



Script for the “Americans with Disabilities Act Requirements for Accessibility in Temporary Traffic Control Zones” Podcast

Hello and welcome to the first in a series of podcasts developed by the American Traffic Safety Services Association’s podcast. Today we’ll discuss designing and setting up solutions for temporary traffic control areas that meet the needs of disabled pedestrians and comply with the Americans with Disabilities Act, or ADA.

Our goal is to help listeners familiarize themselves with pedestrian accessibility considerations. This podcast is based on work supported by the Federal Highway Administration under the 2011 Work Zone Safety Grant. The material presented in this podcast is consistent with Federal standards and statutes, but we encourage you to consult your State and local accessibility guidelines, which may be more strict. Keep in mind that the Federal guidelines are the minimum legal standards.

This podcast is a companion to the document, “Applying the Americans with Disabilities Act in Work Zones: A Practitioner Guide,” which was also developed under the Work Zone Safety Grant. This document is available, along with an accompanying video, at workzonesafety.org. For a more extensive and detailed discussion on this topic, please review this companion document.

This podcast is divided into three parts.

Part 1, which includes this introduction, is about 12 minutes. It will discuss relevant Federal laws that pertain to pedestrian accessibility.

Part II also about 15 minutes and is divided into two segments. The first segment addresses pedestrian accessibility considerations in temporary traffic control zones. The second part discusses accommodating disabled pedestrians and includes the minimum design requirements necessary to do so.

Part III is about 8 minutes long and provides example engineering challenges and options for how to overcome them.



Let's start with a discussion of the Americans with Disabilities Act and related guidelines and standards.

The Americans with Disabilities Act, or ADA, was enacted in 1990 by Congress. The ADA is a civil rights law that gives Americans with disabilities the same protection as the Civil Rights Act of 1964.

According to the ADA, a disability is known as quote, “any physical or mental impairment that substantially limits a major life activity” end quote. This includes activities like seeing, hearing, walking, and communicating. Unless changes are made to accommodate the needs of disabled people in public places, these activities can be, and often are, limited by the environment we live in.

For this reason, the ADA requires equal access to all pedestrians, including those with physical and/or mental disabilities. This means that equal access must be provided not only in completed, publicly accessible transportation facilities, but also during construction and improvements. Because the ADA prohibits discrimination by all public entities at local and state levels, public agencies must comply with ADA regulations and address access requirements for all programs and services offered, including transportation systems.

The U.S. Access Board, a Federal agency devoted to accessibility for people with disabilities, develops and maintains the ADA Accessibility Guidelines, or ADAAG. ADAAG establishes design criteria for construction, including transportation systems, and outlines minimum accessibility requirements for a wide variety of facilities, new construction, and alterations. Note that new construction and alterations are crucial to this discussion and are part of the Federal guideline that brings temporary traffic control zones under the umbrella of ADA accessibility.

The U.S. Access Board is also responsible for accessibility guidelines under the Architectural Barriers Act, or ABA. The ABA requires agencies to comply with ADA accessibility guidelines by providing access to new construction and alterations designed, built, altered, or leased with Federal funds. Such facilities may include transit stop shelters or elevators that lead to raised public transportation platforms.

The Access Board has also drafted a set of standards that regulate pedestrian facilities *within* the public right-of-way. These guidelines, called the Proposed Right-of-Way Accessibility Guidelines, or PROWAG, were published in the Federal Register in 2005. This is important: PROWAG has not been fully adopted and is not considered a “standard” with the force of the law behind it. However, PROWAG are currently recommended as best practices and can be considered for areas that are not fully addressed by ADAAG and ABA. PROWAG’s proposed standards specifically state that that they cover temporary facilities that include, but are not limited to, *temporary routes around work zones*. So again, PROWAG is not a standard, but it



does provide recommended best practices, and those practices do cover temporary routes around work zones.

PROWAG states that quote, “All altered portions of existing facilities located in the public right-of-way *shall* comply with these requirements to the maximum extent feasible” end quote. These alterations include renovating, rehabilitating, reconstructing, and resurfacing circulation paths or vehicular ways. They also include changing or rearranging structural parts or elements of a facility. For example, according to the Manual on Uniform Traffic Control Devices, also known as MUTCD, whenever pedestrian walkways on sidewalks and across streets are constructed or altered, curb ramps with detectable warning surfaces *must* be installed.

PROWAG section R202.3 also says that when elements, spaces, or facilities within a project’s scope are altered, they must comply with the same requirements as new construction. Let’s clarify what *project scope* means. When we say *within the scope of the project*, we’re referring to whether or not an alteration project presents an opportunity to design an altered element, space, or facility in an accessible way. PROWAG does not intend for additional work to be done outside a project’s scope. Here’s an example: if an alteration project involves installing pedestrian signals at existing intersections and there are no detectable warning surfaces on the existing curb ramps at these intersections, PROWAG would *only* require accessible pedestrian signals and pedestrian pushbuttons to be provided since they are within the project’s scope.

It is important to understand that the term “alteration,” as defined by the Federal District Court of Appeals, *includes resurfacing a roadway*. The Court said that “if a street is to be altered to make it more usable by the general public, it must also be made more usable by those with ambulatory disabilities. If resurfacing affects the usability of a street for motor vehicles (or pedestrians at crosswalks), curb ramps must be included where pedestrian routes cross curbs or other barriers.”

Note that ADA does not require pedestrian accessibility improvements during maintenance activities since they are not considered an alteration. Maintenance activities are defined as actions that are intended to preserve roadway systems, slow future deterioration, and maintain the functional condition of roadways without increasing structural capacity. For example, pavement patching and liquid-applied sealing, lane restriping, repairing joints, patching pavement (in other words, filling potholes), repairing shoulders, signing, striping, repairing drainage systems, and minor signal upgrades and other similar short-term maintenance activities are *not* considered alterations.



Unlike maintenance, an alteration is a change to a facility in the public right-of-way that affects — or could affect — its access, circulation, or use. Projects that could potentially affect the structure or grade of roadways are categorized as alterations.

Projects that alter public right-of-way *must* incorporate pedestrian access improvements within the project's scope to meet ADA and Section 504 requirements. Examples of alterations include reconstruction, major rehabilitation, widening, resurfacing that requires structural overlays and mill and fill, and signal installation and upgrades. Work outside the project's scope is at the discretion of the agency. However, if a project impedes or alters any aspect of a pedestrian route, it *must* adhere to ADAAG.

PROWAG says that when existing elements are altered or added, but pedestrian paths are not altered or impeded, the path is *not* required to comply with the requirements for pedestrian access routes (see R202.1). For example, if a new bench is installed on a sidewalk that has a cross slope exceeding 2 percent, the sidewalk is not required to be altered to reduce the cross slope just because the bench is installed on the sidewalk.

Federal Highway Administration rules and guidelines for existing curb ramps affected by alteration projects have determined that curb ramps should be updated to current accessibility standards. This includes adding a detectable surface to the ramp. Truncated domes are the only detectable warnings allowed by ADAAG. Grooves, exposed aggregate, and other designs are too similar to pavement textures, cracks, and joints. They are not considered equal to truncated domes, which are a unique design and have proven to be the most easily detected surface enhancement. All new construction and alteration projects that involve curb ramps are required to include the necessary provisions to construct or upgrade existing ramps in order to meet minimum accessibility guidelines.

Let's talk about some scenarios where accessibility modifications may be needed.

Scenario 1: New curb ramps are being installed in an existing sidewalk that is being widened and resurfaced as part of a downtown improvement program. On one corner, an existing underground utility vault is located in the best spot for a curb ramp. Should the utility vault be moved to ensure that the curb ramp falls within the marked crossing?

The answer is maybe. The scope of this project will determine the answer. If utilities are already being moved for other reasons within the project scope or limits, it may be feasible to alter or relocate the vault. If planned project construction does *not* involve the vault, it may not be feasible to locate the curb ramp in as optimal a spot as new construction standards would require. There are many workarounds for barriers in the public right-of-way; for example, you



could consider widening crosswalk markings to include the new curb ramp location, raising the crosswalk if roadway use permits, or installing an apex ramp as a last resort.

Scenario 2: A city is resurfacing a sidewalk along Main Street. The distance between the edge of the right-of-way and the existing roadway does not provide sufficient room for a four-foot-wide pedestrian access route. Does the municipality have to acquire more right-of-way from private property owners or narrow the roadway to provide a more conforming walkway?

The answer is no. Accessibility guidelines do not require the municipality to obtain right-of-way or to narrow roadways within the limited scope of work of a sidewalk resurfacing project. However, if a municipality plans to narrow a roadway for traffic-calming purposes or acquire additional right-of-way as part of a downtown improvement project, it should plan the project to accommodate new construction standards for sidewalk width. Note that ADA requires adding curb ramps as part of this project, since it is an alteration to a sidewalk.

Scenario 3: Countdown signal displays are being added to some existing WALK/DON'T WALK pedestrian signal heads at an intersection, but the software and signal controller are not being altered. Should accessible pedestrian signals be installed?

Again, the answer is no. Adding displays to existing signals would not involve the system changes needed to implement accessible pedestrian signals. However, keep in mind that the program access provisions that govern existing facilities may apply at any location, regardless of whether alterations are planned. For instance, if a resident with a disability requests accessible pedestrian signals at a crossing, a jurisdiction must consider installing them to provide accessibility.

This concludes Part I of this podcast. To listen to Part II, please visit the Work Zone Safety Clearinghouse page at workzonesafety.org. This podcast has been a presentation of the Federal Highway Administration's Work Zone Safety Grant Program.



Part II

Welcome to Part II of the Americans with Disabilities Act Requirements for Accessibility in Temporary Traffic Control Zones podcast. In Part I, we talked about laws you should know about and comply with when developing accessible temporary traffic control areas. In this part we'll discuss approaches for making temporary pedestrian facilities accessible.

The Manual on Uniform Traffic Control Devices (or MUTCD) says that the needs of pedestrians, including those with disabilities, are a basic requirement of work zone traffic control. Pedestrians' needs must be addressed in temporary traffic control plans and be consistent with ADA requirements. Pedestrian treatments can be a subsection of the overall plan and should identify and address relevant factors and considerations unique to the work zone.

When considering pedestrian accommodations, accessibility in temporary traffic control areas can be condensed down into three approaches.

1. Maintain existing pedestrian pathways if sidewalks can remain open during construction. Add any necessary warnings and modifications to maintain accessibility per MUTCD and ADAAG guidelines.
2. Develop an alternative pedestrian pathway that is parallel to or easily reached from the current pathway if the current pathway must be closed.
3. If the existing pedestrian path must be closed, identify and develop an alternative pedestrian pathway before implementing temporary traffic control measures that will detour pedestrians. (For example, if the sidewalk is on the same side of the street as construction and must be closed, pedestrians can be re-routed across the street to a parallel sidewalk).

When deciding on an approach, the first and most important consideration for all pedestrians is safety. Pedestrians must be kept in a safe environment, ideally on a smooth, well-marked path. Keep in mind that the concept of a safe, useful pedestrian pathway has evolved to incorporate many ADA elements, so addressing the needs of the disabled is an inherent element in well-planned and properly engineered pedestrian facilities.

If it is determined that the current pedestrian facility can remain safely open during construction, the MUTCD clearly states that temporary facilities *must* include accessibility features that are the same as the existing pedestrian facility's features. For example, if the current facility features accessible curb ramps with detectable warning surfaces, then the temporary traffic control area must also provide accessible curb ramps with detectable warning surfaces.

According to Section R205 of PROWAG — which is reinforced by Part 6D.01 of the MUTCD — if pedestrian travel can be kept to the same side of the street it is already on, it will not increase the traffic exposure or accident risk.



Keep in mind that, depending on traffic characteristics and the surrounding environment, a route that uses vehicle lane width for a pedestrian pathway may be shorter, safer, and more usable than one that requires crossing the street twice, even if the roadway surface is imperfect.

Let's talk about some specific devices and practices that accommodate disabled pedestrians.

PROWAG outlines a number of physical guidelines and devices for creating temporary pedestrian routes. These guidelines can be broadly categorized under communication devices, surfaces and detectable edging, temporary curb ramps, and barriers and channelizing devices.

On-Location Communication: Devices, Signs and Guides

One of the most important factors to consider when planning a work zone is how to communicate with disabled pedestrians who approach and use pedestrian pathways around work zones. They must be able to locate and use these pathways safely.

The MUTCD notes that the most desirable way to provide guidance through temporary traffic control areas for people with visual disabilities is a speech message provided by an audible information device. Per the MUTCD, the best devices are those that provide speech messages in response to passive pedestrian actuation; however, devices that continuously emit a message or emit a message in response to using a pushbutton are also acceptable. The MUTCD also advises that audible information "might not be needed if detectable channelizing devices make an alternate route of travel evident to pedestrians with visual disabilities."

It is possible for guidance and warning information to be transmitted via personal receivers, but keep in mind that these devices are not always carried by pedestrians with visual disabilities, so this method should not be wholly relied upon to convey important information.

Warning signs about an upcoming temporary traffic control zone should be placed well ahead of the area to allow pedestrians to select an alternate route if needed. Signs should be positioned at the beginning of the block at an accessible crossing point well in advance of the construction site. Signs should include any special instructions that may be informative to a disabled person. These instructions can include, but are not limited to, the presence of ramps where the temporary traffic control area will end, whether alternative access routes to businesses or destinations are available, if buses available to transport pedestrians around the area, and so on. Signs accommodating people with disabilities should be clear and concise, with large, clear lettering, high contrast, and raised lettering or maps for those who rely on tactile capabilities for information.



A guide can also be provided to assist any disabled or impaired persons in navigating the accessible pathway. This may be particularly appropriate in areas where higher concentrations of individuals with disabilities are known to be. During the planning phase, engineers should assess the general environment for pedestrian generators and other factors that may call for special access accommodations prior to designing a temporary traffic control plan.

Surfaces

Let's talk about guidelines for **surfaces**. A continuous, cane-detectable surface must be provided within 1.5 inches of a finished grade. ADAAG advises that joints should be closed and flush to prevent tripping and to reduce the possibility of canes or small wheels getting trapped in gaps or spaces. Similarly, PROWAG states that discontinuity in the surface must be less than $\frac{1}{4}$ inch. Discontinuities of $\frac{1}{4}$ to $\frac{1}{2}$ inch can be sloped, but discontinuities of greater than $\frac{1}{2}$ inch must be repaired.

Pathways should be clear of debris and adequately drained to prevent accumulation of trash or mud that can cause a tripping or slipping hazard. A minimum, continuous, clear width of 48 inches, free of obstructions, should also be maintained. Be advised that where the clear width of pedestrian access routes is less than 5 feet, passing spaces must be provided at intervals of a maximum of 200 feet. Passing spaces must be a minimum of 5 feet by 5 feet.

Detectable edging

A continuous detectable edge allows cane users to detect the edges of the pedestrian pathway. According to the MUTCD, detectable edging should protrude at least 6 inches above the surface of the pathway, with the bottom of the edging being a maximum of 2.5 inches above the surface. Edging should be continuous throughout the length of the facility, except for gaps where pedestrians or vehicles will be turning or crossing. MUTCD advises that detectable pedestrian edging should be orange, white, or yellow and should match the color of adjacent channelizing or traffic control devices. Edging should be firmly attached to the ground or other devices.

Temporary Curb Ramps

When pedestrians are diverted to temporary routes in the roadway, temporary curb ramps should be provided to enable pedestrians to negotiate curbs safely. Temporary curb ramps should be the full width of the temporary route and are recommended to be 60 inches wide. The minimum width is 48 inches. Temporary curb ramps should generally lie in a single sloped plane, with minimum surface warping and cross slope.

All ramps should be firm, stable, and have a non-slip surface. They should not warp or buckle, and should be made of materials strong enough to support the weight of pedestrians as well as



motorized scooters and wheelchairs. Ramps should also be color contrasting and have marked edges so they are noticeable by pedestrians with visual impairments. Ramps also need free draining surfaces with a maximum cross slope of 1 to 50, or 2 percent.

When placing temporary curb ramps, avoid placing them near drain covers or grills that could impede pedestrians traveling in wheelchairs and motorized scooters. Also avoid placing ramps near drainage collection areas because ponding or running water could be hazardous, especially for those who use canes or walkers.

Transitions from ramps to walks, gutters, or streets should be flush and free of abrupt changes. Ramp slopes may be 1 to 8 for a maximum distance of 2 feet (with a maximum rise of 3 inches), and 1 to 12 for a maximum distance of 6 feet (with a maximum rise of 6 inches).

Each ramp must have level landings at the bottom and top. A landing must be as wide as the run leading to it and have a minimum length of 60 inches. The landing can also provide added safety by adding hand railings and edge protection.

Finally, when a ramp is installed parallel to the curb, a 48 inch by 48 inch platform should be provided at curb level to allow pedestrians to turn 90 degrees before descending the ramp.

Barriers

Per MUTCD section 6F.63, when exposed to vehicular traffic, channelizing devices should be able to provide positive protection to pedestrians. In other words, there should be crash-worthy barriers between pedestrian pathways and traffic. Barriers may include concrete, steel, or water-filled devices and should be used, for example, when diverting pedestrians onto the shoulder of a roadway temporarily if a sidewalk must be closed. The bottom and top surfaces of barriers must have retro-reflective material or delineation on the side exposed to traffic for improved nighttime visibility. On surfaces facing pedestrians, barriers should have a contrasting pattern in alternating light and dark colors to provide visual contrast. This surface will consist of a minimum of 6 inches of sheeting or other contrasting materials. Non-retro-reflective materials may be used on the pedestrian-facing side of the barrier.

When used properly, barriers should indicate a suitable path for pedestrians to travel around or through temporary traffic control areas.

Channelizing Devices

Pedestrian channelizing devices should be used to close sidewalks and delineate alternate routes where pedestrians are *not* exposed to vehicular traffic. These devices should be provided when work activities impact sidewalks or other pedestrian facilities, or when the temporary pedestrian



facility design does not include accessibility features consistent with the existing pedestrian facility.

When used properly, channelizing devices should indicate a suitable pedestrian path around or through temporary traffic control areas. The bottom and top surfaces of these devices should have retro-reflective material or delineation for improved nighttime visibility. They should also be detectable by pedestrians who use canes and visible to people with low vision. Devices should be stable and resist tipping or displacement if a cane or even a body pushes against them; they should be detectable using residual vision by color, contrast, or brightness; and they should meet ADA provisions for protruding objects, which requires that no object should protrude more than 4 inches.

When used to close sidewalks, channelizing devices should run the entire width of the sidewalk and have no gaps. Tape, barrels, or traffic cones should not be used to close a sidewalk because they leave gaps in coverage, which could lead to visually disabled persons accidentally crossing into the work space where they may trip, fall, or be severely injured.

Pedestrian channelizing devices should have a contrasting pattern of alternating light and dark colors to provide visual contrast on the upper surface. This surface should consist of a minimum of 6 inches of sheeting or other contrasting materials. Note that orange is seen by the disabled as a good color to use — it is the “standard” color for construction, provides good color contrast, and seldom results in glare. Do *not* use black to color any base on a device. Black can blend in with the pathway surface, which could cause a tripping hazard to those with diminished vision.

Pedestrian channelizing devices need to be sturdy and stable. They should have continuous bottom and top surfaces. The top surface should be smooth to optimize hand-trailing. Both upper and lower surfaces should share a common vertical plane. The lower edge of the bottom portion should be no higher than 2 inches above the walkway. The top edge of the bottom portion should be at least 8 inches above the walkway. The top of the device must be a minimum 32 inches above the walkway. Ballast for channelizing devices should be internal or mounted to the side of the device facing away from the pedestrian pathway.

We’ve covered a lot of detail in this section, so if you want to review these measurements or print them out for future reference, please go to workzonesafety.org and download the script for this podcast. This site also hosts a downloadable version of the *Practitioner Guide on Applying the Americans With Disabilities Act In Work Zones*, which provides more detailed information and guidance on these and other accessibility considerations. All of these measurements and guidelines are available in the documents posted on the U.S. Access Board’s Public Rights-of-way web page. A list of references can also be found on the web page where this podcast is housed.



This concludes Part II of this podcast. To listen to Part III, please return to the Federal Highway Administration's Grant page on the work zone safety information clearinghouse at workzonesafety.org. This podcast has been a presentation of the Federal Highway Administration's Work Zone Safety Grant Program.



Part III

Welcome to Part III of the Americans with Disabilities Act Requirements for Accessibility in Temporary Traffic Control Zones podcast. In Part II of this podcast, we talked about making temporary pedestrian facilities accessible and specific devices and practices that accommodate disabled pedestrians. Now let's talk about practical applications, best practices, and engineering solutions.

At times, pedestrians with different disabilities may have needs that appear to be in direct conflict with each other. For example, when curbs are flush, visually impaired people do not know where the curb line is located. On the other hand, mobility impaired people who use wheelchairs or walkers typically prefer flush curbs. The way to accommodate both sets of needs is to install truncated domes, which allow a flush curb and provide a mechanism that indicates to visually impaired people that they are entering the street. This is an example of how engineers can successfully use their judgment to accommodate the needs of different types of pedestrians.

In addition to pedestrian paths, other challenges include determining whether and how to maintain access to business entrances and transit stops. This may require constructing temporary ramps and guide rails from pedestrian pathways to buildings or business entrances. If the pedestrian facility currently has a transit stop that will be affected by the work zone, transit authorities that service the stop need to be consulted to determine whether a temporary stop will need to be created inside or outside the traffic control area. If the construction zone is extensive and impacts multiple stops, it may be necessary to arrange for a shuttle or establish a temporary route that transports pedestrians safely around the work area. Changes to transit stop locations or schedules due to construction must be provided in an accessible format, preferably well in advance of the temporary traffic control area, and also via public information outlets.

Now here are some other examples of engineering challenges and their possible solutions. Note that not all solutions are ideal, and sometimes they create other challenges when they are implemented. Whenever a solution is assessed, you should thoroughly consider any potential negative impacts before settling on a final solution. For a more in-depth discussion of engineering challenges and solutions, please refer to the Accessible Public Rights-of-Way Planning and Design for Alterations special report, available on the U.S. Access Board web site.

In **scenario 1**, there is insufficient space for installing an accessible curb ramp and landing at a street intersection that should meet new construction standards due to insufficient right-of-way.

Here are some possible solutions to this scenario. If space allows, you could increase the width of the right-of-way to provide sufficient space to create curb ramp and landing dimensions that provide ideal construction solutions. Adjacent private developments in the permitting stage often offer opportunities to acquire right-of-way at no cost. (Note that this solution may require



alterations to building and/or other structural features located at or near the street corner. Also be aware that sometimes acquiring right-of-way is a long and costly process or is not feasible.)

If increasing the right-of-way is not possible, you could raise the intersection's street grade to make the sidewalk flush with street elevation, thus eliminating the need for curb ramps. Note that if this option is used, it is critical to provide detectable warning surfaces to indicate to blind and visually impaired travelers that they are entering a street.

Another option is to install a parallel curb ramp instead of a perpendicular curb ramp.

If the limitation is caused by the presence of a building or other immovable structure, street width may be reduced by applying a bulb-out. This will provide adequate space to use a combination sidewalk ramp and curb ramp to achieve the required 1:12 slope from curb height to street grade. Providing curb extensions reduces roadway width, which works well if the street has on-street parking. If not, then this solution may not be possible.

In **scenario 2**, an existing signal cabinet limits travel space and the installation of accessible landings and curb ramps at corners.

One solution is to extend the sidewalk to wrap around the back of the cabinet, or to rotate the cabinet to provide clearance.

If the cabinet is pole-mounted, it could be relocated to a pedestal-mounted cabinet, which is built over a base, or it could be rotated to the side of the pole that provides maximum passage clearance on the sidewalk.

Alternately, if the base of the cabinet is sufficiently deep, it may be possible to use a combination sidewalk and curb ramp to achieve the appropriate layout. By ramping the sidewalk down three inches in the cabinet's vicinity, it would be possible to reduce the length of curb ramp about three feet, thus providing adequate space for a landing.

Finally, on to **scenario 3**. In many instances, the existing street running grade does not support accessible crossings.

In situations like these, using bulb-outs can create larger and flatter pedestrian areas at corners, which can accommodate flat landings and acceptable slopes on curb ramps.

Another option is to modify the street profile for the stop-controlled street to "table" the crosswalk, providing a 2% or less cross slope in the crosswalk. This improves the crosswalk and allows for an acceptable curb ramp at each end. Note that the 2% cross slope only needs to be achieved within the 4-foot pedestrian access route, not across the entire crosswalk.

For streets that have been resurfaced several times and the crown slope has gotten steeper and steeper, the pavement surface may be milled back to a 2% crown as part of the resurfacing process. If it is not feasible to re-crown the street, it may help to provide a median refuge area for



pedestrians, particularly on wider streets, as the steeper cross slope causes manual wheelchair users and others with little stamina to take more time to cross the street.

This wraps up our discussion of practical applications, best practices, and engineering solutions that can be used to accommodate the needs of disabled pedestrians in work zones. To view the accessibility requirements or guidance documents referred to throughout this podcast, or for more information on the Federal guidelines for accessibility, please see the references list on the web page where this podcast is posted. Note that links to several States' accessibility standards are also provided to give you an idea of the state of the practice.

This podcast has been a presentation of the Federal Highway Administration's Work Zone Safety Grant Program. For more information on grant products, including a companion ADA video and guidelines on implementing ADA considerations in work zones, please visit the Federal Highway Administration's Grant page on the work zone safety information clearinghouse at workzonesafety.org.



Resources

- U.S. Access Board:
 - Main website, www.access-board.gov (on the left, go to “Pedestrian Networks” and select "Public Rights-of-way." Note that the US Access Board has a number of guidelines, survey forms, and checklists to assess various components of the public right-of-way, including [ramps](#), [bus stops](#), [exterior routes](#), and [sidewalks and street crossings](#)).
 - Special Report: Accessible Public Rights-of-Way Planning and Design for Alterations, <http://www.access-board.gov/prowac/alterations/guide.htm#4> (Note that this is particularly useful for providing potential solutions to common design and engineering challenges).
 - Public Rights-of-Way (PROW) Draft Guidelines, <http://www.access-board.gov/prowac/>
 - ADAAG Manual, <http://www.access-board.gov/adaag/html/adaag.htm>
- Federal Highway Administration, Manual on Uniform Traffic Control Device (MUTCD), www.mutcd.fhwa.dot.gov
- Federal Highway Administration , Accessibility Resource Library, www.fhwa.dot.gov/accessibility/index.cfm
- U.S. Department of Justice, ADA Standards, <http://www.access-board.gov/ada-aba/ada-standards-doj.cfm>
- MN DOT Temporary Pedestrian Access Routes (TPAR), www.dot.state.mn.us/trafficeng/workzone/tpar.html
- CALTRANS, Temporary Pedestrian Facilities Handbook, www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf
- Maryland State Highway Administration, ADA Guidelines for Pedestrian Facilities, roads.maryland.gov/Index.aspx?PageId=80 (Note that this document includes an ADA checklist developed to provide an itemized list of considerations that will help the designer to determine the best possible accessible facility or route).
- The Pedestrian and Bicycle Information Center (PBIC), www.walkinginfo.org/engineering/pedestrians.cfm