

(g) This section shall cease to apply to small operators of over-the-road buses, as defined in § 37.3, on [a date five years from the effective date of this paragraph], and shall cease to apply to other operators of over-the-road buses on [a date four years from the effective date of this paragraph]

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ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

36 CFR Part 1192

[Docket No. 98-1]

RIN 3014-AA23

DEPARTMENT OF TRANSPORTATION

Office of the Secretary

49 CFR Part 38

Americans With Disabilities Act Accessibility Guidelines for Transportation Vehicles; Over-the- Road Buses

AGENCIES: Architectural and Transportation Barriers Compliance Board and Department of Transportation.

ACTION: Joint notice of proposed rulemaking.

SUMMARY: The Architectural and Transportation Barriers Compliance Board and the Department of Transportation propose to amend the accessibility guidelines and standards for over-the-road buses (OTRBs) to include technical specifications for lifts, ramps, wheelchair securement devices, and accessible restrooms, under the Americans with Disabilities Act. Revisions to the specifications for doors, steps, and lighting are also proposed. The specifications describe the design features that an OTRB must have to be readily accessible to and usable by persons who use wheelchairs or other mobility aids. The Department of Transportation has published a separate notice of proposed rulemaking elsewhere in today's **Federal Register** which addresses when OTRB operators are required to comply with the specifications.

DATES: Comments should be received by May 26, 1998. Late comments will be considered to the extent practicable.

ADDRESSES: Comments should be sent to the Office of Technical and Information Services, Architectural and Transportation Barriers Compliance

Board, 1331 F Street NW., suite 1000, Washington, DC 20004-1111. Comments will be available for inspection at the above address from 9:00 a.m. to 5:30 p.m. on regular business days. The Access Board will provide copies of all comments received to the Department of Transportation.

FOR FURTHER INFORMATION CONTACT:
Access Board: Dennis Cannon, Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. Telephone number (202) 272-5434 extension 35 (voice); (202) 272-5449 (TTY). Electronic mail address: cannon@access-board.gov.

Department of Transportation: Robert C. Ashby, Deputy Assistant General Counsel for Regulation and Enforcement, Department of Transportation, 400 7th Street SW., room 10424, Washington, DC 20590. Telephone (202) 366-9306 (voice) or (202) 755-7687 (TTY).

The telephone numbers listed above are not toll-free numbers.

SUPPLEMENTARY INFORMATION:

Availability of Copies and Electronic Access

Single copies of this publication may be obtained at no cost by calling the Access Board's automated publications order line (202) 272-5434, by pressing 1 on the telephone keypad, then 1 again, and requesting publication S-21 (Over-the-Road Buses Proposed Rule). Persons using a TTY should call (202) 272-5449. Please record a name, address, telephone number and request publication S-21. This document is available in alternate formats upon request. Persons who want a copy in an alternate format should specify the type of format (cassette tape, Braille, large print, or computer disk). This document is also available on the Board's Internet site (<http://www.access-board.gov/rules/otrbnprm.htm>).

Background

Under the Americans with Disabilities Act of 1990 (ADA), the Architectural and Transportation Barriers Compliance Board (Access Board) is responsible for developing guidelines to ensure that the various kinds of transportation vehicles covered by the law are readily accessible to and usable by individuals with disabilities.¹ 42 U.S.C. 12204. The

¹The Access Board is an independent Federal agency established by section 502 of the Rehabilitation Act of 1973, as amended, whose primary mission is to promote accessibility for individuals with disabilities. The Access Board consists of 25 members. Thirteen are appointed by the President from among the public, a majority of

Department of Transportation (DOT), which is responsible for issuing regulations to implement the transportation provisions of the ADA, is required to include in its regulations accessibility standards for vehicles that are consistent with the Access Board's guidelines. 42 U.S.C. 12186.

For purposes of the ADA, an over-the-road bus is "a bus characterized by an elevated passenger deck located over a baggage compartment." 42 U.S.C. 12181(5). The ADA provides for rulemaking to establish accessibility requirements for OTRBs operated by private entities to be conducted in two stages: interim requirements and final requirements. 42 U.S.C. 12186.²

The interim requirements were established in 1991 and do not require any structural changes to OTRBs. The Access Board issued accessibility guidelines for OTRBs that provide technical specifications for non-structural design features such as floor surfaces, lighting, and handrails and stanchions. 36 CFR 1192.151 to 1192.157. The DOT adopted these guidelines as its standards and also established interim requirements for providing boarding assistance and accommodating wheelchairs and other mobility aids. 49 CFR 37.169 and 49 CFR 38.151 to 38.157.

Prior to establishing the final requirements, the Office of Technology Assessment was to study issues related to OTRB accessibility. 42 U.S.C. 12185. The Office of Technology Assessment published its study on May 16, 1993. Requirements for accessibility were to have taken effect by July 26, 1996, for large transportation providers, and one year later for small entities. 42 U.S.C. 12186. The National Highway System Designation Act of 1995 (Pub. L. 104-59), amended section 306(a)(2)(B)(iii) of the ADA by removing the specific compliance dates and instead requiring large transportation providers to comply two years after the issuance of the DOT regulation, and small providers to comply three years after issuance.

As a preliminary step to issuing requirements, the Access Board and the DOT held a workshop in Washington,

whom are required to be individuals with disabilities. The other twelve are heads of the following Federal agencies or their designees whose positions are Executive Level IV or above: The Departments of Health and Human Services, Education, Transportation, Housing and Urban Development, Labor, Interior, Defense, Justice, Veterans Affairs, and Commerce; General Services Administration; and United States Postal Service.

²OTRBs purchased by public entities or by a contractor to a public entity must currently meet the same accessibility requirements as do other buses, including requirements for lifts or ramps and wheelchair securement devices. 49 CFR 37.7(c).

D.C. on October 21 and 22, 1993, to discuss issues related to OTRB accessibility. About 30 representatives of the OTRB industry and disability organizations attended the workshop. At the workshop, it was announced that the Access Board and the DOT were considering amending the accessibility guidelines and standards for OTRBs to include technical specifications for:

- Lifts, ramps, and wheelchair securement devices based on existing requirements for other buses in 36 CFR 1192.23 and 49 CFR 38.23;
- Accessible restrooms based on existing requirements for commuter and intercity rail cars in 36 CFR 1192.107 and 1192.123, and 49 CFR 38.107 and 38.123; and
- Front door width, overhead clearance for doors with lifts or ramps, and step riser height and tread depth.

This notice of proposed rulemaking (NPRM) is issued jointly by the Access Board and the DOT to amend the accessibility guidelines and standards for OTRBs, as discussed at the workshop. The NPRM also proposes to revise the exterior lighting specification for OTRBs and other buses based on an equivalent facilitation determination made by the DOT.

The DOT is publishing a separate NPRM elsewhere in today's **Federal Register** which addresses when OTRB operators are required to comply with the specifications.

Section-by-Section Analysis

Section ____ .31 Lighting

The NPRM proposes to amend paragraph (c) of this section for standard urban transit buses to conform to the proposal for OTRBs. See the discussion under Section ____ .157

Section ____ .153 Doors, Steps and Thresholds

The NPRM proposes to amend paragraph (b) of this section by adding a requirement for a maximum step riser height (8 inches) and minimum step tread depth (11 inches) based on accessibility standards for buildings and facilities. The DOT's regulations currently require that standees be permitted to use lifts. 49 CFR 37.165(g). However, the rise of a lift for an OTRB is much higher than for a typical urban transit bus. The higher rise may make some persons with disabilities, especially those with poor balance, feel uncomfortable and insecure about using the lift, even though it is required to have handrails.

Provisions for step riser height and tread depth were originally proposed for other buses in 1991 but not adopted at

the time because lifts were required to accommodate standees and because there were structural difficulties in achieving the proposed provisions. Subsequently, new vehicle designs such as several models of low-floor buses, have made the reduction of step risers practical for urban transit buses. Designs for OTRBs also may have changed since 1991.

Question 1: Should minimum requirements for step riser height and tread depth be established for OTRBs? Are the proposed requirements achievable within the constraints imposed by vehicle structure? Are other requirements more appropriate? Alternatively, are there current lift designs (e.g., folding seats) which would reduce the feeling of insecurity a standee using the lift might experience?

The NPRM proposes to amend paragraph (c) of this section to specify a minimum front door width (30 inches) consistent with other vehicles. This door width is intended to partially accommodate persons using crutches or leg braces or having gait problems who may wish to use the steps instead of the lift. Doors in accessible buildings and facilities are required to provide a 32 inch clear opening based on the crutchtip-to-crutchtip stance of a crutch user. The narrower dimension proposed in the NPRM will provide better access than current OTRB designs for persons who must swing their legs to climb steps. Since a wider opening is needed primarily at the bottom of the door and current designs frequently slope the windshield inward, the proposed requirement would permit the door to taper from a point 48 inches above the first step. It would also limit the intrusion into the required clear width by hinges or other operating mechanisms.

Question 2: Some OTRB designs have doors which are wider than 30 inches. Is a 32 inch width achievable? What would be the cost if engineering changes are needed?

The NPRM proposes to add a new paragraph (d) to this section which specifies a minimum overhead clearance (68 inches) between the top of the door opening and the raised lift platform or highest point of a ramp. A similar provision currently applies to other buses over 22 feet in length. 36 CFR 1192.25(c) and 49 CFR 38.25(c). This clearance is intended to minimize the likelihood that standees using a lift would hit their heads when passing through the door. A lower clearance is required for vehicles of 22 feet or less in length to avoid having to add a large raised roof to a minivan which could

make the vehicle unstable. This is not a problem for large buses.

Unlike urban transit buses, lifts for OTRBs have been placed in a dedicated door near the rear of the vehicle. Typical lift doors for OTRBs have a vertical clearance of 61 inches. Some OTRBs have been designed with a 68 inch clearance at the lift door.

Question 3: What OTRB models can meet a 68 inch clearance at the lift door? What are the structural and cost implications of achieving this height? Should requirements be established for both step riser height and tread depths at the front door and overhead clearance at the lift door, or should these requirements be considered alternatives to one another?

The DOT has previously determined for other buses that an "elevator" type lift provides equivalent facilitation to the door height provision. The platform of an "elevator" type lift moves completely within the vehicle envelope. A standee would board the lift from ground level by passing through the doorway with a clearance greater than 68 inches and be raised within the bus. Thus, a standee would never need to pass through the doorway when the lift is raised and would not encounter the door lintel. There is at least one "elevator" type lift for OTRBs.

Question 4: Should "elevator" type lifts be specifically addressed in the guidelines and standards? Information is requested on these lift designs, their cost, and how much baggage space is occupied when the device is stowed.

Some information has recently come to the Board's attention regarding the effect of providing a lift door in the side of a monocoque construction bus. The Board seeks data, including the results of any engineering studies, which document any structural problems and effect on bus life-cycle costs. In some accessible OTRB designs, the lift door is placed toward the rear, close to the rear wheels, while in others it is placed at the bus mid-point, at the maximum bending moment of the vehicle.

Question 5: What effect does door placement have on the structural integrity of a monocoque construction OTRB? Also, urban transit buses have had rear doors for years, some wider than others and some with lifts. What are the comparisons between urban transit buses and OTRBs in terms of life-cycles? Some transit buses no longer employ monocoque construction. Are there OTRBs which also no longer employ monocoque construction?

Section ____ .157 Lighting

The NPRM proposes to delete the requirement in paragraph (b) of this

section that exterior lights be mounted below window level. The original provision was based on an earlier Federal Transit Administration regulation. 49 CFR 609.15(g)(3). Subsequent to the issuance of that regulation, the Federal Transit Administration began accepting buses which conform to the "Baseline Specifications for Advance Design Buses" (White Book). The White Book permits exterior lights to be mounted in locations other than below the windows. The DOT has determined that compliance with the exterior lighting requirements of the White Book constitutes equivalent facilitation. The NPRM also proposes to delete a similar requirement for other buses in 36 CFR 1192.31(c) and 49 CFR 38.31(c).

Section 159. Mobility Aid Accessibility

This section is based on the current requirements for lifts, ramps, and wheelchair securement devices in 36 CFR 1192.23 and 49 CFR 38.23 which apply to urban transit buses and OTRBs purchased by public entities. The section has been modified by eliminating the references to vehicles of 22 feet or less in length since all OTRBs exceed this length. Paragraph (a)(2), which is taken from the requirements for rail vehicles, permits OTRBs to use station-based lifts, ramps, or similar boarding devices, provided they meet the technical requirements that would have applied to a vehicle-borne device.

The requirements for securement devices in paragraph (d) are the same as those currently required for urban transit buses and OTRBs purchased by public entities. Bus seats are required to be attached to the bus frame and meet specified forces. The design load established for securement devices is based on the need to secure the wheelchair or mobility aid with constraints similar to those imposed on all other seats.

Question 6a: Are OTRB seats required to meet force and attachment strengths greater than the seats on urban transit buses? If so, what are those forces and how do they relate to requirements for mobility aid securement devices?

Considerable speculation has been put forth regarding whether the securement force requirements for urban transit buses are adequate for OTRBs. The concern is that OTRBs often travel at higher speeds than urban transit buses and collisions would be at higher speeds. However, it is not the speed *per se* but the "g-forces" experienced that is important. Since larger vehicles have their own momentum, the deceleration of a mobility aid with respect to the

securement device is less for heavier vehicles. Thus, the current securement device force requirements are greater for small vans than for large buses. 36 CFR 1191.23(d)(1) and 49 CFR 38.23(d)(1).

Question 6b: Since OTRBs are generally heavier than urban transit buses, how will this weight difference affect securement device forces?

Several public transit agencies, and some state agencies, currently operate OTRBs for commuter service on highways at high speed. These vehicles must meet not only the requirements for force, but the limitation on motion of the mobility aid and the requirement for accommodating all common wheelchairs and mobility aids. These securement systems consist of belts or straps that are fastened by the vehicle operator. There is no known commercially available system which is independently operable by the mobility aid user that can accommodate all common wheelchairs and mobility aids, but the common belt systems have been used for many years in public transit applications.

Question 6c: What has been the experience of operators of OTRBs meeting the current securement specification?

Section 161. Restrooms

Section 306(a)(2)(C) of the ADA specifies that the DOT regulation shall not require the installation of accessible restrooms in OTRBs if such installation would result in a loss of seating capacity. DOT has stated in its NPRM that it has found no designs which do not result in seat loss and, therefore, does not intend to require them. Nevertheless, some entities have elected to provide accessible restrooms as a courtesy to their passengers with disabilities. The specifications in this section are meant to ensure that, where such restrooms are provided voluntarily, they meet some minimum accessibility requirements. However, these technical provisions may be more appropriate for the advisory guidance in the Appendix than the rule itself.

This section is derived from current requirements for restrooms on commuter and intercity rail cars in 36 CFR 1192.107 and 1192.123, and 49 CFR 38.107 and 38.123. The rail car requirement relating to a door from the side has been deleted since the width restrictions on OTRBs would generally preclude a side entrance. The requirement for a 60 inch clear floor space from the front of the water closet is designed to provide some maneuvering space for side door entry. If the entry is from the end opposite the water closet, a shorter space may be

workable. These requirements are considered the bare minimum and persons with disabilities have reported difficulty in using current rail car restrooms which meet these requirements.

At least two OTRB manufacturers have designed accessible restrooms for their buses. Also, OTRBs with accessible restrooms are currently operating in commuter service near Los Angeles, California. However, those restrooms may not meet the requirements of this section and a wheelchair user must back into the restroom. The particular design does provide a side approach to the water closet, unlike the rail car version.

Question 7: Are there OTRB restroom designs which provide better accessibility than proposed? Are such restrooms currently in production or available if ordered? What is the cost of providing such restrooms and how many seats are displaced by the design?

In addition, some OTRB operators have provided moveable aisle armrests on some seats. These armrests make it easier for persons to get in and out of closely spaced seats, especially for those with poor balance or mobility.

Question 8: Should a certain percentage of seats be required to have moveable aisle armrests? If so, what percentage and where should they be located (e.g., close to the entry steps)?

Finally, seat loss is a concern of OTRB operators. Some OTRB designs involve sliding sets of pedestal seats forward, rendering them unusable when a wheelchair or mobility aid user is occupying the securement location. Also, some configurations assume a five-foot turning circle must be provided, whereas the vehicle specifications do not require it.

Question 9: What seating configurations have been designed for OTRBs? Has any configuration been developed which would allow a fixed seat adjacent to the securement location for a traveling companion?

Regulatory Process Matters

This proposed rule is jointly issued by the Access Board and the DOT to amend the accessibility guidelines and standards for OTRBs by adding technical specifications for lifts, ramps, wheelchair securement devices, and accessible restrooms. The proposed rule also revises technical specifications for doors, steps, and lighting. DOT has published a separate proposed rule in today's **Federal Register** which addresses when OTRB operators are required to comply with the technical specifications. The proposed rules are closely related and the Access Board

and the DOT have treated them as a single regulatory action for purposes of Executive Order 12866 and the Regulatory Flexibility Act in order to avoid duplicative or unnecessary analyses. The proposed rules are a significant regulatory action under Executive Order 12866 and DOT's Regulatory Policies and Procedures. DOT has prepared a Regulatory Impact Analysis (RIA), which is summarized in the separate proposed rule the DOT has published in today's **Federal Register**. The Office of Management and Budget has reviewed both proposed rules.

The proposed rules are likely to have a significant impact on a substantial number of small entities. DOT has incorporated a Regulatory Flexibility Analysis into the RIA and has included provisions in the separate proposed rule published in today's **Federal Register** to reduce the burden on small OTRB operators.

Text of Proposed Common Rule

The text of the proposed common rule amendments to 36 CFR part 1192 and 49 CFR part 38 appear below.

1. Section _____.31 is amended by revising paragraph (c) to read as follows:

§ _____.31 Lighting.

* * * * *

(c) The vehicle doorways, including doorways in which lifts or ramps are installed, shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance 3 feet (915 mm) perpendicular to all points on the bottom step tread outer edge. Such light(s) shall be shielded to protect the eyes of entering and exiting passengers.

2. Section _____.153 is amended by revising paragraphs (b) and (c), and by adding paragraph (d) to read as follows:

§ _____.153 Doors, steps and thresholds.

* * * * *

(b) All step edges shall have a band of color(s) running the full width of the step which contrasts from the step tread and riser, either dark-on-light or light-on-dark. The maximum height of step risers shall be 8 inches (200 mm) and the minimum tread depth shall be 11 inches (280 mm).

(c) Doors shall have a minimum clear width when open of 30 inches (760 mm), measured from the lowest step to a height of at least 48 inches (1220 mm), from which point they may taper to a minimum width of 27 inches (690 mm). The clear width may be reduced by a maximum of 4 inches (100 mm) by protrusions of hinges or other operating mechanisms if the protrusion is between

44 (1120 mm) and 48 inches (1220 mm) above the lowest step.

(d) The overhead clearance between the top of the door opening and the raised lift platform, or highest point of a ramp, shall be a minimum of 68 inches (1730 mm).

3. Section _____.157 is amended by revising paragraph (b) to read as follows:

§ _____.157 Lighting.

* * * * *

(b) The vehicle doorway shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance 3 feet (915 mm) perpendicular to all points on the bottom step tread outer edge. Such light(s) shall be shielded to protect the eyes of entering and exiting passengers.

4. Section _____.159 is revised to read as follows:

§ _____.159 Mobility aid accessibility.

(a)(1) *General*. All vehicles covered by this subpart shall provide a level-change mechanism or boarding device (e.g., lift or ramp) complying with paragraph (b) or (c) of this section and sufficient clearances to permit a wheelchair or other mobility aid user to reach a securement location. At least two securement locations and devices, complying with paragraph (d) of this section, shall be provided.

(2) *Exception*: If portable or station-based lifts, ramps or bridge plates meeting the applicable requirements of this section are provided at stations or other stops required to be accessible under regulations issued by the Department of Transportation, the bus is not required to be equipped with a vehicle-borne device.

(b) *Vehicle lift*—(1) *Design load*. The design load of the lift shall be at least 600 pounds (2665 N). Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame and attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls*—(i) *Requirements*. The controls shall be interlocked with the vehicle brakes, transmission, or door, or shall provide other appropriate mechanisms or systems, to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all levels (i.e., ground, curb,

and intermediate positions) normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a momentary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception*. Where the lift is designed to deploy with its long dimension parallel to the vehicle axis and which pivots into or out of the vehicle while occupied (i.e., "rotary lift"), the requirements of this paragraph prohibiting the lift from being stowed while occupied shall not apply if the stowed position is within the passenger compartment and the lift is intended to be stowed while occupied.

(3) *Emergency operation*. The lift shall incorporate an emergency method of deploying, lowering to ground level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a rotary lift and is intended to be stowed while occupied.

(4) *Power or equipment failure*. Platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second (305 mm/sec) or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers*. The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling off the platform during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the vehicle until the platform is in its fully raised position. Each side of the lift platform which extends beyond the vehicle in its raised position shall have a barrier a minimum 1-1/2 inches (13 mm) high. Such barriers shall not interfere with maneuvering into or out of the aisle. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground

level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier of the lift shall automatically raise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the platform is more than 3 inches (75 mm) above the roadway or sidewalk and the platform is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged, or disengaged by the lift operator, provided an interlock or inherent design feature prevents the lift from rising unless the barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface.* The platform surface shall be free of any protrusions of ¼ inch (6.5 mm) high and shall be slip resistant. The platform shall have a minimum clear width of 28½ inches (725 mm) at the platform, a minimum clear width of 30 inches (760 mm) measured from 2 inches (50 mm) above the platform surface to 30 inches (760 mm) above the platform, and a minimum clear length of 48 inches (1220 mm) measured from 2 inches (50 mm) above the surface of the platform to 30 inches (760 mm) above the surface of the platform. (See Fig. 1 to this part)

(7) *Platform gaps.* Any openings between the platform surface and the raised barriers shall not exceed ⅝ inch (16 mm) in width. When the platform is at vehicle floor height with the inner barrier (if applicable) down or retracted, gaps between the forward lift platform edge and the vehicle floor shall not exceed ½ inch (13 mm) horizontally and ⅝ inch (16 mm) vertically. Platforms on semi-automatic lifts may have a hand hold not exceeding 1½ inches (28 mm) by 4½ inches (113 mm) located between the edge barriers.

(8) *Platform entrance ramp.* The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8, measured on level ground, for a maximum rise of 3 inches (75 mm), and the transition from roadway or sidewalk to ramp may be vertical without edge treatment up to ¼ inch (6.5 mm). Thresholds between ¼ inch (6.5 mm) and ½ inch (13 mm) high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection.* The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of vehicle roll or pitch) in any direction between its unloaded position and its position when loaded with 600 pounds (2665 N) applied through a 26 inch (660 mm) by

26 inch test pallet at the centroid of the platform.

(10) *Platform movement.* No part of the platform shall move at a rate exceeding 6 inches/second (150 mm/sec) during lowering and lifting an occupant, and shall not exceed 12 inches/second (300 mm/sec) during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction.* The lift shall permit both inboard and outboard facing of wheelchair and mobility aid users.

(12) *Use by standees.* Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The platform may be marked to indicate a preferred standing position.

(13) *Handrails.* Platforms on lifts shall be equipped with handrails on two sides, which move in tandem with the lift, and which shall be graspable and provide support to standees throughout the entire lift operation. Handrails shall have a usable component at least 8 inches (200 mm) long with the lowest portion a minimum 30 inches (760 mm) above the platform and the highest portion a maximum 38 inches (965 mm) above the platform. The handrails shall be capable of withstanding a force of 100 pounds (445 N) concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches (32 mm) and 1½ inches (38 mm) or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ⅓ inch (3.5 mm). Handrails shall be placed to provide a minimum 1½ inches (38 mm) knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(c) *Vehicle ramp—(1) Design load.* Ramps 30 inches (760 mm) or longer shall support a load of 600 pounds (2665 N), placed at the centroid of the ramp distributed over an area of 26 inches by 26 inches (660 mm by 660 mm), with a safety factor of at least 3 based on the ultimate strength of the material. Ramps shorter than 30 inches (760 mm) shall support a load of 300 pounds (1332 N).

(2) *Ramp surface.* The ramp surface shall be continuous and slip resistant; shall not have protrusions from the surface greater than ¼ inch (6.5 mm) high; shall have a clear width of 30

inches (760 mm); and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from roadway or sidewalk and the transition from vehicle floor to the ramp may be vertical without edge treatment up to ¼ inch (6.5 mm). Changes in level between ¼ inch (6.5 mm) and ½ inch (13 mm) shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp shall have barriers at least 2 inches (50 mm) high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps shall have the least slope practicable and shall not exceed 1:4 when deployed to ground level. If the height of the vehicle floor from which the ramp is deployed is 3 inches (75 mm) or less above a 6 inch (150 mm) curb, a maximum slope of 1:4 is permitted; if the height of the vehicle floor from which the ramp is deployed is 6 inches (150 mm) or less, but greater than 3 inches (75 mm), above a 6 inch (150 mm) curb, a maximum slope of 1:6 is permitted; if the height of the vehicle floor from which the ramp is deployed is 9 inches (225 mm) or less, but greater than 6 inches (150 mm), above a 6 inch curb, a maximum slope of 1:8 is permitted; if the height of the vehicle floor from which the ramp is deployed is greater than 9 inches (225 mm) above a 6 inch (150 mm) curb, a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment.* When in use for boarding or alighting, the ramp shall be firmly attached to the vehicle so that it is not subject to displacement when loading or unloading a heavy power mobility aid and that no gap between vehicle and ramp exceeds ⅝ inch (16 mm).

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps, including portable ramps stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop or maneuver.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the vehicle while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches (760 mm) above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds (445 N) concentrated at any point on the handrail without permanent deformation of the rail or its supporting

structure. The handrail shall have a cross-sectional diameter between 1¼ inches (32 mm) and 1½ inches (38 mm) or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ⅛ inch (3.5 mm). Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(d) *Securement devices*—(1) *Design load*. Securement systems, and their attachments to vehicles, shall restrain a force in the forward longitudinal direction of up to 2,000 pounds (8,880 N) per securement leg or clamping mechanism and a minimum of 4,000 pounds (17,760 N) for each mobility aid.

(2) *Location and size*. The securement system shall be placed as near to the accessible entrance as practicable and shall have a clear floor area of 30 inches (760 mm) by 48 inches (1220 mm). Such space shall adjoin, and may overlap, an access path. Not more than 6 inches (150 mm) of the required clear floor space may be accommodated for footrests under another seat, modesty panel, or other fixed element provided there is a minimum of 9 inches (230 mm) from the floor to the lowest part of the seat overhanging the space. Securement areas may have fold-down seats to accommodate other passengers when a wheelchair or mobility aid is not occupying the area, provided the seats, when folded up, do not obstruct the clear floor space required. (See Fig. 2 to this part)

(3) *Mobility aids accommodated*. The securement system shall secure common wheelchairs and mobility aids and shall either be automatic or easily attached by a person familiar with the system and mobility aid and having average dexterity.

(4) *Orientation*. At least one securement device or system required by paragraph (a) of this section shall secure the wheelchair or mobility aid facing toward the front of the vehicle. Additional securement devices or systems shall secure the wheelchair or mobility aid facing forward or rearward. Where the wheelchair or mobility aid is secured facing the rear of the vehicle, a

padded barrier shall be provided. The padded barrier shall extend from a height of 38 inches (965 mm) from the vehicle floor to a height of 56 inches (1420 mm) from the vehicle floor with a width of 18 inches (455 mm), laterally centered immediately in back of the seated individual. Such barriers need not be solid provided equivalent protection is afforded.

(5) *Movement*. When the wheelchair or mobility aid is secured in accordance with manufacturer's instructions, the securement system shall limit the movement of an occupied wheelchair or mobility aid to no more than 2 inches (50 mm) in any direction under normal vehicle operating conditions.

(6) *Stowage*. When not being used for securement, or when the securement area can be used by standees, the securement system shall not interfere with passenger movement, shall not present any hazardous condition, shall be reasonably protected from vandalism, and shall be readily accessed when needed for use.

(7) *Seat belt and shoulder harness*. For each wheelchair or mobility aid securement device provided, a passenger seat belt and shoulder harness, complying with all applicable provisions of the Federal Motor Vehicle Safety Standards, shall also be provided for use by wheelchair or mobility aid users. Such seat belts and shoulder harnesses shall not be used in lieu of a device which secures the wheelchair or mobility aid itself.

5. Section ____ .161 is added to subpart G to read as follows:

§ ____ .161 Restrooms.

(a) If an accessible restroom is provided, it shall be designed so as to allow a person using a wheelchair or mobility aid to enter and use such restroom as specified in paragraphs (a) (1) through (5) of this section.

(1) The minimum clear floor area shall be 35 inches (890 mm) by 60 inches (1525 mm). Permanently installed fixtures may overlap this area a maximum of 6 inches (150 mm), if the lowest portion of the fixture is a minimum of 9 inches (230 mm) above

the floor, and may overlap a maximum of 19 inches (485 mm), if the lowest portion of the fixture is a minimum of 29 inches (740 mm) above the floor, provided such fixtures do not interfere with access to the water closet. Fold-down or retractable seats or shelves may overlap the clear floor space at a lower height provided they can be easily folded up or moved out of the way.

(2) The height of the water closet shall be 17 inches (430 mm) to 19 inches (485 mm) measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position.

(3) A grab bar at least 24 inches (610 mm) long shall be mounted behind the water closet, and a horizontal grab bar at least 40 inches (1015 mm) long shall be mounted on at least one side wall, with one end not more than 12 inches (305 mm) from the back wall, at a height between 33 inches (840 mm) and 36 inches (915 mm) above the floor.

(4) Faucets and flush controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbs (22.2 N). Controls for flush valves shall be mounted no more than 44 inches (1120 mm) above the floor.

(5) Doorways on the end of the enclosure, opposite the water closet, shall have a minimum clear opening width of 32 inches (815 mm). Door latches and hardware shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

(b) Accessible restrooms shall be in close proximity to at least one seating location for persons using mobility aids and shall be connected to such a space by an unobstructed path having a minimum width of 32 inches (815 mm).

6. A heading is added at the end of part ____ preceding the figures to read as follows:

Figures to Part ____

7. Figures 1 and 2 are republished for the convenience of the reader to read as follows:

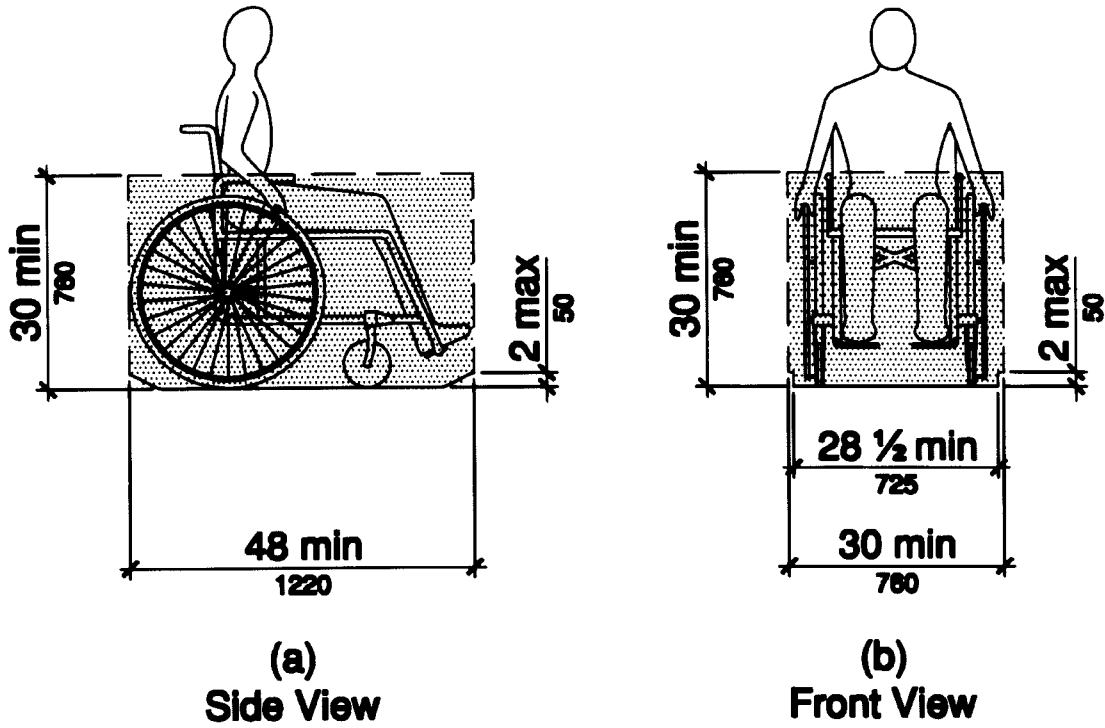


Figure 1
Wheelchair or Mobility Aid Envelope

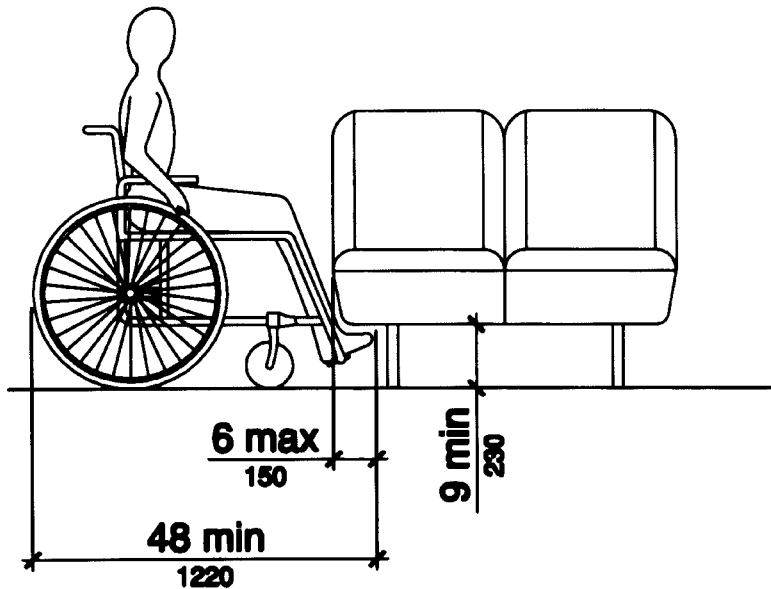


Figure 2
Toe Clearance Under a Fixed Element

Adoption of Proposed Common Rule

The agency specific proposals to adopt the common rule, which appears at the end of the common preamble, are set forth below.

Architectural and Transportation Barriers Compliance Board**36 CFR Part 1192****List of Subjects in 36 CFR Part 1192**

Buses, Civil rights, Individuals with disabilities, Mass transportation, Railroads, Transportation.

Authority and Issuance

For the reasons set forth in the common preamble, part 1192 of title 36 of the Code of Federal Regulations is proposed to be amended as follows:

PART 1192—AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR TRANSPORTATION VEHICLES

1. The authority citation for 36 CFR part 1192 is revised to read as follows:

Authority: 42 U.S.C. 12204.

§ 1192.31 [Amended]

2. Section 1192.31 is amended by revising paragraph (c) to read as set forth at the end of the common preamble.

§ 1192.153 [Amended]

3. Section 1192.153 is amended by revising paragraphs (b) and (c), and by adding paragraph (d) to read as set forth at the end of the common preamble.

§ 1192.157 [Amended]

4. Section 1192.157 is amended by revising paragraph (b) to read as set

forth at the end of the common preamble.

§ 1192.159 [Revised]

5. Section 1192.159 is revised to read as set forth at the end of the common preamble.

§ 1192.161 [Added]

6. Section 1192.161 is added to subpart G to read as set forth at the end of the common preamble.

7. A heading is added at the end of part 1192 preceding the figures to read as set forth at the end of the common preamble.

Authorized by vote of the Access Board on January 28, 1998.

Patrick D. Cannon,

Chair, Architectural and Transportation Barriers Compliance Board.

DEPARTMENT OF TRANSPORTATION**Office of the Secretary****49 CFR Part 38****List of Subjects in 49 CFR Part 38**

Buses, Civil rights, Individuals with disabilities, Mass transportation, Railroads, Transportation.

Authority and Issuance

For the reasons set forth in the common preamble, part 38 of title 49 of the Code of Federal Regulations is amended as follows:

PART 38—AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY SPECIFICATIONS FOR TRANSPORTATION VEHICLES

1. The authority citation for 49 CFR part 38 is revised to read as follows:

Authority: 42 U.S.C. 12101–12213; 49 U.S.C. 322.

§ 38.31 [Amended]

2. Section 38.31 is amended by revising paragraph (c) to read as set forth at the end of the common preamble.

§ 38.153 [Amended]

3. Section 38.153 is amended by revising paragraphs (b) and (c), and by adding paragraph (d) to read as set forth at the end of the common preamble.

§ 38.157 [Amended]

4. Section 38.157 is amended by revising paragraph (b) to read as set forth at the end of the common preamble.

§ 38.159 [Revised]

5. Section 38.159 is revised to read as set forth at the end of the common preamble.

38.161 [Added]

6. Section 38.161 is added to subpart G to read as set forth at the end of the common preamble.

7. A heading is added at the end of part 38 preceding the figures to read as set forth at the end of the common preamble.

Dated: March 19, 1998.

Rodney E. Slater,

Secretary of Transportation.

[FR Doc. 98–7687 Filed 3–20–98; 11:24 am]

BILLING CODE 8150–01–P, 4910–62–P