



DISABILITY AND COMMUNICATION ACCESS BOARD

1010 Richards Street, Rm. 118 • Honolulu, Hawaii 96813
Ph. (808) 586-8121 (V) • Fax (808) 586-8129 • TTY (808) 586-8162

AGENDA

Standing Committee on Facility Access Meeting

Location: Kamamalu Building
1010 Richards Street, Conference Room 118

Date: November 15, 2018
Time: 9:30 a.m. – 10:30 a.m.

- I. Call to Order
- II. Introductions
- III. Approval of Meeting Minutes of September 20, 2018
- IV. Old Business
 - A. Document Reviews and Implementation of Fee Schedule – Update
 - B. Update on Other Facility Access Unit Activities
- V. New Business
 - A. Interpretive Opinion 2018-03 – Ramps at Doorways
 - B. Interpretive Opinion 2018-04 – Ramps at Cased Openings
 - C. Interpretive Opinion 2018-05 – Rear Grab Bar Exception
- VI. Open Forum
- VII. Next Meeting: January 17, 2019
- VIII. Adjournment

If you need an auxiliary aid/service or other accommodation due to disability, contact Cindy Omura at (808) 586-8121 or dcab@doh.hawaii.gov as soon as possible, preferably by November 9, 2018. If a response is received after November 9, 2018, we will try to obtain the auxiliary aid/service or accommodation, but we cannot guarantee that the request will be fulfilled.

Upon request, this notice is available in alternate formats such as large print, Braille, or electronic copy.



APPLICATION FORM DISABILITY AND COMMUNICATION ACCESS BOARD

1010 Richards Street, Room 118, Honolulu, HI 96813 V: (808) 586-8121 Fax: (808) 586-8129 TTY: (808) 586-8162

Date: November 15, 2018

Applicant Information

Company: Disability and Communication Access Board

Address: 1010 Richards Street, Room 118

City: Honolulu State: Hawaii Zip: 96813

Contact: Rodney Kanno Phone: 808-586-8121

Title: Facility Access Specialist Fax: 808-586-8129

Request Information

Site Specific Alternate Design Interpretive Opinion Design Specification (choose one):
 ADOPTION AMENDMENT REPEAL

Guidelines: ADAAG Section(s) Section 404.2.5

Description: If the change in level at a doorway with a door is greater than the maximum threshold height allowed, can a ramp be used?

Site Specific Alternate Design

Project Title: _____

Job No.: _____ T.M.K.: _____

Agency: _____

Address: _____ County: _____

Contact: _____ Phone: _____

Title: _____ Fax: _____

I hereby certify that all statements in this application are true and correct to the best of my knowledge, and I agree and understand that any misstatements of material facts herein may be grounds for *site specific alternate design* denial. I understand that all costs related to the processing of this application for a site specific alternate design by the Disability and Communication Access Board (DCAB), including processing fees, proceeding costs and legal notice publications, will be billed directly to me. In addition, I agree to submit all public notices to the DCAB for review, approval and filing for publication. Further, I understand that all materials filed with or presented to the DCAB will be retained and will be considered public documents under HRS §92F and shall be available for inspection by the public during public hearing as well as after a final decision is made.

Signature: _____ Date: _____

DOCKET NO: DCAB 2018-03

If the change in level at a doorway with a door is greater than the maximum threshold height allowed, can a ramp be used?

BACKGROUND:

DCAB has received inquiries regarding ramps at doorways where the change in level is greater than ½ inch and if the ADAAG allows the usage of a ramp.

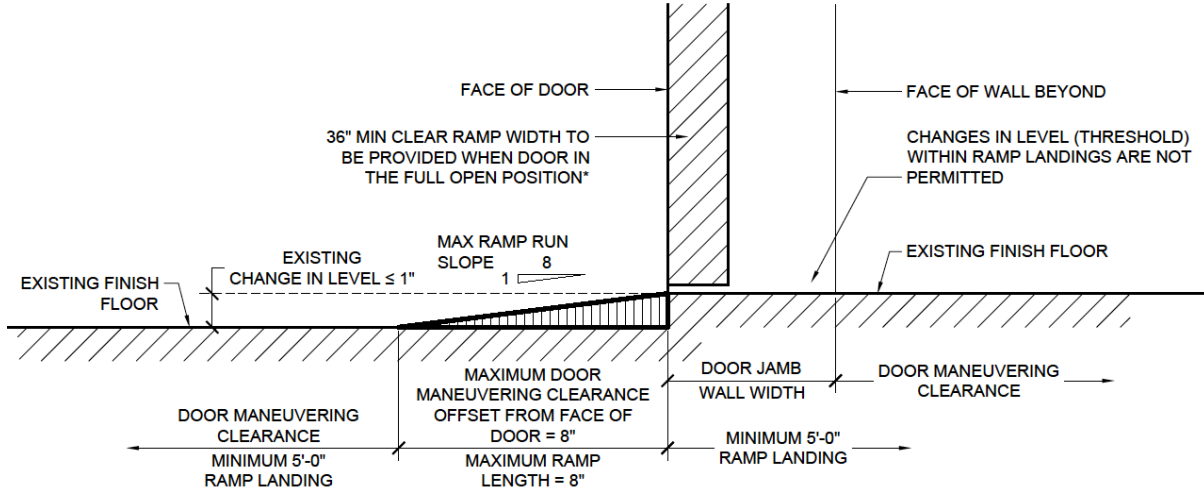
ANALYSIS: (For more background information see ATTACHED 'Supporting Research'.)

Per ADAAG 404.2.5, the maximum door threshold height is ½ inch, ¾ inch for existing or altered thresholds. Since a door threshold is considered a change in level, it is also required to comply with the requirements of ADAAG 302 and 303. ADAAG 303.4 states that changes in level greater than ½ inch are to be ramped and comply with ADAAG 405.

A ramp may be used at a door, provided the requirements of ADAAG 404 and 405 can be met.

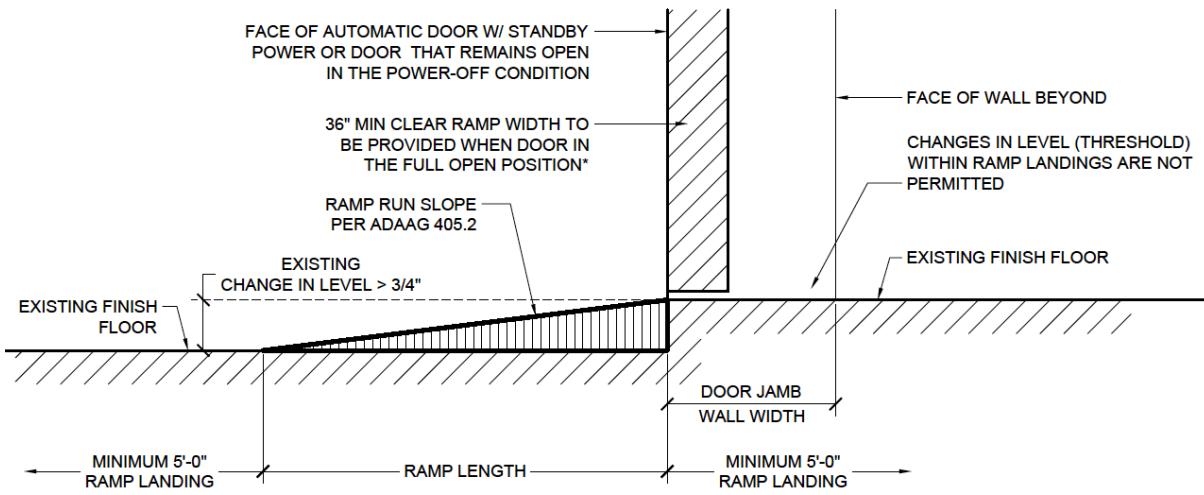
RECOMMENDED RULING – 2018-03 Ramps at Doorways

Where a change in level occurs at a doorway with a door, and the change in level exceeds the maximum threshold height allowed by ADAAG 404.2.5, a ramp may be used to navigate the change in level provided the doorway and ramp complies with the applicable requirements in ADAAG 404 and 405, including but not limited to: slopes, landings, changes in level and clear widths. At doorways that require maneuvering clearances, the ramp run shall not encroach into required door maneuvering clearances.



* CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES.

EXAMPLE: SECTION AT DOORWAY WHERE MANEUVERING CLEARANCES ARE REQUIRED



* CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES.

EXAMPLE: SECTION AT DOORWAY WHERE MANEUVERING CLEARANCES ARE NOT REQUIRED

[Ruling: xx/xx/2018] (Auth and Imp: HRS §103-50)

SUPPORTING RESEARCH:

The 2004 ADA Chapter 1, ADA Chapter 2 and Chapters 3-10 of the Americans with Disabilities Act, Architectural Barriers Act, Accessibilities Guidelines, published on July 23, 2004 by the U.S. Access Board, were adopted by DCAB. The guidelines contain scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities. These scoping and technical requirements are to be applied during the design, construction, and alteration of such buildings and facilities.

103 Equivalent Facilitation

Nothing in these requirements prevents the use of designs, products, or technologies as alternatives to those prescribed, provided they result in substantially equivalent or greater accessibility and usability.

The 2004 ADAAG contains 'Advisory' information which is meant to assist in the use of its ADA/ABA AG. It explains some of the basic considerations for accessible design and clarifies specific ADAAG provisions in an effort to address frequently asked questions. Advisory information is provided in the form of recommendations; these recommendations are optional and go beyond the minimum required by ADAAG.

Advisory 103 Equivalent Facilitation. The responsibility for demonstrating equivalent facilitation in the event of a challenge rests with the covered entity. With the exception of transit facilities, which are covered by regulations issued by the Department of Transportation, there is no process for certifying that an alternative design provides equivalent facilitation.

2004 ADAAG Technical Provisions:

303 CHANGES IN LEVEL

303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

EXCEPTIONS:

1. Animal containment areas shall not be required to comply with 303.
2. Areas of sport activity shall not be required to comply with 303.

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.

303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

303.4 Ramps. Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

404 DOORS, DOORWAYS, AND GATES

404.1 General. Doors, doorways, and gates that are part of an accessible route shall comply with 404.

EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.7, 404.2.8, 404.2.9, 404.3.2 and 404.3.4 through 404.3.7.

Advisory 404.1 General Exception. Security personnel must have sole control of doors that are eligible for the Exception at 404.1. It would not be acceptable for security personnel to operate the doors for people with disabilities while allowing others to have independent access.

404.2 Manual Doors, Doorways, and Manual Gates. Manual doors and doorways and manual gates intended for user passage shall comply with 404.2.

404.2.1 Revolving Doors, Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

404.2.2 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm).

EXCEPTIONS:

1. In alterations, a projection of 5/8 inch (16 mm) maximum into the required clear width shall be permitted for the latch side stop.
2. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1.

404.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36 inches (915 mm) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2.

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.

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 1/2 inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.

EXCEPTION: Existing or altered thresholds 3/4 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.

404.2.6 Doors in Series and Gates in Series. The distance between two hinged or pivoted doors in series and gates in series shall be 48 inches (1220 mm) minimum plus the width of doors or gates swinging into the space.

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other operable parts on doors and gates shall comply with 309.4. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

EXCEPTIONS:

1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
2. Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock.

Advisory 404.2.7 Door and Gate Hardware. Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is not recommended.

404.2.8 Closing Speed. Door and gate closing speed shall comply with 404.2.8.

404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

Advisory 404.2.9 Door and Gate Opening Force. The maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door. It does not apply to the force required to retract bolts or to disengage other devices used to keep the door in a closed position.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

EXCEPTIONS:

1. Sliding doors shall not be required to comply with 404.2.10.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.
3. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10.
4. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor.

EXCEPTION: Vision lights with the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

404.3.2 Maneuvering Clearance. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

EXCEPTION: Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5.

404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6.

404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode.

EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

405 RAMPS

405.1 General. Ramps on accessible routes shall comply with 405.

EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.

EXCEPTION: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor or Ground Surfaces. Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

405.5 Clear Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum.

EXCEPTION: Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum.

405.7 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7.

405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

405.7.2 Width. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

405.7.3 Length. The landing clear length shall be 60 inches (1525 mm) long minimum.

405.7.4 Change in Direction. Ramps that change direction between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

405.7.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505.

EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

EXCEPTIONS:

1. Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 406.3.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

405.9.1 Extended Floor or Ground Surface. The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

United States Access Board research/response: The U.S. Access Board confirmed that a ramp can be used at a change in level at a door provided it meets all the ramp requirements and is clear of the door maneuvering clearances.



APPLICATION FORM DISABILITY AND COMMUNICATION ACCESS BOARD

1010 Richards Street, Room 118, Honolulu, HI 96813 V: (808) 586-8121 Fax: (808) 586-8129 TTY: (808) 586-8162

Date: November 15, 2018

Applicant Information

Company: Disability and Communication Access Board
 Address: 1010 Richards Street, Room 118
 City: Honolulu State: Hawaii Zip: 96813
 Contact: Rodney Kanno Phone: 808-586-8121
 Title: Facility Access Specialist Fax: 808-586-8129

Request Information

Site Specific Alternate Design Interpretive Opinion Design Specification (choose one):
 ADOPTION AMENDMENT REPEAL

Guidelines: ADAAG Section(s) Section 404.2.5

Description: If the change in level at a doorway without a door (cased opening) is greater than the maximum threshold height allowed, can a ramp be used?

Site Specific Alternate Design

Project Title: _____
 Job No.: _____ T.M.K.: _____
 Agency: _____
 Address: _____ County: _____
 Contact: _____ Phone: _____
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I hereby certify that all statements in this application are true and correct to the best of my knowledge, and I agree and understand that any misstatements of material facts herein may be grounds for *site specific alternate design* denial. I understand that all costs related to the processing of this application for a site specific alternate design by the Disability and Communication Access Board (DCAB), including processing fees, proceeding costs and legal notice publications, will be billed directly to me. In addition, I agree to submit all public notices to the DCAB for review, approval and filing for publication. Further, I understand that all materials filed with or presented to the DCAB will be retained and will be considered public documents under HRS §92F and shall be available for inspection by the public during public hearing as well as after a final decision is made.

Signature: _____ Date: _____

DOCKET NO: DCAB 2018-04

If the change in level at a doorway without a door (cased opening) is greater than the maximum threshold height allowed, can a ramp be used?

BACKGROUND:

DCAB has received inquiries regarding ramps at cased openings where the change in level is greater than ½ inch and if the ADAAG allows the usage of a ramp.

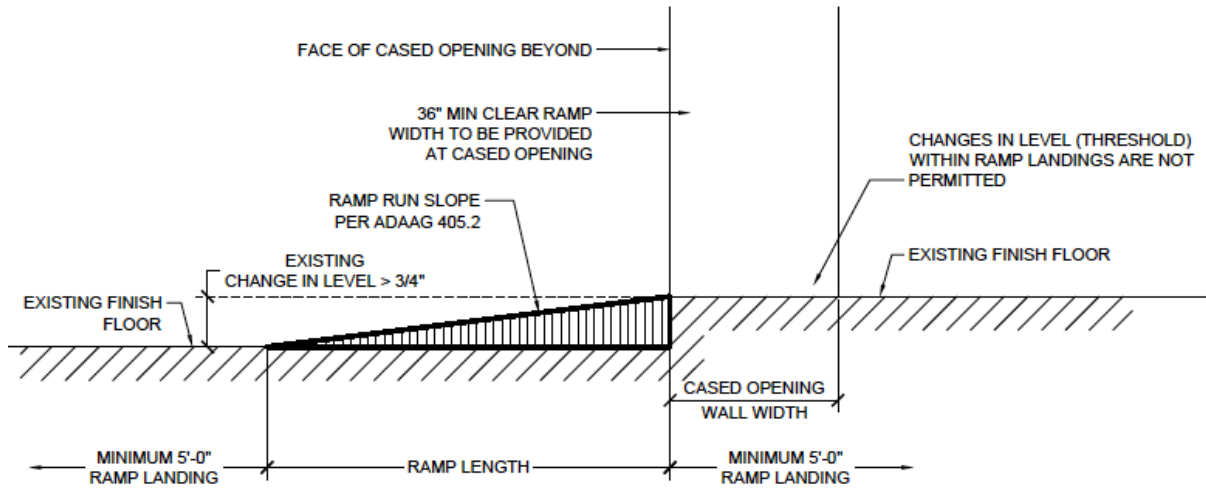
ANALYSIS: (For more background information see ATTACHED 'Supporting Research'.)

Per ADAAG 404.2.5, the maximum door threshold height is ½ inch, ¾ inch for existing or altered thresholds. Since a door threshold is considered a change in level, it is also required to comply with the requirements of ADAAG 302 and 303. ADAAG 303.4 states that changes in level greater than ½ inch are to be ramped and comply with ADAAG 405.

A ramp may be used at a cased opening, provided the requirements of ADAAG 404 and 405 can be met.

RECOMMENDED RULING – 2018-04 Ramps at Cased Openings

Where a change in level occurs at a doorway without a door (cased opening), and the change in level exceeds the maximum threshold height allowed by ADAAG 404.2.5, a ramp may be used to navigate the change in level provided the cased opening and ramp complies with the applicable requirements in ADAAG 404 and 405, including but not limited to: slopes, landings, changes in level and clear widths.



EXAMPLE: SECTION AT CASSED OPENING

[Ruling: xx/xx/2018] (Auth and Imp: HRS §103-50)

SUPPORTING RESEARCH:

The 2004 ADA Chapter 1, ADA Chapter 2 and Chapters 3-10 of the Americans with Disabilities Act, Architectural Barriers Act, Accessibilities Guidelines, published on July 23, 2004 by the U.S. Access Board, were adopted by DCAB. The guidelines contain scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities. These scoping and technical requirements are to be applied during the design, construction, and alteration of such buildings and facilities.

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2. Areas of sport activity shall not be required to comply with 303.

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303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

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404 DOORS, DOORWAYS, AND GATES

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404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm).

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EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1.

404.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36 inches (915 mm) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2.

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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.

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 1/2 inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.

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EXCEPTIONS:

1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
2. Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock.

Advisory 404.2.7 Door and Gate Hardware. Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is not recommended.

404.2.8 Closing Speed. Door and gate closing speed shall comply with 404.2.8.

404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

Advisory 404.2.9 Door and Gate Opening Force. The maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door. It does not apply to the force required to retract bolts or to disengage other devices used to keep the door in a closed position.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

EXCEPTIONS:

1. Sliding doors shall not be required to comply with 404.2.10.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.
3. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10.
4. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor.

EXCEPTION: Vision lights with the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

404.3.2 Maneuvering Clearance. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

EXCEPTION: Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5.

404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6.

404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode.

EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

405 RAMPS

405.1 General. Ramps on accessible routes shall comply with 405.

EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.

EXCEPTION: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor or Ground Surfaces. Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

405.5 Clear Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum.

EXCEPTION: Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum.

405.7 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7.

405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

405.7.2 Width. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

405.7.3 Length. The landing clear length shall be 60 inches (1525 mm) long minimum.

405.7.4 Change in Direction. Ramps that change direction between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

405.7.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505.

EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

EXCEPTIONS:

1. Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 406.3.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

405.9.1 Extended Floor or Ground Surface. The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

United States Access Board research/response: The U.S. Access Board confirmed that a ramp can be used at a change in level at a door provided it meets all the ramp requirements and is clear of the door maneuvering clearances.



APPLICATION FORM DISABILITY AND COMMUNICATION ACCESS BOARD

1010 Richards Street, Room 118, Honolulu, HI 96813 V: (808) 586-8121 Fax: (808) 586-8129 TTY: (808) 586-8162

Date: November 15, 2018

Applicant Information

Company:	<u>Disability and Communication Access Board</u>		
Address:	<u>1010 Richards Street, Room 118</u>		
City:	<u>Honolulu</u>	State: <u>Hawaii</u>	Zip: <u>96813</u>
Contact:	<u>Rodney Kanno</u>	Phone: <u>808-586-8121</u>	
Title:	<u>Facility Access Specialist</u>	Fax: <u>808-586-8129</u>	

Site Specific Alternate Design
 Interpretive Opinion
 Design Specification (choose one):
 ADOPTION AMENDMENT REPEAL

Guidelines: ADAAG Section(s) Section 604.5.2

Description: If a water closet flushing device is required to be a certain height to comply with plumbing code requirements (e.g., water consumption, cross-connection, etc.), can the plumbing code be considered an administrative authority?

Site Specific Alternate Design

Project Title:	_____		
Job No.:	_____	T.M.K.:	_____
Agency:	_____		
Address:	_____	County:	_____
Contact:	_____	Phone:	_____
Title:	_____	Fax:	_____

I hereby certify that all statements in this application are true and correct to the best of my knowledge, and I agree and understand that any misstatements of material facts herein may be grounds for *site specific alternate design* denial. I understand that all costs related to the processing of this application for a site specific alternate design by the Disability and Communication Access Board (DCAB), including processing fees, proceeding costs and legal notice publications, will be billed directly to me. In addition, I agree to submit all public notices to the DCAB for review, approval and filing for publication. Further, I understand that all materials filed with or presented to the DCAB will be retained and will be considered public documents under HRS §92F and shall be available for inspection by the public during public hearing as well as after a final decision is made.

Signature: _____ Date: _____

DOCKET NO: DCAB 2018-05

If a water closet flushing device is required to be a certain height to comply with plumbing code requirements (e.g., water consumption, cross-connection, etc.), can the plumbing code be considered an administrative authority?

BACKGROUND:

Generally, accessible water closets are required to have a side and rear wall grab bar installed. Often when designing the accessible water closet for children's use, there is a conflict between the rear wall grab bar mounting height and the minimum height of the exposed flush device (e.g. flushometer) for the water closet. This conflict is due to the maximum accessible grab bar height for children's use, the minimum required clearance below the grab bar, and the "lowest" manufactured exposed flush device compliant with plumbing regulations.

ANALYSIS: (For more background information see ATTACHED 'Supporting Research'.)

Per the 2004 ADAAG section 106.5, the State of Hawaii Building Code Council meets the definition of an Administrative Authority as the Council adopts regulations for the design, construction, or alteration of buildings and facilities. The Uniform Plumbing Code has been adopted by the Council and contains regulations for flushometer backflow prevention and specifies the flushometer critical level height above the water closet bowl.

When designing accessible water closets for children's use (see Attachment #1)

- The top of the gripping surface of the rear wall grab bar is limited to a maximum height of 27 inches (for ages 9 through 12) and a minimum clearance of 1-1/2 inches is required below the bottom gripping surface.
 - This leaves 24 inches of clear space under the grab bar that can be occupied by the water closet and flushing device.
- The lowest water closet seat height is 11 inches (for ages 3 and 4), which means the rim height is approximately 10 inches.
- The "lowest height" exposed flushometer rough-in height available by various plumbing fixture manufacturers is typically 11-1/2 inches (top of water closet rim to centerline of water supply).
 - All flushometers are required to have vacuum breakers (for backflow prevention) and the vacuum breakers have a "critical level" mark which the plumbing code requires to be a minimum height above the top of the water closet rim.
 - Most flushometer manufacturers permit "trimming" the vacuum tube height (~3/4 inch) on a manual flushometer provided the minimum critical level height is provided, however the manufacturer's warranty is no longer valid for the vacuum tube.

ADAAG section 604.5.2 contains an exception "*Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.*"

The U.S. Access Board has provided technical assistance that the plumbing code which regulates the flush valve height and/or flow rate would lead to the water closet being eligible for the exception.

RECOMMENDED RULING – 2018-05 Grab Bar Exception

Regulations that are adopted by State or County agencies for the design, construction, or alteration of buildings and facilities can be considered an administrative authority.

At accessible water closets designed for children's use, where the flushing device (e.g., flushometer, tank) protrudes into the rear wall grab bar clearance; the maximum flushing device height shall meet one of the provisions below:

1. No higher than the minimum required by the plumbing code, or
2. No higher than the lowest height available from all device manufacturers.

When the flushing device complies with one of the provisions above and still protrudes into the rear wall grab bar clearance, the rear wall grab bar shall be permitted to be split or shifted per the exception in ADAAG 604.5.2.

[Ruling: xx/xx/2018] (Auth and Imp: HRS §103-50)

SUPPORTING RESEARCH:

The 2004 ADA Chapter 1, ADA Chapter 2 and Chapters 3-10 of the Americans with Disabilities Act, Architectural Barriers Act, Accessibilities Guidelines, published on July 23, 2004 by the U.S. Access Board, were adopted by DCAB. The guidelines contain scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities. These scoping and technical requirements are to be applied during the design, construction, and alteration of such buildings and facilities.

103 Equivalent Facilitation

Nothing in these requirements prevents the use of designs, products, or technologies as alternatives to those prescribed, provided they result in substantially equivalent or greater accessibility and usability.

The 2004 ADAAG contains 'Advisory' information which is meant to assist in the use of its ADA/ABA AG. It explains some of the basic considerations for accessible design and clarifies specific ADAAG provisions in an effort to address frequently asked questions. Advisory information is provided in the form of recommendations; these recommendations are optional and go beyond the minimum required by ADAAG.

Advisory 103 Equivalent Facilitation. The responsibility for demonstrating equivalent facilitation in the event of a challenge rests with the covered entity. With the exception of transit facilities, which are covered by regulations issued by the Department of Transportation, there is no process for certifying that an alternative design provides equivalent facilitation.

2010 ADA Standards:

106 DEFINITIONS

106.5 Defined Terms.

Administrative Authority. A governmental agency that adopts or enforces regulations and guidelines for the design, construction, or alteration of buildings and facilities.

604 WATER CLOSETS AND TOILET COMPARTMENTS

604.1 General. Water closets and toilet compartments shall comply with 604.2 through 604.8.

EXCEPTION: Water closets and toilet compartments for children's use shall be permitted to comply with 604.9.

604.5 Grab Bars. Grab bars for water closets shall comply with 609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall.

EXCEPTIONS:

1. Grab bars shall not be required to be installed in a toilet room for a single occupant accessed only through a private office and not for common use or public use provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.
2. In residential dwelling units, grab bars shall not be required to be installed in toilet or bathrooms provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.
3. In detention or correction facilities, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.

Advisory 604.5 Grab Bars Exception 2. Reinforcement must be sufficient to permit the installation of rear and side wall grab bars that fully meet all accessibility requirements including, but not limited to, required length, installation height, and structural strength.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

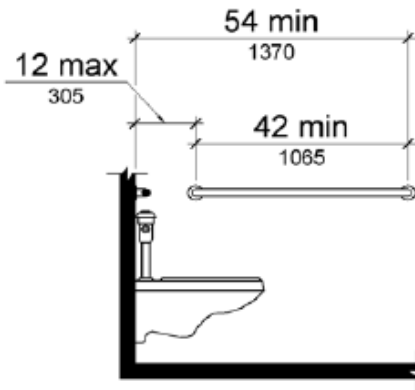


Figure 604.5.1 Side Wall Grab Bar at Water Closets

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.

EXCEPTIONS:

1. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the water closet, where wall space does not permit a length of 36 inches (915 mm) minimum due to the location of a recessed fixture adjacent to the water closet.
2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.

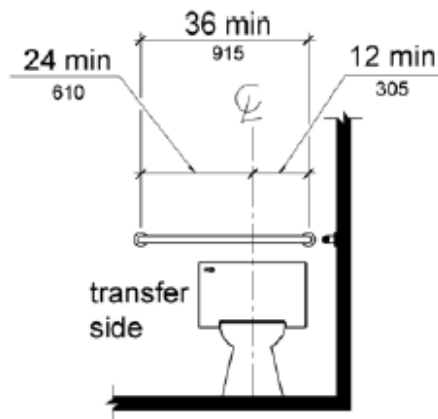


Figure 604.5.2 Rear Wall Grab Bar at Water Closets

604.9 Water Closets and Toilet Compartments for Children's Use. Water closets and toilet compartments for children's use shall comply with 604.9.

604.9.1 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or

partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.9.2 Clearance. Clearance around a water closet shall comply with 604.3.

604.9.3 Height. The height of water closets shall be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.9.4 Grab Bars. Grab bars for water closets shall comply with 604.5.

604.9.5 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.2 and 309.4 and shall be installed 36 inches (915 mm) maximum above the finish floor. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.9.6 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the finish floor. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

604.9.7 Toilet Compartments. Toilet compartments shall comply with 604.8.

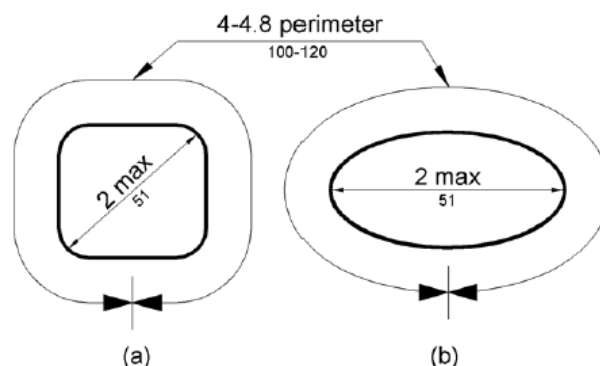
609 GRAB BARS

609.1 General. Grab bars in toilet facilities and bathing facilities shall comply with 609.

609.2 Cross Section. Grab bars shall have a cross section complying with 609.2.1 or 609.2.2.

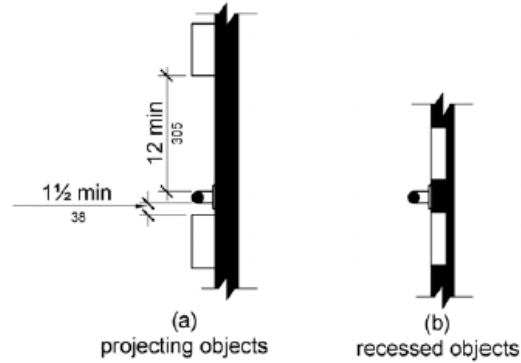
609.2.1 Circular Cross Section. Grab bars with circular cross sections shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

609.2.2 Non-Circular Cross Section. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches (51 mm) maximum and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.



609.3 Spacing. The space between the wall and the grab bar shall be 1 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends shall be 1 1/2 inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.

EXCEPTION: The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1 1/2 inches (38 mm) minimum.



609.4 Position of Grab Bars. Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the finish floor measured to the top of the gripping surface, except that at water closets for children's use complying with 604.9, grab bars shall be installed in a horizontal position 18 inches (455 mm) minimum and 27 inches (685 mm) maximum above the finish floor measured to the top of the gripping surface. The height of the lower grab bar on the back wall of a bathtub shall comply with 607.4.1.1 or 607.4.2.1.

609.5 Surface Hazards. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges.

609.6 Fittings. Grab bars shall not rotate within their fittings.

609.7 Installation. Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space.

609.8 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

2006 Uniform Plumbing Code:

202.0 Definition of Terms.

205.0 -C-

Critical Level - The critical level (C-L or C/L) marking on a backflow prevention device or vacuum breaker is a point conforming to approved standards and established by the testing laboratory (usually stamped on the device by the manufacturer) that determines the minimum elevation above the flood-level rim of the fixture or receptor served at which the device may be installed. When a backflow prevention device does not bear a critical level marking, the bottom of the vacuum breaker, combination valve, or the bottom of any such approved device shall constitute the critical level.

Cross-Connection - Any connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture or any tank, receptor, equipment, or device, through 'which it may be' possible for non potable, used, unclean, polluted, and contaminated water, or other substances to enter into any part of such potable water system under any condition.

208.0 -F-

Flood-Level Rim - The top edge of a receptor from which water overflows.

Flush Tank - A tank located above or integral with water closets, urinals, or similar fixtures for the purpose of flushing the usable portion of the fixture.

Flushometer Tank - A tank integrated within an air accumulator vessel that is designed to discharge a predetermined quantity of water to fixtures for flushing purposes.

Flushometer Valve - A valve that discharges a predetermined quantity of water to fixtures for flushing purposes and is actuated by direct water pressure.

402.0 Water-Conserving Fixtures and Fittings.

402.2 Water Closets. Water closets, either flush tank, flushometer tank, or flushometer valve operated, shall have an average consumption of not more than 1.6 gallons (6.1 liters) of water per flush.

603.0 Cross-Connection Control.

603.4 Specific Requirements.

603.4.1 Water closet and urinal flushometer valves shall be equipped with an atmospheric vacuum breaker. The vacuum breaker shall be installed on the discharge side of the flushometer valve with the critical level at least six (6) inches (152 mm), or the distance according to its listing, above the overflow rim of a water closet bowl or the highest part of a urinal.

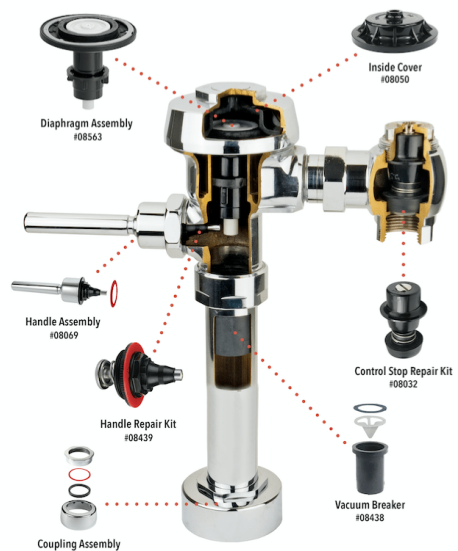
Fixture Manufacturer:

Sloan: 11.5" rough in height (flushometer) is the lowest we offer. On a manual valve, you can always trim the vacuum breaker tube to lower the rough in. Keep in mind the plumbing code normally requires at least 6" from the top of the fixture to the critical line on the vacuum breaker to not be in violation.

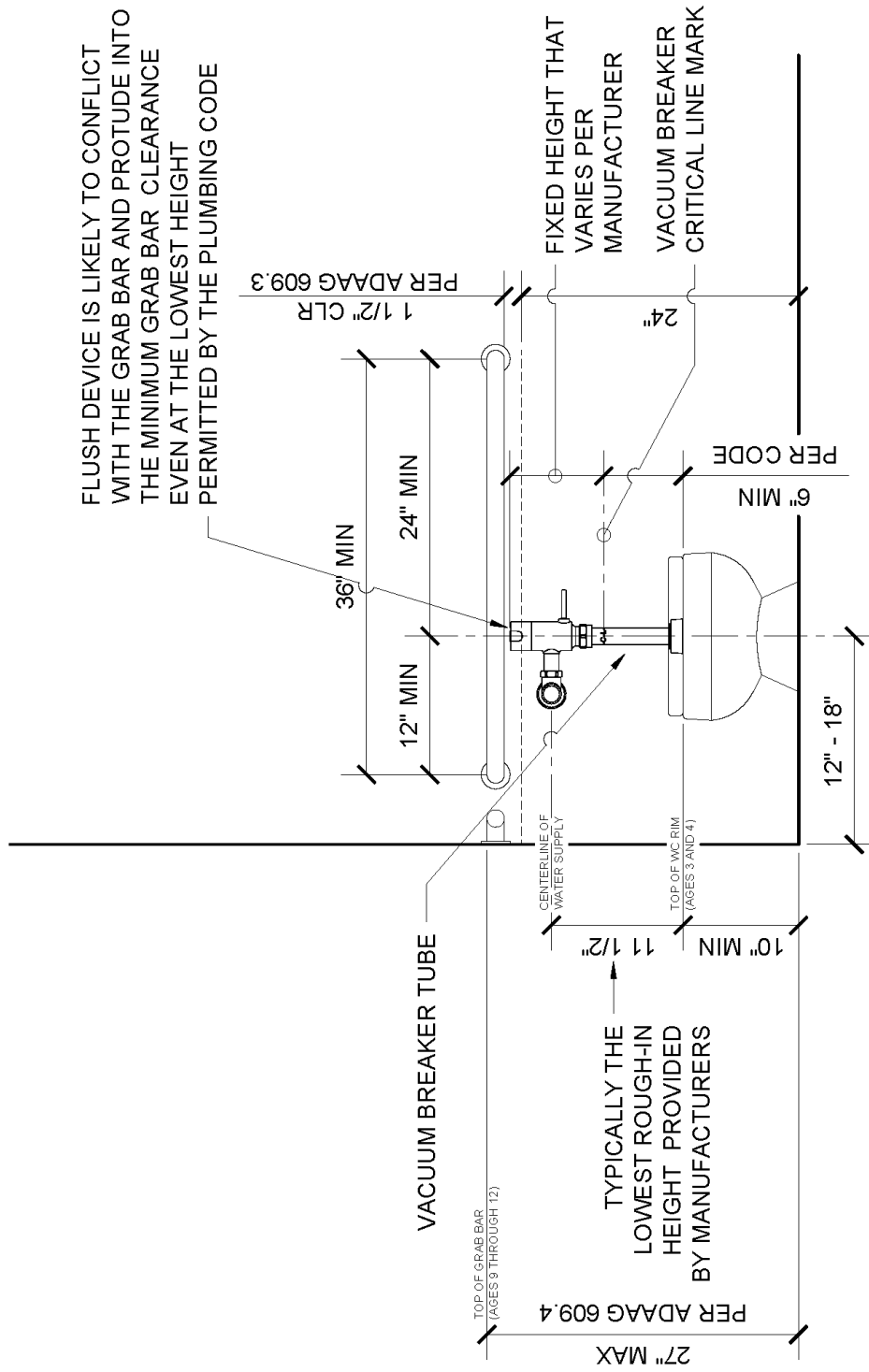
If the vacuum breaker is trimmed, other than the vacuum breaker tube itself the rest of the product warranty would remain intact.

American Standard/Kohler/Zurn: Similar to above.

U.S. Access Board research/response: The U.S. Access Board confirmed that the code that requires the minimum flow rate will dictate the flush valve height and the water closet would be eligible for the exception.



Typical Flushometer Parts Diagram



GRAB BAR EXCEPTION AT CHILDREN'S HEIGHT WATER CLOSET

ATTACHMENT #1