

521 CMR 18.00: TRANSPORTATION TERMINALS

18.1 GENERAL

Transportation terminals shall comply with 521 CMR, except as specified or modified in 521 CMR 18.00. Transportation terminals shall include but not be limited to airports, bus and train stations, marine terminals, subway stops, *commuter rail*, *light rail*, and *rapid rail* transit stations.

18.2 ACCESSIBLE ROUTE

At all newly *constructed*, *reconstructed*, *altered* or *remodeled* stations, an *accessible route* shall connect all terminal *buildings* or station houses, platforms, parking areas and street *entrances*.

18.3 ENTRANCES

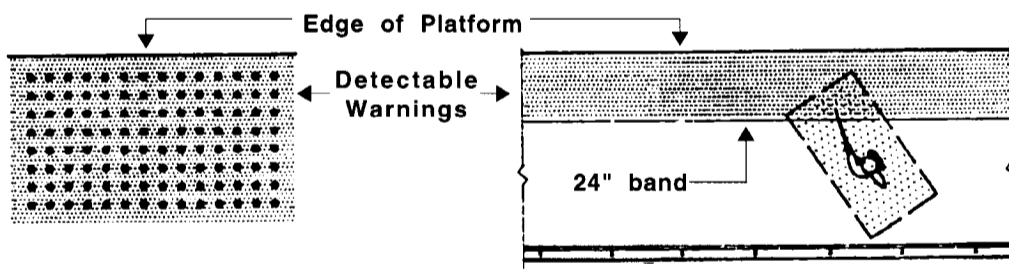
At least 50% of the *entrances* to a transportation terminal shall be *accessible*.

18.4 PLATFORM ACCESS

To facilitate access to subway cars, airplanes, buses, trains, and other means of public transportation, platforms shall comply with the following:

18.4.1 Platform to Vehicle Gaps: At newly *constructed*, *reconstructed*, *altered*, or *remodeled* stations, the distance between platform and vehicle at boarding platforms shall not exceed three inches (3" = 76mm) in the horizontal plane and ½ an inch (½" = 13mm) in the vertical plane. Where *construction* constraints result in platform to vehicle gaps that exceed these requirements, a bridge plate designed to eliminate such gaps shall be made available at every door of the vehicle where passengers are boarding or disembarking. Where construction constraints in *light rail* stations result in platform to vehicle gaps that exceed the requirements a device used to bridge the gap must be a minimum of 36 inches wide or the width of the opening, whichever is greater and the slope shall not exceed 1:12. Exception: a slope between 1:10 (10%) and 1:12 (8.3%) is allowed for a single rise of a maximum of three inches (3" = 76mm).

18.4.2 Platform Warnings: Platform edges at newly *constructed*, *reconstructed*, *altered*, or *remodeled* stations shall have a yellow (Federal Yellow 33538) band of *detectable warning* at least 24 inches (24" = 610mm) in width except where there is no defined platform edge, the warnings shall be placed far enough from the tracks to allow for the dynamic envelope of vehicles using tracks at those terminals. See Fig 18a.



Detectable Warnings
Figure 18a

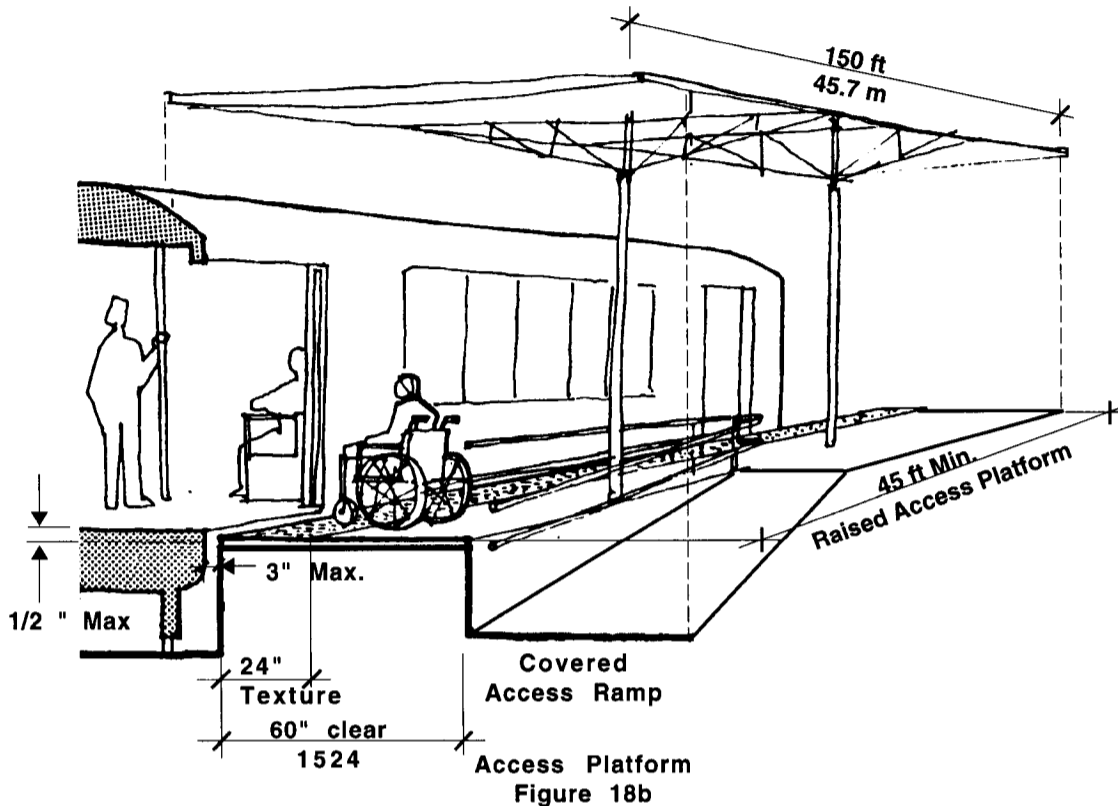
- Detectable warnings* shall consist of raised truncated domes with a base diameter of nominal 0.9 inches (0.9" = 23mm), a height of nominal 0.2 inches (0.2" = 5mm) and a center-to-center spacing between domes which are farthest apart in a configuration, of nominal 2.35 inches (2.35" = 60mm) and shall contrast visually with adjoining surfaces, by a minimum of 40%.
- The material used to provide contrast shall be an integral part of the walking surface.
- Detectable warnings* used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.

18.5 COMMUTER, LIGHT RAIL AND RAPID RAIL TRANSIT TERMINALS

To facilitate access to *commuter*, *light rail*, and *rapid rail* transit vehicles, the following shall be provided:

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- 18.5.1 Platforms at new stations: At newly *constructed* stations serving *commuter rail* coaches, access shall be provided to all passengers and to all coaches of the train by means of a full length raised platform. For purposes of 521 CMR 18, a newly *constructed* station is defined as any station stop where passenger services has not heretofore been provided or where no regularly scheduled passenger service has been provided for five or more years. See Fig. 18b.



- a. Such platforms shall be at least 60 inches (60"=1524mm) in *clear* width
 - b. Such platforms shall provide overhead shelter from rain and snow along a total of at least 150 feet (150' = 46m) of their length and at all access *ramps*.
- 18.5.2 Platforms at *reconstructed* stations: Any *reconstructed*, *altered* or *remodeled* stations serving *commuter rail* coaches shall afford access to at least two coaches of a train by means of a raised platform. Said platform shall comply with the following:
- a. Such platforms shall be at least 60 inches (60" = 1524mm) in *clear* width.
 - b. Such platforms shall be at least 45 feet (45' = 14m) in length and shall, along their full length and at all access *ramps*, provide overhead shelter from rain and snow.
- 18.5.3 *Light Rail Transit Terminals*: To facilitate access to *light rail* transit vehicles, the following shall be provided:
- 18.5.3.1 Platforms at newly *constructed* stations serving *light rail* transit vehicles shall provide access to all passengers and to all coaches of the train by means of a full length raised platform. Such platforms shall be at least 60 inches (60" = 1524mm) to *clear* width at the stopping zone for *accessible* doors. A minimum of 36 inches (36" = 914mm) in *clear* width must be provided to each stopping zone for *accessible* doors.
- 18.5.3.2 Platforms at *reconstructed*, *remodeled* or *altered* stations serving *light rail* transit vehicles shall afford *access* to at least one car by means of a raised platform. Said platform shall comply with the following:
- a. Such platforms shall be at least 60 inches (60" = 1524mm) in clear width at the stopping zone for *accessible* doors. A minimum 36 inch (36" = 914mm) clear width must be provided to each stopping zone for *accessible* doors.
 - b. Such platforms shall be at least eight feet (8' = 2438mm) in length.

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18.6 FARE TRANSACTION

At least one fare transaction area of each type, at each accessible entrance shall be *accessible* and shall have a minimum 36 inch (36" = 914mm) wide path of travel. Where transaction counters are provided, they shall comply with the requirements set forth in 521 CMR 7.2.1 a., b., c., and d. Where provided, coin or card slots shall comply with **521 CMR 6.5 Forward Reach** or **521 CMR 6.6 Side Reach**.

18.7 ENTRY/EXIT GATE

At least one entry and one exit gate shall be *accessible* and shall have a *clear* opening of not less than 32 inches (32" = 813mm) wide. If one gate serves as both entry/exit, it shall have a *clear* opening of not less than 32 inches (32" = 813mm) wide.

18.8 HAZARDOUS VEHICULAR AREAS

Detectable warnings shall be provided where a *walk* crosses or adjoins a *vehicular way* and the pedestrian and vehicular areas are not separated by curbs, railings, or other *elements*. The boundary between the areas shall be defined by a continuous *detectable warning* which is 24 inches (24" = 610mm) wide, complying with **521 CMR 18.4.2(a), (b), and (c)**.

18.9 SEATING

Within the terminal there shall be seating at intervals not to exceed 200 feet (200' = 61m).

18.10 AT GRADE CROSSINGS

Where public *sidewalks* cross rail systems at grade, the surface of the continuous passage shall be level and flush with the rail top at the outer edge and between the rails. The horizontal gap on the inner edge of each rail shall be the minimum necessary to allow passage of wheel flanges and shall not exceed 2½ inches (2½" = 64mm). Where tracks cross a *sidewalk*, 24 inch (24" = 610mm) wide *detectable warnings* complying with **521 CMR 18.4.2a** shall be placed on both sides of the tracks across the entire width of the *sidewalk*, at a sufficient distance from the tracks to allow clearance for the widest vehicle using those tracks. Where multiple tracks are part of the same level crossing, *detectable warnings* should be placed alongside the outermost track, and not within the sets of tracks.

18.11 ANNOUNCEMENTS IN SEATING AND PLATFORM AREAS

Visual systems for providing announcement to deaf and hard of hearing customers shall be provided wherever there are auditory systems for providing announcements.

18.12 TIER I MARINE FACILITIES

Tier I marine facilities are docks and/or piers that service scheduled waterborne passenger vessels with a vessel length of 40 feet (40' = 12m) or greater. These *facilities* shall provide persons with disabilities *unassisted access* measured under nominal marine conditions throughout spring tide range or 9½ feet (9.5' = 2996mm) whichever is less. *Tier I marine facilities* shall comply with the following:

18.12.1 *Unassisted Access* between the land or fixed facility and a floating vessel, with or without an intervening floating structure, shall be provided.

18.13 MARINE RAMPS

shall comply with the following:

18.13.1 Handrails: *Marine ramps* shall be equipped with handrails which comply with **521 CMR 24.5 Handrails**.

Exception: At the top and bottom of the *marine ramp*, the upper and lower rails shall be connected with a circular return extending a minimum of 12 inches (12" = 305mm) beyond the edge of the *ramp*. It is not intended that handrail extensions be horizontal during all tidal or weather conditions.

18.13.2 Width: The *clear* width of the *marine ramp* shall be a minimum of 36 inches (36" = 914mm) measured between the handrails.

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18.13.3 Platforms: *Marine ramps* shall terminate in *level* platforms that are a minimum of 48 inches (48"= 1219mm) by 48 inches (48" = 1219mm), *clear* and unobstructed by handrails, door swings, *entrances*, or other projections. Such platforms shall occur at the top and bottom of each *ramp* and at intervals not exceeding the maximum *ramp* length as described in Table 1:

<u>RAMPS</u>	Table 1 MAXIMUM RAMP LENGTH (<u>excluding transition plates</u>)
1:12 but less than 1:14	Not to exceed 30 feet (9m)
1:14 but less than 1:16	Not to exceed 35 feet (11m)
1:16 but less than 1:18	Not to exceed 40 feet (12m)
1:18 but less than 1:20	Not to exceed 45 feet (14m)
1:20 and over	Unlimited length

18.13.4 *Transition Plates* shall be a maximum of eight feet (8' = 2438mm) in length and shall have slopes less than or equal to 1:12. *Transition plates* longer than 18 inches (18" = 457mm) shall be equipped with handrails complying with **521 CMR 18.11.1**. These handrails must be parallel to the handrails on the *marine ramp(s)*, but may not necessarily be continuous with them. *Transition plates* shall be at least as wide as the *ramp*. The change in level between the end of the *transition plate* and the adjoining *level* surface shall be no greater than ½ an inch (½" = 13mm).

18.14 BRIDGE PLATES

Vessels using *bridge plates* at boarding and disembarking areas, access shall comply with the following:

18.14.1 A maximum slope of 1:8 to 1:10 is allowed for a maximum rise of three inches (3" = 76mm). A maximum slope that is less steep than 1:10 and no steeper than 1:12 is allowed for a maximum rise of six inches (6" = 152mm).

18.14.2 *Bridge Plates* shall have a minimum *clear* width of at least 36 inches (36" = 914mm).

18.14.3 *Bridge Plates* longer than six feet (6' = 1829mm) are *marine ramps* and shall comply with **521 CMR 18.13, Marine Ramps**.

18.15 FLOATING AND FIXED DOCKS

The edge of all floating and fixed docks shall provide at least one of the following:

- a. Handrails that comply with **521 CMR 24.5, Handrails**;
- b. Curbs that are at least four inches (4" = 102mm) high and are preceded by *detectable warnings* that comply with 521 CMR; or
- c. *Detectable warnings* that comply with 521 CMR.

18.16 ACCESSIBLE ROUTE

There shall be an *accessible route* to and throughout the *marine facility* that connects the vessels boarding area with all other areas and services available to the public within the *marine facility*. The *accessible route* shall comply with **521 CMR 20.00: ACCESSIBLE ROUTE**.

18.17 ANCILLARY FACILITIES

Where provided within the *marine facility*, ancillary *facilities* such are fare transaction areas, public toilets, public telephones, vendor(s) stands, etc., shall comply with 521 CMR.

18.18 MARINE FACILITIES THAT SERVICE WATERBORNE PASSENGER VESSELS WITH A VESSEL LENGTH OF LESS THAN 40 FEET (40' = 12m) - Reserved

18.19 OTHER TIER(S) MARINE FACILITIES - Reserved