



# National Committee on Uniform Traffic Control Devices

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**Attachment No. 2**  
**Item No.: 15A.EC.01**

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## NCUTCD Proposal for Changes to the Manual on Uniform Traffic Control Devices

<b>TECHNICAL COMMITTEE:</b>	Edit Committee, with input from all technical committees and a task force
<b>ITEM NUMBER:</b>	Edit #1
<b>TOPIC:</b>	Site Roadways Open to Public Travel (SROPT)
<b>ORIGIN OF REQUEST:</b>	Needed due to changes in the 2009 MUTCD applying the MUTCD to private roads open to public travel
<b>AFFECTED SECTIONS OF MUTCD:</b>	Part 1, Part 2, Part 3, Part 6

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### DEVELOPMENT HISTORY:

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- Approved by Edit Committee, April 30, 2015, revised and approved June 17, 2015
- Approved by NCUTCD Council: June 18, 2015 (Edit, GMI and Signals) and January 8, 2016 (R&W, Markings, TTC and GMI)
- Reviewed by task force and Edit Committee for editorial consistency June 8, 2016.

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*This is a proposal for recommended changes to the MUTCD that have 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.*

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### SUMMARY:

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In 2007 the FHWA approved federal rule making that made the Manual on Uniform Traffic Control Devices applicable to “roads open to public travel”. By the end of 2009, FHWA issued federal rule making on the MUTCD that further defined the application of the MUTCD to private roads open to public travel but left much of the detail to be developed. As currently written, all provisions of the MUTCD apply to both public roads and private roads open to public travel. Some characteristics of roads off of the public right-of-way that are open to public travel are different from other roadway environments and for this reason some existing MUTCD provisions are impractical for these roadways. ***For purposes of these recommend changes to MUTCD language, these roadways are described as “Site Roadways Open to Public Travel” or “Site Roadways.”*** Not all site roadways are on private property. Some are on public property (educational campuses, government facilities, airports, etc.), making the term private roadway imprecise in describing this category of roadways. The purpose of the described recommended MUTCD changes is to provide additional flexibility in selected provisions of the MUTCD for roadways that are not in the public right-of-way but are open to public travel.

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36 These proposed changes were initially developed by a task force that worked with all of the  
37 NCUTCD technical committees. The task force work was then reviewed by the Edit Committee  
38 and packaged as recommended MUTCD changes to submit to sponsors for review and comment.  
39

40 We believe that the safety, efficiency and convenience of road travel in the United States – by all  
41 road users – can be enhanced by the uniform and consistent application of traffic control devices.  
42 For owners of site roadways, these recommended changes increase the flexibility in providing  
43 traffic control devices that are consistent with the needs of the users of those facilities, which  
44 may be different from the needs of users of roadways in the public right-of-way.  
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## 46 **DISCUSSION**

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48 For many years, the Code of Federal Regulations (23CFR655) included the statement that the  
49 MUTCD is “the national standard for all traffic control devices installed on any street, highway,  
50 or bicycle trail open to public travel.” This language is also mentioned in the 2000 and 2003  
51 MUTCDs. In December 2006, the FHWA revised the language in 23 CFR 655.603 to clarify  
52 that, for the purpose of MUTCD applicability, the phrase “open to public travel” includes toll  
53 roads and roads within shopping centers, parking lots, airports, sports arenas, and other similar  
54 business and recreation facilities that are privately or publicly owned but where the public is  
55 allowed to travel without full-time access restrictions.  
56

57 The Final Rule making in 2009 for the MUTCD provides the following definition:  
58

### 59 **Part 1 General Introduction**

#### 60 **Standard:**

61 **Traffic control devices shall be defined as all signs, signals, markings, and other devices**  
62 **used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway,**  
63 **pedestrian facility, bikeway, or private road open to public travel (see definition in Section**  
64 **1A.13) by authority of a public agency or official having jurisdiction, or, in the case of a**  
65 **private road, by authority of the private owner or private official having jurisdiction.**  
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68 **The Manual on Uniform Traffic Control Devices (MUTCD) is incorporated by reference in**  
69 **23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall be recognized as the**  
70 **national standard for all traffic control devices installed on any street, highway, bikeway,**  
71 **or private road open to public travel (see definition in Section 1A.13) in accordance with 23**  
72 **U.S.C. 109(d) and 402(a). The policies and procedures of the Federal Highway**  
73 **Administration (FHWA) to obtain basic uniformity of traffic control devices shall be as**  
74 **described in 23 CFR 655, Subpart F.**  
75

76 **In accordance with 23 CFR 655.603(a), for the purposes of applicability of the MUTCD:**  
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- 78 **A. Toll roads under the jurisdiction of public agencies or authorities or public-private**  
79 **partnerships shall be considered to be public highways;**
- 80 **B. Private roads open to public travel shall be as defined in Section 1A.13; and**

- 81           **C. Parking areas, including the driving aisles within those parking areas, that are**  
82           **either publicly or privately owned shall not be considered to be “open to public**  
83           **travel” for purposes of MUTCD applicability.**  
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85           **Section 1A.13 Definitions**

86           **159. Private Road Open to Public Travel—private toll roads and roads (including any**  
87           **adjacent sidewalks that generally run parallel to the road) within shopping centers,**  
88           **airports, sports arenas, and other similar business and/or recreation facilities that are**  
89           **privately owned, but where the public is allowed to travel without access restrictions.**  
90           **Roads within private gated properties (except for gated toll roads) where access is**  
91           **restricted at all times, parking areas, driving aisles within parking areas, and private grade**  
92           **crossings shall not be included in this definition.**  
93

94           As pointed out in the comments to the NPA of the 2009 MUTCD, there are many challenges  
95           associated with applying the MUTCD to sites open to public travel. While some sites open to  
96           public travel share similar characteristics with public streets and highways, other sites open to  
97           public travel possess characteristics that were not considered when developing criteria for the  
98           application, placement, and other aspects of traffic control devices on public roadways and  
99           highways. Examples of sites open to public travel characteristics that make some of them  
100           different from public roads include (but are not limited to):  
101

- 102           • Lack of right-of-way defining limits of the “highway.”
  - 103           • Low-speed travel.
  - 104           • No posted or statutory speed limit.
  - 105           • High volumes of pedestrians.
  - 106           • No applicable law enforcement for failure to comply with traffic control devices.
  - 107           • Individual property rights.
- 108

109           **Guiding Principles**

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111           Five guiding principles were followed in the development of proposed edits to the MUTCD to  
112           address Site Roadways Open to Public Travel (SROPT). These include:  
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- 114           1. MUTCD applies to roads – public or private. With guidance (provided in edits to  
115           definitions in the MUTCD and the ITE Traffic Control Device Handbook) designers  
116           and proper authorities can make decision about what is a road;
- 117           2. In many cases on site roadways (due to their lower speed conditions), traffic control  
118           devices are not necessary with proper geometric and site design. However, where  
119           traffic control devices are utilized they need to comply with the MUTCD;
- 120           3. Editing of the MUTCD to include site roadways in the existing text was preferred  
121           versus a separate new Part (Chapter) to avoid redundancy and achieve streamlining.  
122           This was determined after prototyping out a new Part to the MUTCD and discovering  
123           that the issues were not as extensive as to require a new Part;
- 124           4. While the decision was made to not expand the MUTCD by adding a new Part, there  
125           was desire to highlight site roadways items such that a user could rapidly find  
126           discussion unique to site roadways without having to scan the entire MUTCD. To

127 accomplish this, it was decided to use the term “site roadways” or the acronym  
128 “SROPT” (for Site Roadways Open to Public Travel) and place it in front of new text  
129 specifically addressing conditions for site roadways to allow users to rapidly search  
130 future MUTCDs for “SROPT” related statements.

131 5. Carve outs to address SROPT flexibility was the preferred approach to the editing. This  
132 was particularly relevant in size exceptions, which used lower speeds as a condition for  
133 the flexibility, given that the function of these traffic control devices would not be  
134 affected in these circumstances.

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## 136 **Outreach**

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138 The Technical Committee outreach process framed numerous issues that people identified for  
139 consideration. The top five comments are summarized below as well as how they were  
140 addressed:

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- 142 • Standards for shape, color, size and those for placement, font, letter heights, number of  
143 signs
  - 144 ♦ *Where traffic control devices are used, they need to comply with shape, color and*  
145 *size specified by the MUTCD, unless specifically indicated otherwise. Flexibility*  
146 *for placement, fonts, letter heights and number of signs are called out in several*  
147 *sections to address SROPT conditions*
- 148 • Determining if/how smaller sizes are possible
  - 149 ♦ *Specific carve outs that address slower speed conditions are made for SROPT.*  
150 *However, where SROPTs have roads with speeds that are consistent with the*  
151 *higher speeds of public roadways, the traffic control devices that are used need to*  
152 *comply with the MUTCD.*
- 153 • Crosswalks in SROPT
  - 154 ♦ *Crosswalk use in SROPTs is a designer’s choice in many cases. Where crosswalk*  
155 *traffic control devices are used, they need to comply with the MUTCD (including*  
156 *the carve outs defined in signing and markings). Many cases for SROPT, proper*  
157 *design of the crossing areas from the front doors of buildings to parking areas can*  
158 *reduce or eliminate the need for traffic control devices. This is the preferred*  
159 *approach and it is highlighted in the ITE Traffic Control Device Handbook chapter*  
160 *on SROPT.*
- 161 • Retroreflectivity of signs and markings
  - 162 ♦ *Sign retroreflectivity for regulatory and warnings signs needs to comply with the*  
163 *MUTCD, where such traffic control devices are used.*
- 164 • Applicability to sidewalks, ferries, and other areas where the rule only states roads,  
165 streets and bicycle trails
  - 166 ♦ *The Federal rule making applies to roads as defined (see above definition #271).*  
167 *Designers have discretion to extend MUTCD application to sidewalks, ferries, and*  
168 *other areas if they choose to use traffic control devices in some capacity for these*  
169 *areas.*
- 170 • Who enforces traffic control devices on private roads?
  - 171 ♦ *In the Federal Register final rule, the FHWA noted it did not believe it is necessary*  
172 *for State and/or local highway agencies to have specific authority or enforcement*

173 *responsibility for traffic control devices on private roads. This change to*  
174 *23CFR655 does not require State or local agencies to police the private properties*  
175 *open to public travel to ensure compliance with the MUTCD. However, this change*  
176 *does make it clear that private roads open to public travel are subject to the same*  
177 *traffic control standards as public streets and highways. Therefore, owners or*  
178 *parties who are responsible for such private roads who decide to utilize traffic*  
179 *control devices are encouraged to bring them into compliance with the MUTCD*  
180 *and other applicable State manuals.*

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182 **Wrap-Up**

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184 The addition of site roadways to the MUTCD is aimed at making the road user experience more  
185 uniform and consistent by providing a comprehensive application of the MUTCD for travelers  
186 regardless of the facility or ownership of the facility. This was already the case for many states  
187 across the United States prior to the change in 23CFR655. That change was not aimed at  
188 imposing government regulation upon private property. Rather, the majority of road users do not  
189 know where they cross jurisdiction lines or move from a public street or highway to a site  
190 roadway open to public travel.

191  
192 Uniformity in traffic control devices for these circumstances is beneficial, reducing the potential  
193 for collisions, injuries, and potential fatalities. Uniformity enhances traffic safety and  
194 convenience by assuring that road users are able to navigate effectively with high recognition  
195 and minimal confusion. Lack of recognition and the potential for confusion contribute to  
196 distractions which are significant in collisions, property damage, and injuries. If the goal is to  
197 reduce collisions, injuries, and fatalities associated with our transportation system it is hard to  
198 argue against the premise that having road users encounter consistent and uniform messages to  
199 regulate, warn, or guide them, no matter where they travel in the United States is better at  
200 meeting this goal than an inconsistent, non-uniform alternative.

201  
202 For site roadways open to public travel, the responsible parties are different than with public  
203 streets and highways. Public streets and highways have a public agency or jurisdiction that  
204 operates and maintains traffic control devices and is held accountable to consistency with the  
205 MUTCD by the potential for design liability and by the US DOT through its funding allocations.  
206 SROPT have different accountability. For example, a port or toll road may be responsible to a  
207 quasi-public agency (such as a Port or Toll Authority) that has some relationship to the US and  
208 state DOTs. However, an office building or shopping center would be the responsibility of the  
209 property owner. The FHWA noted that enforcement can only occur when States or  
210 municipalities include the requirement to comply with MUTCD in State ordinances, local  
211 building codes, development approvals, site plans, etc., and, as a result, potential tort liability to  
212 the owners of the private roads in the event of non-compliance. The FHWA believes that public  
213 agency traffic engineers are not expected to enforce this provision for existing conditions on site  
214 roads open to public travel. Owners, designers and contractors have responsibilities to address  
215 and/or manage these risks for SROPT. In closing, this proposal is focused on providing  
216 clarifications to the MUTCD to address Federal rulemaking of the past decade. For state or local  
217 DOT traffic engineers, while the need for these changes may not affect highways and roadways  
218 under their jurisdiction, the resulting uniformity will benefit all road users.

219 **RECOMMENDED MUTCD CHANGES**

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221 The following present the proposed changes to the MUTCD within the context of the current  
222 MUTCD language. Proposed additions to the MUTCD are shown in blue underline and  
223 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously  
224 approved by NCUTCD Council are shown in green double underline for additions and ~~green~~  
225 ~~double strikethrough~~ for deletions. Changes to previously approved NCUTCD text are shown  
226 blue underline and ~~red strikethrough~~ within the green text.

227

228 **INTRODUCTION**

229

230 **Standard:**

231 ~~01—Traffic control devices shall be defined as all signs, signals, markings, and other~~  
232 ~~devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street,~~  
233 ~~highway, pedestrian facility, bikeway, or private road open to public travel (see definition~~  
234 ~~in Section 1A.13) by authority of a public agency or official having jurisdiction, or, in the~~  
235 ~~case of a private road, by authority of the private owner or private official having~~  
236 ~~jurisdiction.~~

237 01 Traffic Control Devices shall be defined as all signs, signals, markings, channelizing  
238 devices or other devices that use colors, shapes, symbols, words, sounds and/or tactile  
239 information for the primary purpose of communicating a regulatory, warning, or guidance  
240 message to road users on a highway, pedestrian facility, bikeway, pathway, or site roadway  
241 private road open to public travel. [Previously approved by NCUTCD Council 6/23/11]

242 02 The Manual on Uniform Traffic Control Devices (MUTCD) is incorporated by  
243 reference in 23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall be  
244 recognized as the national standard for all traffic control devices installed on any street,  
245 highway, bikeway, or site roadways ~~private road~~ open to public travel (SROPT) (see  
246 definition in Section 1A.13) in accordance with 23 U.S.C. 109(d) and 402(a). The policies  
247 and procedures of the Federal Highway Administration (FHWA) to obtain basic  
248 uniformity of traffic control devices shall be as described in 23 CFR 655, Subpart F.

249 ~~03—In accordance with 23 CFR 655.603(a), for the purposes of applicability of the~~  
250 ~~MUTCD:~~

251 ~~A.—Toll roads under the jurisdiction of public agencies or authorities or public-private~~  
252 ~~partnerships shall be considered to be public highways;~~

253 ~~B.—Private roads open to public travel shall be as defined in Section 1A.13; and~~

254 ~~C.—Parking areas, including the driving aisles within those parking areas, that are~~  
255 ~~either publicly or privately owned shall not be considered to be "open to public~~  
256 ~~travel" for purposes of MUTCD applicability.~~

257 ~~D.—Roads within private gated properties where access is restricted at all times (except~~  
258 ~~for gated toll roads or roads where the general public is able to pay to access the~~  
259 ~~facility), parking areas, parking aisles within parking areas, private grade~~  
260 ~~crossings and pedestrian ways internal to buildings shall not be included in this~~  
261 ~~definition.~~

262 03 In accordance with 23 CFR 655.603(a), the MUTCD shall apply to all of the following  
263 facilities:

- 264 A. Any street, roadway, or bikeway open to public travel, either publicly and
- 265 privately owned;
- 266 B. Streets and roadways on sites that are off the public right-of-way that are open to
- 267 public travel without full-time access restrictions. Examples include roadways
- 268 within shopping centers, office parks, airports, sports arenas, other similar
- 269 business and/or recreation facilities, governmental office complexes, schools,
- 270 universities, airports, recreational parks, and other similar publicly owned
- 271 complexes and/or recreation facilities. The above-described examples of streets
- 272 and roadways are referred to in this Manual as Site Roadways Open to Public
- 273 Travel (SROPT);
- 274 C. Publicly-owned toll roads, including those under the jurisdiction of a public
- 275 agency, public authority, or public-private partnership;
- 276 D. Privately-owned toll roads where the public is allowed to travel without access
- 277 restriction. This includes gated toll roads or roadways where the general public is
- 278 able to pay to access the facility; and
- 279 E. Grade crossings of publicly-owned roadways with railroads or light rail transit.
- 280 04 The MUTCD shall not apply to the following facilities:
- 281 A. Roadways within private gated properties where access to the general public is
- 282 restricted at all times;
- 283 B. Grade crossings of privately-owned roadways with railroads;
- 284 C. Parking areas, including the driving aisles within those parking areas, that are
- 285 either publicly or privately owned; and
- 286 D. Pedestrian ways internal to buildings.

287 Support:

288 <sup>10</sup> The Standard, Guidance, Option, and Support material described in this edition of the  
289 MUTCD provide the transportation professional with the information needed to make  
290 appropriate decisions regarding the use of traffic control devices on streets, highways, bikeways,  
291 and site roadways ~~private roads~~ open to public travel (see definition in Section 1A.13).

## 292 PART 1: GENERAL

### 293 Chapter 1A. General

#### 294 Section 1A.01 Purpose of Traffic Control Devices

295 Support:

296 <sup>01</sup> The purpose of traffic control devices, as well as the principles for their use, is to promote  
297 highway safety and efficiency by providing for the orderly movement of all road users on streets,  
298 highways, bikeways, and site roadways ~~private roads~~ open to public travel throughout the  
299 Nation.

300 <sup>02</sup> Traffic control devices notify road users of regulations and provide warning and guidance  
301 needed for the uniform and efficient operation of all elements of the traffic stream in a manner  
302 intended to minimize the occurrences of crashes.

303 **Standard:**

304 <sup>03</sup> **Traffic control devices or their supports shall not bear any advertising message or any**  
305 **other message that is not related to traffic control.**

306 Support:

310 04 Tourist-oriented directional signs and Specific Service signs are not considered advertising;  
311 rather, they are classified as motorist service signs.

312 05 The UVC Section 11-206 (a) does not allow persons to place or maintain any unauthorized  
313 device that is or resembles an official traffic control devices on or within view of any highway.

314

### 315 **Section 1A.02 Principles of Traffic Control Devices**

316 Support:

317 01 This Manual contains the basic principles that govern the design and use of traffic control  
318 devices for all streets, highways, bikeways, and site roadways ~~private roads~~ open to public travel  
319 (see definition in Section 1A.13) regardless of type or class or the public agency, official, or  
320 owner having jurisdiction. This Manual's text specifies the restriction on the use of a device if it  
321 is intended for limited application or for a specific system. It is important that these principles be  
322 given primary consideration in the selection and application of each device.

323 *Guidance:*

324 02 *To be effective, a traffic control device should meet five basic requirements:*

- 325 A. *Fulfill a need;*
- 326 B. *Command attention;*
- 327 C. *Convey a clear, simple meaning;*
- 328 D. *Command respect from road users; and*
- 329 E. *Give adequate time for proper response.*

330 **Standard:**

331 08 SROPT: All traffic control devices used on site roadways open to public travel shall  
332 have the same shape, color, and meaning as those required by the MUTCD for use on  
333 public highways, except as allowed by the guidance in Section 1A.03, paragraph 05. Sign  
334 size exceptions are noted in each Chapter as applicable.

335

### 336 **Section 1A.03 Design of Traffic Control Devices**

337 *Guidance:*

338 01 *Devices should be designed so that features such as size, shape, color, composition, lighting*  
339 *or retroreflection, and contrast are combined to draw attention to the devices; that size, shape,*  
340 *color, and simplicity of message combine to produce a clear meaning; that legibility and size*  
341 *combine with placement to permit adequate time for response; and that uniformity, size,*  
342 *legibility, and reasonableness of the message combine to command respect.*

343 02 *Aspects of a device's standard design should be modified only if there is a demonstrated*  
344 *need.*

345 Support:

346 03 An example of modifying a device's design would be to modify the Combination Horizontal  
347 Alignment/Intersection (W1-10) sign to show intersecting side roads on both sides rather than on  
348 just one side of the major road within the curve.

349 Option:

350 04 With the exception of symbols and colors, minor modifications in the specific design  
351 elements of a device may be made provided the essential appearance characteristics are  
352 preserved.

353 05 SROPT: On site roadways open to public travel, sign sizes may be modified where space  
354 limitations dictate.

355



356 **Section 1A.07 Responsibility for Traffic Control Devices**

357 **Standard:**

358 01 The responsibility for the design, placement, operation, maintenance, and uniformity  
359 of traffic control devices shall rest with the public agency or the official having jurisdiction,  
360 or, in the case of site roadways or private toll roads ~~private roads~~ open to public travel,  
361 with the private owner or private official having jurisdiction. 23 CFR 655.603 adopts the  
362 MUTCD as the national standard for all traffic control devices installed on any street,  
363 highway, bikeway, or site roadways ~~private roads~~ open to public travel (see definition in  
364 Section 1A.13). When a State or other Federal agency manual or supplement is required,  
365 that manual or supplement shall be in substantial conformance with the National MUTCD.

366 02 23 CFR 655.603 also states that traffic control devices on all streets, highways,  
367 bikeways, and site roadways ~~private roads~~ open to public travel in each State shall be in  
368 substantial conformance with standards issued or endorsed by the Federal Highway  
369 Administrator.

370 **Support:**

371 03 The Introduction of this Manual contains information regarding the meaning of substantial  
372 conformance and the applicability of the MUTCD to site roadways ~~private roads~~ open to public  
373 travel.

374

375 **Section 1A.08 Authority for Placement of Traffic Control Devices**

376 **Standard:**

377 01 Traffic control devices, advertisements, announcements, and other signs or messages  
378 within the highway right-of-way shall be placed only as authorized by a public authority or  
379 the official having jurisdiction, or, in the case of site roadways or private toll roads ~~private~~  
380 ~~roads~~ open to public travel, by the private owner or official having jurisdiction, for the  
381 purpose of regulating, warning, or guiding traffic.

382 02 When the public agency or the official having jurisdiction over a street or highway or,  
383 in the case of site roadways or private toll roads ~~private roads~~ open to public travel, the  
384 private owner or private official having jurisdiction, has granted proper authority, others  
385 such as contractors and public utility companies shall be permitted to install temporary  
386 traffic control devices in temporary traffic control zones. Such traffic control devices shall  
387 conform with the Standards of this Manual.

388

389 **Section 1A.09 Engineering Study and Engineering Judgment**

390 *Guidance:*

391 04 Jurisdictions, or owners of site roadways or private toll roads ~~private roads~~ open to public  
392 travel, with responsibility for traffic control that do not have engineers on their staffs who are  
393 trained and/or experienced in traffic control devices should seek engineering assistance from  
394 others, such as the State transportation agency, their county, a nearby large city, or a traffic  
395 engineering consultant.

396

397 **Section 1A.10 Interpretations, Experimentations, Changes, and Interim Approvals**

398 **Support**

399 09 A request for permission to experiment will be considered only when submitted by the  
400 public agency or toll facility operator responsible for the operation of the road or street on which  
401 the experiment is to take place. For a site roadway ~~private road~~ open to public travel, the request

402 will be considered only if it is submitted by the private owner or private official having  
403 jurisdiction.

404 **Standard:**

405 <sup>17</sup> A jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to  
406 public travel that desires to use a traffic control device for which FHWA has issued an  
407 interim approval shall request permission from FHWA.

408 *Guidance:*

409 <sup>20</sup> A local jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to  
410 public travel using a traffic control device or application under an interim approval that was  
411 granted by FHWA either directly or on a statewide basis based on the State's request should  
412 inform the State of the locations of such use.

413 <sup>21</sup> A local jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to  
414 public travel that is requesting permission to experiment or permission to use a device or  
415 application under an interim approval should first check for any State laws and/or directives  
416 covering the application of the MUTCD provisions that might exist in their State.

417

418 **Section 1A.13 Definitions of Headings, Words, and Phrases in this Manual**

419 **Standard:**

420 <sup>02</sup> Unless otherwise defined in this Section, or in other Parts of this Manual, words or  
421 phrases shall have the meaning(s) as defined in the most recent editions of the "Uniform  
422 Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," and other  
423 publications mentioned in Section 1A.11.

424 <sup>03</sup> The following words and phrases, when used in this Manual, shall have the following  
425 meanings:

426 **94. Intersection—intersection is defined as follows:**

- 427 (a) The area embraced within the prolongation or connection of the lateral curb  
428 lines, or if none, the lateral boundary lines of the roadways of two highways  
429 that join one another at, or approximately at, right angles, or the area within  
430 which vehicles traveling on different highways that join at any other angle  
431 might come into conflict.
- 432 (b) The junction of an alley, ~~or~~ driveway or site roadway with a public roadway  
433 or highway shall not constitute an intersection, unless the public roadway or  
434 highway at said junction is controlled by a traffic control device.
- 435 (c) If a highway includes two roadways that are 30 feet or more apart (see  
436 definition of Median), then every crossing of each roadway of such divided  
437 highway by an intersecting highway shall be a separate intersection.
- 438 (d) If both intersecting highways include two roadways that are 30 feet or more  
439 apart, then every crossing of any two roadways of such highways shall be a  
440 separate intersection.
- 441 (e) At a location controlled by a traffic control signal, regardless of the distance  
442 between the separate intersections as defined in (c) and (d) above:
- 443 (1) If a stop line, yield line, or crosswalk has not been designated on the  
444 roadway (within the median) between the separate intersections, the two  
445 intersections and the roadway (median) between them shall be  
446 considered as one intersection;

- 447 (2) Where a stop line, yield line, or crosswalk is designated on the roadway  
448 on the intersection approach, the area within the crosswalk and/or  
449 beyond the designated stop line or yield line shall be part of the  
450 intersection; and  
451 (3) Where a crosswalk is designated on a roadway on the departure from  
452 the intersection, the intersection shall include the area extending to the  
453 far side of such crosswalk.

454 159. ~~Private Road Open to Public Travel—private toll roads and roads (including any~~  
455 ~~adjacent sidewalks that generally run parallel to the road) within shopping~~  
456 ~~centers, airports, sports arenas, and other similar business and/or recreation~~  
457 ~~facilities that are privately owned, but where the public is allowed to travel~~  
458 ~~without access restrictions. Roads within private gated properties (except for~~  
459 ~~gated toll roads) where access is restricted at all times, parking areas, driving~~  
460 ~~aisles within parking areas, and private grade crossings shall not be included in~~  
461 ~~this definition.~~ [see new definition for Site Roadways Open to Public Travel #265]

462 177. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with  
463 disabilities, within the highway or on a site roadway ~~private road~~ open to public travel.

464 237. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and  
465 other conveyances either singularly or together while using for purposes of travel any  
466 highway or site roadway ~~private road~~ open to public travel.

467 238. ~~Traffic Control Device—a sign, signal, marking, or other device used to regulate,~~  
468 ~~warn, or guide traffic, placed on, over, or adjacent to a street, highway, private road~~  
469 ~~open to public travel, pedestrian facility, or shared-use path by authority of a public~~  
470 ~~agency or official having jurisdiction, or, in the case of a private road open to public~~  
471 ~~travel, by authority of the private owner or private official having jurisdiction. Traffic~~  
472 ~~Control Device - a sign, signal, marking, channelizing device or other device that uses~~  
473 ~~colors, shapes, symbols, words, sounds and/or tactile information for the primary~~  
474 ~~purpose of communicating a regulatory, warning, or guidance message to road users~~  
475 ~~on a highway, pedestrian facility, bikeway, pathway, or site roadway~~ ~~private road~~ ~~open~~  
476 ~~to public travel. [Previously approved by NCUTCD Council 6/23/11]~~

477 [ADD THE FOLLOWING DEFINITIONS]

478 260. Driveway – a private an access from a roadway to a building, site, or abutting  
479 property. [Previously approved by NCUTCD Council 6/26/14]

480 261. Driving Aisle – circulation area for motor vehicles within a parking area,  
481 typically between rows of parking spaces. Driving aisles provide one-way or two-  
482 way travel. Driving aisles are exempted from compliance with MUTCD  
483 provisions.

484 262. Loading Zone – a specially marked, signed or designated area for the loading or  
485 unloading of vehicles (passenger or freight)

486 263. On-Street Parking – parking adjacent to and accessed directly from a site  
487 roadway or a public roadway.

488 264. Parking Space – an area marked or designated for storage of a vehicle while the  
489 driver is not present.

490 265. Site Roadways Open to Public Travel – also referred to as Site Roadways.  
491 Roadways and bikeways on sites of shopping centers, office parks, airports,  
492 schools, universities, sports arenas, recreational parks, and other similar

business, governmental and/or recreation facilities that are publically or privately owned but where the public is allowed to travel without full-time access restrictions. Two types of roadways are not included in this definition: 1) roadways where access is restricted at all times by gates and/or guards to residents, employees or other specifically authorized persons; and 2) private highway-rail crossings. Site roadways open to public travel does not include parking areas, including the driving aisles within those parking areas.

**Section 1A.14 Meanings of Acronyms and Abbreviations in this Manual**

**Standard:**

01 The following acronyms and abbreviations, when used in this Manual, shall have the following meanings:

**36. SROPT – Site Roadways Open to Public Travel**

**PART 2: SIGNS**

**CHAPTER 2A. GENERAL**

**Section 2A.01 Function and Purpose of Signs**

Support:

01 This Manual contains Standards, Guidance, and Options for the signing of all types of highways, and site roadways ~~private roads~~ open to public travel. The functions of signs are to provide regulations, warnings, and guidance information for road users. Words, symbols, and arrows are used to convey the messages. Signs are not typically used to confirm rules of the road.

**Section 2A.03 Standardization of Application**

**Standard:**

05 Each standard sign shall be displayed only for the specific purpose as prescribed in this Manual. Determination of the particular signs to be applied to a specific condition shall be made in accordance with the provisions set forth in Part 2. Before any new highway, site roadway ~~private road~~ open to public travel (see definition in Section 1A.13), detour, or temporary route is opened to public travel, all necessary signs shall be in place. Signs required by road conditions or restrictions shall be removed when those conditions cease to exist or the restrictions are withdrawn.

**Section 2A.06 Design of Signs**

Option:

13 State and local highway agencies and owners of site roadways open to public travel may develop special word message signs in situations where roadway conditions make it necessary to provide road users with additional regulatory, warning, or guidance information, such as when road users need to be notified of special regulations or warned about a situation that might not be readily apparent. Unlike colors that have not been assigned or symbols that have not been approved for signs, new word message signs may be used without the need for experimentation.

**Section 2A.11 Dimensions**

**Standard:**

02 The sign dimensions prescribed in the sign size tables in the various Parts and Chapters in this Manual and in the “Standard Highway Signs and Markings” book (see Section

540 1A.11) shall be used unless engineering judgment determines that other sizes are  
541 appropriate. Except as provided in Paragraph 3, where engineering judgment determines  
542 that sizes smaller than the prescribed dimensions are appropriate for use, the sign  
543 dimensions shall not be less than the minimum dimensions specified in this Manual. The  
544 sizes shown in the Minimum columns that are smaller than the sizes shown in the  
545 Conventional Road columns in the various sign size tables in this Manual shall only be used  
546 on low-speed roadways, alleys, and site roadways ~~private roads~~ open to public travel where  
547 the reduced legend size would be adequate for the regulation or warning or where physical  
548 conditions preclude the use of larger sizes.

549 *Guidance:*

550 *08 When supplemental plaques are installed with larger sized signs, a corresponding increase*  
551 *in the size of the plaque and its legend should also be made. The resulting plaque size should be*  
552 *approximately in the same relative proportion to the larger sized sign as the conventional sized*  
553 *plaque is to the conventional sized sign.*

554 Option:

555 08a SROPT: The minimum sign sizes for site roadways open to public travel roads with  
556 operating speeds less than 25 MPH may be 6 inches less in both width and height than the single-  
557 lane conventional road size shown in Tables 2B-1 and 2C-2 (but not less than 18" high or 9"  
558 wide). This does not apply to supplemental plaques. Where a Site Roadway open to public  
559 travel intersects with a street or highway the sign size for the regulatory STOP or YIELD sign  
560 shall be sizes shown in Table 2B-1.

561

## 562 CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

563

### 564 Section 2B.03 Size of Regulatory Signs

565 *Guidance:*

566 *09 The minimum sizes for regulatory signs facing traffic on exit and entrance ramps at major*  
567 *interchanges connecting an Expressway or Freeway with an Expressway or Freeway (see*  
568 *Section 2E.32a) (Council Approved 6-23-11) should be as shown in the column of Table 2B-1*  
569 *that corresponds to the mainline roadway classification (Expressway or Freeway). If a minimum*  
570 *size is not provided in the Freeway column, the minimum size in the Expressway column should*  
571 *be used. If a minimum size is not provided in the Freeway or Expressway Column, the size in the*  
572 *Oversize column should be used.*

573 *10 The minimum size for all regulatory signs facing traffic on exit and entrance ramps at all*  
574 *interchanges (See section 2E.A(b) B and C) should be the regulatory sign size shown in Table*  
575 *2B-1 Conventional Road Single Lane column for single lane ramps and Multi-Lane for multi-*  
576 *lane ramps (Council Approved 6-23-11)*

577 Option:

578 10a SROPT: The minimum sign sizes for site roadways open to public travel with operating  
579 speeds less than 25 MPH may be 6 inches less in both width and height than the single-lane  
580 conventional road size except for supplemental plaques identified by "P" in the sign designation  
581 in Table 2B-1.

582 Standard:

583 10b SROPT: Where a Site Roadway open to public travel intersects with a street or  
584 highway the sign size for the regulatory STOP or YIELD sign shall be sizes shown in Table  
585 2B-1.

586

587 **Section 2B.06 STOP Sign Applications**

588 *Guidance:*

589 01 *At intersections where a full stop is not necessary at all times, consideration should first be*  
590 *given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).*

591 02 *The use of STOP signs on the minor-street approaches should be considered if engineering*  
592 *judgment indicates that a stop is always required because of one or more of the following*  
593 *conditions:*

594 A. *The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per*  
595 *day;*

596 B. *A restricted view exists that requires road users to stop in order to adequately observe*  
597 *conflicting traffic on the through street or highway; and/or*

598 C. *Crash records indicate that three or more crashes that are susceptible to correction by*  
599 *the installation of a STOP sign have been reported within a 12-month period, or that five*  
600 *or more such crashes have been reported within a 2-year period. Such crashes include*  
601 *right-angle collisions involving road users on the minor-street approach failing to yield*  
602 *the right-of-way to traffic on the through street or highway.*

603 *Support:*

604 03 *The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.*

605 Option:

606 03a SROPT: At the ends of driving aisles connecting to site roadways open to public travel, the  
607 word STOP on the pavement when accompanied with a stop line may be used in the place of a  
608 STOP sign.

609

610 **Section 2B.07 Multi-Way Stop Applications**

611 *Guidance:*

612 03 *The decision to install multi-way stop control should be based on an engineering study.*

613 Option:

614 03a SROPT: The decision to install a multi-way stop control on site roadways open to public  
615 travel may be based on engineering judgment.

616

617 **Section 2B.10 STOP Sign or YIELD Sign Placement**

618 **Standard:**

619 01 **The STOP or YIELD sign shall be installed on the near side of the intersection on the**  
620 **right-hand side of the approach to which it applies, except as provided in paragraph 20a.**

621 **When the STOP or YIELD sign is installed at this required location and the sign visibility**  
622 **is restricted, a Stop Ahead sign (see Section 2C.36) shall be installed in advance of the**  
623 **STOP sign or a Yield Ahead sign (see Section 2C.36) shall be installed in advance of the**  
624 **YIELD sign.**

625 **Option:**

626 20 **For a yield-controlled channelized right-turn movement onto a roadway without an**  
627 **acceleration lane and for an entrance ramp onto a freeway or expressway without an acceleration**  
628 **lane, a NO MERGE AREA (W4-5P) supplemental plaque (see Section 2C.40) may be mounted**  
629 **below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering**  
630 **judgment indicates that road users would expect an acceleration lane to be present.**

631 20a [SROPT: At the junction of two site roadways open to public travel when the operating](#)  
632 [speeds are less than 25 mph on both roadways, a STOP or YIELD sign may be installed at a](#)  
633 [location on other than the right hand side as-necessitated by physical constraints.](#)

634  
635 **Section 2B.37 DO NOT ENTER Sign (R5-1)**

636 Option:

637 04 The DO NOT ENTER sign may be installed where it is necessary to emphasize the one-way  
638 traffic movement on a ramp or turning lane.

639 04a [SROPT: A DO NOT ENTER sign may be omitted only if an R4-7 or R6-1 sign is installed](#)  
640 [for divided roadway median openings when the operating speeds are less than 25 mph on a site](#)  
641 [roadway open to public travel.](#)

642  
643 **Section 2B.40 ONE WAY Signs (R6-1, R6-2)**

644 Option:

645 14 The BEGIN ONE WAY (R6-6) sign (see Figure 2B-13) may be used notify road users of  
646 the beginning point of a one direction of travel restriction on the street or roadway. The END  
647 ONE WAY (R6-7) sign (see Figure 2B-13) may be used notify road users of the ending point of  
648 a one direction of travel restriction on the street or roadway.

649 14a [SROPT: A ONE-WAY sign may be omitted for site roadways open to public travel that](#)  
650 [intersect one-way driving aisles when wrong way pavement marking arrows and/or stop line the](#)  
651 [full width of the aisle and/or stop markings are used.](#)

652  
653 **Section 2B.68 Gates**

654 **Standard:**

655 14 **If red lights are attached to a traffic gate, the red lights shall be steadily illuminated or**  
656 **flashed only during the period when the gate is in the horizontal or closed position and**  
657 **when the gate is in the process of being opened or closed.**

658 15 **Except as provided in Paragraph 16, rolling sections of fence, if used, shall include**  
659 **either a horizontal strip of retroreflectorized sheeting on both sides of the fence with**  
660 **vertical stripes alternately red and white at 16-inch intervals measured horizontally to**  
661 **simulate the appearance of a gate arm in the horizontal position, or one or more Type 4**  
662 **object markers (see Section 2C.66), or both. If a horizontal strip of retroreflectorized**  
663 **sheeting is used, the bottom of the sheeting shall be located 3.5 to 4.5 feet above the**  
664 **roadway surface.**

665  
666 15a [SROPT: If a chain, cable, or other device is used to restrict access to a portion of a site, it](#)  
667 [shall be clearly marked with a Type 1 object marker or a retroreflective sign suspended from or](#)  
668 [attached to the chain, cable, or other device. \(See Section 2C.63 for object marker sizes\).](#)

669  
670 **CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS**

671  
672 **Section 2C.01 Function of Warning Signs**

673 Support:

674 01 Warning signs call attention to unexpected conditions on or adjacent to a highway, street, or  
675 [site roadways](#) ~~private roads~~ open to public travel and to situations that might not be readily

676 apparent to road users. Warning signs alert road users to conditions that might call for a  
 677 reduction of speed or an action in the interest of safety and efficient traffic operations.

678

679 **Section 2C.05 Placement of Warning Signs**

680

Table 2C-4. Guidelines for Advance Placement of Warning Signs

Posted or 85 <sup>th</sup> - Percentile Speed	Advance Placement Distance <sup>1</sup>								
	Condition A: Speed reduction and lane changing in heavy traffic <sup>2</sup>	Condition B: Deceleration to the listed advisory speed (mph) for the condition							
		0 <sup>3</sup>	10 <sup>4</sup>	20 <sup>4</sup>	30 <sup>4</sup>	40 <sup>4</sup>	50 <sup>4</sup>	60 <sup>4</sup>	70 <sup>4</sup>
20 mph <u>or less</u>	225 ft	115 ft	N/A	—	—	—	—	—	—
25 mph	325 ft	155 ft	N/A	N/A	—	—	—	—	—

681 **(Remainder of table remains the same, Council Approved table 6-22-12)**

682

683 **CHAPTER 2D. GUIDE SIGNS – CONVENTIONAL ROADS**

684

685 **Section 2D.01 Scope of Conventional Road Guide Sign Standards**

686 **Standard:**

687 01 The provisions of this Chapter shall apply to any road or street ~~other than low volume~~  
 688 ~~roads (as defined in Section 5A.01)~~ [Deleted by Council 1/10/14], other than expressways  
 689 and freeways.

690

691 Option:

692 02 SROPT: Except as noted in Section 1A.03, for site roadways open to public travel with  
 693 operating speeds of less than 25 miles per hour, provisions of this Chapter may be modified.

694

695 Standard:

696 03 SROPT: When a modification is made, it shall be based upon engineering judgment  
 697 that considers speed, traffic characteristics and other site specific considerations.

698

699

700 **PART 3: MARKINGS**

701

702 **Chapter 3A. General**

703

704 **Section 3A.01 Functions and Limitations**

705 Support:

706 01 Markings ~~on highways and on private roads open to public travel~~ have important  
 707 functions in providing guidance and information for the road user. Major marking types include  
 708 pavement and curb markings, delineators, colored pavements, channelizing devices, and islands.  
 709 In some cases, markings are used to supplement other traffic control devices such as signs,  
 710 signals, and other markings. In other instances, markings are used alone to effectively convey  
 711 regulations, guidance, or warnings in ways not obtainable by the use of other devices.

712

713

714

715



716 **Section 3A.02 Standardization of Application**

717 *Guidance:*

718 02 Before any new highway, [site roadway](#) ~~private road open to public travel (see definition in~~  
 719 ~~Section 1A.13)~~, paved detour, or temporary route is opened to public travel, all necessary  
 720 markings should be in place.

721

722 **Chapter 3B. Pavement and Curb Markings**

723 **Section 3B.02 No-Passing Zone Pavement Markings and Warrants**

724 **Standard:**

725 04 On roadways with center line markings, no-passing zone markings shall be used at  
 726 horizontal or vertical curves where the passing sight distance is less than the minimum  
 727 shown in Table 3B-1 for the 85th-percentile speed or the posted or statutory speed limit.  
 728 The passing sight distance on a vertical curve is the distance at which an object 3.5 feet  
 729 above the pavement surface can be seen from a point 3.5 feet above the pavement (see  
 730 Figure 3B-4). Similarly, the passing sight distance on a horizontal curve is the distance  
 731 measured along the center line (or right-hand lane line of a three-lane roadway) between  
 732 two points 3.5 feet above the pavement on a line tangent to the embankment or other  
 733 obstruction that cuts off the view on the inside of the curve (see Figure 3B-4).

734

**Table 3B-1. Minimum Passing Sight Distances for No-Passing Zone Markings**

85th-Percentile or Posted or Statutory Speed Limit	Minimum Passing Sight Distance
<u>20 mph</u>	<u>400 feet</u>
25 mph	450 feet
30 mph	500 feet
35 mph	550 feet
40 mph	600 feet
45 mph	700 feet
50 mph	800 feet
55 mph	900 feet
60 mph	1,000 feet
65 mph	1,100 feet
70 mph	1,200 feet

735

736 *Guidance:*

737 16 The minimum lane transition taper length should be 100 feet in urban areas and 200 feet in  
 738 rural areas.

739 Option:

740 17 SROPT: The minimum taper length may be less than 100 feet on site roadways open to  
 741 public travel where the operating speed is less than 25 mph.

742

743 **Section 3B.09 Lane-Reduction Transition Markings**

744 *Option:*

745 03 On low-speed urban roadways [and on site roadways open to public travel with operating](#)  
 746 [speeds less than 25 mph](#) where curbs clearly define the roadway edge in the lane-reduction

747 transition, or where a through lane becomes a parking lane, the edge line and/or delineators  
748 shown in Figure 3B-14 may be omitted as determined by engineering judgment.

749 Option:

750 05a SROPT: Based on engineering judgement, the minimum taper length may be less than 100  
751 feet on site roadways open to public travel where the operating speed is less than 25 mph.

752

### 753 **Section 3B.10 Approach Markings for Obstructions**

754 *Guidance:*

755 *05 The minimum taper length should be 100 feet in urban areas and 200 feet in rural areas.*

756

757 Option:

758 05a SROPT: Based on engineering judgement, the minimum taper length may be less than 100  
759 feet on site roadways open to public travel where the operating speed is less than 25 mph.

760

### 761 **Section 3B.20 Pavement Word, Symbol, and Arrow Markings**

762 *Option:*

763 *12 On narrow, low-speed shared-use paths, the pavement words, symbols, and arrows may be*  
764 *smaller than suggested, but to the relative scale.*

765 12a SROPT: On site roadways open to public travel where the operating speed is less than 25  
766 mph, the pavement words, symbols, and arrows may be reduced in size to no less than ¼ size,  
767 but in relative proportion to the associated full-size word, symbol, or arrow.

768 *13 Pavement markings simulating Interstate, U.S., State, and other official highway route shield*  
769 *signs (see Figure 2D-3) with appropriate route numbers, but elongated for proper proportioning*  
770 *when viewed as a marking, may be used to guide road users to their destinations (see Figure 3B-*  
771 *25).*

772

773 **Standard:**

774 ~~**14 Except at the ends of aisles in parking lots, the word STOP shall not be used on the**~~  
775 ~~**pavement unless accompanied by a stop line (see Section 3B.16) and STOP sign (see Section**~~  
776 ~~**2B.05). At the end aisle in parking lots, the word STOP shall not be used on the pavement**~~  
777 ~~**unless accompanied by a stop line.**~~

778 **1514 The word STOP shall not be placed on the pavement in advance of a stop line, unless**  
779 **every vehicle is required to stop at all times.**

780

781 Option:

782 15 SROPT: At the ends of driving aisles connecting to site roadways open to public travel, the  
783 word STOP on the pavement may be used in the place of a STOP sign when accompanied with a  
784 stop line.

785

### 786 **Section 3B.24 Chevron and Diagonal Crosshatch Markings**

787 *Guidance:*

788 *05 The chevrons and diagonal lines used for crosshatch markings should be at least 12 inches*  
789 *wide for roadways having a posted or statutory speed limit of 45 mph or greater, and at least 8*  
790 *inches wide for roadways having posted or statutory speed limit of less than 45 mph. The*  
791 *longitudinal spacing of the chevrons or diagonal lines should be determined by engineering*  
792 *judgment considering factors such as speeds and desired visual impacts. The chevrons and*

793 diagonal lines should form an angle of approximately 30 to 45 degrees with the longitudinal  
794 lines that they intersect.

795 06 SROPT: Chevrons and diagonal lines used for crosshatch markings should be at least 4  
796 inches wide on site roadways open to public travel where the operating speed is less than 25  
797 mph.

798  
799

## 800 PART 4: SIGNALS

801

### 802 Chapter 4D. Traffic Control Signal Features

803

#### 804 Section 4D.02 Responsibility for Operation and Maintenance

805 *Guidance:*

806 *01 Prior to installing any traffic control signal, the responsibility for the maintenance of the*  
807 *signal and all of the appurtenances, hardware, software, and the timing plan(s) should be clearly*  
808 *established ~~by the~~ ~~The~~ responsible agency or owner of site roadways open to public travel*  
809 *~~should provide for the maintenance of the traffic control signal and all its appurtenances in a~~*  
810 *~~competent manner.~~*

811 *02 To this end the agency or site roadway owner should:*

- 812 A. *Keep every controller assembly in effective operation in accordance with its*  
813 *predetermined timing schedule; check the operation of the controller assembly*  
814 *frequently enough to verify that it is operating in accordance with the predetermined*  
815 *timing schedule; and establish a policy to maintain a record of all timing changes and*  
816 *that only authorized persons are permitted to make timing changes;*
- 817 B. *Clean the optical system of the signal sections and replace the light sources as*  
818 *frequently as experience proves necessary;*
- 819 C. *Clean and service equipment and other appurtenances as frequently as experience*  
820 *proves necessary;*
- 821 D. *Provide for alternate operation of the traffic control signal during a period of failure,*  
822 *using flashing mode or manual control, or manual traffic direction by proper*  
823 *authorities as might be required by traffic volumes or congestion, or by erecting other*  
824 *traffic control devices;*
- 825 E. *Have properly skilled maintenance personnel available without undue delay for all*  
826 *signal malfunctions and signal indication failures;*
- 827 F. *Provide spare equipment to minimize the interruption of traffic control signal operation*  
828 *as a result of equipment failure;*
- 829 G. *Provide for the availability of properly skilled maintenance personnel for the repair of*  
830 *all components; and*
- 831 H. *Maintain the appearance of the signal displays and equipment.*

832

#### 833 Section 4D.07 Size of Vehicular Signal Indications

834 **Standard:**

835 **01 There shall be two nominal diameter sizes for vehicular signal indications: 8 inches and**  
836 **12 inches.**

837 **02 Except as provided in Paragraph 3 below, 12-inch signal indications shall be used for**  
838 **all signal sections in all new signal faces.**

839 Option:

- 840 03 Eight-inch circular signal indications may be used in new signal faces only for:
- 841 A. The green or flashing yellow signal indications in an emergency-vehicle traffic control
- 842 signal (see Section 4G.02);
- 843 B. The circular indications in signal faces controlling the approach to the downstream
- 844 location where two adjacent signalized locations are close to each other and it is not
- 845 practical because of factors such as high approach speeds, horizontal or vertical curves,
- 846 or other geometric factors to install visibility-limited signal faces for the downstream
- 847 approach;
- 848 C. The circular indications in a signal face that is located less than 120 feet from the stop
- 849 line on a roadway with a posted or statutory speed limit ([or operating speed on site](#)
- 850 [roadways open to public travel](#)) of 30 mph or less;
- 851 D. The circular indications in a supplemental near-side signal face:
- 852 E. The circular indications in a supplemental signal face installed for the sole purpose of
- 853 controlling pedestrian movements (see Section 4D.03) rather than vehicular
- 854 movements; and
- 855 F. The circular indications in a signal face installed for the sole purpose of controlling a
- 856 bikeway or a bicycle movement.
- 857 04 Existing 8-inch circular signal indications that are not included in Items A through F in
- 858 Paragraph 3 may be retained for the remainder of their useful service life.
- 859
- 860

## 861 **PART 6: TEMPORARY TRAFFIC CONTROL**

### 862 **Chapter 6A. General**

#### 863 **Section 6A.01 General**

##### 864 **Standard:**

865 02 **The needs and control of all road users (motorists, bicyclists, and pedestrians within**

866 **the highway, or on [site roadways](#) ~~private roads~~ open to public travel (see definition in**

867 **Section 1A.13), including persons with disabilities in accordance with the Americans with**

868 **Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a TTC zone shall be an**

869 **essential part of highway construction, utility work, maintenance operations, and the**

870 **management of traffic incidents.**

##### 871 **Support:**

872 03 When the normal function of the roadway, or a [site roadway](#) ~~private road~~ open to public

873 travel, is suspended, TTC planning provides for continuity of the movement of motor vehicle,

874 bicycle, and pedestrian traffic (including accessible passage); transit operations; and access (and

875 accessibility) to property and utilities.

##### 876 **Standard:**

877 10 **TTC plans and devices shall be the responsibility of the ~~authority of a~~ public body or**

878 **official [or the owners of site roadways open to public travel](#) ~~authority~~ having jurisdiction**

879 **for guiding road users. There shall be adequate statutory authority for the implementation**

880 **and enforcement of needed road user regulations, parking controls, speed zoning, and the**

881 **management of traffic incidents. Such statutes shall provide sufficient flexibility in the**

882 **application of TTC to meet the needs of changing conditions in the TTC zone.**

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**Chapter 6C. Temporary Traffic Control Elements**

**Section 6C.01 Temporary Traffic Control Plans**

*Guidance:*

*09 This alternate or modified plan should have the approval of the responsible highway agency or owner of site roadways open to public travel ~~authority~~ prior to implementation.*

**Section 6C.04 Advance Warning Area**

Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

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899  
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904

\* Speed category to be determined by the highway agency [or owner of site roadways open to public travel authority](#).

\*\* The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The “first sign” is the sign in a three-sign series that is closest to the TTC zone. The “third sign” is the sign that is furthest upstream from the TTC zone.)

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**Chapter 6D. Pedestrian and Worker Safety**

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**Section 6D.01 Pedestrian Considerations**

*Support:*

*06 It must be recognized that pedestrians are reluctant to retrace their steps to a prior intersection for a crossing or to add distance or out-of-the-way travel to a destination. [This is especially true for site roadways open to public travel where pedestrians will seek the shortest route, e.g., from a site building to their parked vehicle.](#)*

*Guidance:*

*09 Consideration should be made to separate pedestrian movements from both worksite activity and vehicular traffic. Unless an acceptable route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock worksites that will induce them to attempt skirting the worksite or making a midblock crossing.*

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922 *09a Due to the likelihood of high pedestrian presence in site roadways open to public travel,*  
923 *TTC zones should be designed to minimize conflicts between vehicular and pedestrian*  
924 *movements.*

925  
926 **Section 6F.01 Types of Devices**

927 Support

928 03 Various Sections of the MUTCD require certain traffic control devices, their supports,  
929 and/or related appurtenances to be crashworthy. Such MUTCD crashworthiness provisions apply  
930 to all streets, highways, and site roadways ~~private roads~~ open to public travel. Also, State  
931 Departments of Transportation and local agencies might have expanded the NCHRP Report 350  
932 crashworthy criteria to apply to certain other roadside appurtenances.

933 **Standard**

934 06 **Traffic control devices shall be defined as all signs, signals, markings, and other**  
935 **devices used to regulate, warn, or guide road users, placed on, over, or adjacent to a street,**  
936 **highway, site roadways ~~private roads~~ open to public travel (see definition in Section 1A.13),**  
937 **pedestrian facility, or bikeway by authority of a public body or official having jurisdiction.**

938 07 **All traffic control devices used for construction, maintenance, utility, or incident**  
939 **management operations on a street, highway, or site roadway ~~private road~~ open to public**  
940 **travel (see definition in Section 1A.13) shall comply with the applicable provisions of this**  
941 **Manual.**