


## Accessibility in Rail Facilities

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## ADA Transportation Provisions

Making Transportation Accessible was a major focus of the statutory provisions of the ADA

**PART B - Actions Applicable to Public Transportation Provided by Public Entities Considered Discriminatory [Subtitle B]**

**SUBPART I - Public Transportation Other Than by Aircraft or Certain Rail Operations [Part I]**

42 U.S.C. § 12141 – 12150

Definitions – fixed route and demand responsive, requirements for new, used and remanufactured vehicles, complementary paratransit, requirements in new facilities and alterations of existing facilities and key stations

**SUBPART II - Public Transportation by Intercity and Commuter Rail [Part II]**

42 U.S.C. § 12161- 12165

Detailed requirements for new, used and remanufactured rail cars for commuter and intercity service and requirements for new and altered stations and key stations

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## What Do the DOT ADA Regulations Require?

**Accessible railcars**

- Means for wheelchair users to board
- Clear path for wheelchair user in railcar
- Wheelchair space
- Handrails and stanchions that do create barriers for wheelchair users
- Public address systems
- Between-Car Barriers
- Accessible restrooms if restrooms are provided for passengers in commuter cars
- Additional mode-specific requirements for thresholds, steps, floor surfaces and lighting

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### What are the different 'modes' of passenger rail under the ADA?

- **Rapid Rail (defined as "Subway-type," full length, high level boarding) 49 C.F.R. Part 38 Subpart C** - NYCTA, Boston T, Chicago "L," D.C. Metro, Baltimore Metro, BART, MARTA
- **Light Rail & Streetcars 49 C.F.R. Part 38 Subpart D** - Older Systems - SEPTA, MBTA Green Line, Pittsburgh T; Newer Systems - Portland TriMet MAX, Charlotte Lynx, Minneapolis Metro, others
- **Commuter Rail - 49 C.F.R. Part 38 Subpart E** - Older systems - Long Island Railroad (LIRR); Metro North (New York Central, Penn Central, Conrail), SEPTA (Reading RR & Pennsylvania RR), MBTA (Boston & Maine); Newer systems - MARC, VRE, Tri-Rail (Miami), UTA Front Runner (Salt Lake City), New Mexico Rail Runner (Albuquerque to Santa Fe), Metro Transit Northstar (Minneapolis)
- **Intercity Rail 49 C.F.R. Part 38 Subpart F** - National Railroad Passenger Corporation (Amtrak). Created in 1971, took over long distance (vs. commuter) passenger service from freight railroads with a limited nationwide system.

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### What do these different modes look like?

**Rapid Rail (49 C.F.R. §38 Subpart C)** Subways - provide full length platforms & level boarding from platforms onto railcars, can run underground, at grade or on elevated track.



Chicago CTA 'L' rapid rail/subway car at an elevated station



Washington D.C. Metro rapid rail/subway cars at an underground station

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### Light Rail (49 C.F.R. §38 Subpart D)

Limited operation on streets, mostly operate on dedicated right-of-way, on grade, below grade, underground or elevated tracks. Older systems had high floor cars. Newer cars are usually low floor.



Portland TriMet MAX Bombardier Type I Light Rail car (Built mid 1980s) at low level platform (note steps inside car). Newer TriMet MAX cars have low floors



Phoenix Valley Metro Kinkisharyo low floor Light Rail car built in 2008 provides level boarding from platforms about 14 inches Above Top of Rail.

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### Streetcars, treated as Light Rail under ADA but considered somewhat different by the industry



Apply ADA Light rail requirements – Photo shows a Washington, D.C. Streetcar Inekon Trio. Modern streetcars are low floor and often have slightly raised platforms that provide level boarding.

Main differences between modern streetcars and modern light rail, is that streetcars are lighter and narrower, usually operate as single car trains, and can run on narrower public streets with sharper curves.

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### Heritage Streetcars (49 C.F.R. §38 Subpart D)



Little Rock Arkansas River Line Heritage Streetcars (cars built mid 2000s) Exterior view above. On right, an interior view showing a wheelchair lift.

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### Intercity Rail (Amtrak) (49 C.F.R. §38 Subpart F)



Amtrak Amfleet I single level cars, coach class, built 1975-78. (Pre-ADA). Car floor height is 48 inches Above Top of Rail.

Amtrak Superliner Bi-Level cars. Car #32038 is a sleeping car built in 1981. (Pre-ADA) Car floor height is 18 inches Above Top of Rail.

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### Commuter Rail (49 C.F.R. §38 Subpart E)

cars can board from high 48" ATR platforms, low platforms or some intermediate height level boarding platforms



SEPTA GE Silverliner IV (Built 1973-1976) single level commuter car. Car floor is 48 inches Above Top of Rail (ATR). Newly constructed low platforms must be 8 inches Above Top of Rail. Existing platforms are often much lower.



MARC III Kawasaki Bi-level (built 2000-2001) at Baltimore Penn Station that has a car floor and platform at 48 inches Above Top of Rail allowing level boarding.

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### Commuter Rail - Gallery Cars

(49 C.F.R. §38 Subpart E) can only board from low platforms



Virginia Railway Express (VRE) Nippon Sharyo Bi-level "Gallery" cars (2006-2008) with center entrance doors with steps up to car floor and equipped with car borne lifts. In photo on right, the left stairway bottom step says "Rincon" which is the maker of the lifts. Gallery cars typically cannot be used at high level platforms. In addition to VRE, similar and older gallery cars are widely used by Metra Chicago suburban lines and Caltrain in San Francisco Peninsula service.

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### Commuter Rail - Gallery Cars

(49 C.F.R. §38 Subpart E) board from low platforms



Virginia Railway Express Nippon Sharyo Bi-level "Gallery" cars showing door open to restroom, stairs to galley seats, wheelchair space and priority seating and entrance stairs

Virginia Railway Express Nippon Sharyo Bi-level "Gallery" cars, view of upper gallery seating

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### Bombardier Bi-Level commuter cars

(49 C.F.R. §38 Subpart E)  
unique (at time) car floor height



Metrolink (Los Angeles) Bombardier Bi-level commuter cars with unique octagonal car shape (First introduced in the early 1990s with subsequent orders in the early 2000s) have two doors on the low center floor of car which is 25 inches Above Top of Rail. Metrolink was first U.S. user of Bombardier Bi-level Commuter cars. Ten other U.S. commuter systems have since purchased Bombardier Bi-level commuter cars and similar non-octagonal shaped Bi-Level commuter cars built by Hyundai Rotem.

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### Bi-level & Multilevel Commuter Railcars –

Have doors for high level platform boarding and steps for boarding from low level platforms.



Maryland Area Regional Commuter (MARC) Bombardier Multilevel commuter cars first delivered in 2014 at Washington Union Station. Virtually identical cars were purchased earlier by New Jersey Transit. They have car floors and four sets of doors that allow level boarding from 48 inches Above Top of Rail platforms and have steps for boarding from low level platforms.

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### 2011 DOT Platform Rule

Federal Register Volume 76, Number 181 (Monday, September 19, 2011)

- Requires full-length, level-boarding platforms (where the platform surface is level with the floor of the train cars) in new and substantially reconstructed commuter and Amtrak stations.
- If the passenger railroad cannot provide full-length level-entry boarding because freight traffic uses the track adjacent to the platform, a passenger railroad can choose to meet the performance standard through use of car-borne lifts, station-based lifts, or mini-high platforms (with multiple stops if needed).
- The passenger railroad must provide a plan to FTA or FRA for approval explaining how its chosen means of meeting the performance standard will provide safe, reliable access.
- If two types of railcars with different car floor heights use the same platform, level boarding platform height should be coordinated with the lower car floor height

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**Why can't intercity and commuter systems have full length level boarding platforms like rapid rail systems?**



Most intercity and much commuter rail service in the U.S. operates on tracks owned and or used by freight railroads. Freight railroads occasionally move oversize loads, such as the industrial item shown on this car. Both the car and the load are wider than passenger railcars. To provide clearance for these wide loads, freight railroads insist that high level, level boarding platforms provide clearance or are "set back," unlike platforms on rapid rail systems.

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**Incompatible platform heights -  
Cars built for lower level boarding heights cannot use  
48 inch Above Top of Rail Platforms**



Amtrak Bi-level Superliner Sleeping car with ramp to low level platform at Washington, D.C. Union Station



Amtrak Bi-level Superliner car at a 48 inches Above Top of Rail platform at Washington, D.C. Union Station. Floor of car is about 30 inches below the platform

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**Boarding a commuter or intercity car with a 48" Above Top of Rail car floor  
by wheelchair users or individuals who cannot climb stairs**



An Amtrak portable platform lift needed to get a wheelchair user or individual unable to climb railcar steps up to a 48 inch Above Top of Rail car floor from a low level platform. The lifts are deployed by the train or station crew.



MBTA Photo

Many commuter rail stations served by railcars with 48 inch Above Top of Rail car floors often have "mini-highs." The mini-highs will provide access into one or two cars of the train.

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### Portable platform lift in use

Used by Amtrak and a number of commuter systems



Amtrak personnel have deployed and are assisting an individual to board an Amtrak rail car (with a 48 inch Above Top of Rail car floor) at Raleigh, North Carolina station

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### Solutions for boarding high floor railcars where full length level boarding is not possible



Amtrak's movable set back platform test in Ann Arbor, Michigan. On left, platform is retracted for freight trains clearance. On right, platform extended to provide level boarding onto two cars. Boarding time is shortened and passengers like it.

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### Solutions for boarding high floor railcars where full length level boarding is not possible

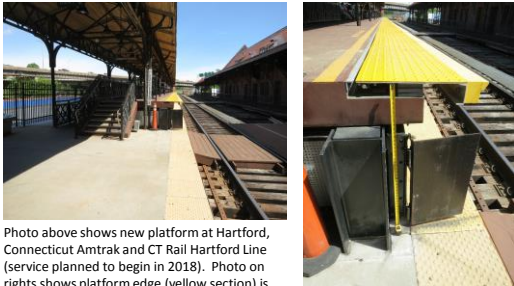


Photo above shows new platform at Hartford, Connecticut Amtrak and CT Rail Hartford Line (service planned to begin in 2018). Photo on rights shows platform edge (yellow section) is hinged to flip up to provide clearance for freight trains. Platform is not a full length platform, it is approximately 3 cars long.

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### Rail cars with different car floor heights using the same station (Oakland, CA)



Amtrak California single level rebuilt former New Jersey Transit Comet 1B cars built by St. Louis Car Company for the Penn Central in the late 1960s. The car floor is 48 inches Above Top of Rail. The only means of wheelchair access is by use of a portable platform lift. See upcoming slide.



Amtrak California Bi-level California cars (this car built by Morrison-Knudsen in the mid-1990s) have a 15 inch Above Top of Rail lower car floor. Because station platforms are lower, they have carborne lifts on most cars.

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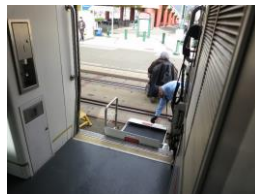
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### Amtrak Bi-Level California Car has carborne lifts



Amtrak California cars have a 18 inch Above Top of Rail car floor. Most passenger platforms in California are no more than 8 inches Above Top Rail and some are at Top of Rail. So a carborne wheelchair lift is needed.

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### Bridging the horizontal gap - bridgeplates or ramps still usually needed



Bridgeplate in use at Amtrak Ann Arbor, Michigan movable set back platform



Amtrak's Lorton, VA station provides full length level boarding onto Superliner cars but a bridgeplate is still needed to span the horizontal gap.

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### Boarding Bombardier Bi-level commuter cars

UTA Front Runner has full length level boarding at most stations



Utah Transit Authority (UTA) Front Runner Bombardier bi-level commuter car at FULL LENGTH LEVEL BOARDING platform in Salt Lake City. Car floors are 25 inches Above Top of Rail. Extended sill at car door appears to mitigate the need for a bridgeplate.

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### New Mexico Rail Runner Raised Platform and Bridgeplates for boarding Bombardier Bi-level commuter cars



New Mexico Rail Runner Bombardier Bi-Level Commuter car showing raised level boarding platform and bridgeplate in Albuquerque in September 2016

New Mexico Rail Runner Bombardier Bi-Level Commuter car with wheelchair user boarding in Albuquerque from raised level boarding platform using bridgeplate in September 2016. Conductors deploy bridgeplates at every station stop.

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### New Mexico Rail Runner Raised Platform and Bridgeplates



New Mexico Rail Runner Bombardier Bi-Level Commuter car with wheelchair user boarding in Albuquerque from wooden mini-high platform using bridgeplate in October 2011

New Mexico Rail Runner Bombardier Bi-Level Commuter car with all passengers boarding from large raised level boarding platform using bridgeplate in Albuquerque in September 2016

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**Metro Transit Northstar (Minneapolis) has raised platforms and bridgeplates AND carborne lifts to allow equal access to every car in a train**



Above, Minnesota Northstar station, raised level boarding platform with bridgeplate deployed. On Right, interior view of car doors with car borne lift (in every car)

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**Metro Transit Northstar (Minnesota) has raised platforms and bridgeplates AND carborne lifts**



Metro Transit Northstar Target Field Minneapolis station with raised level boarding platform providing access to Bombardier Bi-level commuter car at end of train.

Metro Transit Northstar station, raised level boarding platform

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**Boarding high floor Light Rail cars**



Maryland MTA Light Rail "Mini-High" Platform to allow boarding by wheelchairs users and other unable to climb steps onto high floor light rail cars.



Sacramento Regional Transit light rail car stopped by boarding platform to allow boarding by wheelchairs users and others unable to climb steps onto high floor light rail cars.

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### Full length level boarding on newer low floor light rail cars



Charlotte Area Transit System (CATS) LYNX Blue Line Siemens S70 light rail cars with full length level boarding platform



Minneapolis, Minnesota Metro Transit Bombardier Flexity Swift light rail cars with full length level boarding platform

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### ADA Between-Car Barrier Requirement

#### Rapid Rail

§ 38.63 Between-car barriers.

(a) Requirement. Suitable devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Acceptable solutions include, but are not limited to, pantograph gates, chains, motion detectors or similar devices.

(b) Exception. Between-car barriers are not required where platform screens are provided which close off the platform edge and open only when trains are correctly aligned with the doors.

#### Light Rail

§ 38.85 Between-car barriers.

Where vehicles operate in a high-platform, level-boarding mode, devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Appropriate devices include, but are not limited to, pantograph gates, chains, motion detectors or other suitable devices.

#### Commuter Rail

§ 38.109 Between-car barriers.

Where vehicles operate in a high-platform, level-boarding mode, and where between-car bellows are not provided, devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Appropriate devices include, but are not limited to, pantograph gates, chains, motion detectors or other suitable devices.

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### Examples of Between-Car Barriers



Between-Car Barriers on San Francisco Muni Light Rail cars at a high level boarding subway station platform, installed in 2014.

[https://www.sfmta.com/sites/default/files/pressreleases/Press%20Release--Between%20Car%20Barriers%20Enhance%20Safety%20on%20Muni%20Metro%2004.24.14\\_0.pdf](https://www.sfmta.com/sites/default/files/pressreleases/Press%20Release--Between%20Car%20Barriers%20Enhance%20Safety%20on%20Muni%20Metro%2004.24.14_0.pdf)



Between-Car Barriers on new Washington DC Metro 7000 series rapid rail (subway) car.

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**“See Something, Say Something”  
Lack of Between-Car Barriers on Baltimore Metro**



Maryland MTA Metro rapid rail/  
subway cars cab end do not have any  
between car barrier.



Maryland MTA Metro rapid rail/  
subway cars non-cab ends do not have  
any between car barrier.

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**Emerging issue - lack of Between-Car Barriers  
on level boarding light rail systems**

49 C.F.R. §38.85



Phoenix Valley Metro



Phoenix Valley Metro, note lack of  
Between Car Barrier

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**Platform-based Between Car Barriers  
on a level boarding light rail system**

49 C.F.R. §38.85



Charlotte Area Transit System (CATS) LYNX Blue Line light rail  
trains use platform-based Between Car Barriers

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### ADA Rapid Rail interior circulation, handrails, and stanchions requirements (49 C.F.R. §38.57)

§ 38.57 Interior circulation, handrails and stanchions.

(a) Handrails and stanchions shall be provided to assist safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(b) Handrails, stanchions, and seats shall allow a route at least 32 inches wide so that at least two wheelchair or mobility aid users can enter the vehicle and position the wheelchairs or mobility aids in areas, each having a minimum clear space of 48 inches by 30 inches, which do not unduly restrict movement of other passengers. Space to accommodate wheelchairs and mobility aids may be provided within the normal area used by standees and designation of specific spaces is not required. Particular attention shall be given to ensuring maximum maneuverability immediately inside doors. Ample vertical stanchions from ceiling to seat-back rails shall be provided. Vertical stanchions from ceiling to floor shall not interfere with wheelchair or mobility aid user circulation and shall be kept to a minimum in the vicinity of doors.

(c) The diameter or width of the gripping surface of handrails and stanchions shall be 1 1/4 inches to 1 1/2 inches or provide an equivalent gripping surface and shall provide a minimum 1 1/2 inches knuckle clearance from the nearest adjacent surface.

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### ADA Rapid Rail interior circulation, handrails and stanchions requirements (49 C.F.R. §38.57)



Above, WMATA/D.C. Metro Rail car showing wheelchair space & some floor to ceiling stanchions (poles).

Right, WMATA/D.C. Metro Rail CAF built 5000 series car delivered in 2000 showing high view of wheelchair space with seat folded and one floor to ceiling stanchion.

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### ADA Rapid Rail interior circulation, handrails and stanchions requirements (49 C.F.R. §38.57)



WMATA/D.C. Metro Rail Breda 3000 series car delivered in 1987 (pre-ADA) showing floor to ceiling stanchions (poles) (which are 30 inches apart rather than providing a route 32 inches wide required under the ADA)

WMATA/D.C. Metro Rail Kawasaki 7000 series car delivery began in 2014. Photo shows with open circulation space, wheelchair space that has handholds and handholds attached to seat backs and windscreens and no floor to ceiling stanchions

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**“See Something, Say Something”  
Lack of wheelchair spaces on Baltimore  
Metro Rapid Rail/Subway cars**



Maryland MTA Metro Rapid Rail/Subway Car Interior.  
What's Missing? Is there a wheelchair space? Was/is a wheelchair space required? 43

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**Likely configuration of future  
rapid rail (subway) cars**



Bombardier TORONTO Rocket, TORONTO, CANADA (not covered by the ADA) but a similar design with *full width gangways* is specified for next NYC subway order 44

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**ADA Light Rail interior circulation, handrails  
and stanchions requirements (49 C.F.R. §38.77)**

**§ 38.77 - Interior circulation, handrails and stanchions.**

- (a) Handrails and stanchions shall be sufficient to permit safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.
- (b) At entrances equipped with steps, handrails and stanchions shall be provided in the entrance to the vehicle in a configuration which allows passengers to grasp such assists from outside the vehicle while starting to board, and to continue using such handrails or stanchions throughout the boarding process. Handrails shall have a cross-sectional diameter between 1 1/4 inches and 1 1/2 inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than 1/8 inch. Handrails shall be placed to provide a minimum 1 1/2 inches knuckle clearance from the nearest adjacent surface. Where on-board fare collection devices are used, a horizontal passenger assist shall be located between boarding passengers and the fare collection device and shall prevent passengers from sustaining injuries on the fare collection device or windshield in the event of a sudden deceleration. Without restricting the vestibule space, the assist shall provide support for a boarding passenger from the door through the boarding procedure. Passengers shall be able to lean against the assist for security while paying fares.
- (c) At all doors on level-entry vehicles, and at each entrance accessible by lift, ramp, bridge plate or other suitable means, handrails, stanchions, passenger seats, vehicle driver seat platforms, and fare boxes, if applicable, shall be located so as to allow a route at least 32 inches wide so that at least two wheelchair or mobility aid users can enter the vehicle and position the wheelchairs or mobility aids in areas, each having a minimum clear space of 48 inches by 30 inches, which do not unduly restrict movement of other passengers. Space to accommodate wheelchairs and mobility aids may be provided within the normal area used by standees and designation of specific spaces is not required. Particular attention shall be given to ensuring maximum maneuverability immediately inside doors. Ample vertical stanchions from ceiling to seat-back rails shall be provided. Vertical stanchions from ceiling to floor shall not interfere with wheelchair or mobility aid circulation and shall be kept to a minimum in the vicinity of accessible doors.

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**ADA Light Rail interior circulation, handrails and stanchions requirements (49 C.F.R. §38.77)**



Portland Tri-Met Siemens SD660 light rail car showing two wheelchair spaces and priority seating.



Phoenix Valley Metro Kinkisharyo light rail car showing two wheelchair spaces & priority seating.

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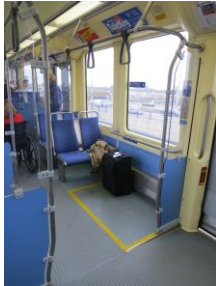
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**Light Rail interior circulation, handrails and stanchions requirements**

(49 C.F.R. §38.77)



On left, Minneapolis Metro Transit Bombardier Flexity Swift light rail car wheelchair space.  
Above, Minneapolis Metro Transit Siemens S70 light rail car wheelchair space & priority seating

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**ADA Light Rail interior circulation, handrails and stanchions requirements (49 C.F.R. §38.77)**



Phoenix Valley Metro Kinkisharyo light rail car wheelchair space and priority seats and signage



Wheelchair space in Charlotte Lynx Siemens S70 (same as Minneapolis Metro. Seem small?)

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### Commuter rail car mobility aid accessibility

49 C.F.R. §38.95

- Requires new commuter cars to provide either level boarding or have level change mechanism
- Provides detailed specifications for load, controls, emergency operation, power or equipment failure, and platform details.
- Provides specifics for car ramps and bridgeplates and
- Has requirements for mobility aid seating location

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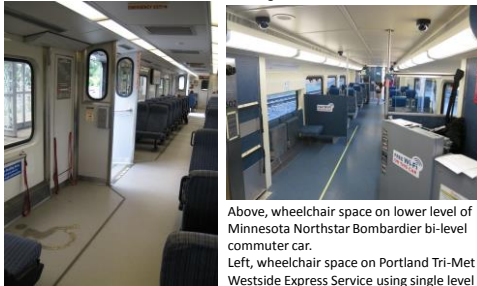
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### Commuter rail car mobility aid seating location

49 C.F.R. §38.95



Above, wheelchair space on lower level of Minnesota Northstar Bombardier bi-level commuter car.  
 Left, wheelchair space on Portland Tri-Met Westside Express Service using single level Colorado Rail Car Diesel Multiple Unit railcar

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### ADA Commuter Rail car restroom provisions 49 C.F.R. §38.107

#### § 38.107 Restrooms.

(a) If a restroom is provided for the general public, 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 by 60 inches. Permanently installed fixtures may overlap this area a maximum of 6 inches, if the lowest portion of the fixture is a minimum of 9 inches above the floor, and may overlap a maximum of 19 inches, if the lowest portion of the fixture is a minimum of 29 inches 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 to 19 inches 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 long shall be mounted behind the water closet, and a horizontal grab bar at least 40 inches long shall be mounted on at least one side wall, with one end not more than 12 inches from the back wall, at a height between 33 inches and 36 inches 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 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. Doorways on the side wall shall have a minimum clear opening width of 39 inches. Door latches and hardware shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

(b) Restrooms required to be accessible 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.

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### Restrooms in commuter rail cars

49 C.F.R. §38.107



Above, accessible restroom on lower level of Amtrak California bi-level car (which is sort of a hybrid between a commuter rail car and an intercity rail car). The maximum dimensions of the restroom are approximately 65 inches by 75 inches.



Above, restroom on lower level of Minnesota Northstar Bombardier bi-level commuter car.

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### Restrooms in commuter rail cars

49 C.F.R. §38.107



Restroom in Virginia Railway Express (VRE) Nippon Sharyo Gallery car



Restroom in Maryland Area Regional Commuter (MARC) Kawasaki MARC III multilevel car

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### ADA Public Information System Requirements

#### Rapid Rail

§ 38.61 Public information system.

(a) (1) Requirements. Each vehicle shall be equipped with a public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted. Each vehicle operating in stations having more than one line or route shall have an external public address system to permit transportation system personnel, or recorded or digitized human speech messages, to announce train, route, or line identification information.

(2) Exception. Where station announcement systems provide information on arriving trains, an external train speaker is not required.

(b) [Reserved]

#### Light Rail

§ 38.87 Public information system.

(a) Each vehicle shall be equipped with an interior public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted.

(b) [Reserved]

#### Commuter Rail

§ 38.121 Public information system.

(a) Each car shall be equipped with a public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted.

(b) [Reserved]

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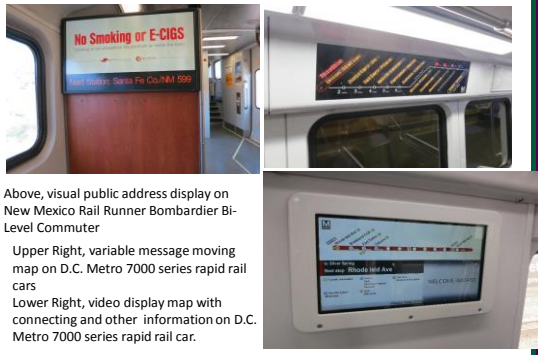
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## Public Address/Communications in Rail Vehicles



Above, visual public address display on New Mexico Rail Runner Bombardier Bi-Level Commuter

Upper Right, variable message moving map on D.C. Metro 7000 series rapid rail cars

Lower Right, video display map with connecting and other information on D.C. Metro 7000 series rapid rail car.

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## Accessible Stations - ADA Statutory New Construction & Alterations Requirements

### Sec. 12146. New facilities

For purposes of section 12132 of this title and section 794 of title 29, it shall be considered discrimination for a public entity to construct a new facility to be used in the provision of designated public transportation services unless such facility is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

### Sec. 12147. Alterations of existing facilities

#### (a) General rule

With respect to alterations of an existing facility or part thereof used in the provision of designated public transportation services that affect or could affect the usability of the facility or part thereof, it shall be considered discrimination, for purposes of section 12132 of this title and section 794 of title 29, for a public entity to fail to make such alterations (or to ensure that the alterations are made) in such a manner that, to the maximum extent feasible, the altered portions of the facility are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, upon the completion of such alterations. Where the public entity is undertaking an alteration that affects or could affect usability of or access to an area of the facility containing a primary function, the entity shall also make the alterations in such a manner that, to the maximum extent feasible, the path of travel to the altered area and the bathrooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, upon completion of such alterations, where such alterations to the path of travel or the bathrooms, telephones, and drinking fountains serving the altered area are not disproportionate to the overall alterations in terms of cost and scope (as determined under criteria established by the Attorney General).

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## Newly Constructed Commuter Rail Stations



Minnesota Northstar Stations, from left to right, Anoka, Coon Rapids, and Ramsey, MN

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### Alterations of Rapid Rail Stations to provide accessibility



Street to station elevator kiosk in the style of original stairway kiosks at New York City MTA rapid rail Brooklyn Bridge-City Hall Subway Station for #4, #5 #6 trains

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### Recent ADA Station Litigation

Earlier this year, there have been two new cases filed against transit agencies for failure to maintain accessible features under the ADA and a case seeking improved station access under state law. All three cases filed by Disability Rights Advocates with co-counsel from Legal Aid at Work against BART and the law firm Sheppard Mullin and the NYCTA and MTA.

- *Senior and Disability Action, et al. v. San Francisco Bay Area Rapid Transit District* (N.D. Calif.) filed April 5, 2017
- *Center for Independence of the Disabled New York (CIDNY), et al. v. New York City Transit Authority (NYCTA), et al.* (S.D.N.Y.)
- *Center for Independence of the Disabled New York (CIDNY), et al. v. New York City Transit Authority (NYCTA), et al.* (N.Y. State Supreme Court) – LATER TWO both filed April 25, 2017

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### Fare Machines & Web Accessibility

2010 ADA Accessibility Guidelines

§220 Automatic Teller Machines and Fare Machines

- Provide at least one compliant with 707

§707 Automatic Teller Machines and Fare Machines

- Standards for clear floor space, operable parts, privacy, speech output, receipts, input controls, numerical keypads, function keys, tactile symbols, display screen and braille

Web no ADA regulations but clear DOJ enforcement activity requiring compliance with the Web Content Accessibility Guidelines 2.0, Level AA.

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## Fare Machines



Minneapolis Metro Transit Fare Machine



Charlotte Area Transit System (CATS) LYNX Blue Line Fare Machine

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## Inaccessible WMATA/D.C. Metro Smart Trip card machines

### All Metro stations now have SmarTrip vending machines

By Luz Lazo  
November 6, 2012  
Washington Post

After months of delays, SmarTrip card vending machines are now available at every Metrorail station. The transit agency has been installing new machines across the system, and with older machines in place in 47 stations, Metro now has at least one machine in each of the system's 86 stations.

Installation of the 100 new machines was put on hold this year after disability advocates complained in August that the new dispensers did not comply with the Americans With Disabilities Act.

Metro said it planned to add Braille and an audio feature once the machines were in use, but under pressure, officials opted to keep the machines out of service until all of them were made accessible to people with sight impairments.

"We learned some lessons," Christian T. Kent, assistant general manager of access services, told members of the Metro's Accessibility Advisory Committee on Monday.

"We learned how important it is before we deploy any equipment to have proper vetting," he said.

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## Another fare system accessibility issue

### BART Clipper Card

Date Settled: 11/24/2015

BART Clipper Card (fare payment card) readers at BART fare gates did not provide any audible feedback so blind passengers could not easily determine whether to move through the gates or whether they would not be able to because of an error or low-balance.

BART and the Metropolitan Transportation Commission ("MTC") signed a settlement in which they agreed to improve the accessibility of the Clipper Card system at BART stations by modifying the fare gates to emit audible Tagging Tones.

The Tagging Tones will now communicate to blind or low-vision passengers their successful entry or exit through a fare gate, as well as any error or low-balance on their Clipper Cards.

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## Houston METRO Website Agreement

### METROPOLITAN TRANSIT AUTHORITY OF HARRIS COUNTY ANNOUNCES DIGITAL ACCESSIBILITY INITIATIVE

HOUSTON (March 17, 2016) — Consistent with its commitment to all of its riders, the Metropolitan Transit Authority of Harris County ("METRO") today announced an initiative to make its affiliated websites, mobile applications, and print formation more accessible and inclusive.

METRO adopted the Web Content Accessibility Guidelines (WCAG) version 2.0 level AA as its accessibility standard and is making enhancements to work toward meeting this standard. METRO will also continue providing braille, large print, electronic, and audio versions of print information to riders with visual impairments upon their request within a reasonable time after the request has been made.

METRO worked with blind riders and with Disability Rights Texas, a non-profit legal advocacy agency serving Texans with disabilities, on its accessibility initiative.



Houston Transit Authority Website

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## Accessibility Nationwide, a mix

- Newer light rail systems and new commuter rail cars and stations are largely accessible
- Some older rail systems are getting better but some have a long way to go: [https://www.nytimes.com/2017/03/29/opinion/new-york-has-a-great-subway-if-youre-not-in-a-wheelchair.html?\\_r=0](https://www.nytimes.com/2017/03/29/opinion/new-york-has-a-great-subway-if-youre-not-in-a-wheelchair.html?_r=0)
- For example, as of November 2016, 106 out of 139 (75%) of MBTA commuter rail stations were accessible.
- Key requirement is to *maintain infrastructure, particularly elevators*

### SHINING EXAMPLE

- MassDOT – Office of Performance Management & Innovation MBTA 2016 Scorecard page 65

PERFORMANCE MEASURE	CURRENT (FY16)	CHANGE FROM FY15	2-YEAR TARGET
Platform accessibility (all rapid transit stations with elevators)	99.5% (April 2015 - March 2016)	+0.1% (April 2014 - March 2015)	In development
Vehicle accessibility (Green Line)	98.0%	no data	In development
Customer satisfaction	3.2	no data	In development

[http://www.massdot.state.ma.us/Portals/0/docs/infoCenter/performancemanagement/AnnualPerformanceReport\\_2016.pdf](http://www.massdot.state.ma.us/Portals/0/docs/infoCenter/performancemanagement/AnnualPerformanceReport_2016.pdf)

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## An Inspiration for Rail Accessibility Advocacy



"Grab Bar" over bed in President Franklin D. Roosevelt's 1920s- 1930s Private Rail Car, the "Marco Polo"

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## Questions?

Hope you enjoyed this presentation. I had fun putting it together.

All photographs except for the MBTA mini-high platform were taken by Kenneth Shiotani.

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