.2 at SAD-10 website link above. Drinking fountains may need shields to project to within 4” of front of fountain and be no lower than 27” from floor. These shields may not encroach required fountain CFS or nearby door maneuver space (DMS).
4. **Alcove width for drinking fountains:** Maintain min 30” alcove width for alcoves less than 24” deep. Also maintain 15” center line of fountain to side wall clearance for all lower ADA fountains.

## **I. Stairs**

1. **Stair handrails** are not a consistent height above nosing as required by SAD-10 Section 505.4. See figure 505.4 at SAD-10 website link above .
2. **Stairs** must provide bottom and top extensions per SAD-10 Section 505.10. See figure 505.10.2 for top extension detail of 505.10.3 for bottom extensions at SAD-10 website link above.

## J. Floors

1. Floors must be firm and stable. Tile, vinyl, concrete and the compact commercial grades of carpet meet this rule, but thick carpets, especially those with pads underneath, do not comply since wheelchair users have difficulty crossing them.
2. Floor surfaces must not have significant bumps. Bumps up to ¼" are allowed with no special treatment. Bumps up to ½ inch high must be beveled twice as long as the height of the bump.

## K. Accessible Route

1. **The door landing is not level and flat:** Door landings must not slope more than ¼" per foot (approx. 2%) and cannot have bumps higher than 1/4 inch. A bump up to 1/2 inch is allowed but only if it is beveled twice as long as it is high. For example, a 1-inch bump must be beveled for 2 inches in the running direction. **See SAD-10 Section 404.2.4.4 at SAD-10 website link above.**
2. **Entry door landing is too small:**
  - a. Exterior landings at outswing doors must all be minimum 60 inches deep from face of door outward UNLESS the approach is towards the latch side, when that depth can be reduced to 48 inches. For the width, landings outside double doors must be at least as wide as the doors from jamb-to-jamb. Landings outside single doors vary:
    - i. For an approach from straight ahead the landing must be at least the door width PLUS an extra 18" width on the latch side of the jamb (Min 60" landing depth required).
    - ii. For a side approach towards the latch side the landing must be at least the door width PLUS an extra 24" width on the latch side of the jamb (Min 48" landing depth required).
    - iii. For a side approach towards the hinge side the landing must be at least the door with plus an extra 36" on the latch side of the jamb (Min 60" landing depth required).
3. **Entry door threshold is too high:** A threshold cannot be higher than 1/2 inch, beveled both sides. There is an exception: exterior sliding door thresholds may be maximum 3/4 inch high. **See SAD-10 Section 303 at SAD-10 website link above.**
4. **"Bumps in the Road":** Abrupt changes in level, commonly known as bumps, are regulated on Accessible Routes. You may have bumps up to 1/4 inch high with no special treatment. A bump up to 1/2 inch is allowed but only if it is beveled twice as long as it is



high. For example, a 1-inch bump must be beveled for 2 inches in the running direction. No bumps higher than 1/2" high are allowed on Accessible Routes.

5. **Carpet:** Carpet or carpet tile shall be securely attached. Any exposed edges of carpet must be fastened to the floor with trim along the entire length of exposed edge. Pile thickness up to 1/2" is allowed and if a pad is used underneath it must be firm.
6. **Minimum width of an Accessible Route:** 36" is the minimum width allowed for an Accessible Route. You must provide at least one Accessible Route to each accessible element, such as toilet room, dressing room, merchandise display, checkout counter, sink, drinking fountain, Emergency Exit and so on. Accessible Routes should be kept clear of stored merchandise, equipment and supplies.
7. **Front Entry is not accessible:** Steps make an entry non-accessible to wheelchair users and difficult for the infirm, who have trouble negotiating steps. The ADA says that disabled visitors must be able to use the same general circulation paths as others – you cannot send a wheelchair user around back to the kitchen door. So your first priority is to make your main entrance accessible, installing a ramp if steps block the way, switching to accessible door hardware, lowering the threshold and ensuring that the walkways are level and flat.

If structural issues make your building entrance inaccessible or if the ADA remediation resources are very small, you may legally make an alternate entrance. In such a case you must install directional signage indicating the location of the accessible entrance.



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