

Resources on Emergency Evacuation and Disaster Preparedness

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During the terrorist attacks on the World Trade Center, two men carried a woman who uses a wheelchair down 68 flights to safety moments before the tower collapsed. Other stories have shed light on hardships people with disabilities faced in the aftermath of the crisis, including difficulties they encountered in accessing various relief services. The tragic events of last September have brought into focus the importance of taking into account the needs of all persons, including those with disabilities, in preparing for, and responding to, disasters and emergencies. They have also served to renew interest in how building requirements address accessible egress.

The Access Board develops and maintains accessibility requirements for the built environment, transit vehicles, telecommunications equipment, and for electronic and information technology under several different laws, including the Americans with Disabilities Act (ADA). The Board's guidelines for facilities address means of egress that are accessible to persons with disabilities. Presented here is an overview of these design requirements. Also included are links to information developed by other organizations on evacuation planning and disaster preparedness.

- [ADA Design Requirements for Accessible Egress](#)
- [Resources on Evacuation Planning and Assistive Products](#)
- [Resources on Disaster Preparedness](#)

Related Document: [Access Board Emergency Evacuation Procedures](#)

ADA Design Requirements for Accessible Egress

The ADA covers a wide variety of facilities, including places of public accommodation, commercial facilities, and state and local government facilities. The Board's [ADA Accessibility Guidelines](#) (ADAAG), which primarily cover new construction and alterations, include specifications for accessible means of egress, emergency alarms, and signage. Model building codes, life safety codes, and state access codes also address these and other elements related to emergency egress.

Accessible Means of Egress (ADAAG [4.1.3\(9\)](#), [4.3.10](#))

ADAAG 's criteria for accessible means of egress, like those in other building

requirements, address both the required number and the technical specifications. The minimum number of egress routes required to be accessible is based on life safety code requirements for means of egress. Most of the criteria for accessible routes, such as width and the treatment of elevation changes, are applied to accessible means of egress to ensure access for persons with disabilities, including those with mobility impairments. Multi-story buildings pose a particular challenge to accessible means of egress since elevators, the standard means of access between floors, are typically taken out of service in emergencies for safety purposes. ADAAG addresses this situation through requirements for areas of rescue assistance or horizontal exits. Evacuation elevators, which are recognized by the model building codes but not the current ADAAG, offer an additional solution.

Areas of Rescue Assistance (ADAAG [4.1.3\(9\)](#), [4.3.11](#))

ADAAG provides requirements for fire-resistant spaces where persons unable to use stairs can call for and await evacuation assistance from emergency personnel. Known as "areas of rescue assistance" or "areas of refuge," these spaces must meet specifications for fire resistance and ventilation. They are often incorporated into the design of fire stair landings, but can be provided in other recognized locations meeting the design specifications, including those for fire and smoke protection. Areas of rescue assistance must include two-way communication devices so that users can place a call for evacuation assistance. ADAAG requires areas of rescue assistance in new buildings only. An exception is provided for buildings equipped with sprinkler systems that have built-in signals used to monitor the system's features. Horizontal exits, which use fire barriers, separation, and other means to help contain the spread of fire on a floor, can substitute for areas of rescue assistance provided they meet applicable building codes. Horizontal exits enable occupants to evacuate from one area of a building to another area or building on approximately the same level that provides safety from smoke and fire. Life safety codes and model building codes provide requirements for horizontal exits (see [Additional Resources](#)).

Evacuation Elevators (Proposed ADAAG [207](#), [409](#))

Emergency personnel may operate standard elevators in certain emergencies through the use of a special key. In some cases, it may be possible to evacuate people with disabilities in this manner. This, however, is not always an option. Model building codes, such as the International Building Code, and referenced standards now include criteria for elevators that are specially designed to remain functional in emergencies. Known as "evacuation elevators," they feature, among other things, back-up power supply and pressurization and ventilation systems to prevent smoke build-up. This type of elevator was not generally recognized when ADAAG was first developed. The Board has included requirements for these elevators, that are consistent with the model building codes, in its proposal to [update ADAAG](#). Most recent model building codes now require this technology in new mid-rise and high-rise buildings.

Alarms (ADAAG [4.1.3\(14\)](#), [4.28](#))

ADAAG provides specifications for emergency alarms so that they are accessible to

persons with disabilities, including those with sensory impairments. Where emergency alarm systems are provided, they must meet criteria that address audible and visual features. Visual strobes serve to notify people who are deaf or hard of hearing that the alarm has sounded. ADAAG specifications for visual appliances address intensity, flash rate, mounting location, and other characteristics. In general, it is not sufficient to install visual signals only at audible alarm locations. Audible alarms installed in corridors and lobbies can be heard in adjacent rooms but a visual signal can be observed only within the space it is located. Visual alarms are required in hallways, lobbies, restrooms, and any other general usage and common use areas, such as meeting and conference rooms, classrooms, cafeterias, employee break rooms, dressing rooms, examination rooms and similar spaces.

Signage (ADAAG [4.1.3\(16\)](#), [4.30](#))

Requirements in ADAAG for building signage specify that certain types of signs are required to be tactile. Raised and Braille characters are required on signs that designate permanent spaces. This is intended to cover signs typically placed at doorways, such as room and exit labels, because doorways provide a tactile cue in locating signs. Tactile specifications also apply to signs labeling rooms whose function, and thus designation, is not likely to change over time. Examples include signs labeling restrooms, exits, and rooms and floors designated by numbers or letters. This includes floor level designations provided in stairwells. ADAAG also addresses informational and directional signs. These types of signs are not required to be tactile but must meet criteria for legibility, such as character size and proportion, contrast, and sign finish. The types of directional and informational signs covered include those that provide direction to exits and information on egress routes.

Additional Resources

Further information on ADAAG and other Board guidelines is available in our [technical assistance](#) section. Model building codes, fire safety codes, and state access codes include requirements pertinent to accessible egress and emergency notification. Resources on these codes include:

- [International Code Council](#)
- [National Fire Protection Association](#)
- [State Code Contacts](#)
- [Other Codes and Standards Resources](#)

In addition, the [American Institute of Architects](#) has developed material on security issues in building design.

Resources on Evacuation Planning and Assistive Products

Evacuation planning is a critical component of life safety, including for persons with disabilities. This is true for all buildings, including those that are new and fully accessible. Evacuation planning should include a needs assessment to determine who may need what in responding to an emergency and evacuating a facility. Such an assessment is instrumental in implementing policies and supplying products that accommodate the needs of all facility occupants. Primary resources on fire safety include the [U.S. Fire Administration](#) and the [National Fire Protection Association](#).

The U.S. Fire Administration offers a variety of materials specific to persons with disabilities:

- [Emergency Procedures for Employees with Disabilities in Office Occupancies \[PDF\]](#)
- [Fire Risks for Persons with Mobility Impairments \[PDF\]](#)
- [Fire Risks for Deaf or Hard of Hearing Persons \[PDF\]](#)
- [Fire Risks for Blind or Visually Impaired Persons \[PDF\]](#)
- [Removing the Barriers: A Fire Safety Factsheet for People with Disabilities and Their Caregivers \[PDF\]](#)

Information is also available from other sources:

- [Saving Lives: Including People with Disabilities in Emergency Planning](#) (National Council on Disability)
- [Emergency Evacuation Preparedness: A Guide For People with Disabilities and Other Activity Limitations](#) (by June Isaacson Kailles, Disability Policy Consultant)
- [Emergency Evacuation Procedures for Employees with Disabilities](#) (Job Accommodation Network)

Evacuation and Emergency Alarm Products

Various products are available that are designed to accommodate persons with disabilities in emergencies. Mobility aids, such as evacuation chairs, are available to transport people unable to use stairs. These devices are designed with rollers, treads, and braking mechanisms that enable a person to be transported down stairs with the assistance of another individual. These devices can be a key element of an evacuation plan, particularly where areas of rescue assistance, horizontal exits, or evacuation elevators are not available. An agency's evacuation plan should include the designation of people willing to provide assistance and their training in the type of evacuation devices supplied. Other types of products are available that can enhance access in existing buildings that are not subject to ADAAG requirements, such as portable visual alarm devices. A leading resource on product information is [ABLEDATA](#), a federally subsidized organization that maintains a database of information on more than 27,000 assistive devices and technologies. In addition, the [Job Accommodation Network](#)

website provides information on evacuation products.

Resources on Disaster Preparedness

Information on disaster preparedness and relief is available from the [American Red Cross](#), the [Federal Emergency Management Agency](#) (FEMA), the [National Center on Emergency Planning for People with Disabilities](#), and the [National Organization on Disability \(NOD\)](#). NOD is the leading force behind a newly established Task Force on Emergency Preparedness and People with Disabilities, which includes representatives from disability groups, emergency planning and response organizations, and various government agencies. In addition, the [Interagency Coordinating Council \(ICC\) on Emergency Preparedness and Individuals with Disabilities](#), which was established by Executive Order in 2004, is responsible for implementing policies to address the safety and security needs of people with disabilities in emergency situations. The Council is headed by the Director of Homeland Security and is comprised of representatives from other Federal departments, including the Department of Labor (DOL).

On-line information available from these and other organizations include:

- [Accessible Emergency Notification and Communication: State of the Science Conference](#) (RERC on Telecommunications Access)
- [Disability and Emergency Preparedness Resources](#) (NOD)
- [Disability Resource Center](#) (ICC on Emergency Preparedness and Individuals with Disabilities)
- [Disaster Preparedness for People with Disabilities](#) (American Red Cross) [PDF]
- [Disaster Preparedness for People with Disabilities](#) (June Isaacson Kailes, Disability Policy Consultant)
- [Disability Preparedness Resource Center](#) (Interagency Coordinating Council)
- [Disaster Mitigation for Persons with Disabilities](#)
- [Effective Emergency Preparedness Planning: Addressing the Needs of Employees with Disabilities](#) (DOL)
- [Emergency Evacuation of People With Physical Disabilities From Buildings: 2004 Conference Proceedings](#) (Interagency Committee on Disability Research) [PDF]
- [Emergency Preparedness Resources](#) (DisabilityInfo.gov)
- [Prepare Yourself: Disaster Readiness Tips for People with Disabilities](#) (NOD)
- [Preparing for Disaster for People with Disabilities and other Special Needs](#)

(FEMA) [[PDF](#)]

- [Preparing the Workplace for Everyone: Accounting for the Needs of People with Disabilities](#) (DOL)

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