



PEDESTRIAN ACCOMMODATION GUIDE FOR TEMPORARY ENCROACHMENTS

TABLE OF CONTENTS

Introduction	2
• Purpose	
• Standards	
Pedestrian Routing Plan	5
• Flow Chart	
• Design Examples	
Tool Index	8
• Definitions	



iStock/DenisTangneyJr
Cover Photo: iStock/bee32

Purpose

The City of Columbia prioritizes the safety of pedestrians and cyclists. As our community continues to experience exponential growth and development, the need for a set of standardized accommodations for pedestrians and cyclists in and around construction zones is becoming increasingly clear.

Any work currently being done within the right-of-way is already subject to **approval** by city staff dependent on site specific conditions.

All individuals conducting work in the right-of-way must submit a Temporary Encroachment Permit.

This document serves as a companion piece to be received on the front end of a project that clearly outlines our expectations for maintaining pedestrian and bicyclist well-being.

It's our ambition with this standardized set of procedures that all the parties involved understand what's expected prior to submitting your project for approval.



Scan this QR code to be taken to the Encroachments website

<https://bit.ly/COC-encroachments>



iStock/Andrei Stanesco



Standards For All Temporary Encroachments

All work being performed within the right of way, regardless of how lengthy the process may be, is subject to the same standards of pedestrian and bicyclist accommodations.

Below are a list of general provisions that apply to all temporary encroachment requests:

Site-Specific Maintenance

- Trees shall not be removed, pruned, or disfigured for construction or raising of temporary walkways without written approval.
- Following work in the right of way, any disturbance of the ground, grass, plants, irrigation system, sidewalks pavers, or asphalt and concrete shall be returned to its pre-work state.
- Following the completion of the work, sidewalks, roads and right-of-way areas shall be cleaned of all trash, debris, etc.
- When work is not actively being completed in the designated area, portions of the sidewalks shall be kept clear of debris and equipment to allow unfettered pedestrian access through the site.

Signage

- Signage shall be provided for lane closure, signage shall include but is not limited to “lane closed, lane closed ahead” -etc.
- If lanes are going to be fully closed proper signage shall be provided indicating an alternate route well in advance of the proposed site such as “pedestrians cross here, use other side of street”, etc.
- Pedestrian signage shall be provided for sidewalk closure, signage shall include but is not limited to “sidewalks closed, sidewalk closed ahead” -etc.
- Proper signage shall be provided indicating an alternate route at the two nearest corners on the same side of the street of the proposed site such as “pedestrians cross here, use other side of street”, etc.

Alternative Pathway

- An alternative route must be provided when existing pedestrian and bicyclist facilities are disrupted.

ADA Compliance

- Alternative pathways must maintain a minimum sidewalk width of 48" as required by ICC A117.1-2017 and Chapter 11 of the IBC, and a smooth surface.
- Pathways must also be detectable for pedestrians with disabilities both physically and visually.

Construction Equipment

- Equipment, including vehicles, lifts, machinery, and tools, shall not be stored or staged on the sidewalk outside of any fencing or barriers while workers are not present, nor overnight.

Pedestrian Considerations

- Be aware of the effect your work is having on those who wish to access this area of right-of-way. When you see pedestrians and cyclists being placed into potentially dangerous scenarios, such as having to walk in the street, tripping on equipment, or having difficulty accessing adjacent areas in an ADA-friendly manner, these issues should be handled swiftly so as to not put people at risk.



iStock/Sergei Dubrovskii

All projects, regardless of their duration, are subject to our list of standards.



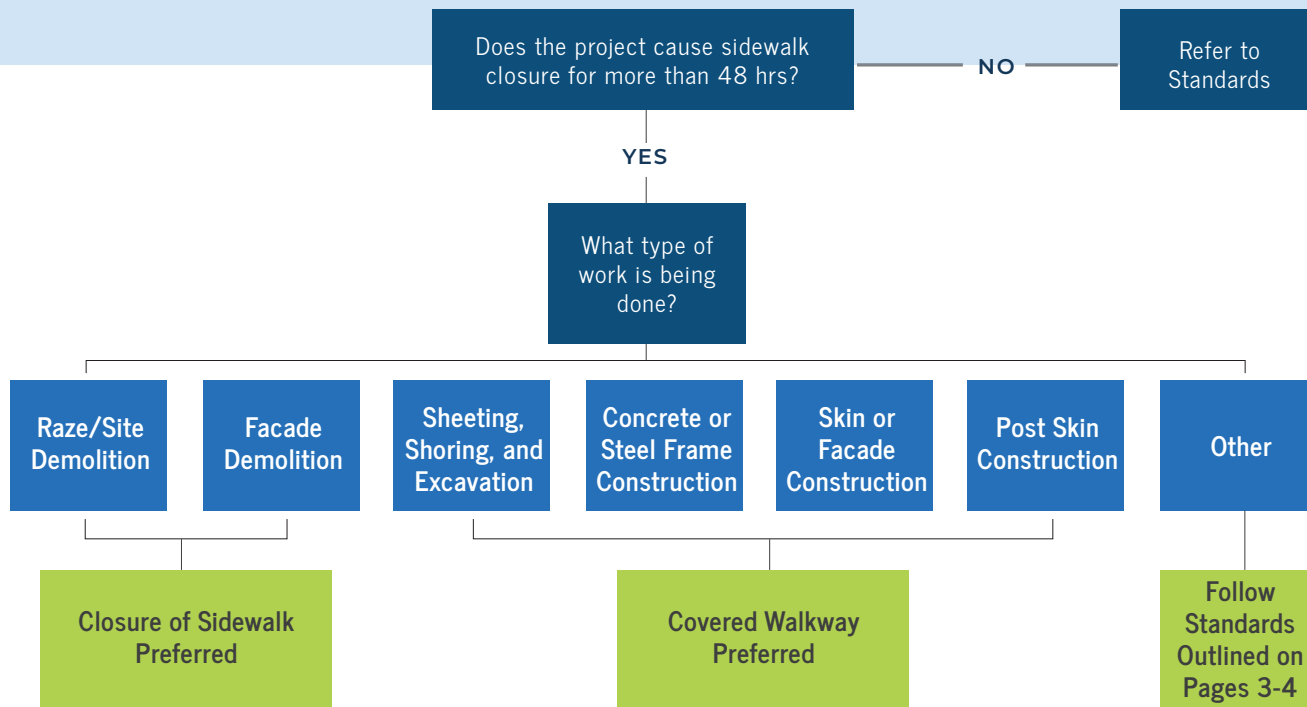
Covered walkways, like the one shown above, are recommended for certain projects that involve overhead construction.

Sidewalk Closure

- Complete closure of a sidewalk or bike lane shall only be done as a matter of last resort. All effort shall be made to accommodate pedestrians and cyclists around the proposed work zone. Full sidewalk or bike lane closures will only be approved in extenuating circumstances where it has been determined that the closure is the safest and most practical option for pedestrians and cyclists.
- * **Sidewalk closures require applicants to contact the Commission for the Blind.**

How Do I Know Which Protective Tools to Deploy?

We use the Manual on Uniform Control Devices (MUTCD) and International Building Code (IBC) as guides when determining the intensity of pedestrian and bicyclist accommodations for your project.



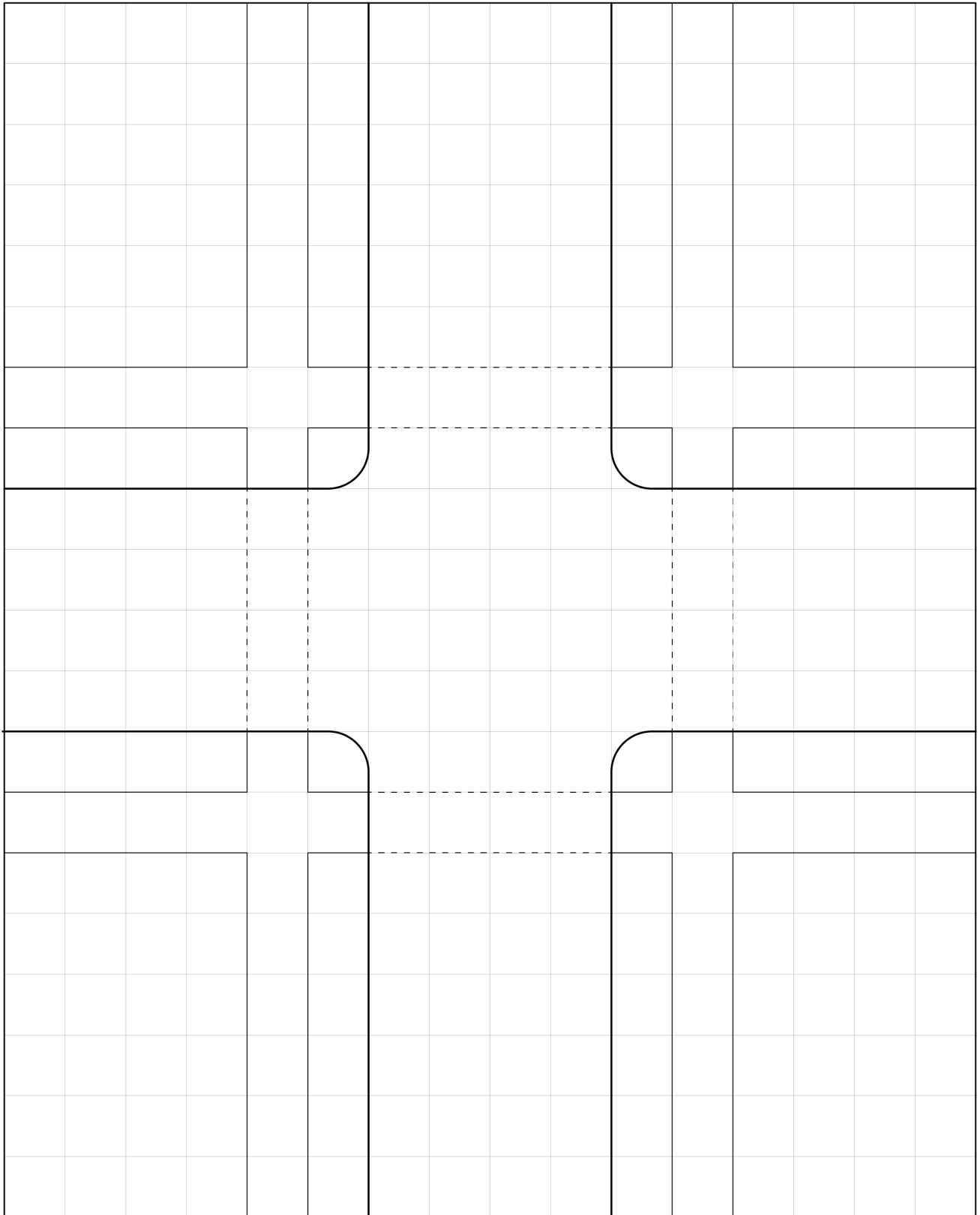
Please refer also to the IBC Table 3306.1 on pedestrian safety within construction zones: <https://shorturl.at/5pKtQ>.

Pedestrian Routing Plan

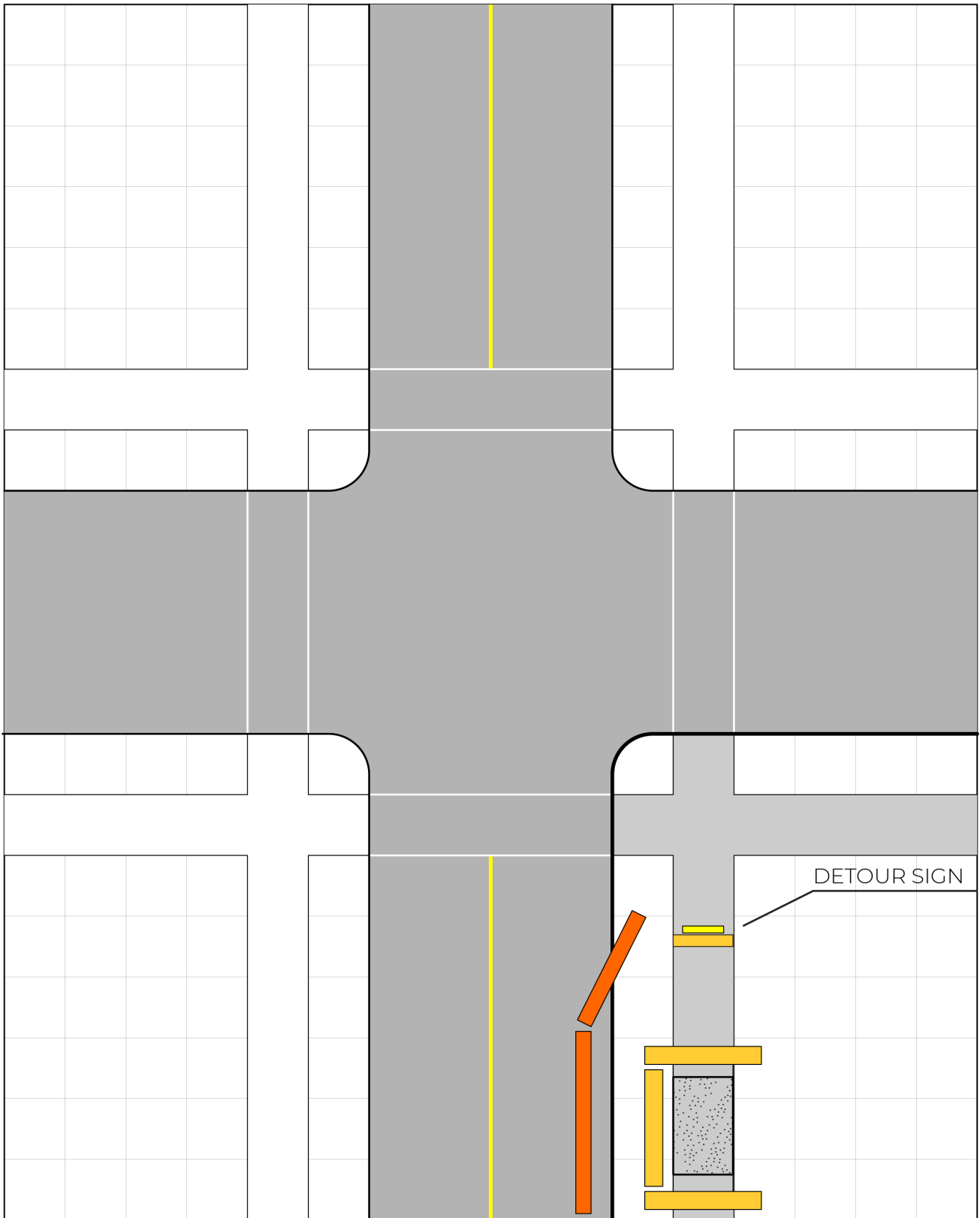
If your proposed construction will require the blockage of a sidewalk, bicycle lane, or other public bicycle or pedestrian path for more than **48** hours, we ask that you submit a Pedestrian Routing Plan.

This can be hand drawn or drafted using professional software. In either case, it must describe the following:

- Sidewalk locations.
- The direction of travel lanes.
- Location of the job area and surrounding buildings.
- Pavement markings.
- On-street parking.
- Street-scape features (lighting, trees, benches, trash bins, etc.)
- Transit stop locations.
- Location of overhead protection (if necessary).
- ADA requirements specific to the site.
- Barricade type being used and locations of use.
- List of businesses affected by the routing plan.
- Signage.



The above drawing can be used as a template for you submission.



The diagram above illustrates a site plan sketch that details signage and the types of channeling devices used.

DEFINITIONS

The following tools serve to protect both bicyclists and pedestrians around construction zones.



1. BARRICADES

Pedestrians are directed away from work zones with the proper use of barricades. These barriers also protect pedestrians and cyclists from construction debris.



2. TRAFFIC DRUM

This channeling device directs vehicles away from pedestrian traffic which is essential in the formation of alternative walking routes.



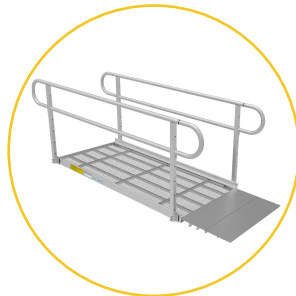
3. WATER BARRIER

This channeling device maintains a degree of separation between both pedestrians and vehicles, and pedestrians from construction zones.



4. SIGNAGE

Adequate signage directs pedestrians and bicyclists to their new route and warns of construction zones ahead.



5. BEVELED SURFACES

Maintaining the smooth connection between the surfaces of a path is essential for ADA accessibility and to minimize accidents.



6. SCAFFOLDING

In more urban contexts, the use of overhead protection might be appropriate. This can either be in the form of more traditional scaffolding or modified shipping containers.



BARRICADES

Uses

A barricade like the ones shown above should be deployed as a channeling device for an alternate walkway.

Barricades can also serve as a barrier for entry onto worksites and host signage that alerts pedestrians and bicyclists to alternative pathways.

The reflective, orange panels of a barricade increase its visibility and alert vehicles from afar of their presence.

When being used as a channeling device, barricades should be adjoined at their ends to create a continuous line of protection.

Other Considerations

The barricade recommended in the Manual on Uniform Traffic Control Devices (MUTCD) for use in most construction zones is a Type-III barricade.

These differ from Type I and II barricades in their durability and size.

Fencing alongside construction sites accomplishes a similar objective of restricting pedestrian access onto worksites.

Type-3 Barricade



Barricades are typically lightweight and among the more maneuverable channeling devices.



TRAFFIC DRUM

Uses

Traffic drums primarily direct vehicles away from work sites and areas with heavy pedestrian and bicyclist traffic.

Because of their role in directing vehicular movement, traffic drums are almost entirely placed in the roadway.

They can, like other channeling devices, serve to call out or mark smaller-scale work sites.

A reflective coating lines the exterior of most traffic drums making them visible from far away.

Other Considerations

With exception to drums fitted with a light for added visibility, traffic drums don't differ very much from one another.

While the device is rather standardized, the formation of traffic drums can easily evolve depending on changing needs on the worksite.

Application



Traffic drums are often the first line of defense when it comes to separating vehicular traffic from pedestrian movement.



WATER BARRIER

Uses

Water barriers, like traffic drums, are most often used as a barrier between vehicle and pedestrian traffic.

They serve as a better channeling device than traffic drums as they are able to be stacked in a continuous line.

Water barriers are often used as an alternative to concrete traffic barriers because of their relative lightness when empty.

Other Considerations

Water barriers can be arranged in a variety of configurations.

Beyond their variability horizontally, water barriers often allow for a stacking of a variety of features vertically.

Signage, additional barricades and lighting are often placed atop water barriers.

Application



The sturdiness of water barriers when filled instill pedestrians with an additional sense of security.



SIGNAGE

Uses

Beyond alerting pedestrians and bicyclists to route closures and alternative paths, signage can inform people of business operations during construction and alternative modes of entering.

Signage indicating sidewalk closure or re-routing should be placed at intersections.

The size of text and reflectivity of the surface should be taken into consideration to ensure signs are legible for the visually impaired.

Signage indicating that a crossing is necessary should clearly delineate where to cross.

Other Considerations

Crosswalk buttons and signage at the base of pedestrian signal poles ought to be free from obstruction.

Reference the most recent edition of the Manual on Uniform Traffic Control Devices (MUTCD) for a full index of sign types: <https://mutcd.fhwa.dot.gov/>

Application



Placement and visibility of signage is crucial to ensuring pedestrian safety.



BEVELED SURFACES

Uses

Beveled surfaces minimize trip hazards and are essential for ADA accessibility.

It's important that non-slip material is applied to the beveled surface and its adjoining sloped surface.

All beveled surfaces and ramps should be well lit for clear visibility if they exist within a scaffolding structure.

If a beveled surface is exposed without overhead protection, it should stand out through bright coloration.

Other Considerations

Beveled surfaces are most often used in conjunction with ramps which are one of the more bespoke tools for pedestrian accommodations in the right-of-way.

The height, horizontal space allotted, and turning requirements of the pathway help determine the type of ramp deployed.

Application



A beveled surface built into the ramp shown above ensures an even, smooth transition from sidewalk to ramp structure.



SCAFFOLDING

Uses

Most applicable in cases where overhead construction is being performed, scaffolding is one of the more robust pedestrian routing solutions available.

Handrails must line the walls of any scaffolding structure to ensure ADA compliance.

Within the scaffolding structure, whether it be a converted shipping container or more traditional scaffolding, the space must be well lit and feature emergency exits in the form of openings or breaks to the scaffolding wall.

Other Considerations

The converted shipping container shown above is an innovative and convenient solution for overhead protection.

When using a shipping container as scaffolding, the following should be considered:

- Entrances to the scaffolding should be clearly marked and illuminated.
- Ramps should be deployed at the entrances and exits.
- Ramps must be fitted with non-slip surfaces and have beveled connections.
- Original fixtures such as doors should be removed prior to placement on sight

Scaffolding as a canvas



Overhead protection structures provide an opportunity for artists to display their work.