

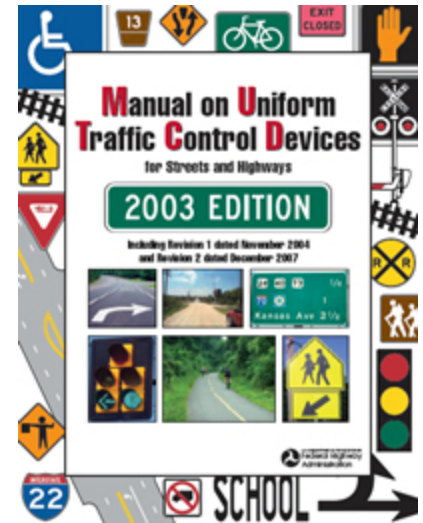
Designing and Maintaining a Pedestrian-Friendly Work Zone

Gerald L. Ullman, Ph.D., P.E.
Texas Transportation Institute



The MUTCD is clear!

*The needs and control of all road users
(motorists, bicyclists, and
pedestrians...) through a TTC zone
shall be an essential part of highway
construction, utility work,
maintenance operations...*



Pedestrians should...

- ...not be led into conflicts with work vehicles, equipment or operations
- ...not be led into conflicts with vehicles moving through or around work site
- ...be provided with a reasonably safe, convenient, and accessible path
- ...not have their route severed due to parked vehicles or equipment



Pedestrian TCP Design Checklist

- ✓ Diversion Route Considerations
- ✓ Pedestrian/Work Area Separation
- ✓ Pedestrian/Vehicle Separation
- ✓ Pathway Width and Surface Needs
- ✓ Detectable Edging Requirements



TCP Design Checklist (cont'd)

- ✓ Canopied Walkway Needs
- ✓ Sight Line Maintenance
- ✓ Provision of Pedestrian Guidance Information
- ✓ Other Intersection Needs
- ✓ Mitigate Path Obstructions
- ✓ Access to Transit Stops, Businesses, Residences

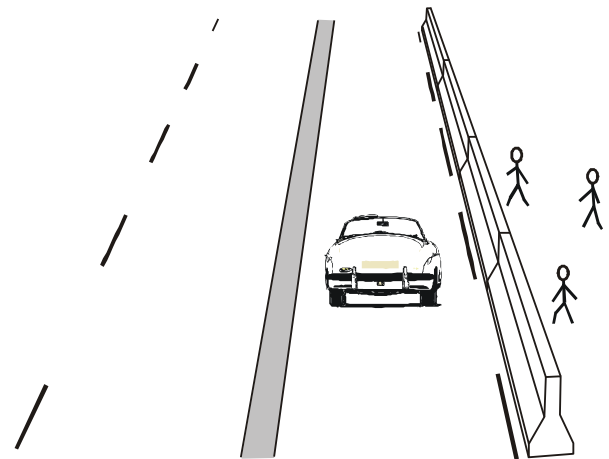


Diversion Route Considerations

Priorities:

1. Parking lane next to work site
2. Closed travel lane next to work site (if multi-lane facility)
3. Sidewalk or path across the street

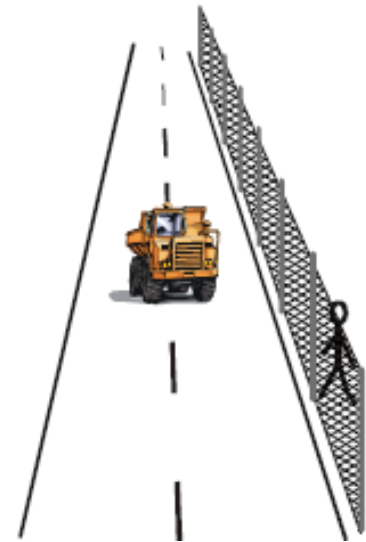
In some cases, a temporary traffic barrier may be needed



Pedestrian/Work Area Separation

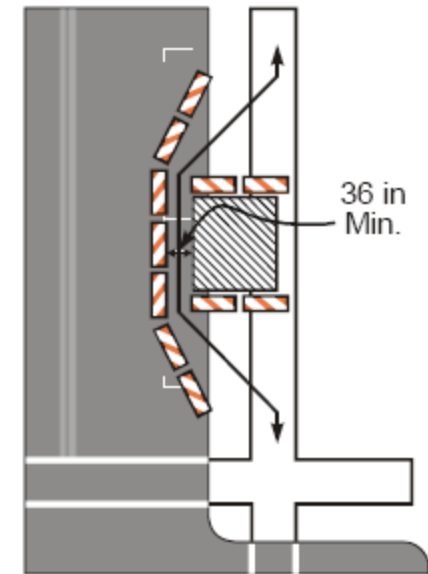
- Positively protect excavations or drop-offs
- Fences or barriers to prevent pedestrian access into work site

Fences or barriers should be high enough to prevent climbing over



Pedestrian/Vehicle Separation

- Barriers may be needed
 - High-speed traffic situations
 - Designed to prevent intrusions
- Barricades or channelizing devices may be sufficient
 - Detectable edging required
 - Continuous path provided



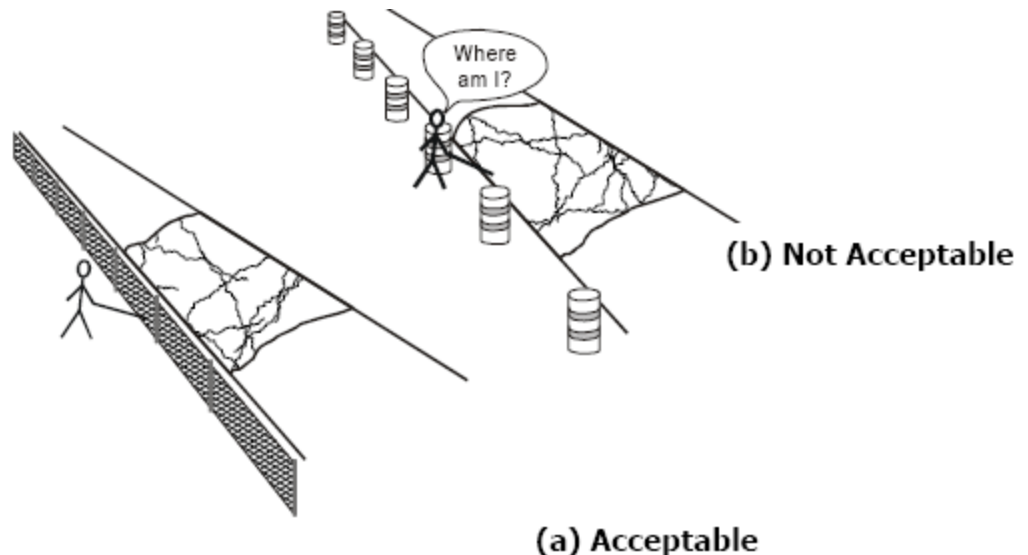
Pathway Width and Surface Needs

- 5 ft width desirable
- If less than 5 ft, provide a 5 ft by 5 ft space every 200 ft along route
- 3 ft absolute minimum, unless special provisions provided for wheelchairs
- Path must be smooth, continuous, hard surface



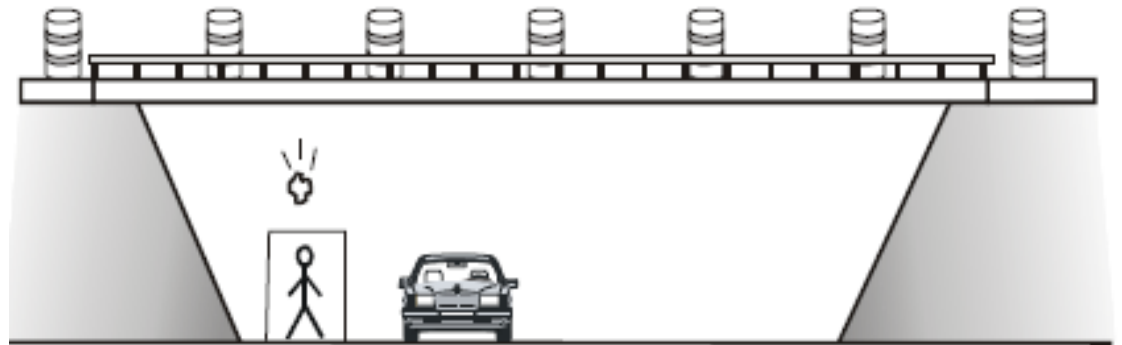
Detectable Edging

- Continuous plastic, metal, wood, etc.
- Bottom rail a maximum of 6 inches above ground
- Rail at hand height desirable



Canopied Walkway

- Required if potential for falling debris
- Lighting may be required if intended for use at night



Maintaining Sight Lines

- Drivers and pedestrians need to see each other at crossings
- Features to check:
 - Fences
 - Parking
 - Signs
 - Bridge abutments
 - Work vehicles and equipment



Pedestrian Information Needs

- Advance information about sidewalk closures
- Clear and positive guidance provided through and around work area
- Guidance back to original route provided



Ask yourself: What would I tell a driver?

Pedestrian Information (cont'd)

Message Design Tips:

- Provide distances (blocks or feet)
- Describe desired action when possible (“USE OTHER SIDE”)
- Orange and black = work zone



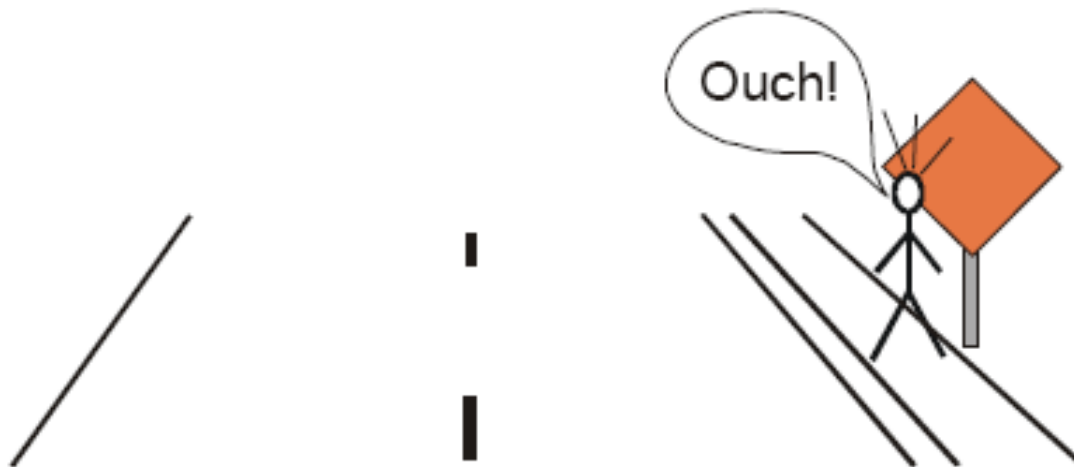
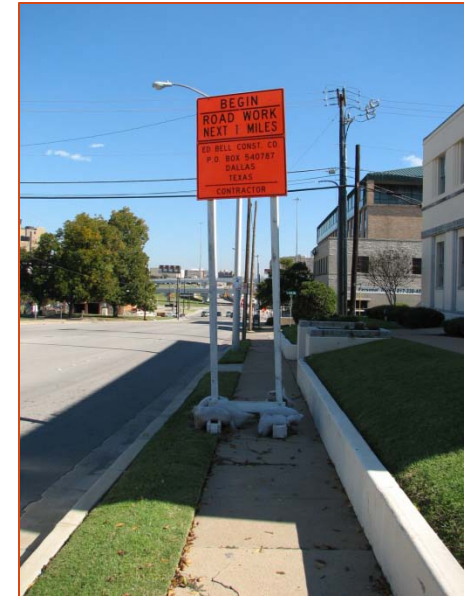
Other Intersection Needs

- Temporary crosswalks
- Traffic signal adjustments
 - Pedestrian clearance
 - Maintaining accessibility



Mitigate Path Obstructions

- No scaffolding, fencing, etc., protruding into path
- No signs lower than 7 ft extending into path



Access Considerations

- Transit stops



- Access to businesses, residences also need to be considered

In-Field Construction Reviews

- Check TCP design at beginning of project, after each phase change
- Include as part of regular inspector reviews throughout project
- Be vigilant for “accidental” impacts to pedestrians



















For more information....

- *Checklist for Accommodating Pedestrians in Temporary Traffic Control Areas*, December 2007,
<http://tti.tamu.edu/documents/0-5237-P1.pdf>
- FHWA Work Zone Safety Grant Program
http://www.workzonesafety.org/fhwa_wz_grant/atssa/atssa_pedestrian_checklist
http://www.workzonesafety.org/fhwa_wz_grant/atssa/atssa_guidance_sheet

Gerald Ullman

TTI

(979) 845-9908

g-ullman@tamu.edu