

TDI

Safety @ Work
Division of Workers' Compensation



**Emergency Evacuation
Planning for People
with Disabilities**



**Workplace
Program**



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INTRODUCTION



Acknowledgments

The development of this publication was due in large part to a focus upon a single objective of the NFPA: to provide a simple tool, based on the agency's codes and standards, to help people with disabilities plan for an emergency evacuation, and to help those who manage a building or organization, with planning considerations for an emergency evacuation. This objective drove the authors, the NFPA Disability Access Review and Advisory Committee (DARAC), to ask detailed questions and reassess the guidance that was previously published. As changes in both technology and the built environment have occurred, this publication was reimagined to take the reader, step-by-step, on a journey to help inform plans for an inclusive building evacuation.

This publication is part of a growing body of knowledge that builds on previous work created by the NFPA. It is dedicated to all people with disabilities. It is our hope that you find this document both useful and practical for evacuation planning in the buildings where you live, work, or visit.

This document provides guidance to building occupants and building managers in non-residential buildings on how to develop an emergency evacuation plan that is inclusive of people with disabilities. It is important to note that non-residential buildings may encompass one or more types of occupancies within the building or structure. This Workplace Program anticipates practical discussion between building occupants, with and without disabilities, and building management and personnel on planning and management of emergency evacuations. The information received will assist in preparing and tailoring evacuation plans to address the needs of building occupants with disabilities to ensure their safe evacuation in emergencies. The following sections detail many of the issues, strategies, and preparations needed to help people with disabilities during an evacuation. This Workplace Program aids in crafting an evacuation plan specific to the building occupied and to occupants' identified access and functional needs. It illustrates important considerations and offers a general checklist for preparing an evacuation plan.

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Preparing an Emergency Evacuation

Use the following five steps to create and implement an emergency evacuation plan.

Step 1: Organize a Planning Team

An evacuation planning team should be organized that involves all stakeholders, including:

- building occupants and employees, especially those with disabilities;
- businesses and employers;
- facility managers and owners;
- firefighting personnel; and
- others involved with fire and life safety.

Occupants who self-identify as having a disability are essential to the team because they can provide valuable information about their experiences and needs. These occupants may include (but are not limited to) individuals who are deaf, hard of hearing, blind, or have low vision, mobility impairments, or cognitive disabilities. It is important that the team initially meets to establish responsibilities and tasks. Members of the planning team will provide input for the following steps and their implementation.

Step 2: Gather Information

The team needs to gather information from building occupants, including those with disabilities. Persons who may need assistance in an evacuation due to a disability should consider self-identifying to employers and building managers to aid in the planning process. Employers and building managers should provide ways for people to self-identify and communicate their particular needs during evacuation. The planning team leader can start the conversation by inviting building occupants to disclose their access and functional needs for the purpose of evacuation planning. The following sections of this Workplace Program provide the framework for gathering this information and tailoring the evacuation plan to individual needs.

Working individually or with others, each occupant should note any conditions that could prevent successful independent evacuation. These notes are talking points that should be shared with the entire team as they develop the plan. An individual with a disability is



most often the best person to assess their own capabilities and needs. Any suggestions they have should be noted along with their concerns. If an individual's needs include assistance from other people, the individual might also consider who might best provide the needed help and have a discussion with them about their willingness to serve in that role. This conversation should happen prior to notifying the team and writing the plan, but the planning team should remind those individuals to coordinate with someone for their required assistance.

Finally, the planning team should also consider communicating the appropriate contact for any maintenance or repair issues that may have an impact on evacuation.

Step 3: Draft and Share the Plan

The plan should be responsive to issues raised by individual occupants, including those with access and functional needs. Consult with your authority having jurisdiction regarding any specific obligations you may have. The plan should be written and made available in both electronic and hard copy formats. Any part of the plan that includes personal information should be treated as confidential and managed in accordance with applicable laws.

It is important to circulate the evacuation plan to all occupants, building managers, and other stakeholders. Doing so allows all building occupants to understand elements of a plan, consider their own responsibilities, and suggest additional information for the plan. Building managers should also communicate to all occupants that pre-planning for assistance in an emergency is available. The plan should always be readily available for stakeholders and occupants.

Many residential and commercial buildings will have plans for emergencies or specific hazards. NFPA 101®, Life Safety Code®, 2021 edition (4.8.2.1), requires that building emergency plans include:

- procedures for reporting emergencies;
- occupant and staff response to emergencies;
- evacuation, relocation, and shelter-in-place procedures appropriate to the building, its occupancy, emergencies, and hazards;
- appropriateness of the use of elevators;
- design and conduct of fire drills;
- type and coverage of building fire protection systems; and
- other items required by the authority having jurisdiction.

Step 4: Practice the Plan

Regular practice of the evacuation plan by all building occupants is critical. It helps everyone understand and know their responsibilities in emergency evacuations. Practice also aids in identifying weaknesses in the plan that would prevent its successful implementation in a real emergency. While standard evacuation drills are essential, occupants should also be prepared for the unexpected. Building management should conduct required drills that are both unannounced and announced. The more the plan is practiced, the better the likelihood that it will be executed successfully in an actual emergency. After each practice, the plan should be updated to address any identified gaps or problems.

Step 5: Review & Update the Plan

It is important that all stakeholders review the plan on a regular basis so that necessary updates can be made. The plan should be revised to address changing conditions of spaces within the building and changes in occupants of the building, access needs, or those with evacuation responsibilities under the plan, including the provision of assistance to others. Be sure to distribute updated versions of the plan to all stakeholders and occupants.

Copies of the plan should be filed in appropriate secure locations. Distribution of the plan needs to respect confidential information, preferences of the individual, and their choice of assistance. Any plan referencing individuals must be kept confidential and secure. Persons responsible for implementation may include a human resources department, building manager, employer, or other approved and qualified personnel.

What is considered a disability?



The term disability is defined by various regulations and laws. Under the Americans with Disabilities Act (ADA), for example, a disability is “a physical or mental impairment that substantially limits one or more major life activities.” A disability can be permanent, or temporary, such as recovery from an injury. Some are visible, while others are not.

For evacuation planning purposes, it is important to address any condition that individuals themselves have identified as impacting their ability to safely evacuate a facility in an emergency. Consult with your authority having jurisdiction regarding specific obligations you may have.

Stages of an Emergency Evacuation

This section outlines the typical stages of emergency evacuation from a non-residential building. It highlights key information to consider and steps that can be taken to ensure that all occupants with disabilities can safely evacuate the facility in an emergency.

1. Notifying Occupants to Evacuate (Notification)

Where required, building occupants must be notified of fires and other emergencies. A fire alarm provides an alert to an emergency, which may instruct occupants to evacuate. Some other types of alerts, such as tornado

warnings or active shooter alarms, typically provide notification to shelter in place or as instructed.

Codes and standards, including NFPA 101®, Life Safety Code®, require emergency notification systems, including fire alarms systems, in certain types of buildings and occupancies. Fire alarm systems feature audible signals, such as bells, horns, and speakers. Unless previously approved, they also must include visible components, such as a strobe light or text display, so that notification is provided to people who are deaf or hard of hearing. NFPA 72®, National

Fire Alarm and Signaling Code®, details the technical requirements for fire alarms and signaling appliances.

The planning team should review the features of the building's fire alarm and emergency notification systems for accessibility concerns. While visual alarms are now widely required by code, they might not be provided in older buildings that were built to earlier codes. If not provided, then the planning team should review and document how occupants who are unable to hear the fire alarms will be alerted of the need to evacuate.

All individuals should consider how they will be notified in the event of an emergency and if they will be capable of following directions and communicating any needs that would arise. Alarms that provide visual notification may provide a solution. In addition, volunteers can be identified who will check to make sure occupants know when an alarm has sounded. Planning should also address the needs of occupants who might respond to audible or visible emergency alarms with confusion, fear, or panic.

Public Announcements

Some buildings allow for forms of notification other than audible signals, such as placing public announcements on variable message signs. In emergency situations, variable message signs can attract attention and



provide information about the type of emergency or situation. Variable message signs should operate simultaneously with public announcements. Often, the messages are pre-recorded and typically developed during risk assessment of emergency planning. For further information, consult NFPA 72® and NFPA 101®.

2. Finding the Way to Safety (Exit Signs)

All occupants must know a way to safety, which is also known as the means of egress. Occupants should expect, with limited exceptions, two means of egress from every building or structure, which generally takes the form of an exit. In the moment of evacuation, every occupant should know the closest available exit and the corresponding egress route. NFPA 101®, 2021 edition (4.5.3.3), requires that every exit be clearly visible or that the routes to reach every exit be conspicuously marked.

Fire Alarm Appliances



Audible and visual components can be included in one device (left) or as separate audible (center) and visual appliances (right).

Routes to the exit are conspicuously marked by the placement of exit signs. Directional and informational signs point the way to exits or instruct how to exit. Additionally, signs must be utilized to mark exit doors. It is important that exit signs serve everyone. For example, people with little or no vision cannot use signs without raised letters or braille. Occupants with low vision may be able to recognize an exit sign, but may not be able to see directional cues, such as arrows on the sign. Others may not be able to read or comprehend the information because of a cognitive disability. Unless otherwise required, exits with visual signs should also be marked by tactile signs.

It is important that evacuation plans address how information or evacuating a building is provided to all occupants. Plans should include:

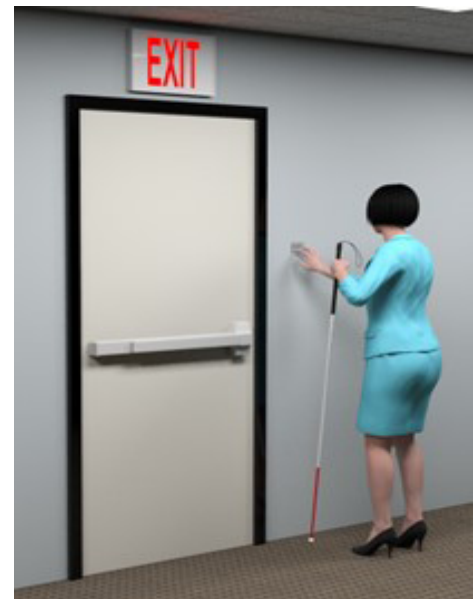
- providing code compliant tactile signs to identify exits;
- providing information in alternative formats, such as large print, tactile maps, etc.;
- using diagrams to convey evacuation routes and instructions;
- supplementing and tailoring evacuation training and drills to address individual needs; and
- procedures to describe the location of exits to those present.

3. Proceeding to an Exit (Exit Access)

The portion of the means of egress that leads to an exit is known as exit access. This route includes doors, corridors, ramps, and stairs. This route must be free and clear at all times of any physical barriers or obstacles that people might face. Storage or clutter cannot obstruct egress routes.

In developing the evacuation plan, members of the planning team should ask all occupants to identify the marked egress routes from the spaces they typically occupy. Occupants should look for the exit signs in corridors outside offices and other spaces and fully check all available routes.

Members of the planning team should identify any barriers, such as unavoidable areas too narrow for wheelchair passage, steps or stairs, heavy doors, or complex or changeable spaces or circulation paths that would prevent specific occupants from proceeding along the means of egress to an exit. Record in the



plan any pathway that is not accessible for any individuals with disabilities and how evacuation will be addressed.

4. Evacuating Floors and the Building (Exits)

An exit affords the occupant a protected space to evacuate the building, or shelter in place. Exits often take the form of enclosed stairwells and are constructed to restrict the passage of fire and smoke, as well as to provide the occupants a clear path as they move toward the exit discharge. It is important to note that building occupants typically cannot use elevators during an emergency unless specifically designed for such use. It is important that plans address access between floors for any occupants unable to use stairs. Elevators typically return to a specified floor



when a fire alarm is activated and can be operated after that only by use of a keyed switch operable by the fire department. On floors above or below the ground floor, exit access usually leads to either an enclosed stairway or a horizontal exit.

Areas of Refuge

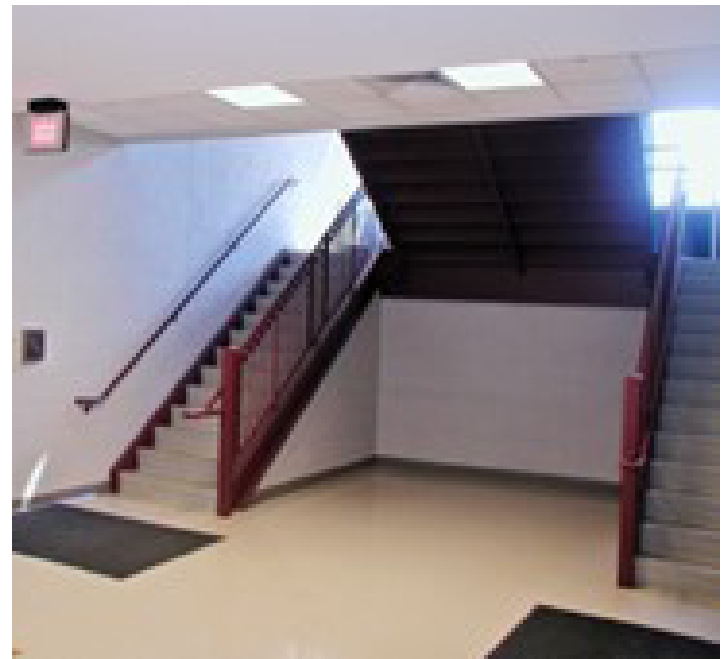
Another consideration for the planning team are areas of refuge. These areas are where a person can wait for assistance and call for help if they are unable to leave the building. Building and life safety codes address areas of refuge in multiple ways. In NFPA 101®, areas of refuge can take several forms. One option in non-sprinklered buildings is the use of landings within enclosed stairwells. Areas of refuge in non-sprinklered buildings must:

- be clearly marked by a sign;
- have an accessible two-way communication system with operating instructions for the user;
- provide space for those using

- wheelchairs that is outside of the egress routes; and
- have direct access to exit stairways if not located on the stair landing.

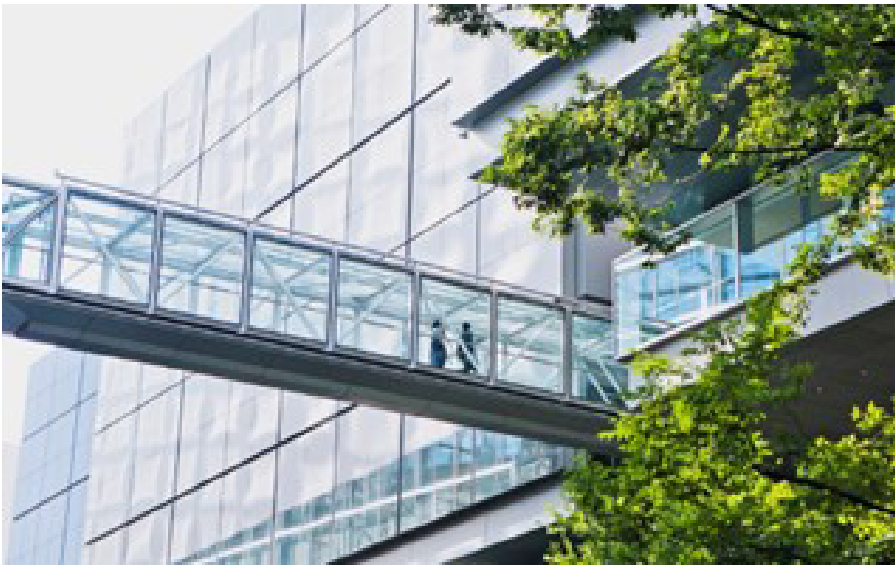
For buildings that are fully protected by sprinklers, each floor may be recognized as an area of refuge if it has a two-way communication system at each elevator landing, with directions for its use and both audible and visible signals.

If areas of refuge are provided in the building, then instruction and practice on their use are important for occupants who will depend on them in emergencies. In the evacuation plan, include information about the location, design, and use of the building's areas of refuge, whether the building has sprinkler protection, or places to await assisted rescue when self-evacuation is not possible.



Note:

There may be specific area-of-refuge requirements for certain occupancies. See your authority having jurisdiction for further details.



Horizontal Exits

Horizontal exits are another important consideration for the planning team to review. These exits are protected by fire-rated walls and doors to allow occupants to safely exit the area where a fire originates to another protected area. Horizontal exits generally take one of two forms.

One would be a passage that connects from one building to an area of refuge in another building on the same level. This type of horizontal exit could take the form of a bridge that connects two buildings.

The second would be a passage through a fire wall and fire door that separates two areas within a building on the same level. This type of horizontal exit could be a floor, divided in half by fire-rated walls and doors, with a passage to the other side of the wall on the same floor.

Members of the planning team should verify that an accessible means of egress (without steps or non-ramped changes in level) connects to horizontal exits.

Emergency Stair Travel Devices

Devices are available to provide assisted

evacuation for those unable to use stairs on their own. Known as emergency stair travel devices, they make it easier to transport individuals up or down stairs in emergencies and require assistance by others. Those who use wheelchairs must transfer to an emergency stair travel device. Some of these devices can be operated by one person, while others require two or more. Most allow the operator to guide the device up or down the stairs, traveling along the leading edge of the stairs.

Not all emergency stair travel devices can travel up and down stairs—some only travel downward. Some are powered and can travel up or down stairs with a single operator; others have handles that, with additional operators, can be used to transport individuals up the stairs. Information on these devices and their features is readily available online. However, it is important to see the devices in person to be sure that occupants and operators are comfortable with their operation and that they function properly in the building. Carry-type devices will require two or more operators, depending on the weight of the occupant. Alternatively, track-type devices usually require one operator, and most sled-type devices require two operators. It is important to note that devices

also have different requirements regarding position while traveling and ease or difficulty in transfers to and from the devices. It may be beneficial to test a variety of devices in your building prior to purchasing.

Where emergency stair travel devices are used, the evacuation plan needs to cover provision and use of these devices for the occupants of a building. The plan should include information on the type of device, instructions, and storage locations. It is also important to identify volunteers who will assist by operating the device or, if needed, with transfer to the device. All persons involved in using or operating the device should be properly trained. Persons assisting an individual to transfer should be trained to help by the person needing assistance or, if that is not possible, by someone familiar with that person's needs. Practice of the plan should involve use of emergency stair travel devices.

When the exit includes stairs and an emergency stair travel device is to be used, determine (1) where the device is to be stored for quick and easy access; and (2) where transfer onto the device will occur. Storage and transfer locations should not block the flow of persons using the exit, including stairs.

Further information on emergency stair travel devices can be found in NFPA 101®, Life Safety Code®, and ANSI/ RESNA ED-1, Emergency Stair Travel Devices Used by Individuals with Disabilities, Volume 1.

When an emergency stair travel device is not available, consult your authority having jurisdiction (generally, your local fire department) to determine where people who cannot use stairs should await assisted rescue. People requiring assisted rescue should talk with the fire department about:

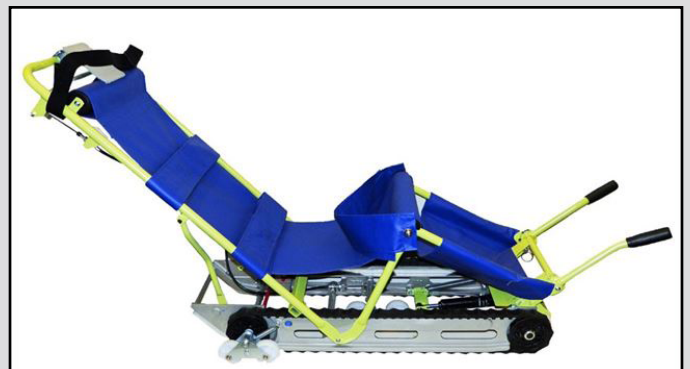
- how they will be carried down the stairs so as not to sustain an injury;
- how to handle a ventilator or other equipment that must travel with the individual;
- how to handle a service animal; and
- if it is not possible to bring the person's mobility device down the stairs, what resources may be made available for mobility once the person is in a safer place.

Examples of Emergency Stair Travel Devices



A carry-type device →

← A carry-type device in use



↑ A sled-type device

Elevators for Use in Fires and Other Emergencies

Elevators historically have not been used in an emergency. However, the 9/11 attack on the World Trade Center led to new provisions in NFPA 101®, Life Safety Code®, and building codes on the use of elevators in fires and other emergencies. They provide requirements for elevators that serve firefighters and those for use by building occupants.

Fire Service Access Elevators are used by firefighters to fight fires and to evacuate people from the building. These elevators are equipped with emergency signaling devices and standby power so that they remain operational when regular electrical service is lost. They are designed to be protected from smoke and water. Building codes address where they are required, the number that must be provided, car capacity, and other features.

Occupant Evacuation Elevators, which are less common, allow building occupants to independently evacuate. Building codes include requirements for these types of elevators where they are provided. Like Fire Service Access Elevators, they are designed so that they remain operational in emergencies and are protected from smoke and water. Specialized messaging is required to let building occupants know when the elevators are available for use in an emergency and when other evacuation methods should be followed.

Further information on Fire Service Access Elevators and Occupant Evacuation Elevators can be found in NFPA 101®, Life Safety Code®, the NFPA 72®, National Fire Alarm and Signaling Code® Handbook, and ASME A17.1/CSA B44, *Handbook on Safety Code for Elevators and Escalators*.

5. Proceeding to a Public Way (Exit Discharge)

The last stage of evacuation is exiting the building and proceeding to a public way, such as a street, alley, or sidewalk. This portion of a means of egress leading to the public way is known as exit discharge.

Generally, exits from the building are marked with exit signs. Members of the planning team need to determine whether exits are accessible to occupants with disabilities. If not, directional signs should be provided to indicate the location of those exits that are accessible.

Next, the planning team should check to see if all building occupants can proceed from all accessible exits to a public street or sidewalks. Members of the team should identify any



barriers, such as steps or steep terrain, which would prevent anyone from exiting the building to a public way.

The evacuation plan also should identify meeting places. These are accessible locations on accessible routes from the point of exit discharge where evacuating occupants gather to be accounted for, to await further

instructions, or learn when it is safe to return to the building. The plan should clearly indicate that persons exiting a building should never return to the building that has been evacuated until cleared by the authority having jurisdiction (fire, police, or another official role). Meeting locations should not be in fire lanes or other areas that first responders may need to access.

Checklist for Emergency Evacuation

This checklist is not a stand-alone document and does not necessarily determine compliance with applicable codes, standards, or other regulations. Instead, it complements previous sections in this Workplace Program and is meant to help fill any gaps in the plan that might be overlooked. Users should fill out the checklist during the planning phase and update it over the lifetime of the plan as conditions change. Note any items requiring further planning, facilities and equipment requiring repair, replacement, or correction, and policies and procedures that will impact the successful implementation of the plan. Please contact your authority having jurisdiction for specific requirements, questions, or assistance in completing this checklist.

Emergency Evacuation Checklist

| Building Name: | Date: | |
|---|------------|-----------|
| Notifying Occupants to Evacuate | | |
| <i>Does the system provide visual notifications that are equivalent to the audible notifications provided others? For example, does it allow them to distinguish among different types of warnings? If not, how does the plan address these concerns?</i> | YES | NO |
| Does the building have a fire alarm system that notifies all occupants of the need to evacuate or take other actions? | | |
| Does the alarm system include verbal instructions for all occupants? | | |
| Does the building have other types of emergency notification systems (e.g., tornado warning)? | | |
| Finding the Way Out (Exit Signs) | | |
| <i>Can everyone locate the means of egress and emergency-related equipment? If not, how does the plan address these concerns?</i> | YES | NO |
| Are the means of egress readily identifiable by all occupants? | | |
| Do all occupants, including visitors, know the routes to exits or areas of refuge that are accessible to them? | | |
| Can all occupants independently locate all emergency exits, fire pull stations, and fire extinguishers? | | |
| Can all occupants see, read, understand, and act upon the information on evacuation signs, including directional and informational signs, and maps? | | |

Proceeding to an Exit (Exit Access)

| <i>Are all routes to all exits accessible to everyone? If not, how does the plan address these barriers and how are occupants made aware of the issues that will impact them?</i> | YES | NO |
|---|------------|-----------|
| Can all occupants independently travel from spaces they occupy to all emergency exits? (Are there steps or high thresholds preventing independent travel? Are the corridors and doors wide enough?) | | |
| Have you identified all occupants who will need assistance to get to an exit? | | |
| Are all occupants able to open and proceed through exit doors? | | |
| Is there a responsible person for maintaining the accessibility of the route? Who is it and what is the procedure for notifying and rectifying a problem? | | |

Exiting Floors and the Building (Exit)

| <i>How will the plan address evacuation of those unable to use stairs?</i> | YES | NO |
|---|------------|-----------|
| Does evacuation require the use of exit stairs? | | |
| Have you identified occupants unable to use stairs, if any? | | |
| Are emergency stair travel devices provided? If yes, which occupants will use them and who will operate them? | | |
| Are there areas of refuge or horizontal exits on the floor? | | |

Proceeding to a Public Way (Exit Discharge)

| <i>Once outside the building, how and where do occupants meet up and how are they accounted for?</i> | YES | NO |
|---|------------|-----------|
| Does the building have at least two separate exits that are accessible to all occupants? | | |
| Must some occupants use a specific exit(s) for accessibility? | | |
| Will some occupants remain in the building to await assisted rescue? If so, who? | | |
| Can all occupants use the exits and proceed to a public street or sidewalk? | | |
| Does the plan identify a meeting place(s) that is accessible to everyone? | | |
| Is the route from accessible exits to rallying points accessible to everyone? If not, which occupants require assistance to travel to the rallying point? | | |

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Publications and Other Resources

- American Council of the Blind
acb.org
- American Society of Mechanical Engineers
asme.org
- Independent Living Centers Directory
ilru.org/projects/cil-net/cil-center-and-association-directory
- International Fire Safety Training Association
ifsta.org
 - » [Fire Safety Solutions for People with Disabilities](#)
- National Association of the Deaf
nad.org
- National Disability Rights Network
ndrn.org/about/ndrn-member-agencies/
- National Federation of the Blind
nfb.org
- National Fire Protection Association
nfpa.org
 - » **NFPA Disabilities**
nfpa.org/Public-Education/Fire-causes-and-risks/Specific-groups-at-risk/People-with-disabilities
 - » **NFPA Disability Access Review Advisory Committee (DARAC)**
nfpa.org/darac
 - » **NFPA Codes and Standards**
nfpa.org/codes-and-standards
 - » **NFPA 72®**, National Fire Alarm and Signaling Code®
nfpa.org/72
 - » **NFPA 101®**, Life Safety Code®
nfpa.org/101
- Niagara University First Responders Disability Awareness Training
frdat.niagara.edu
- Rehabilitation Engineering and Assistive Technology Society of North America
resna.org