LIFT-U®
Division of Hogan Manufacturing, Inc.

Requirements for ADA Access in Performance Areas

LIFT-U®
Division of Hogan Mfg., Inc.
1520 First Street
Escalon, CA 95320
http://www.lift-u.com

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Presented By: LIFT-U® Division of Hogan Mfg., Inc.
1520 First Street
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Description: Provides an overview of 2010 ADA Standards for Accessible Design and Code requirements regarding universal access and available options for providing stage access in schools, churches, and performing arts centers

AIA/CES Info: Provider J731 – Course No. LU0022 (On-line, self taught)

Learning Units: 1.00 This program qualifies for HSW credit.

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Copyright Materials

Learning Objectives

- Requirements for ADA Standards in performance areas
- Additional regulations to consider
- Important design considerations for providing access to performance areas
- How the features, components, and operation methods of the accessibility options fulfill the standards

Accessibility Codes & Standards

Overview

The Department of Justice published revised regulations for Titles II and III of the Americans with Disabilities Act of 1990 "ADA" in the Federal Register on September 15, 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design "2010 Standards" or "Standards". The 2010 Standards set minimum requirements – both scoping and technical – for newly designed and constructed or altered State or local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Americans With Disabilities Act

The 2010 ADA Standards for Accessible Design

The 2010 ADA Standards set requirements for accessibility to public places and commercial facilities by individuals with disabilities

"Universal Access" is providing safe, direct access to anyone desiring to use a building regardless of physical limitations

The 2010 ADA Standards are to be applied during the design, construction, and alteration of such buildings and facilities to the extent required by regulations issued by Federal Agencies

A revised ADA Accessibility Guidelines, combined with the Architectural Barriers Act (ABA), was adopted by the Department of Justice on September 15, 2010. The ADA/ABAAG was completed in July 2004 and is included in the 2010 ADA Standards for Accessible Design.

Accessibility Codes & Standards

Accessible and Usable Buildings and Facilities (ICC/ANSI A117.1)

The International Code Council (ICC) and the American National Standards Institute (ANSI) have prepared this standard in order to:

> "…make sites, facilities, buildings and elements accessible to and usable by people with such physical disabilities as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, uncoordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size. The intent of these sections of the standard is to allow a person with a physical disability to independently get to, enter, and use a site, facility, building, or element."

The message is clear - public buildings must be accessible to all!

Accessibility Codes & Standards

Not an Option, only ramps serving temporary structures can be temporary or portable.

ADA Requirements for Performance Areas

106.5 Defined Terms.

Assembly Area. A *building* or *facility*, or portion thereof, used for the purpose of entertainment, educational or civic gatherings, or similar purposes. For the purposes of these requirements, *assembly areas* include, but are not limited to, classrooms, lecture halls, courtrooms, public meeting rooms, public hearing rooms, legislative chambers, **motion picture houses, auditoria, theaters, playhouses, dinner theaters, concert halls, centers for the performing arts, amphitheaters, arenas, stadiums, grandstands, or convention centers.**

ADA Requirements for Performance Areas

206.2.4 Space and Elements.

At least one *accessible* route shall connect *accessible building* or *facility entrances* with all *accessible spaces* and *elements* within the *building* or *facility* which are otherwise connected by a *circulation path* unless exempted by 206.2.3 Exceptions 1 through 7.

Advisory 206.2.4 Spaces and Elements. Accessible routes must connect all spaces and elements required to be accessible including, but not limited to, **raised areas and speaker platforms**.

ADA Requirements for Performance Areas

ADA Requirements for Performance Areas

206.2.6 Performance Areas.

Where a *circulation path* directly connects a performance area to an assembly seating area, an *accessible* route shall directly connect the assembly seating area with the performance area. An *accessible* route shall be provided from performance areas to ancillary areas or *facilities* used by performers unless exempted by 206.2.3 Exceptions 1 through 7.

ADA Requirements for Performance Areas

206.3 Location.

Accessible routes shall coincide with or be located in the same area as general *circulation paths*. Where *circulation paths* are interior, required *accessible* routes shall also be interior.

Advisory 206.3 Location. The accessible route must be in the same area as the general circulation path. This means that circulation paths, such as vehicular ways designed for pedestrian traffic, walks, and unpaved paths that are designed to be routinely used by pedestrians must be accessible or have an accessible route nearby. ***Additionally, accessible vertical interior circulation must be in the same area as stairs and escalators, not isolated in the back of the facility.***

ADA Requirements for Performance Areas

ADA Requirements for Performance Areas

206.7 Platform Lifts.

Platform lifts shall comply with 410. Platform lifts shall be permitted as a component of an *accessible* route in new construction in accordance with 206.7. Platform lifts shall be permitted as a component of an *accessible* route in an existing *building* or *facility*.

206.7.1 Performance Areas and Speakers' Platforms. Platform lifts shall be permitted to provide *accessible* routes to performance areas and speakers' platforms.

206.7.2 Wheelchair Spaces. Platform lifts shall be permitted to provide an *accessible* route to comply with the *wheelchair space* dispersion and line-of-sight requirements of 221 and 802.

206.7.3 Incidental Spaces. Platform lifts shall be permitted to provide an *accessible* route to incidental *spaces* which are not *public use spaces* and which are occupied by five persons maximum.

ADA Requirements for Performance Areas

ADA Requirements for Performance Areas

207 Accessible Means of Egress.

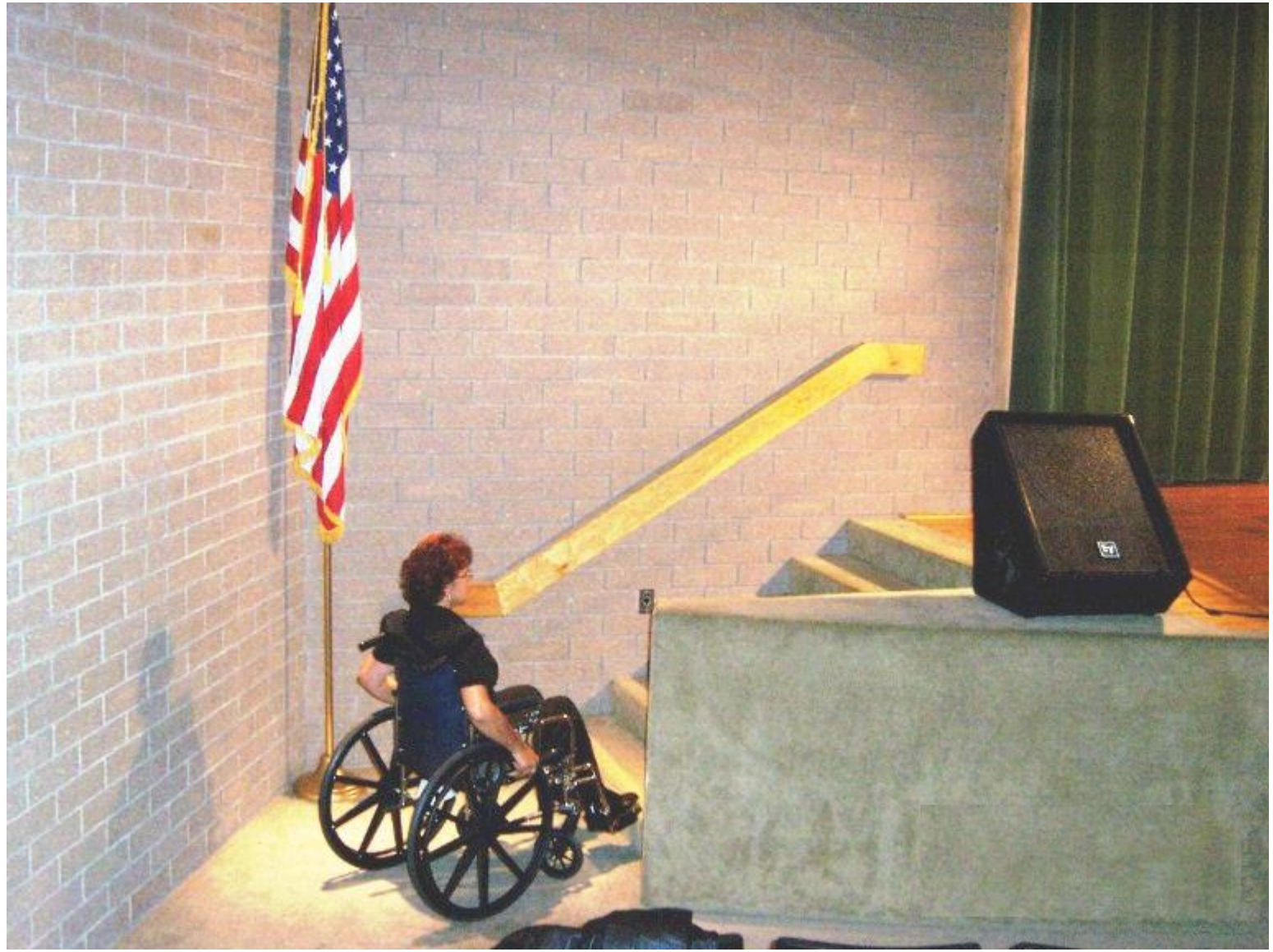
207.1 General. Means of egress shall comply with section 1003.2.13 of the International Building Code (2000 edition and 2001 Supplement) or section 1007 of the International Building Code (2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

207.2 Platform Lifts. Standby power shall be provided for platform lifts permitted by section 1003.2.13.4 of the International Building Code (2000 edition and 2001 Supplement) or section 1007.5 of the International Building Code (2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1) to serve as a part of an *accessible means of egress*.

Excerpt from IBC 1109.7 Lifts which is referenced by Section 1007 of the 2003 IBC.

Platform (wheelchair) lifts are permitted to be a part of a required accessible route in new construction where indicated in Items 1 through 10. Platform (wheelchair) lifts shall be installed in accordance with ASME A18.1.

1. An accessible route to a performing area and speaker platforms in Group A occupancies.
2. An accessible route to wheelchair spaces required to comply with the wheelchair space dispersion requirements of Sections 1108.2.2 through 1108.2.6.
3. An accessible route to spaces that are not open to the general public with an occupant load of not more than five.



Design Considerations

Design Considerations

Introduction

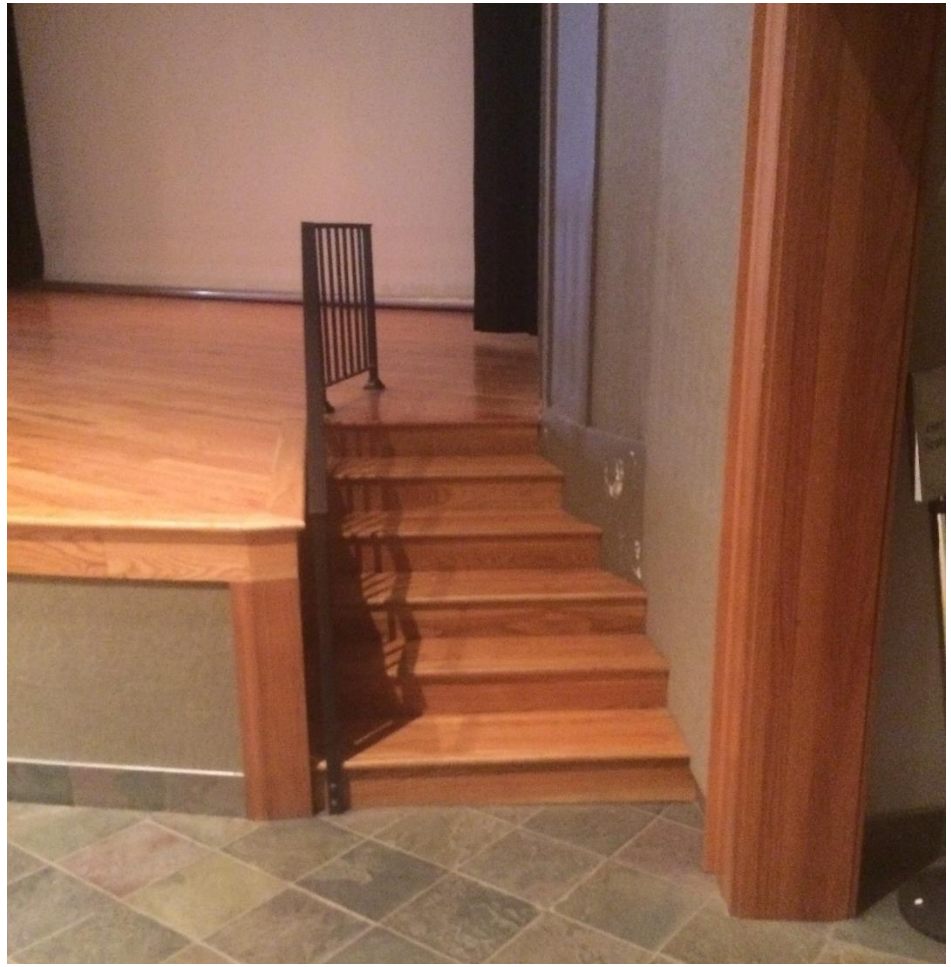
When designing a new building, it is possible to eliminate the need for lift systems by designing a single level building, or incorporating gradual slopes or elevators into the final design.

When working on renovations or retrofit projects, it can be much more difficult to provide an adequate accessibility solution due to the limitations of the existing structure.

In either case, there may be some areas within a building that require an instant change in elevation and cannot be made accessible without the use of some type of lift system.

For example, stage areas, altars, band rooms, projection rooms, and orchestra pits all present an immediate, low-rise change in elevation that can be difficult or even impossible for mobility impaired individuals to negotiate.

Design Considerations



Design Considerations

Site Preparation

A large factor in determining how to provide accessibility to a raised platform is the amount and cost of site preparation. The more site preparation involved, the higher the cost, and the greater limitation on the use of available space. Structural issues often influence the decision.

- **Will walls have to be relocated or removed?**
- **Will a new concrete slab or pit be required?**
- **Is the required electrical power available? If not, determine how and where?**

Design Considerations

Space Requirements

In any project, floor space is money. The higher the per square foot cost of the project, the more important efficient use of space becomes. With floor space costs approaching $500 per square foot in some parts of the country, providing access should require a minimum of space.

- **How much square footage does the footprint of the device require? What is the cost per square foot?**
- **Is there adequate accessible space available or will it need to be created?**
- **Is the project a renovation where there was no accessibility provision in the original design?**
- **Is the space allocation competing between different uses?**
- **Will the space be well utilized or will it often sit idle?**

ADA Requirements for Performance Areas

Provide Stage Access

Provide Control Booth Access

Design Considerations

Traffic Flow to Stage Area - Accessible Routes

Part of the design and placement of accessibility solutions has to be consideration of the path a wheelchair user must take to get to the accessibility equipment and the stage. It is now required that everyone use the same path with no undo attention drawn to a mobility impaired person.

- **How do mobility impaired people access the stage?**
- **Are the aisles wide enough for wheelchair access?**
- **Is there adequate clearance between the seating and the stage?**
- **Will foot traffic be diverted by the accessibility device?**
- **Is there space available?**

The intent of universal access is to have everyone use the same circulation path throughout a building.

Design Considerations

402 Accessible Routes.

402.1 General. *Accessible* routes shall comply with 402.

402.2 Components. *Accessible* routes shall consist of one or more of the following components: walking surfaces with a *running slope* not steeper than 1:20, doorways, *ramps*, *curb ramps* excluding the flared sides, elevators, and platform lifts. All components of an *accessible* route shall comply with the applicable requirements of Chapter 4.

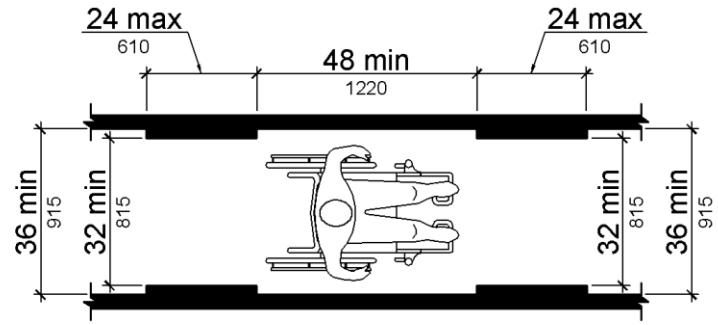


Figure 403.5.1
Clear Width of an Accessible Route

Design Considerations

Sight Lines & Aesthetics

Will the selected device interfere with audience sight lines?

A primary consideration in any auditorium or meeting room is ensuring that there is a clear view of the activity on stage from every seat. If some seats have their view of the stage obstructed by accessibility equipment, the effective capacity of the space is reduced. Every effort should be made to maintain sight lines.

Will the selected device detract from the aesthetics of the stage area?

Aesthetics are a very important consideration for stage areas. Building owners hire architects to make their building as aesthetically pleasing and functional as possible. You don't want to have a beautiful auditorium diminished by the addition of an "appliance" to provide accessibility. The accessibility device should blend in with the architecture so that it is not a focal point.

Accessibility Options

Introduction

The 2010 ADA Standards require facilities to provide universal access to individuals with physical limitations.

Even short flights of stairs can present a real challenge for mobility impaired individuals unless some type of accessibility device is made available.

What options are available for providing disable individuals with access to stage areas or platforms where there is an immediate floor height transition?

Accessibility Options

Accessibility Options

Portable Lifts

Portable lifts are similar to vertical platform lifts, however portable lifts can be moved to the edge of an elevated stage or platform, used to provide access to the stage and removed when no longer required.

Portable lifts are relatively large and heavy and must often be disassembled in order to fit through doorways. Because they can be difficult to handle, portable lifts are often left in storage and not used or left in place.

Leaving the portable lift in place at the stage causes several problems, including blocked sight lines, and violation of codes for permanent lifting devices.

Accessibility Options

Portable Lifts

Can platform lifts be portable or provided after construction as an adaptation?

[1]Platform lifts must be permanent and installed at the time of construction or alteration with few exceptions. Platform lifts can be provided after construction only to provide access to raised work stations in courtrooms (sufficient space and electrical service must be provided in design to facilitate installation). Only platform lifts serving temporary structures can be temporary or portable.

[1]U.S. Access Board Technical Guide, Elevators and Platform Lifts.

Accessibility Options

Inclined Platform Lifts

Inclined platform lifts attach to the side wall of a stairway and move in a path parallel to the slope of the stairs between two landings.

When the device is not in use, the platform is stored vertically along the wall, and is rotated into a horizontal position over the stairway when required.

Unlike elevators or vertical platform lifts, this device offers minimal protection to the user while in motion.

Inclined platform lifts reduce the width of the stairway when not in use, and block the stairway to foot traffic when in use.

Accessibility Options

410 Platform Lifts

Advisory 410.1 General. Inclined stairway chairlifts and inclined and vertical platform lifts are available for short-distance vertical transportation. Because an accessible route requires an 80 inch (2030 mm) vertical clearance, care should be taken in selecting lifts as they may not be equally suitable for use by people using wheelchairs and people standing. If a lift does not provide 80 inch (2030 mm) vertical clearance, it cannot be considered part of an accessible route in new construction.

Are stairway chairlifts permitted?

[1]No, stairway chairlifts cannot be used where platform lifts are permitted by the ADA Standards (§206.7) although they are addressed by the ASME A18.1 Standard. Chairlifts require transfer to a fixed seat from wheeled mobility aids and thus are not independently usable. Platform lifts can be equipped with seats, including those that fold, but they must be located outside the minimum clear area specified for platforms which are sized to accommodate wheeled mobility aids.

[1]**U.S. Access Board Technical Guide, Elevators and Platform Lifts.**

Accessibility Options

Ramps

A ramp is a permanent, gradually sloped surface that allows travel between areas of different elevation.

Code regulations specify that the slope of a ramp cannot exceed 1 inch rise per 12 inches of length and that a horizontal rest platform must be provided every 30 lineal feet.

Ramps are expensive to construct when you factor in the large amount of square footage they occupy and the continual care to keep the surface clear and clean.

The space dedicated to ramps is often poorly utilized because it is typically placed out of the area of main traffic flow and is slower to traverse than stairs.

Accessibility Options

Site Preparation for Ramps

What are the ADA Requirements for Ramps?

What site preparation is required?

- Will seating configuration have to be changed?
- Is there adequate floor space available for a ramp?
- Will the ramp require a major modification to the floor?
- Are tripping hazards created?
- Are normal foot traffic patterns changed?

Accessibility Options

ADA 2010 Requirements for Ramps

106.5 Defined Terms.

Ramp. A walking surface that has a *running slope* steeper than 1:20.

405 Ramps

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

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

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

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities

Slope[1]	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

1. A slope steeper than 1:8 is prohibited.

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

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

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

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

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

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

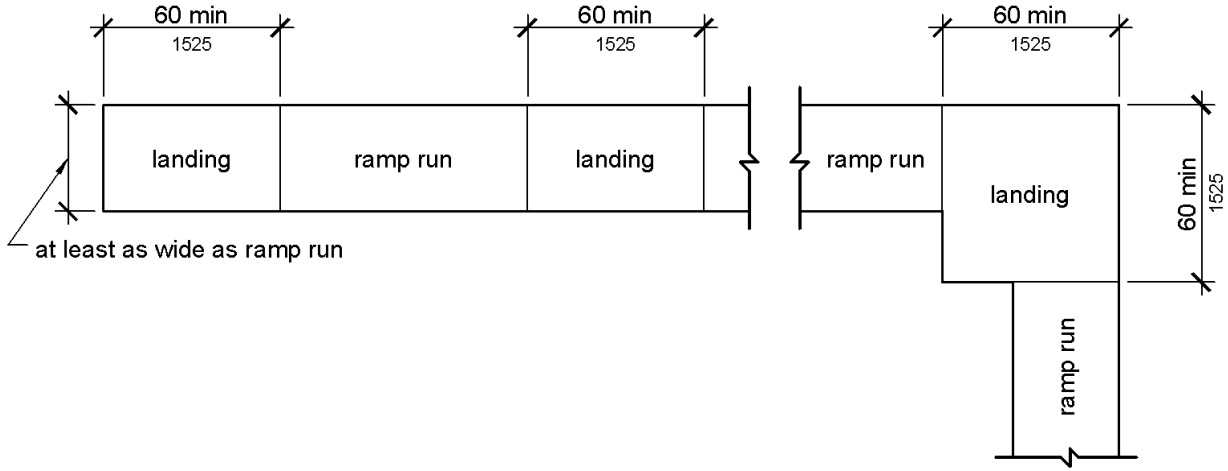


Figure 405.7
Ramp Landings

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

405.7 Landings.

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

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

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

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

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

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

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

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

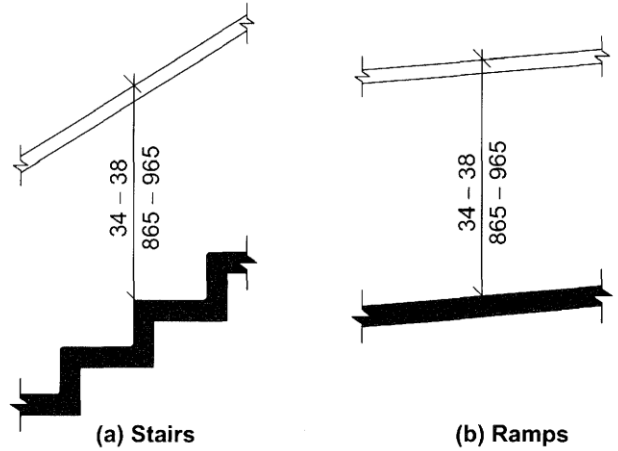


FIG. 505.4
HANDRAIL HEIGHT

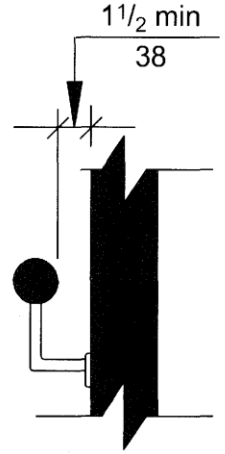


FIG. 505.5
HANDRAIL CLEARANCE

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

EXCEPTIONS: 1. Edge protection shall not be required on *ramps* that are not required to have handrails and have sides complying with 406.3.

2. Edge protection shall not be required on the sides of *ramp* landings serving an adjoining *ramp* run or stairway.

3. Edge protection shall not be required on the sides of *ramp* landings having a vertical drop-off of ½ inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

Advisory 405.9.1 Extended Floor or Ground Surface. The extended surface prevents wheelchair casters and crutch tips from slipping off the ramp surface.

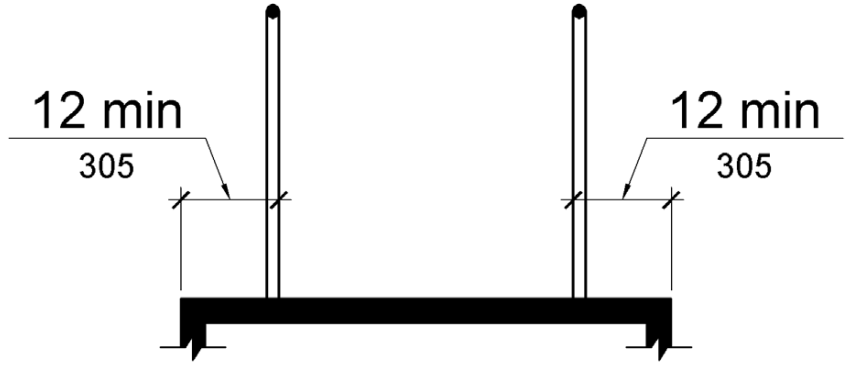


Figure 405.9.1
Extended Floor or Ground Surface Edge Protection

Accessibility Options

ADA 2010 Requirements for Ramps

405 Ramps

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

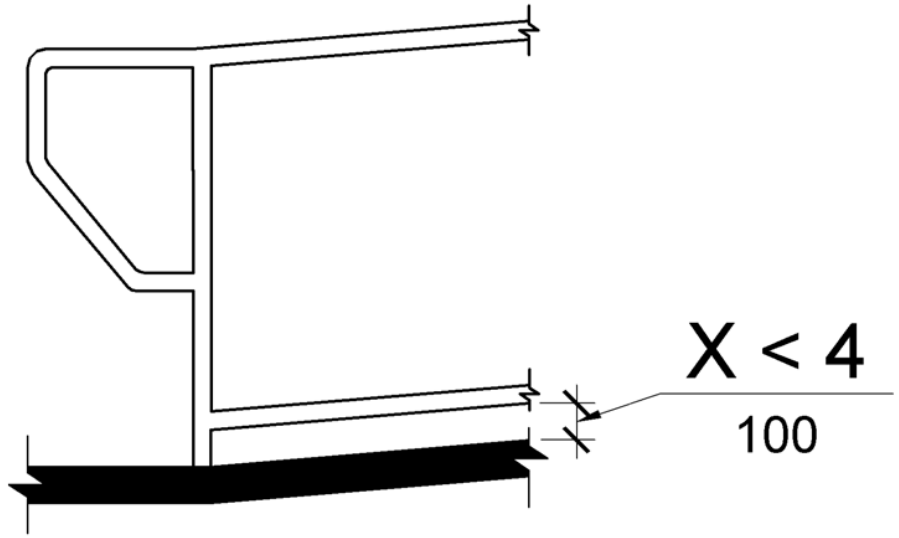
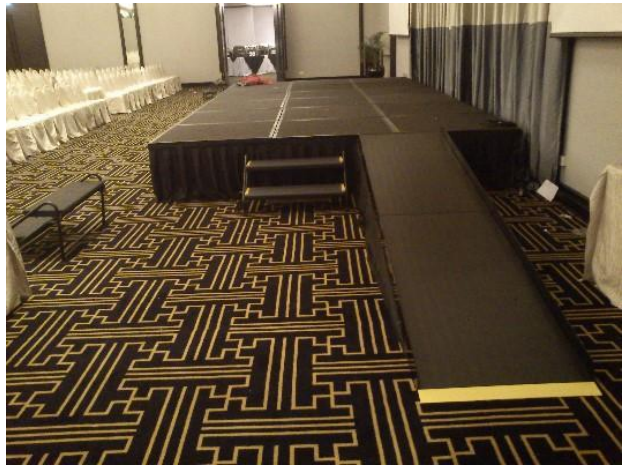


Figure 405.9.2

Curb or Barrier Edge Protection

Accessibility Options

Implementation - Ramps



Accessibility Options

Vertical Platform Lifts

A vertical platform lift is analogous to a single passenger elevator with a vertical travel limited to a distance of 14 feet.

This device provides protection to the user while on the platform, although it is not fully enclosed at the top.

The lift enclosure often becomes a storage area for all types of unsuitable materials.

206.7 Platform Lifts. Platform lifts shall comply with 410. Platform lifts shall be permitted as a component of an accessible route in new construction in accordance with 206.7. Platform lifts shall be permitted as a component of an existing building or facility.

206.7.1 Performance Areas and Speakers' Platforms. Platform lifts shall be permitted to provide accessible routes to performance areas and speakers' platforms.

Accessibility Options

Vertical Platform Lifts Continued

The space required for a vertical platform lift is often poorly utilized because of the extremely specialized nature of the device.

With the equal path requirement of the ADA, the lift must be adjacent to the ambulatory access point

Often times, a pit is required. If a pit is not an option, an entrance ramp will add to the required square footage.

Accessibility Options

Site Preparation for Lifts

What are the ADA Requirements for Lifts?

How much space does the device require?

What is the cost of floor space?

Is the space available or will it need to be reallocated?

Will the space be well utilized? The space is used by both able-bodied and mobility impaired alike.

What site preparation is required?

- Will the stage have to be changed?
- Will the device require a pit below floor level?
- What type of electrical power is required and is it available?

Will the lift detract from the aesthetics or can it be incorporated into the surroundings

Accessibility Options

ADA 2010 Requirements for Lifts

410 Platform Lifts

410.1 General. Platform lifts shall comply with ASME A18.1 (1999 edition or 2003 edition) (incorporated by reference, see “Referenced Standards” in Chapter 1). Platform lifts shall not be attendant-operated and shall provide unassisted entry and exit from the lift.

410.2 Floor Surfaces. Floor surfaces in platform lifts shall comply with 302 and 303.

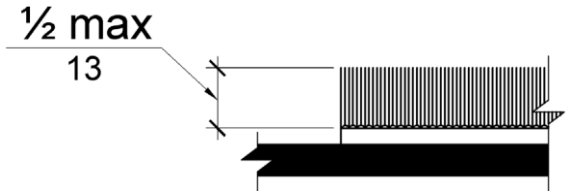


Figure 302.2
Carpet Pile Height

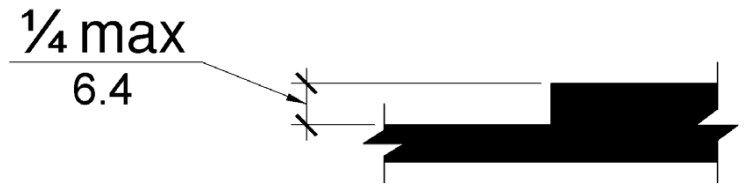


Figure 303.2
Vertical Changes in Level

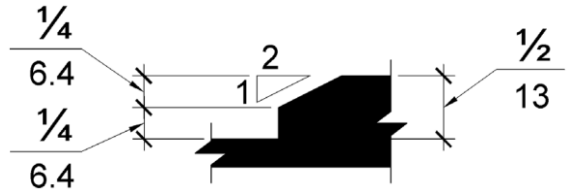


Figure 303.3
Beveled Change in Level

Accessibility Options

ADA 2010 Requirements for Lifts

410 Platform Lifts

410.3 Clear Floor Space. Clear floor *space* in platform lifts shall comply with 305.

305.3 Size. The clear floor or ground *space* shall be 30 inches (760 mm) minimum by 48 inches (1220 mm) minimum.

ANSI A117 Minimums for Platform Lifts

410.5.1 Lifts with Single Door or Doors on Opposite Ends.
Platform lifts with a single door or with doors on opposite ends shall provide a clear floor width of **36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220 mm) minimum**.

410.5.2 Lifts with Doors on Adjacent Sides.
Platform lifts with doors on adjacent sides shall provide a clear floor width of ***42 inches (1065 mm) minimum and a clear floor depth of 60 inches (1525 mm) minimum***.

EXCEPTION: In existing buildings, platform lifts with doors on adjacent sides shall be permitted to provide a clear floor width of **36 inches (915 mm) and a clear floor depth of 60 inches (1525 mm)**.

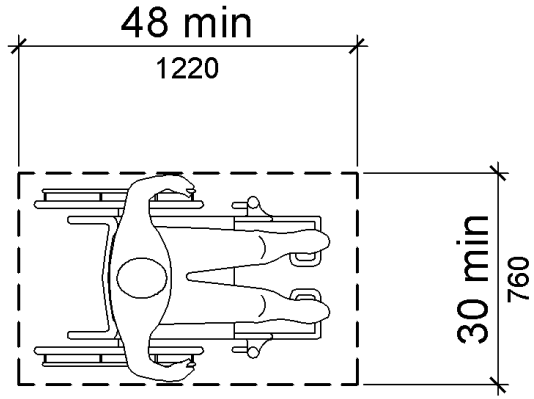


Figure 305.3
Clear Floor or Ground Space

Accessibility Options

ADA 2010 Requirements for Lifts

410 Platform Lifts

410.4 Platform to Runway Clearance. The clearance between the platform sill and the edge of any runway landing shall be 1¼ inch (32 mm) maximum.

NOTE: ASME A18.1 allows a range of only .375" to .75"

410.5 Operable Parts. Controls for platform lifts shall comply with 309.

309 Operable Parts

309.1 General. *Operable parts* shall comply with 309.

309.2 Clear Floor Space. A clear floor or ground *space* complying with 305 shall be provided.

309.3 Height. *Operable parts* shall be placed within one or more of the reach ranges specified in 308.

309.4 Operation. *Operable parts* shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate *operable parts* shall be 5 pounds (22.2 N) maximum.

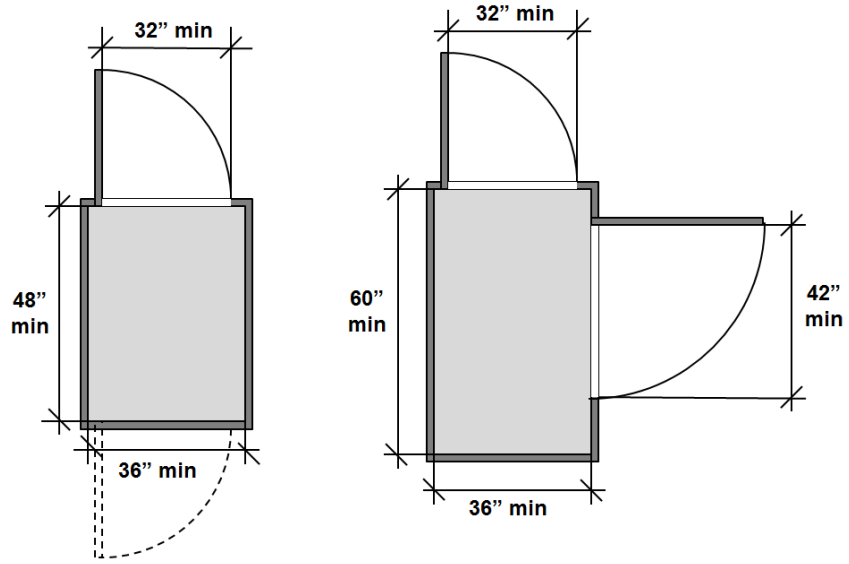
Accessibility Options

ADA 2010 Requirements for Lifts

410 Platform Lifts

410.6 Doors and Gates. Platform lifts shall have low-energy power-operated doors or gates complying with 404.3. Doors shall remain open for 20 seconds minimum. End doors and gates shall provide a clear width 32 inches (815 mm) minimum. Side doors and gates shall provide a clear width 42 inches (1065 mm) minimum.

EXCEPTION: Platform lifts serving two landings maximum and having doors or gates on opposite sides shall be permitted to have self-closing manual doors or gates.



Accessibility Options

Convertible Stairway Lifts

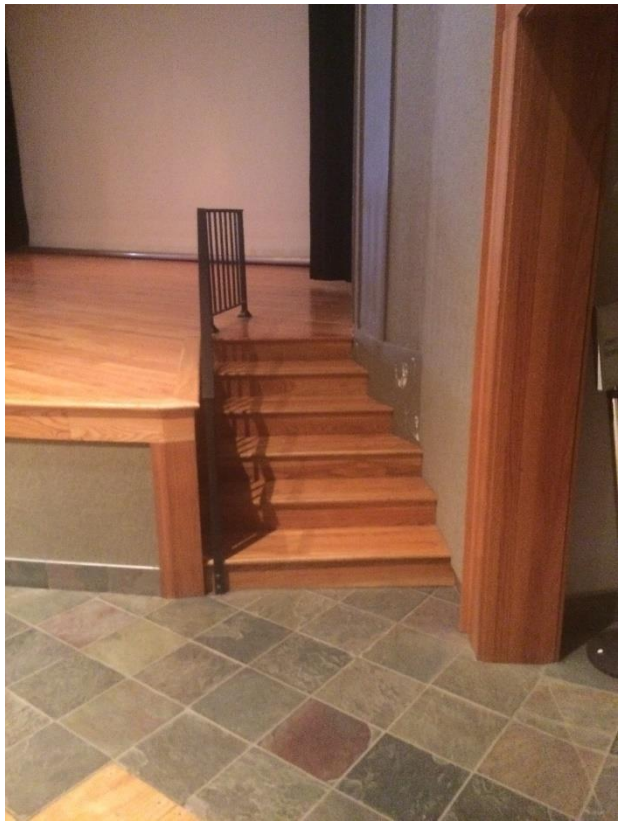
Convertible stairway lifts combine a stairway and a platform lift into one unit, allowing for both mobility impaired and pedestrian traffic to the stage area.

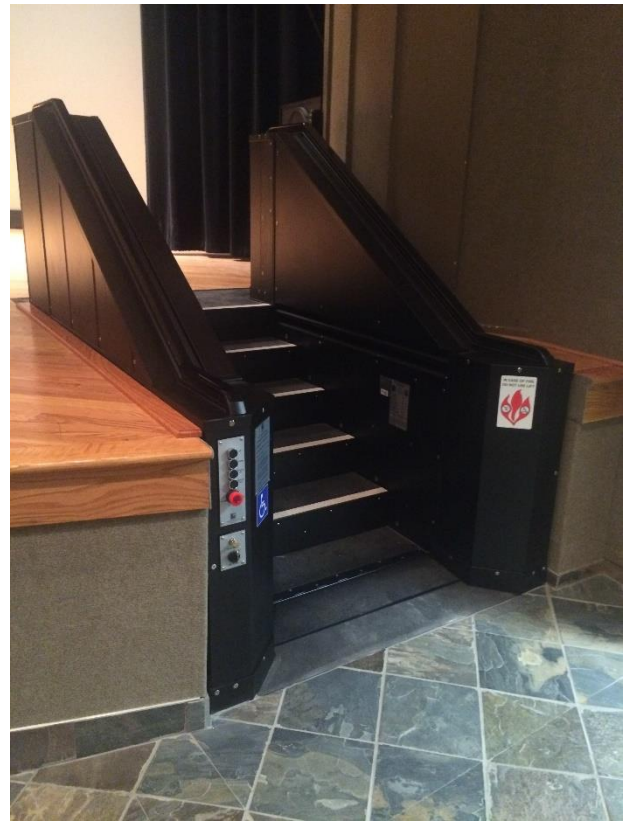
These systems can accommodate floor height transitions from 18 inches to 50 inches, and require less space than ramps, elevators, and other types of lifting devices.

Convertible lifts can be fully integrated into the design of the stage area, providing an aesthetically pleasing accessibility solution.

Accessibility Options

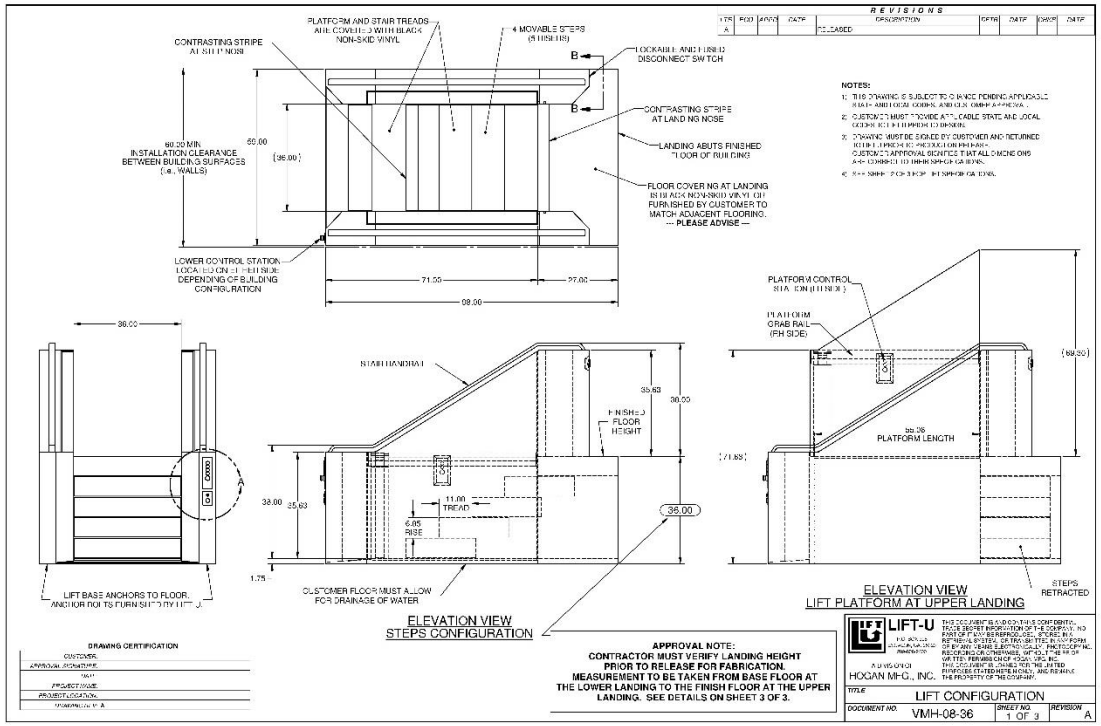
Site Preparation for Convertible Stairway / Wheelchair Lifts

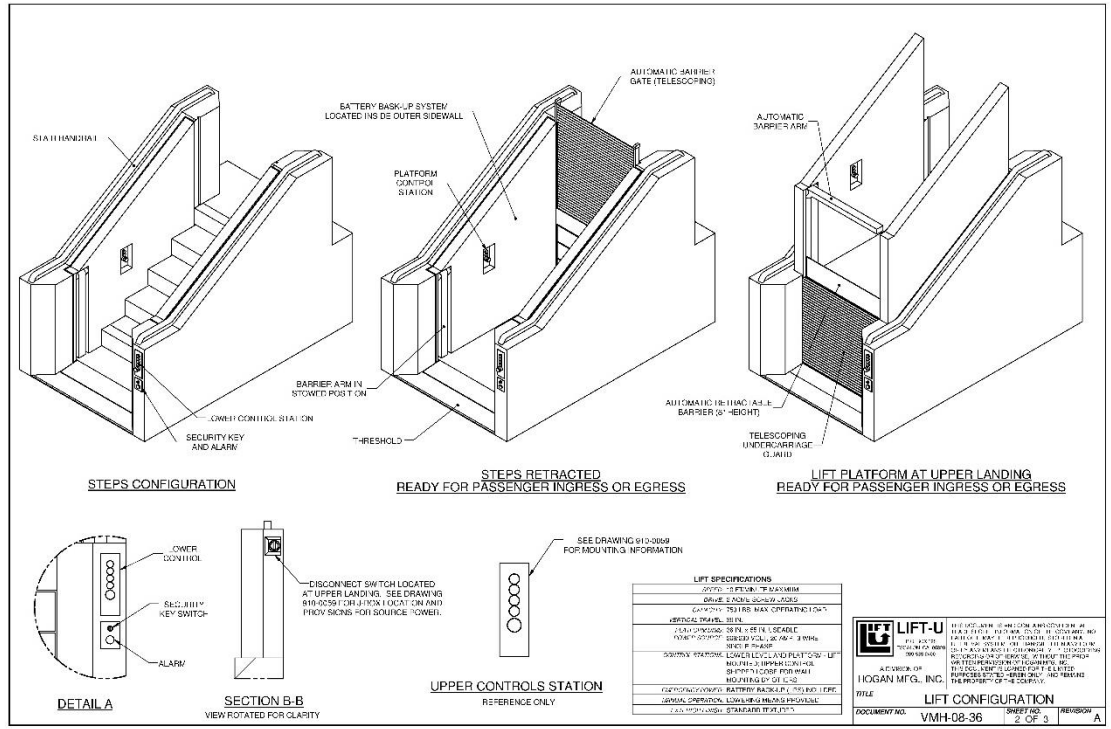




Accessibility Options

Convertible Stairway / Wheelchair Lifts





Accessibility Options

Convertible Stairway / Wheelchair Lifts

Features & Benefits

Aesthetics

Convertible stairway lifts harmonize with the surrounding design and are virtually invisible when not in use as a lift.

Cost & Maintenance

Convertible stairway lifts are designed to be highly reliable, while competitively priced with other devices on a total installed cost basis. Minimal site preparation is a major cost savings.

Maximum Space Efficiency

Convertible stairway lifts require no more space than a standard stairway and occupy a smaller footprint than ramps, elevators, and vertical platform lifts.

Accessibility Options

Convertible Stairway / Wheelchair Lifts

Features & Benefits Cont'd . . .

Ease of Operation

Convertible stairway lifts provide users with independent access and require minimal dexterity to operate. The device cycles quickly and quietly from stairway mode to lift mode, minimizing attention to the user and distraction to others.

Ease of Installation

Convertible stairway lifts can be installed on a level floor with little preparation. They do not require a pit or separate mechanical area, and are ideal for retrofit projects where space may be limited.

Accessibility Options

Convertible Stairway / Wheelchair Lifts

Accessibility Options

Convertible Stairway / Wheelchair Lifts

Finishes

Convertible stairway lift's standard finish is a durable, taupe textured powder coat. Custom colors are available at an additional cost.

The standard floor treatment is a non-skid, composite vinyl, black in color. First step and upper landing nosing include a contrasting color stripe. Carpet and other flooring can be applied on-site by others.

Standard handrails are black. Other colors are available at an additional cost.

Accessibility Options

Convertible Stairway / Wheelchair Lifts

Installation

The flooring under the unit should be stable and level from front to rear and side to side prior to installation.

The base of the lift should be anchored to the floor. Depending on the vertical rise of unit, up to 6 anchors maybe required.

Accessibility Options

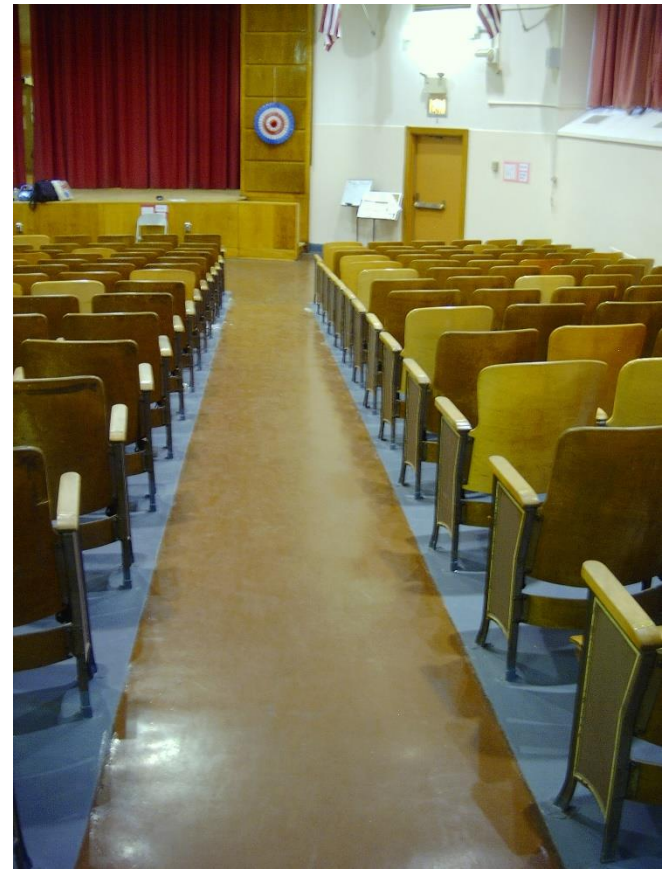
Convertible Stairway / Wheelchair Lifts

Codes & Standards

The stairway function is regulated by the International Building Code (IBC), standard ICC/ANSI A117.1 "Accessible and Usable Buildings and Facilities“, and the 2010 ADA Standards for Accessible Design.

The lift function is considered to be a "Runway Enclosure Not Provided, Vertical Platform Lift" under the American Society of Mechanical Engineers A18.1 Safety Standard for Wheelchair Lifts and Stairway Chair Lifts (ASME A18.1) which limits the vertical travel of the device to 5'-0“.

Choosing an Accessibility Option



Choosing an Accessibility Option

Selection Criteria

Space Requirements

Is this a renovation, restoration, or new construction?

What is the cost per square foot on the project? Have you added in the cost of floor space to your determination of the cost of the solution?

How much space does the device require? How many square feet are required, in total, to install and use the device?

How much additional space is required for accompanying devices to meet the accessible path requirements of ADA?

Is space limited? Is space a primary or secondary consideration?

Are there competing uses for the space? Would you rather use the space for some other use? Could you choose a more space efficient solution?

When not in use for accessibility, how will the space be utilized? Will the space become a storage catch-all?

Choosing an Accessibility Option

Selection Criteria

Visual Impact

Does the device preserve the aesthetics of the design?

Can the device be integrated into the design of the stage? What finishes are available?

Will the device cause problems with sight lines?

What visual accommodations might be required? Ideally, it should not be necessary to “hide” the accessibility device in order to maintain sight lines.

Choosing an Accessibility Option

Selection Criteria

Method of Operation

Can the device be operated independently?

Does the use of the device need to be monitored or controlled? Is the device in plain sight or is it in an area out of sight? Is it necessary to control unintended use, to keep the device from being “played” with?

The Standards require “unassisted” entry and exit from lifts (§410.1). Situations in which platform lifts are locked and require users to request or retrieve a key for operation will not satisfy this requirement for independent operation. Platform lifts can be locked during those times when the space or facility they serve is closed.

Choosing an Accessibility Option

Selection Criteria

Ease of Use

Is the device easy to use? Is the operation straight forward?

Is it always available for use? Does the user have to wait for the device?

How quickly does the device operate?

Does it call undue attention to the user? Could this cause embarrassment for users by calling attention to their disabilities?

Is the use of the device a normal part of the layout?

Accessible vertical interior circulation must be in the same area as stairs and escalators, not isolated in the back of the facility.

Choosing an Accessibility Option

Selection Criteria

Installation Costs

What is the total cost of installation? Have you considered all the costs, not just the purchase price of the equipment?

Labor cost vary greatly from region to region. In addition, public works projects requiring union labor and prevailing wages can push hourly team rates up to $450+ per hour.

Are there any additional site preparation or post-installation costs? Site preparation and post-installation cost are often not identified or considered, they can be substantial and should be identified.

Choosing an Accessibility Option

Selection Criteria

Maintenance Expenses

What will be the on-going costs of operating the device? Is the device reliable? Maintenance costs can make an inexpensive purchase very costly.

How much energy does the device consume? How much electricity is used? What is the cost of electricity at the site? Is there emergency power available? Is it required? Is battery back-up required and specified?

Does the device require a maintenance program or periodic inspection? What is the cost of a preventative maintenance program? Are annual inspection by a government agency required? What do they cost?

Choosing an Accessibility Option

Portable Lifts

- Not allowed by ADA as a permanent solution.
- Must be attendant operated
- Must be moved by personnel
- Not Independently operable
- Not recognized by ASME A18.1
- Use for temporary applications only

Choosing an Accessibility Option

Inclined Platform Lifts

- Low cost option
- Minimal site preparation required
- Does not interfere with sight lines
- Detracts from aesthetics
- Not suitable for high traffic occupancy environments
- May impede egress to & from stage
- Reduces effective width of stairway when left down

Choosing an Accessibility Option

Ramps

- Low maintenance expense
- Ambulatory and wheelchair access
- Ease of use for powered chairs
- Major impact on configuration of performance area
- Large amount of square footage required
- Detracts from aesthetics
- Extensive site prep required in renovations
- May block sight lines

Advisory 405.2 Slope. To accommodate the widest range of users, provide ramps with the least possible running slope and, wherever possible, accompany ramps with stairs for use by those individuals for whom distance presents a greater barrier than steps, e.g., people with heart disease or limited stamina.

Choosing an Accessibility Option

Vertical Platform Lifts

- Allowed to be part of the accessible path
- Easy to operate
- Certain models harmonize with the surrounding aesthetics
- Square footage required is in addition to accompanying stairway
- May require a pit or an entrance ramp up to 3 feet in length
- Poor utilization of space
- Egress for disabled use only

Choosing an Accessibility Option

Convertible Stairway Lifts

- Minimal site preparation
- Occupies same space of existing stairs
- Easy to operate
- Efficient utilization of square footage
- Ambulatory and wheelchair access
- Preservation of sight lines
- No pit required
- Comparable cost when value of square footage saved factored in

Conclusion

- ✓Where a *circulation path* directly connects a performance area to an assembly seating area, an *accessible* route shall directly connect the assembly seating area with the performance area.
- ✓ADA requires Means of Egress comply with the IBC which allows the use of wheelchair lift to be part of the accessible path, as does the ADA.
- ✓Wheelchair lifts, including convertible stairway lifts, are required to comply with the ASME A18.1 Standard.
- ✓Ramp requirements in ANSI and IBC mirror requirements of the ADA.
- ✓The type of construction along with the availability of square footage will help determine the means to provide accessibility.
- ✓Portable lifts are not allowed by ADA as they are not permanent or independently operable.
- ✓Incline platform lifts are allowed if the required overhead clearance is available but are not suitable for high occupancy environments.
- ✓Ramps provide access to everyone however, they require a large amount of square footage that is disproportionate to the short change in elevation they are accessing.
- ✓Vertical platform lifts provide a safe and effective way to access a stage. However, they require additional square footage that is not utilized efficiently.
- ✓Convertible stairway lifts are a fiscally responsible alternative to more traditional ways of achieving handicapped access to raised platforms and stages in various new and retrofit situations, applicable for use in schools, churches and performing arts centers. They require a minimal amount of space, are quick and easy to install, and they don’t require a separate fixed stairway to accommodate regular pedestrian traffic.

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Thank You for Your Time

LIFT-U
Division of Hogan Mfg., Inc.
1520 First Street
Escalon, CA 95320
http://www.lift-u.com

This concludes the American Institute of Architects
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