

### National Committee on Uniform Traffic Control Devices

13236 North 7th Street, Suite 4-259, Phoenix, Arizona 85022 Phone/Text: 231-4-NCUTCD (231-462-8823) E-mail: secretary@ncutcd.org Website: https://ncutcd.org

1 Item No.: 25A-TTC-04

3

5

# NCUTCD RECOMMENDATION FOR CHANGES TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

**COMMITTEE / TASK FORCE:** Temporary Traffic Control Technical Committee

ITEM NUMBER: 25A-TTC-04

**TOPIC:** "TTC Zone", "Work Zone", and "Work Space" Consistency

ORIGIN OF REQUEST: TTC Task Force #10 - Special Projects

AFFECTED SECTIONS 1C.02

**OF MUTCD:** 6A.01, 6B.01a (formerly 6N.01), 6B.07, 6B.09, 6C.02, 6E.04,

6H.07, 6K.02, 6M.05, 6M.08, 6P.07 (6N.11 in 11th Ed.)

9A.01

6

7

#### DEVELOPMENT HISTORY:

8 Approved by Edit TC: 01/08/2025, 06/11/2025

9 Approved by Bicycle TC: 01/08/2025

10 Approved by TTC TC: 01/09/2025, 06/11/2025

Approved by NCUTCD Council: 06/12/2025

11 12 13

14

15 16 This is a recommended change to the MUTCD that has been approved by the NCUTCD Council. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. It will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only through the federal rulemaking process.

17 18 19

20

21

22

2324

#### **SUMMARY:**

For improved consistency throughout the MUTCD, the term "work zone" was reviewed to see if the term "TTC zone" was more applicable in the context of each section. In parallel, the use of "work area" was reviewed for universal replacement with the term "work space". The definition of the term "Temporary Traffic Control Zone" was also reviewed and updated to reflect the current description provided in Section 6B.02. The definition of the term "work zone" is also recommended for inclusion in Section 1C.02 pointing back to the definition of "Temporary Traffic Control Zone".

262728

25

#### **DISCUSSION:**

- A review of the definition of "Temporary Traffic Control Zone" in Section 1C.02 resulted in recommendations to include "planned special events" and "emergency responders". We are
- recommending the proposed changes to the definition of "Temporary Traffic Control Zone"
- 32 presented below and including a definition of "Work Zone" which refers to the "Temporary Traffic
- 33 Control Zone" definition. TTC presented this proposed definition to the Edit Committee on

01/08/25, and with modifications to what was originally presented, was passed unanimously as shown below.

A review of the term "work zone" in the MUTCD identified 35 occurrences including section titles. Of those occurrences, twelve (12) are recommended to be replaced with "TTC zone" and three (3) replaced with "work space" based on the context. Note that Ballot items 24A-TTC-06 and 24A-TTC-02, approved by Council June 2024, already recommended eliminating the phrase "work zone" in Sections 6L.01 and 6M.02, respectively. It is recommended that the fifteen (15) references to "work zone" be replaced as presented in this proposal.

Two (2) occurrences are in Part 9 (Traffic Control for Bicycle Facilities). TTC Committee has coordinated with the Bicycles Technical Committee regarding our recommendation to replace "work zone" with "TTC zone".

 A review of the term "work area" in the MUTCD, an outdated term, identified ten (10) occurrences. The correct term is "work space" which is well described in Section 6B.06 (Activity Area) including multiple figures in the MUTCD. It is recommended that nine (9) references to "work area" be replaced with "work space" and one (1) be replaced with "TTC zone" as presented in this proposal. The references to "work area" in Section 4D.11 were previously addressed by the 24A-TTC-06 ballot item in coordination with Signals Technical Committee.

#### **RECOMMENDED MUTCD CHANGES:**

The following present the proposed changes to the current MUTCD within the context of the current MUTCD language. Proposed additions to the MUTCD are shown in <u>blue underline</u> and proposed deletions from the MUTCD are shown in <u>red strikethrough</u>. Changes previously approved by NCUTCD Council (but not yet adopted by FHWA) are shown in <u>green double underline</u> for additions and <u>green double strikethrough</u> for deletions. In some cases, background comments may be provided with the MUTCD text. These comments are indicated by <u>[bracketed white text in shaded green]</u>.

#### PART 1. GENERAL

### CHAPTER 1C. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS USED IN THIS MANUAL

#### Section 1C.02 Definitions of Words and Phrases Used in this Manual

- Unless otherwise defined in this Section, or in other Parts of this Manual, words or phrases shall have the meaning(s) as defined in the "Uniform Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," or other appropriate publications.
- Where a term that is defined in this Section or elsewhere in this Manual has a different definition in another resource or in common use, the definition herein shall govern for purposes of the applicability of the provisions of this Manual.
- The following words and phrases, when used in this Manual, shall have the following meanings:
- [Only affected definitions are shown. Definition 262 and proposed definition 291a are also impacted by separate ballot item 25A-EDT-01 "Definitions of Highway, Roadway, and Road" under concurrent

Standard:

82 review by Council. This ballot item will be updated to reflect all approve changes if both ballot items 83 pass Council.] 84 262. Temporary Traffic Control Zone—an area of a highway, pedestrian or bicycle facility 85 where road user conditions are changed because of a work zone, planned special event, or 86 incident by the use of temporary traffic control devices, flaggers, emergency responders, 87 uniformed law enforcement officers, or other authorized personnel. 88 89 291a. Work Zone – an area of a highway, pedestrian or bicycle facility with construction, 90 maintenance or utility work activities (see Temporary Traffic Control Zone). 91 92 93 PART 4. HIGHWAY TRAFFIC SIGNALS 94 95 CHAPTER 4D. DESIGN FEATURES OF TRAFFIC CONTROL SIGNALS 96 97 **Section 4D.11 Temporary and Portable Traffic Control Signals** 98 [For brevity, only paragraphs 06 and 07 of Section 4D.11 are shown.] 99 Guidance: 100 A temporary traffic control signal should be used only if engineering judgment indicates that installing the signal will improve the overall safety and/or operation of the location. 101 The use of temporary traffic control signals by a work crew on a regular basis in their work area 102 should be subject to the approval of the jurisdiction having authority over the roadway. 103 104 [Instance of "work area" deleted in 24A-TTC-06.] 105 106 107 PART 6. TEMPORARY TRAFFIC CONTROL 108 109 **CHAPTER 6A. GENERAL** 110 111 Section 6A.01 General 112 [For brevity, only paragraphs 01-02 and 10 of Section 6A.01 are shown.] 113 Support: 01 Whenever the acronym "TTC" is used in Part 6, it refers to "temporary traffic control." 114 115 Standard: 116 The needs and control of all road users (motorists, bicyclists, and pedestrians within the 117 highway, or on a site roadway open to public travel (see definition in Section 1C.02), including persons with disabilities) through a Temporary Traffic Control (TTC) zone shall be an essential 118 119 part of highway construction, utility work, maintenance operations, and the management of traffic 120 incidents. 121 Support: 122 Operational improvements might be realized by using intelligent transportation systems (ITS) in 123 work zones TTC zones. The use of ITS technologies in work zones of ITS technology, such as portable camera systems, highway advisory radio, variable speed limits, ramp metering, traveler information, 124 125 merge guidance, warning systems for vehicles exiting the work space, and queue detection information, is 126 aimed at increasing safety for both workers and road users and helping to ensure a more efficient traffic flow. The use of ITS technologies in work zones TTC zones of ITS technologies has been found to be 127 128 effective in providing traffic monitoring and management, data collection, and traveler information.

129 130	CHAPTER 6B. TEMPORARY TRAFFIC CONTROL ELEMENTS
131	Section 6N.01 6B.01a Work Duration
132 133	[Section 6N.01 was relocated to 6B.01a in 24B-TTC-03. For brevity, only paragraphs 13-15 of the section are shown.]
134	Option:
135	Flags and/or channelizing devices may additionally be used and moved periodically to keep them near the mobile work space area.
136 137 138	14 Flaggers may be used for mobile operations that often involve frequent short stops.  Support:
139 140 141	Mobile operations also include work activities where workers and equipment move along the road without stopping, usually at slow speeds. The advance warning area moves with the work space area.
142	Section 6B.07 Termination Area
143	Support:
144 145 146 147	The termination area is the section of the highway where road users are returned to their normal driving path. The termination area extends from the downstream end of the work space area to the last TTC device such as END ROAD WORK signs, if posted.  Option:
148	O2 An END ROAD WORK sign, a Speed Limit sign, or other signs may be used to inform road users
149 150	that they can resume normal operations.
150 151 152	A longitudinal buffer space may be used between the work space and the beginning of the downstream taper.
153	Section 6B.09 Detours and Diversions
154 155 156	Support:  Of A detour is a temporary rerouting of road users onto an existing highway in order to avoid a TTC zone.
157 158 159	Guidance: 02 Detours should be clearly signed over their entire length so that road users can easily use existing highways to return to the original highway.
160 161 162	Support:  O3 A diversion is a temporary rerouting of road users onto a temporary highway or alignment placed around the work space area.
163 164	CHAPTER 6C. PEDESTRIAN AND WORKER SAFETY
165 166	Section 6C.02 Pedestrian Considerations
167	[For brevity, only paragraphs 05 and 10 of Section 6C.02 are shown.]
168	Option:
169 170	of If an existing pedestrian route is impacted by a short-duration or a short-term stationary <u>TTC zone</u> work zone that is attended with project personnel, establishing an alternate pedestrian route may not be
171	necessary if the work can be stopped and pedestrians can navigate the TTC zone work zone. Pedestrians
172 173 174	may be delayed for a short period of time for project personnel to move equipment and material to facilitate passage. TTC zone Work zone personnel may also provide assistance to pedestrians as
1/4	necessary.

175 176 177 178	Support:  10 Figures 6P-28 and 6P-29 show typical TTC device usage and techniques for pedestrian movement through TTC zones work zones
179 180	CHAPTER 6E. ONE-LANE, TWO-WAY TRAFFIC CONTROL
181	Section 6E.04 Pilot Car Method
182 183 184	[For brevity, only paragraphs 01-04 of Section 6E.04 are shown.] Option:  A pilot car may be used to guide a queue of vehicles through the TTC zone or detour.
185 186 187	Guidance:  The pilot car should have the name of the contractor or contracting authority prominently displayed.  Standard:
188 189 190 191	The PILOT CAR FOLLOW ME (G20-4) sign (see Figure 6H-1) shall be mounted on the top or on the rear of the pilot vehicle (see Section 6H.37).  The pilot car operation shall be coordinated with flagging operations or other methods of control at each end of the one lane section of the TTC zone work zone.
192 193 194	CHAPTER 6H. TTC ZONE WARNING SIGNS
195	Section 6H.07 Lane(s) Closed Signs (W20-5, W20-5a, and W9-3)
196 197 198 199 200 201	Standard:  1 The Lane(s) Closed sign (see Figure 6H-1) shall be used in advance of that point where one or more through lanes of a multi-lane roadway are closed.  10 For a single lane closure, the Lane Closed (W20-5) sign (see Figure 6H-1) shall use the legend RIGHT (LEFT) LANE CLOSED. Where two or more adjacent lanes are closed, the W20-5a sign (see Figure 6H-1) shall use the legend XX RIGHT (LEFT) LANES CLOSED.
202 203	Option:  The distance legend may be either XX FEET, XX MILES, or AHEAD.
204 205 206 207 208 209	Guidance:  14 The Interior Lane Shift (W9-3) sign (see Figure 6H-1) should be used in advance of that point where work occupies an interior lane(s) and approaching motor vehicle traffic is directed to the right or left of the work space zone in the lane(s) by using a shifting taper to route traffic around the closed interior lane(s).
210 211	CHAPTER 6K. TTC ZONE CHANNELING DEVICES
212	Section 6K.02 Pedestrian Channelizing Devices
213 214 215 216 217	[Section 6K.02 previously revised in 24B-TTC-04. For brevity, only paragraph 01 and 02 of Section 6K.02 is shown.]  Support:  1 Pedestrian channelizing devices indicate a suitable path of pedestrian travel around or through the work TTC zone.

218 219 220 221 222	Guidance:  Pedestrian channelizing devices should be provided when a TTC zone impacts work activities impact sidewalks or other pedestrian facilities or when the design of the temporary pedestrian facility does not otherwise include accessibility features consistent with the features in the existing pedestrian facility.
223 224	CHAPTER 6M. OTHER TTC ZONE DESIGN FEATURES AND SAFETY DEVICES
225	Section 6M.02 Positive Protection and Temporary Traffic Barriers
226	[Section 6M.02 previously revised in 24A-TTC-02. Only paragraphs 1 through 3 are shown.]
227 228 229 230	Support:  1 Temporary traffic barriers, including portable or movable barriers, are devices designed to help prevent penetration by vehicles while minimizing injuries to vehicle occupants, and to protect workers, bicyclists, and pedestrians.
231 232 233 234 235	Guidance:  oz Except as otherwise required, at a minimum, longitudinal traffic barriers and/or other positive protection devices should be considered in work <u>TTC</u> zone situations that place workers at increased risk from motorized traffic, and where positive protection devices offer the highest potential for improved safety for workers and road users.
236	Support:
237 238 239	Considerations for positive protection include, but are not limited to, the following circumstances:  A. Work-TTC zones that provide workers no means of escape from motorized traffic such as tunnels or bridges;
240 241	B. Long-term stationary work <u>TTC</u> zones <u>with durations</u> of two weeks or more resulting in substantial worker exposure to motorized traffic;
242 243	C. Projects with anticipated operating speeds of 45 mph or greater, especially when combined with high traffic volumes;
244 245	D. Work operations that place workers, pedestrians, or bicyclists close to travel lanes open to traffic; and
246 247	<ul> <li>E. Roadside hazards, such as drop-offs or unfinished bridge decks, that will remain in place overnight or longer.</li> </ul>
248 249	Section 6M.05 Crash Cushions
<ul><li>250</li><li>251</li></ul>	[For brevity, only paragraph 05 of Section 6M.05 is shown.]  Truck-mounted attenuators shall be energy-absorbing devices attached to the rear of shadow

252 trailers or trucks and shall be used in accordance with the manufacturer's specifications. If used,

the shadow vehicle with the attenuator shall be located in advance of the work space area, workers, 253 254

or equipment to reduce the severity of rear-end crashes from errant vehicles.

#### Section 6M.08 Lighting for Night Work

256 Support:

255

263

264

265

266267

268

269

- 257 of Utility, maintenance, or construction activities on highways are frequently conducted during
- 258 nighttime periods when vehicular traffic volumes are lower. Large construction projects are sometimes
- operated on a double-shift basis requiring night work (see Section 6N.18).
- 260 Guidance:
- When nighttime work is being performed, floodlights should be used to illuminate the work <u>space</u> area, equipment crossings, and other areas.
  - 03 When used, floodlighting should be installed in a manner that minimizes glare to approaching road users, flaggers, or workers.
  - The adequacy of the floodlight placement and elimination of potential glare should be determined by driving through and observing the floodlighted area from each direction on all approaching roadways after the initial floodlight setup, at night, and periodically. Lighting should be sufficient so as to give road users the capability to identify a worker as a person. Care should be taken to minimize the potential for shadows to conceal workers within the work space area.
- 270 Support:
- Desired illumination levels vary depending upon the nature of the task involved. An average
- horizontal luminance of 5 foot candles can be adequate for general activities. Tasks requiring high levels
- of precision and extreme care can require an average horizontal luminance of 20 foot candles.
- 274 Standard:
- 275 of Except in emergency situations, flagger stations shall be illuminated at night.

277278

279

280

281

282

284

285

276

#### **CHAPTER 6P. TYPICAL APPLICATIONS**

## Section <u>6N.11</u> <u>6P.07</u> Work within the Traveled Way of a Multi-Lane, Non-Access Controlled Highway

[Section 6N.11 relocated to 6P.07 in 24B-TTC-01. For brevity, only paragraph 13 of the section is shown.]

283 Option:

13 If operating speeds are 40 mph or less and the space approaching the work space area does not permit moving traffic over one lane at a time, a single continuous taper may be used.

286 287

### [For brevity, only the affected Typical Applications, and affected portions of those TAs, are shown.]

288 289 290

# Notes for Figure 6P-36—Typical Application 36 Lane Shift on a Freeway or Expressway Approved in 24B-TTC-01.

291292

293

294

295

296

297

298

299

300

#### Guidance:

1. The lane shift should be used when the work space extends into either the right-hand or left-hand lane of a divided highway and it is impracticable, for capacity reasons, to reduce the number of available lanes.

Support:

2. When a lane shift is accomplished by using (1) geometry that meets the design speed at which the permanent highway was designed, (2) full normal cross-section (full lane width and full shoulders), and (3) complete pavement markings, then only the initial general <a href="TTC">TTC</a> work-zone warning sign is required.

### Notes for Figure 6P-38—Typical Application 38 Interior Lane Closure on a Freeway

302303304

307

308

309310

311

312313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329330

331

332

333

335

336

301

#### **Standard:**

- 1. An arrow board shall be used when a freeway lane is closed. When more than one freeway lane is closed, a separate arrow board shall be used for each closed lane.
  - lane is closed, a separate arrow board shall be used for each closed lane.

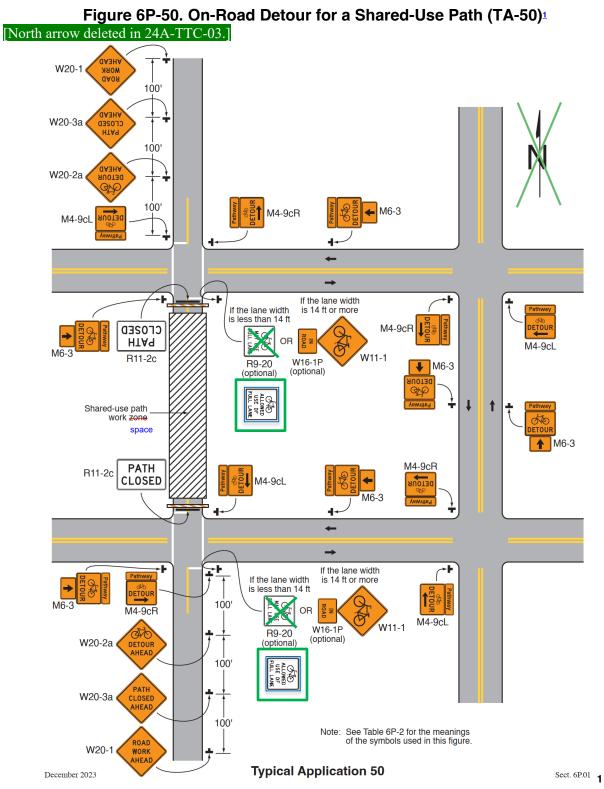
    2. If temporary traffic barriers are installed, they shall comply with the provisions and requirements in Section 6M.02.
  - 3. The barrier shall not be placed along the shifting taper. The lane shall first be shifted using channelizing devices and pavement markings.
  - 4. For long-term stationary work, existing conflicting pavement markings shall be removed and temporary markings shall be installed before traffic patterns are changed.

Guidance:

- 5. For a long-term closure, a barrier should be used to provide additional safety to the operation in the closed interior lane. A buffer space should be used at the upstream end of the closed interior lane.
- 6. An arrow board displaying an arrow pointing to the right should be placed on the left-hand shoulder at the beginning of the taper.
- 7. For long-term use, the broken lane lines should be made solid white in the two-lane section. Option:
  - 8. As an alternative to initially closing the left-hand lane, as shown in the typical application, the right-hand lane may be closed in advance of the interior lane closure with appropriate channelization and signs. The Interior Lane Shift Ahead symbol sign may be mirrored to indicate a right lane shift.
  - 9. A short, single row of channelizing devices in advance of the vehicular traffic split to restrict vehicular traffic to their respective lanes may be added.
  - 10. DO NOT PASS signs may be used.
  - 11. If a paved shoulder having a minimum width of 10 feet and sufficient strength is available, the left-hand and center lanes may be closed and motor vehicle traffic carried around the work space on the right-hand lane and a right-hand shoulder.
  - 12. A work vehicle with a truck-mounted attenuator may be used within the closed interior lane between the buffer space and the work space area.
  - 13. Positive protection devices may be used per Section 6M.02.

334 Guidance:

14. When a shoulder lane is used that cannot adequately accommodate trucks, trucks should be directed to use the normal travel lanes.



339 340

<sup>&</sup>lt;sup>1</sup> Known error. From MUTCD website: Figure 6P-50: Change "May" to "Allowed" on R9-20 sign.

341	PART 9. TRAFFIC CONTROL FOR BICYCLE FACILITIES
342	
343	CHAPTER 9A. GENERAL
344	
345	Section 9A.01 General
346	Support:
347	Part 9 covers signs and pavement markings specifically related to bicycle operation on roadways,
348	separated bikeways, and shared-use paths. In jurisdictions where small, low-speed, human or electric-
349	powered transportation devices (often referred to as a micromobility devices) are allowed to use bicycle
350	facilities, they can be regulated by signs, pavement markings, and other traffic control devices related to
351	bicycle operations. Part 4 contains information on highway traffic signals and bicycle signal faces. Part 6
352	contains information on TTC zones work zones for bicycle facilities and the mitigation of impacts to
353	bicycle travel through TTC zones work zones.