

Work Zone Safety How to make your projects ADA Compliant

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Disclaimer

- ▶ These materials are intended to assist employers, workers, and others as they strive to improve work zone safety. All of the pictures, video and information in the following presentation are to be utilized for training purposes only. Any individuals or companies named or shown can not be retroactively perused based upon information gained during this presentation as it is being utilized for training and education purposes.

Lets take a look at the past

- ▶ 2003 (Before My time at MDOT)



Do you see it?



Can you see?



(Before my time ... 2006)



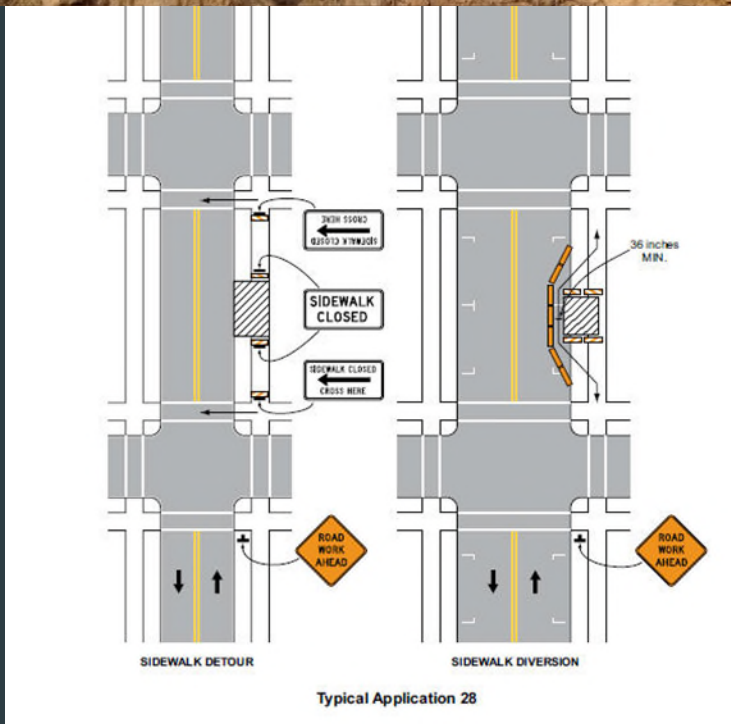




2012-2014 We Have Improved ... A little

















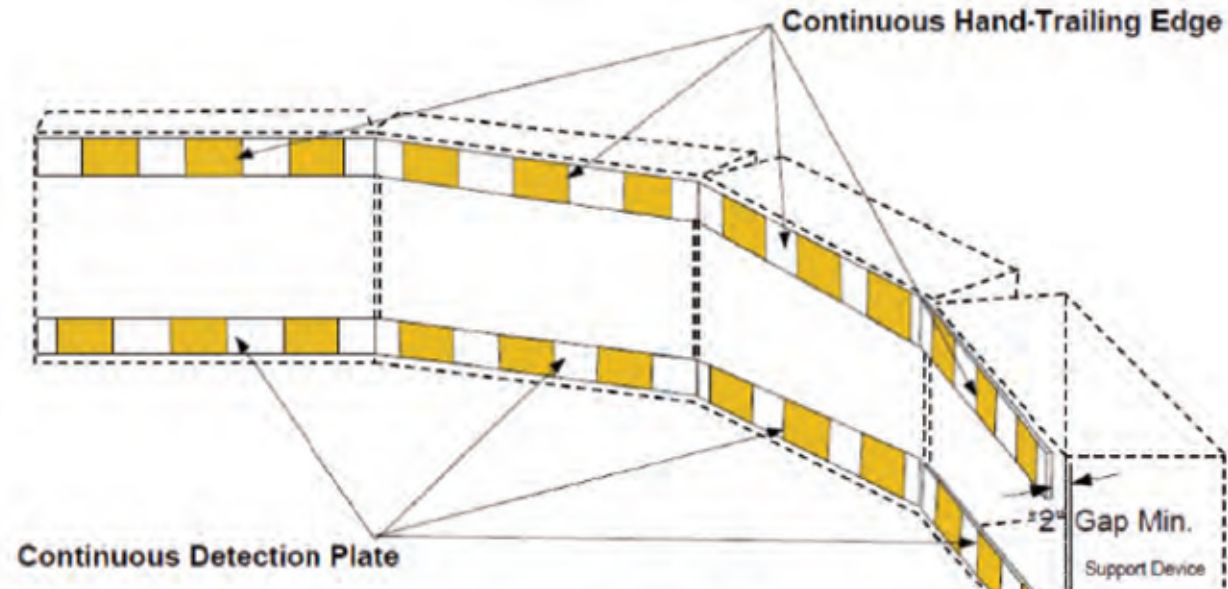
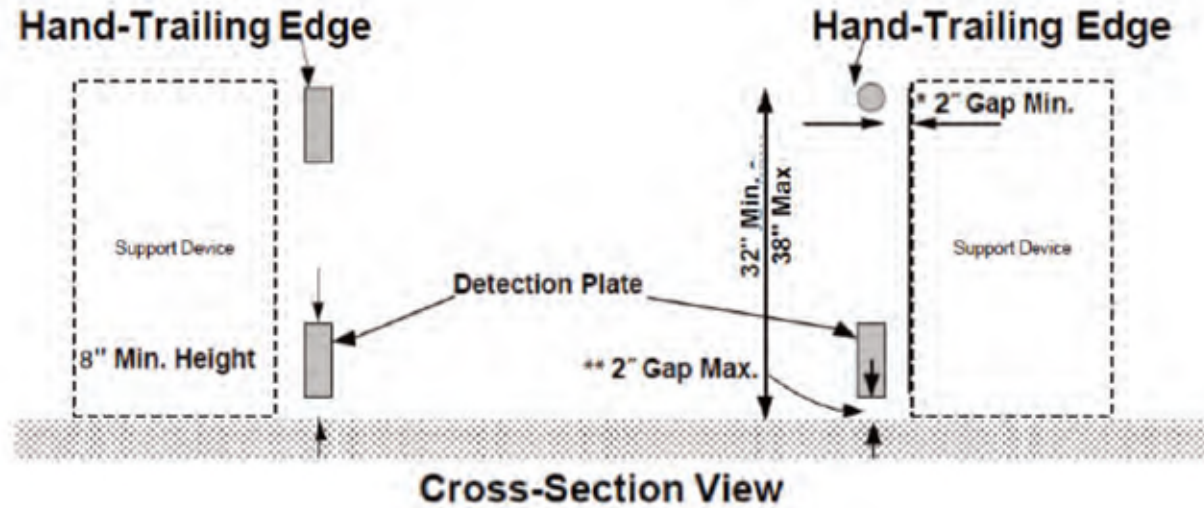
Upcoming Changes

- ▶ FHWA is in the process of updating the MUTCD Part 6
 - ▶ Looking at adding additional guidance on ADA devices
 - ▶ The next 4 slides are Draft examples of what may end up in the updated version of Part 6



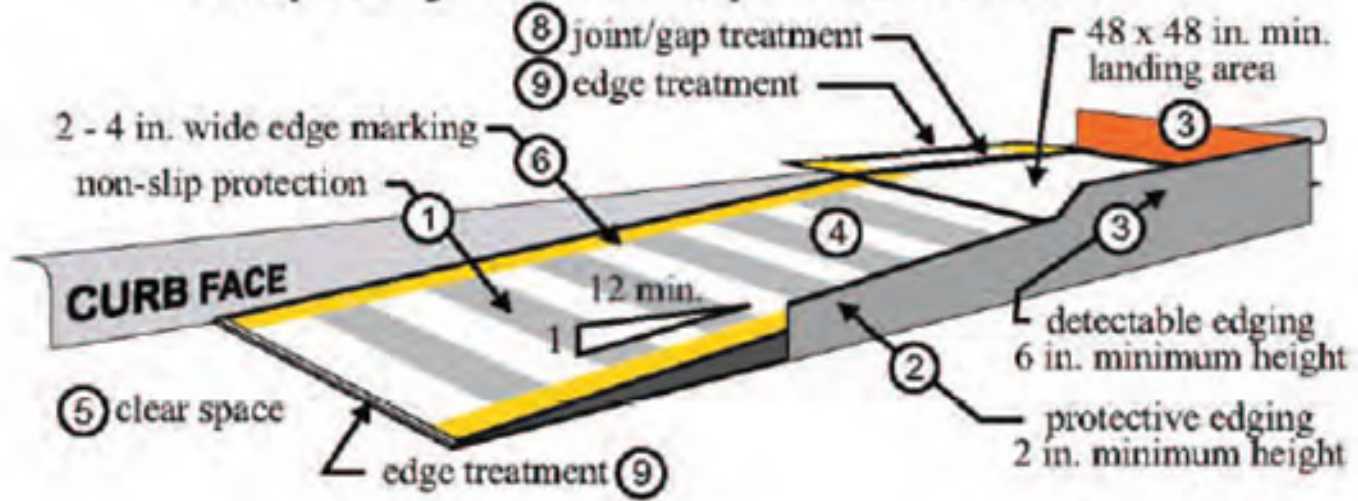
DRAFT

Pedestrian Channelizing Device

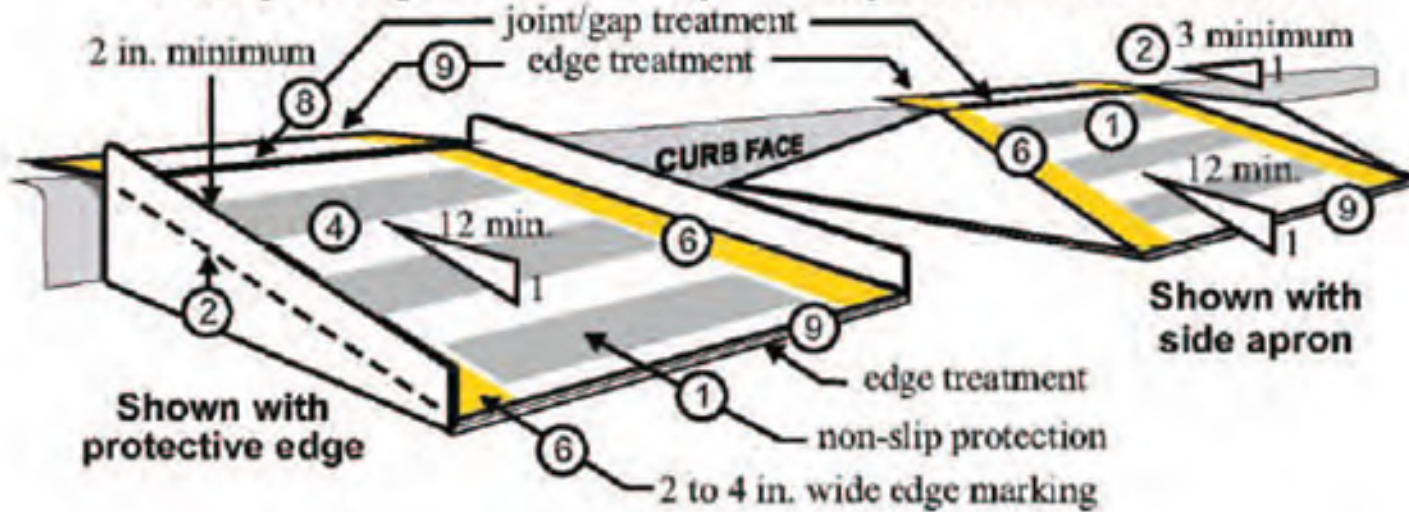


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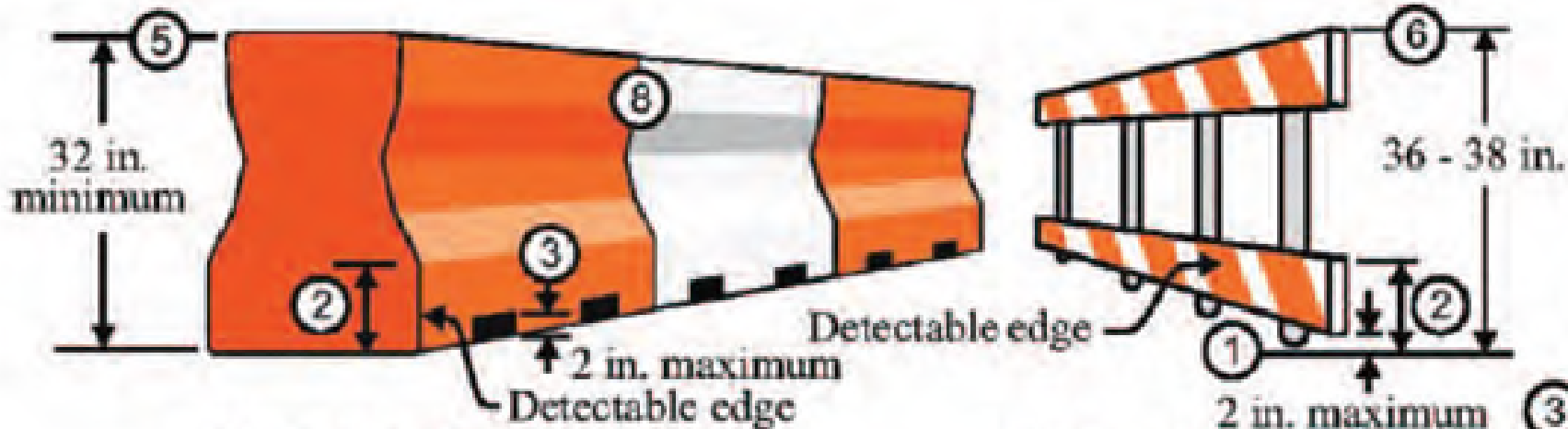
Temporary Curb Ramp - Parallel to Curb



Temporary Curb Ramp - Perpendicular to Curb



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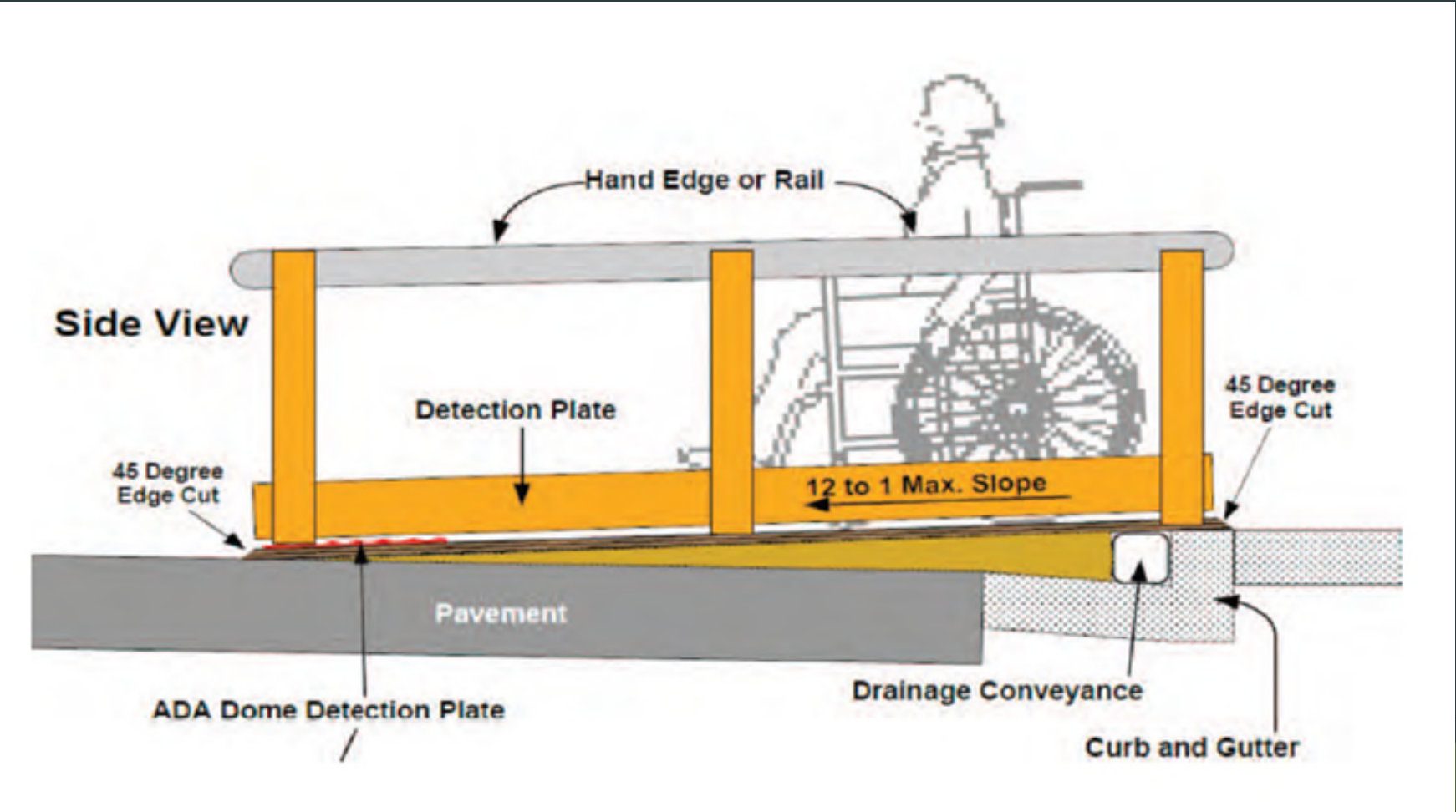
Detectable Edge

using a Longitudinal Channelizer

Detectable Edge

shown on a railing system

DRAFT



Pedestrian ADA 2016

New SP's are approved and posted on the Web

- ▶ 2012 Previously Approved
- ▶ Division 812 - Temp Traffic Control for Constr Zone Operation
 - ▶ [Temporary Pedestrian Barrier with Fence-12DS812\(J800\)-10-30-15](#)
 - ▶ [Temporary Pedestrian Type II Barricade-12DS812\(J820\)-10-30-15](#)
 - ▶ [Temporary Pedestrian Type II Channelizer-12DS812\(J825\)-10-30-15](#)
- ▶ Division 8 - Incidental Construction
 - ▶ [Temporary Pedestrian Path-12DS800\(J810\)-10-30-15](#)
 - ▶ [Temporary Pedestrian Ramp-12DS800\(J815\)-10-30-15](#)
 - ▶ [Temporary Pedestrian Passing Space-12DS800\(J805\)-10-30-15](#)
- ▶ 2012 Templates Division 8 - Incidental Construction
 - ▶ [Temporary Bus Stop-12TM800\(A325\)-10-30-15](#)

2020 Spec Book - FUSPs

20SP-812E-01

20SP-812E-01 TEMPORARY PEDESTRIAN TYPE II BARRICADE - Use in all projects with Pedestrian Type II Barricade, Temp pay item.

20SP-812F-01

20SP-812F-01 TEMPORARY PEDESTRIAN TYPE II CHANNELIZER - Use on all projects with Pedestrian Type II Channelizer, Temp pay item.

20SP-812G-02

20SP-812G-02-TEMPORARY PEDESTRIAN PATH - Use on all projects with Pedestrian Path, Temp pay item.

20SP-812H-01

20SP-812H-01 TEMPORARY PEDESTRIAN RAMP - Use on all projects with Pedestrian Ramp, Temp pay item.

Temporary Pedestrian Barrier With Fence



- Use to channelize pedestrians, and provide a high level of protection.
- May be used to separate pedestrian and vehicle traffic.
- Concrete or water-filled barrier sections are allowed.

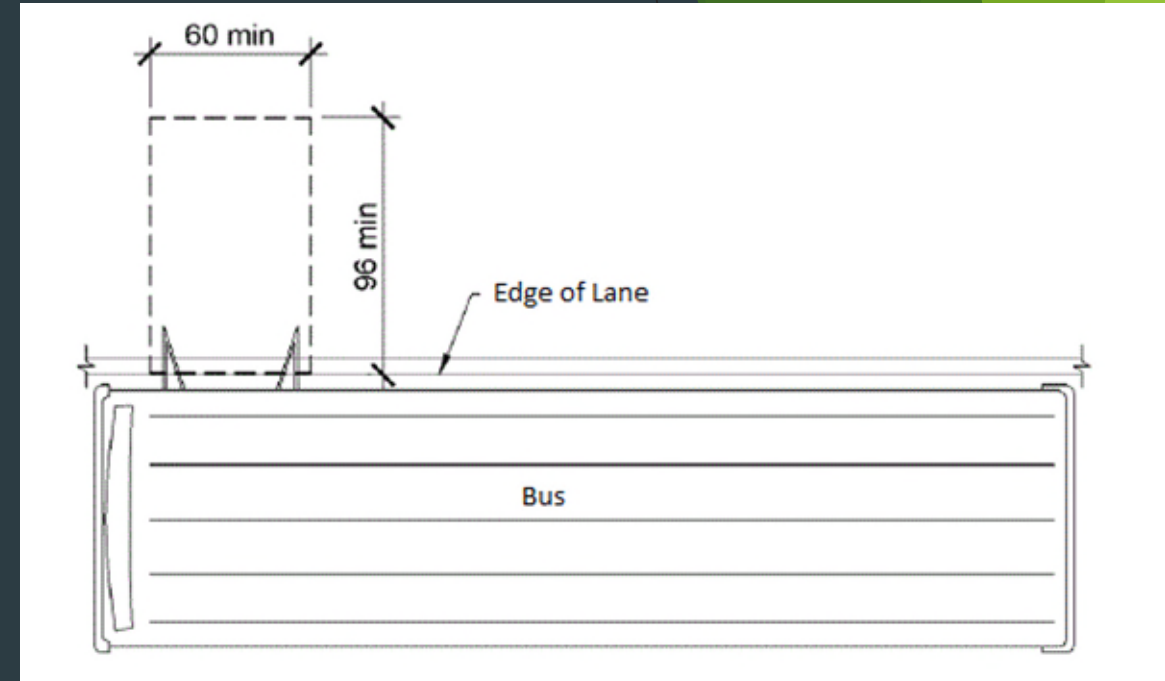
Pay Item

Pay Unit

Pedestrian Barrier with Fence, Temp..... Foot

Temporary Bus Stop

- Include in projects when permanent bus stops cannot be accessed due to construction.
- Dimensions listed are minimums, size can be increased with demand.
- The perimeter must be delineated with a pedestrian channelizing system, paid separately, to separate the bus stop from the work area.
- The bus stop may be constructed on a temporary surface or an existing surface.



Pay Item

Pay Unit

Bus Stop, Temporary.....Each

Temporary Pedestrian Type II Barricade

- Use to close non-motorized facilities in an ADA compliant manner.
- Cannot be used to channelize, or separate motorized traffic, or to close motorized facilities.
- One barricade is defined as a 4' section.
- Several devices available from different manufacturers.



Pay Item

Pay Unit

Pedestrian Type II Barricade, Temp..... Each

Temporary Pedestrian Type II Channelizer

- Use to channelize non-motorized traffic when a high level of protection is not needed.
- Cannot be used to separate pedestrians and motorized traffic.
- Paid separately from Pedestrian Type II Barricade.
- Various devices are available.



Pay Item

Pay Unit

Pedestrian Type II Channelizer, Temp.....Foot

Temporary Pedestrian Ramp

- Used when slopes on temporary paths are greater than 1:12, or to route pedestrians over a vertical obstacle.
- Detectable edging and handrails are not always required.
- All dimensional constraints spelled out in the Special Provision.



Pay Item

Pay Unit

Pedestrian Ramp, Temp.....Each



Temporary Pedestrian Path

- Encompasses all temporary pedestrian/non-motorized facility construction.
- Minimum width 4 feet.
- Cross-slope maximum of 2%
- Longitudinal slope maximum of 1:12, anything greater requires a temporary ramp, paid separately.
- Suitable materials to construct the path include asphalt materials, Oriented Strand Board (OSB), plywood, dimensional lumber, reclaimed, or other as approved by the Engineer. **Compacted soils, aggregate and sand are prohibited.**



Pay Item

Pay Unit

Pedestrian Path, Temporary..... Foot

Work Zone Safety and Mobility Manual

CHAPTER 5

NON-MOTORIZED WORK ZONE SAFETY AND MOBILITY

The MMUTCD Chapter 6D provides the requirements and guidance for non-motorized traffic accommodations in construction and maintenance work zones, as well as for work performed under permits. As stated in the [MMUTCD](#):

“The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on private roads open to public travel), including persons with disabilities (in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a TTC zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.” (Michigan Manual of Uniform Traffic Control Devices, 2011, p. 547 Part 6)

The chapter provides additional information specific to the planning, scoping, design, and implementation of non-motorized traffic control.

Minimum FHWA Requirement

- ▶ From FHWA *“the minimum accessibility requirement, to be enforced by our office is “replace in kind” - so , if the existing route is accessible, the detour must be accessible and detectable also; if existing route is not accessible and detectable, detour route need not be made accessible and detectable.”*
 - ▶ We can always do more and go above what is required.



Audible Systems





System - Installation



Why do we need to do all the extra work?

- ▶ A basic requirement of work zone traffic control, as provided in the Manual on Uniform Traffic Control Devices (MUTCD), is that the needs of pedestrians, including those with disabilities, must be addressed in temporary traffic control plans (TCPs) in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130
- ▶ The law requires pedestrians with physical and/or mental disabilities be accommodated not only in completed publicly accessible facilities, but also during times of construction or improvement.
- ▶ **BUT THIS WILL COST MILLIONS!**
- ▶ **What a waste!!**

WHY?





Our Reach Moving Forward

▶ Industry Education

- ▶ MDOT is working with traffic control companies and contractors on education and awareness.
- ▶ Meeting with large groups and smaller to answer specific questions

▶ MDOT Education

- ▶ Notification of Specification Development
- ▶ Trainings on how to use the devices
 - ▶ Need to make sure the correct items are in the plans
- ▶ Field inspection - what to look for









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Facts

- ▶ Nearly 10% of all adult Americans reported they either "have trouble" seeing, even when wearing glasses or contact lenses, or that they are blind or unable to see at all.

MUTCD 2009

Chapter 6D Pedestrian and Worker Safety

Section 6D.01 Pedestrian Considerations

- ▶ *Advance notification of the sidewalk closures shall be provided by the maintaining agency.*
- ▶ *If the TTC zone affects the movement of pedestrians, adequate pedestrian access and walkways shall be provided. If the TTC zone affects an accessible and detectable pedestrian facility, the accessibility and detectability shall be maintained along the alternate pedestrian route.*

MUTCD 2009

Chapter 6D Pedestrian and Worker Safety

Section 6D.02 Accessibility Considerations

05 Because printed signs and surface delineation are not usable by pedestrians with visual disabilities, blocked routes, alternate crossings, and sign and signal information should be communicated to pedestrians with visual disabilities by providing audible information devices, accessible pedestrian signals and barriers and channelizing devices that are detectable to pedestrians with the aid of a long cane or who have low vision.

06 The most desirable way to provide information to pedestrians with visual disabilities that is equivalent to visual signing for notification of sidewalk closures is a speech message provided by an audible information device. Devices that provide speech messages in response to passive pedestrian actuation are the most desirable. Other devices that continually emit a message are also acceptable.

2013 National Statistics



Alabama	143,900	Montana	23,800
Alaska	13,600	Nebraska	33,600
Arizona	157,100	Nevada	81,100
Arkansas	98,100	New Hampshire	22,000
California	790,700	New Jersey	179,100
Colorado	106,600	New Mexico	71,300
Connecticut	65,300	New York	402,800
Delaware	20,800	North Carolina	252,800
District of Columbia	12,600	North Dakota	11,500
Florida	494,900	Ohio	270,900
Georgia	262,400	Oklahoma	124,400
Hawaii	25,600	Oregon	107,300
Idaho	42,700	Pennsylvania	285,300
Illinois	266,500	Rhode Island	23,700
Indiana	165,400	South Carolina	127,600
Iowa	53,100	South Dakota	18,700
Kansas	54,200	Tennessee	203,900
Kentucky	138,700	Texas	634,600
Louisiana	147,800	Utah	45,600
Maine	27,200	Vermont	13,800
Maryland	111,900	Virginia	155,100
Massachusetts	136,500	Washington	147,500
Michigan	229,400	West Virginia	72,200
Minnesota	83,500	Wisconsin	106,600
Mississippi	107,700	Wyoming	12,600
Missouri	143,900	Puerto Rico	206,400

ADA - Field Examples



ADA - Field Examples



ADA - Field Examples



ADA - Field Examples







ADA - Field Examples



































6F.74 Detectable Edging for Pedestrians

- ▶ Individual channelizing devices, **tape or rope** used to connect individual devices, other discontinuous barriers and devices, and pavement markings are not detectable by persons with visual disabilities and are **incapable of providing detectable path** guidance on temporary or realigned sidewalks or other pedestrian facilities.





Does this meet?



Does this meet?



Questions?

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