



National Committee on Uniform Traffic Control Devices

17200 West Bell Road No.1135 * Surprise, Ariz. 85374
Telephone (623) 214-2403 * e-mail: ncutcd@aol.com

Item No.: 15A.EC.01

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

TECHNICAL COMMITTEE: Edit Committee, with input from all technical committees and a task force
ITEM NUMBER: Edit #1
TOPIC: Site Roadways Open to Public Travel
ORIGIN OF REQUEST: Needed due to changes in the 2009 MUTCD applying the MUTCD to private roads open to public travel
AFFECTED SECTIONS OF MUTCD: Parts 1, 2, 3, 4, 6, and 9

DEVELOPMENT HISTORY:

- Approved by Technical Committee: Approved by Edit Committee, April 30, 2015
- Approved by NCUTCD Council: TBD

This is a proposal for recommended changes to the MUTCD that have been developed by a technical committee of the NCUTCD. The NCUTCD is distributing it to its sponsoring organizations for review and comment. Sponsor comments will be considered in revising the proposal prior to NCUTCD Council consideration. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. If approved by the NCUTCD Council, the recommended changes 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.

SUMMARY:

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.

36
37 These proposed changes were initially developed by a task force that worked with all of the
38 NCUTCD technical committees. The task force work was then reviewed by the Edit Committee
39 and packaged as recommended MUTCD changes to submit to sponsors for review and comment.
40

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

47 **DISCUSSION**

48
49 For many years, the Code of Federal Regulations (23CFR655) included the statement that the
50 MUTCD is “the national standard for all traffic control devices installed on any street, highway,
51 or bicycle trail open to public travel.” This language is also mentioned in the 2000 and 2003
52 MUTCDs. In December 2006, the FHWA revised the language in 23 CFR 655.603 to clarify
53 that, for the purpose of MUTCD applicability, the phrase “open to public travel” includes toll
54 roads and roads within shopping centers, parking lots, airports, sports arenas, and other similar
55 business and recreation facilities that are privately or publicly owned but where the public is
56 allowed to travel without access restrictions.
57

58 The Final Rule making in 2009 for the MUTCD provides the following definition:
59

60 **Part 1 General Introduction**

61 **Standard:**

62 **Traffic control devices shall be defined as all signs, signals, markings, and other devices**
63 **used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway,**
64 **pedestrian facility, bikeway, or private road open to public travel (see definition in Section**
65 **1A.13) by authority of a public agency or official having jurisdiction, or, in the case of a**
66 **private road, by authority of the private owner or private official having jurisdiction.**
67
68

69 **The Manual on Uniform Traffic Control Devices (MUTCD) is incorporated by reference in**
70 **23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall be recognized as the**
71 **national standard for all traffic control devices installed on any street, highway, bikeway,**
72 **or private road open to public travel (see definition in Section 1A.13) in accordance with 23**
73 **U.S.C. 109(d) and 402(a). The policies and procedures of the Federal Highway**
74 **Administration (FHWA) to obtain basic uniformity of traffic control devices shall be as**
75 **described in 23 CFR 655, Subpart F.**
76

77 **In accordance with 23 CFR 655.603(a), for the purposes of applicability of the MUTCD:**
78

- 79 **A. Toll roads under the jurisdiction of public agencies or authorities or public-private**
80 **partnerships shall be considered to be public highways;**
- 81 **B. Private roads open to public travel shall be as defined in Section 1A.13; and**

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

86 **Section 1A.13 Definitions**

87 **159. Private Road Open to Public Travel—private toll roads and roads (including any**
88 **adjacent sidewalks that generally run parallel to the road) within shopping centers,**
89 **airports, sports arenas, and other similar business and/or recreation facilities that are**
90 **privately owned, but where the public is allowed to travel without access restrictions.**
91 **Roads within private gated properties (except for gated toll roads) where access is**
92 **restricted at all times, parking areas, driving aisles within parking areas, and private grade**
93 **crossings shall not be included in this definition.**
94

95 As pointed out in the comments to the NPA of the 2009 MUTCD, there are many challenges
96 associated with applying the MUTCD to sites open to public travel. While some sites open to
97 public travel share similar characteristics with public streets and highways, other sites open to
98 public travel possess characteristics that were not considered when developing criteria for the
99 application, placement, and other aspects of traffic control devices on public roadways and
100 highways. Examples of sites open to public travel characteristics that make some of them
101 different from public roads include (but are not limited to):
102

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

109 **Guiding Principles**

110
111
112 Five guiding principles were followed in the development of proposed edits to the MUTCD to
113 address Site Roadways Open to Public Travel (SROPT). These include:
114

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

128 it was decided to use the term “site roadways” or the acronym “SROPT” and place it in
129 front of new text specifically addressing conditions for site roadways to allow users to
130 rapidly search 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.

135

136 Outreach

137

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:

141

- 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*

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

Special Request for Reviewers of this Proposal

Reviewers of this proposal are encouraged to “beta test” this proposal for real world application.

1. Pick a real world site roadway. It can be a fast food restaurant, a shopping center, a strip mall, a government or private office park, a sports complex, an airport, a school, a university campus, a park, or anything else that might qualify as an SROPT.
2. Do a site visit or use Google Earth to look at the layout of roadways, parking areas, etc.
3. Attempt to apply the SROPT provisions in this proposal. Be careful to rely on the provisions as they are stated in the document and don’t just make decisions based on your expertise. Put yourself in the shoes of someone who is attempting to apply SROPT provisions for the first time.

Are you able to:

- A. Determine whether your site meets the definition of a Site Roadway Open to Public Travel?
- B. Determine what facilities are Site Roadways?
- C. Determine which locations are subject to the MUTCD and which are not?
- D. Determine what traffic control devices should be applied at what locations?
- E. Determine whether any of the special provisions for Sites Roadways Open to Public Travel apply to your site?

If you have any problems applying the SROPT provisions, please comment on those problems using the comment spreadsheet. Also suggest text changes that would make those provisions work better.

Wrap-Up

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

Uniformity in traffic control devices for these circumstances is beneficial, reducing the potential for collisions, injuries, and potential fatalities. Uniformity enhances traffic safety and convenience by assuring that road users are able to navigate effectively with high recognition

220 and minimal confusion. Lack of recognition and the potential for confusion contribute to
221 distractions which are significant in collisions, property damage, and injuries. If the goal is to
222 reduce collisions, injuries, and fatalities associated with our transportation system it is hard to
223 argue against the premise that having road users encounter consistent and uniform messages to
224 regulate, warn, or guide them, no matter where they travel in the United States is better at
225 meeting this goal than an inconsistent, non-uniform alternative.
226

227 For site roadways open to public travel, the responsible parties are different than with public
228 streets and highways. Public streets and highways have a public agency or jurisdiction that
229 operates and maintains traffic control devices and is held accountable to consistency with the
230 MUTCD by the potential for design liability and by the US DOT through its funding allocations.
231 SROPT have different accountability. For example, a port or toll road may be responsible to a
232 quasi-public agency (such as a Port or Toll Authority) that has some relationship to the US and
233 state DOTs. However, an office building or shopping center would be the responsibility of the
234 property owner. The FHWA noted that enforcement can only occur when States or
235 municipalities include the requirement to comply with MUTCD in State ordinances, local
236 building codes, development approvals, site plans, etc., and, as a result, potential tort liability to
237 the owners of the private roads in the event of non-compliance. The FHWA believes that public
238 agency traffic engineers are not expected to enforce this provision for existing conditions on site
239 roads open to public travel. Owners, designers and contractors have responsibilities to address
240 and/or manage these risks for SROPT. In closing, this proposal is focused on providing
241 clarifications to the MUTCD to address Federal rulemaking of the past decade. For state or local
242 DOT traffic engineers, while the need for these changes may not affect highways and roadways
243 under their jurisdiction, the resulting uniformity will benefit all road users.
244

245 **RECOMMENDED MUTCD PROVISIONS/ REVISIONS**

246

247 The following present the proposed changes to the MUTCD within the context of the current
248 MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
249 proposed deletions from the MUTCD are shown in ~~red strikethrough~~ (note this is not fully
250 consistent yet). Changes previously approved by NCUTCD Council are shown in green double
251 underline for additions and ~~green double strikethrough~~ for deletions.
252

253 **RECOMMENDED MUTCD CHANGES**

254

255 The following present the proposed changes to the MUTCD within the context of the current
256 MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
257 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
258 approved by NCUTCD Council are shown in green double underline for additions and ~~green~~
259 ~~double strikethrough~~ for deletions. Changes to previously approved NCUTCD text are shown
260 blue underline and ~~red strikethrough~~ within the green text.
261
262

INTRODUCTION

Standard:

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

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

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

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

- ~~A. Toll roads under the jurisdiction of public agencies or authorities or public-private partnerships shall be considered to be public highways;~~
- ~~B. Private roads open to public travel shall be as defined in Section 1A.13; and~~
- ~~C. Parking areas, including the driving aisles within those parking areas, that are either publicly or privately owned shall not be considered to be "open to public travel" for purposes of MUTCD applicability.~~
- ~~D. Roads within private gated properties where access is restricted at all times (except for gated toll roads or roads where the general public is able to pay to access the facility), parking areas, parking aisles within parking areas, private grade crossings and pedestrian ways internal to buildings shall not be included in this definition.~~

03 In accordance with 23 CFR 655.603(a), the MUTCD shall apply to the following facilities.

- A. Any street, roadway, or bikeway open to public travel, both publicly and privately owned.
- B. Streets and roadways that are either publicly or privately owned and that are open to public travel without access restrictions. Examples include roadways within shopping centers, office parks, airports, sports arenas, other similar business and/or recreation facilities, governmental office complexes, schools, universities, airports, recreational parkland, national parks, and other similar publicly owned complexes

308 and/or recreation facilities. The above-described examples of streets and roadways
309 are referred to in this Manual as Site Roadways Open to Public Travel.

310 C. Publicly-owned toll roads, including those under the jurisdiction of a public agency,
311 public authority, or public-private partnership.

312 D. Privately-owned toll roads where the public is allowed to travel without access
313 restriction. This includes gated toll roads or roadways where the general public is
314 able to pay to access the facility.

315 E. Grade crossings of publicly-owned roadways with railroads or light rail transit.

316

317 04 The MUTCD shall not apply to the following facilities.

318 A. Roadways within private gated properties where access to the general public is
319 restricted at all times

320 B. Grade crossings of privately-owned roadways with railroads.

321 C. Parking areas, including the driving aisles within those parking areas, that are
322 either publicly or privately owned.

323 D. Pedestrian ways internal to buildings.

324

325 Support:

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

330

PART 1: GENERAL

331

332

Chapter 1A. General

333

Section 1A.01 Purpose of Traffic Control Devices

336 Support:

337 ⁰¹ The purpose of traffic control devices, as well as the principles for their use, is to promote
338 highway safety and efficiency by providing for the orderly movement of all road users on streets,
339 highways, bikeways, and site roadways ~~private roads~~ open to public travel throughout the
340 Nation.

341 ⁰² Traffic control devices notify road users of regulations and provide warning and guidance
342 needed for the uniform and efficient operation of all elements of the traffic stream in a manner
343 intended to minimize the occurrences of crashes.

344 **Standard:**

345 ⁰³ **Traffic control devices or their supports shall not bear any advertising message or any**
346 **other message that is not related to traffic control.**

347 Support:

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

350 **Standard:**

351 ⁰⁵ On-premise advertising signs, including advertising signs located on site roadways
352 open to public travel shall not include depictions of official traffic control devices (signs or
353 signals).

354 Support

355 06 The UVC Section 11-206 (a) does not allow persons to place or maintain any unauthorized
356 use of official traffic control devices on, or within view of any highway.

357
358 **Section 1A.02 Principles of Traffic Control Devices**

359 Support:

360 01 This Manual contains the basic principles that govern the design and use of traffic control
361 devices for all streets, highways, bikeways, and site roadways ~~private roads~~ open to public travel
362 (see definition in Section 1A.13) regardless of type or class or the public agency, official, or
363 owner having jurisdiction. This Manual's text specifies the restriction on the use of a device if it
364 is intended for limited application or for a specific system. It is important that these principles be
365 given primary consideration in the selection and application of each device.

366
367 *Guidance:*

368 02 *To be effective, a traffic control device should meet five basic requirements:*

- 369 A. *Fulfill a need;*
370 B. *Command attention;*
371 C. *Convey a clear, simple meaning;*
372 D. *Command respect from road users; and*
373 E. *Give adequate time for proper response.*

374
375 Standard:

376 08 SROPT: All traffic control devices used on site roadways open to public travel shall
377 have the same shape, color, and meaning as those required by the MUTCD for use on
378 public highways, except as allowed by the guidance in Section 1A.03, paragraph 05. Sign
379 size exceptions are noted in each Chapter as applicable.

380
381 **Section 1A.03 Design of Traffic Control Devices**

382 *Guidance:*

383 01 *Devices should be designed so that features such as size, shape, color, composition, lighting*
384 *or retroreflection, and contrast are combined to draw attention to the devices; that size, shape,*
385 *color, and simplicity of message combine to produce a clear meaning; that legibility and size*
386 *combine with placement to permit adequate time for response; and that uniformity, size,*
387 *legibility, and reasonableness of the message combine to command respect.*

388 02 *Aspects of a device's standard design should be modified only if there is a demonstrated*
389 *need.*

390 Support:

391 03 An example of modifying a device's design would be to modify the Combination Horizontal
392 Alignment/Intersection (W1-10) sign to show intersecting side roads on both sides rather than on
393 just one side of the major road within the curve.

394 Option:

395 04 With the exception of symbols and colors, minor modifications in the specific design
396 elements of a device may be made provided the essential appearance characteristics are
397 preserved.

398 05 SROPT: On site roadways open to public travel, sign shapes may be modified where space
399 limitations dictate.

400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428

Section 1A.04 Placement and Operation of Traffic Control Devices

Guidance:

- 01 Placement of a traffic control device should be within the road user's view so that adequate visibility is provided. To aid in conveying the proper meaning, the traffic control device should be appropriately positioned with respect to the location, object, or situation to which it applies. The location and legibility of the traffic control device should be such that a road user has adequate time to make the proper response in both day and night conditions.*
- 02 Traffic control devices should be placed and operated in a uniform and consistent manner.*
- 03 Unnecessary traffic control devices should be removed. The fact that a device is in good physical condition should not be a basis for deferring needed removal or change.*

Section 1A.04a - Examples of Application for Sites Roadways Open to Public Travel

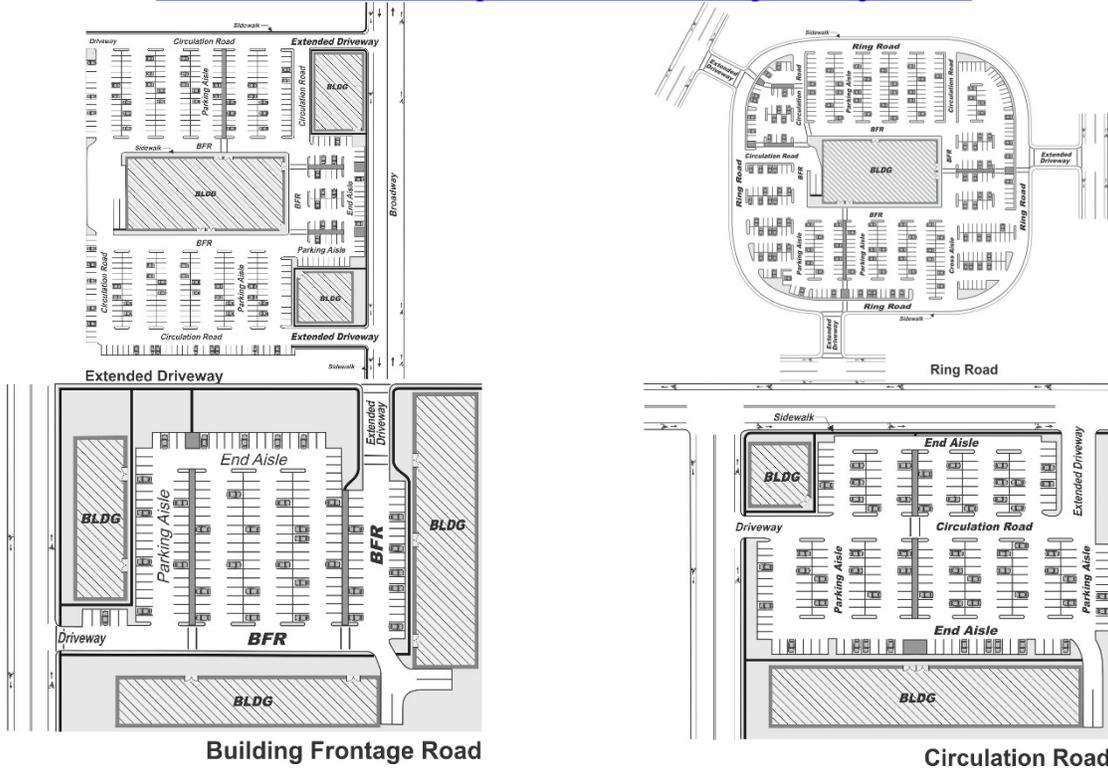
Support:

01 Figure 1A-XX illustrates examples of ring roads, circulation roads, extended driveways, driveways, and Building Frontage Roads (BFR's) in several different site roadway applications. While the MUTCD is not applicable to parking areas (including the driving aisles within those parking areas) the MUTCD applies to all of the site roadways that provide access between the public roadway network and parking areas. These site roadways can include driveways, extended driveways, ring roads, circulation roads, and building frontage roads. Building Frontage Roads frequently separate the primary parking area for use of employees, visitors, or customers of office, retail or other users of the site roadway from the generating activity. In these cases, frequent crossing of building frontage roads by pedestrians causes this type of roadway to represent the area of greatest vehicle/pedestrian conflict. Note that the examples do not represent a site size, only general layout characteristics. Typically parking areas of 500 spaces or greater the more likely to have site roadway circulation elements that would be addressed by the MUTCD.



429
430

Figure 1A-XX Examples of Site Roadways
(Abbreviations used in figures: BFR = Building Frontage Road)



431

Section 1A.07 Responsibility for Traffic Control Devices

432

Standard:

433

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

434

435

436

437

438

439

440

441

442

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

443

444

445

Support:

446

447

448

449

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

450

451

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

452

Standard:

453

01 Traffic control devices, advertisements, announcements, and other signs or messages within the highway right-of-way shall be placed only as authorized by a public authority or

454

455 the official having jurisdiction, or, in the case of site roadways ~~private roads~~ open to public
456 travel, by the private owner or official having jurisdiction, for the purpose of regulating,
457 warning, or guiding traffic.

458 02 When the public agency or the official having jurisdiction over a street or highway or,
459 in the case of site roadways ~~private roads~~ open to public travel, the private owner or
460 private official having jurisdiction, has granted proper authority, others such as
461 contractors and public utility companies shall be permitted to install temporary traffic
462 control devices in temporary traffic control zones. Such traffic control devices shall
463 conform with the Standards of this Manual.

464

465 Section 1A.09 Engineering Study and Engineering Judgment

466 *Guidance:*

467 04 Jurisdictions, or owners of site roadways ~~private roads~~ open to public travel, with
468 responsibility for traffic control that do not have engineers on their staffs who are trained and/or
469 experienced in traffic control devices should seek engineering assistance from others, such as the
470 State transportation agency, their county, a nearby large city, or a traffic engineering
471 consultant.

472

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

474 Support

475 09 A request for permission to experiment will be considered only when submitted by the
476 public agency or toll facility operator responsible for the operation of the road or street on which
477 the experiment is to take place. For a site roadway ~~private road~~ open to public travel, the request
478 will be considered only if it is submitted by the private owner or private official having
479 jurisdiction.

480 **Standard:**

481 17 A jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to
482 public travel that desires to use a traffic control device for which FHWA has issued an
483 interim approval shall request permission from FHWA.

484

485 *Guidance:*

486 20 A local jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to
487 public travel using a traffic control device or application under an interim approval that was
488 granted by FHWA either directly or on a statewide basis based on the State's request should
489 inform the State of the locations of such use.

490 21 A local jurisdiction, toll facility operator, or owner of a site roadway ~~private road~~ open to
491 public travel that is requesting permission to experiment or permission to use a device or
492 application under an interim approval should first check for any State laws and/or directives
493 covering the application of the MUTCD provisions that might exist in their State.

494

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

496 **Standard:**

497 02 Unless otherwise defined in this Section, or in other Parts of this Manual, words or
498 phrases shall have the meaning(s) as defined in the most recent editions of the "Uniform
499 Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," and other
500 publications mentioned in Section 1A.11.

501 03 The following words and phrases, when used in this Manual, shall have the following
502 meanings:

503 94. Intersection—intersection is defined as follows:

- 504 a. The area embraced within the prolongation or connection of the lateral curb
505 lines, or if none, the lateral boundary lines of the roadways of two highways
506 that join one another at, or approximately at, right angles, or the area within
507 which vehicles traveling on different highways that join at any other angle
508 might come into conflict.
- 509 b. The junction of an alley or driveway with a roadway or highway shall not
510 constitute an intersection, unless the roadway or highway at said junction is
511 controlled by a traffic control device.
- 512 c. The junction of a site roadway with adjacent streets or highways in the public
513 right-of-way shall be considered as an intersection if the site roadway connects
514 as a prolongation of a public road or the junction is controlled by a traffic
515 control signal. The junction of a ring road, perimeter road, or other site
516 roadways with adjacent streets or highways shall be considered as
517 intersections.
- 518 d. If a highway includes two roadways that are 30 feet or more apart (see
519 definition of Median), then every crossing of each roadway of such divided
520 highway by an intersecting highway shall be a separate intersection.
- 521 e. If both intersecting highways include two roadways that are 30 feet or more
522 apart, then every crossing of any two roadways of such highways shall be a
523 separate intersection.
- 524 f. At a location controlled by a traffic control signal, regardless of the distance
525 between the separate intersections as defined in (c) and (d) above:
- 526 i. If a stop line, yield line, or crosswalk has not been designated on the
527 roadway (within the median) between the separate intersections, the two
528 intersections and the roadway (median) between them shall be
529 considered as one intersection;
- 530 ii. Where a stop line, yield line, or crosswalk is designated on the roadway
531 on the intersection approach, the area within the crosswalk and/or
532 beyond the designated stop line or yield line shall be part of the
533 intersection; and
- 534 iii. Where a crosswalk is designated on a roadway on the departure from
535 the intersection, the intersection shall include the area extending to the
536 far side of such crosswalk.

537 ~~159. Private Road Open to Public Travel—private toll roads and roads (including any
538 adjacent sidewalks that generally run parallel to the road) within shopping
539 centers, airports, sports arenas, and other similar business and/or recreation
540 facilities that are privately owned, but where the public is allowed to travel without
541 access restrictions. Roads within private gated properties (except for gated toll
542 roads) where access is restricted at all times, parking areas, driving aisles within
543 parking areas, and private grade crossings shall not be included in this definition.
544 [see new definition for Site Roadways Open to Public Travel #271]~~

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

- 547 237. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other
548 conveyances either singularly or together while using for purposes of travel any
549 highway or site roadway ~~private road~~ open to public travel.
- 550 238. ~~Traffic Control Device— a sign, signal, marking, or other device used to regulate, warn,~~
551 ~~or guide traffic, placed on, over, or adjacent to a street, highway, private road open to~~
552 ~~public travel, pedestrian facility, or shared-use path by authority of a public agency or~~
553 ~~official having jurisdiction, or, in the case of a private road open to public travel, by~~
554 ~~authority of the private owner or private official having jurisdiction. Traffic Control~~
555 ~~Device - a sign, signal, marking, channelizing device or other device that uses colors,~~
556 ~~shapes, symbols, words, sounds and/or tactile information for the primary purpose of~~
557 ~~communicating a regulatory, warning, or guidance message to road users on a highway,~~
558 ~~pedestrian facility, bikeway, pathway, or site roadway ~~private road~~ open to public~~
559 ~~travel. [Previously approved by NCUTCD Council 6/23/11]~~

560
561 **[ADD THE FOLLOWING DEFINITIONS]**

- 562 **260. Building Frontage Road (BFR) – a vehicle circulation element of a site that is**
563 **located immediately adjacent to the buildings. The primary function of**
564 **Building Frontage Roads is for through circulation, but they may also provide**
565 **access to parking areas, loading zones, and fire lanes. They may connect**
566 **directly to public streets or highways (without an intervening driveway).**
- 567 **261. Driveway – a private an access from a roadway to a building, site, or abutting**
568 **property. [Previously approved by NCUTCD Council 6/26/14]**
- 569 **262. Driving Aisle – circulation area for motor vehicles within a parking area,**
570 **typically between rows of parking spaces. Driving aisles may provide one-way**
571 **or two-way travel. Driving aisles are exempted from compliance with MUTCD**
572 **provisions.**
- 573 **263. Extended Driveway – a site roadway that connects streets or highways with site**
574 **circulation including the throat area used for storing exiting or entering traffic.**
- 575 **264. Loading Zone – a specially marked, signed or designated area for the loading of**
576 **vehicles (passenger or freight)**
- 577 **265. On-Premise Advertising Sign – signs that advertise goods, services or activities**
578 **offered by business enterprises or groups on the property where the sign is**
579 **located.**
- 580 **266. On-Street Parking – parking spaces adjacent to and accessed directly from a**
581 **site roadway or a public roadway.**
- 582 **267. Parking Space – an area marked or designated for temporary storage of a**
583 **vehicle while the driver is not present.**
- 584 **268. Circulation Road – a road that connects multiple buildings, parking facilities,**
585 **loading zones, public or private transit stops, and other vehicular destinations**
586 **on a site. Circulation roads may be lined with parking similar to on-street**
587 **parking in the public right of way or pass through parking areas; however the**
588 **purpose of the roadway is primarily through circulation to other vehicular**
589 **destinations not solely parking stalls.**
- 590 **269. Ring Road – a common term for a perimeter circulation road that**
591 **circumnavigates the primary destinations on the site, although there may be**
592 **vehicular destinations outside the ring road as well.**

- 593 **270. Site – a parcel of land publicly or privately owned bounded by property line(s)**
594 **and/or portions of public right-of-way, such as shopping centers, office parks,**
595 **airports, sports arenas, governmental office complexes, schools, public**
596 **universities, recreational parkland, national parks, and other similar publicly**
597 **owned complexes and/or recreation facilities.**
- 598 **271. Site Roadways Open to Public Travel – also referred to as Site Roadways.**
599 **Roadways and bikeways on sites of shopping centers, office parks, airports,**
600 **sports arenas, and other similar business and/or recreation facilities that are**
601 **privately owned but where the public is allowed to travel without access**
602 **restrictions. Roadways and bikeways on sites of governmental office complexes,**
603 **schools, public universities, publicly owned airports, recreational parkland,**
604 **national parks, and other similar publicly owned complexes and/or recreation**
605 **facilities. This includes vehicular, bicycle or pedestrian ways where the public**
606 **is allowed to travel without access restriction, a private toll road, site roadways**
607 **(including any adjacent sidewalk that generally runs parallel to the road) or**
608 **other facility that may be access-controlled for the purposes of revenue**
609 **collection, but where the controls allow anyone to enter and/or exit. Two types**
610 **of roadways are not included in this definition: 1) roadways where access is**
611 **restricted at all times by gates and/or guards to residents, employees or other**
612 **specifically authorized persons; and 2) private highway-rail crossings. Site**
613 **roadways open to public travel does not include parking areas, including the**
614 **driving aisles within those parking areas.**

615
616 **Section 1A.14 Meanings of Acronyms and Abbreviations in this Manual**

617 **Standard:**

618 01 The following acronyms and abbreviations, when used in this Manual, shall have the
619 following meanings:

620 **36. SROPT – Sites Roadways Open to Public Travel**

621
622 **PART 2: SIGNS**

623
624 **Chapter 2A. General**

625
626 **Section 2A.01 Function and Purpose of Signs**

627 **Support:**

628 01 This Manual contains Standards, Guidance, and Options for the signing of all types of
629 highways, and **site roadways** ~~private roads~~ open to public travel. The functions of signs are to
630 provide regulations, warnings, and guidance information for road users. Words, symbols, and
631 arrows are used to convey the messages. Signs are not typically used to confirm rules of the road.

632
633 **Section 2A.03 Standardization of Application**

634
635 **Standard:**

636 05 Each standard sign shall be displayed only for the specific purpose as prescribed in this
637 Manual. Determination of the particular signs to be applied to a specific condition shall be
638 made in accordance with the provisions set forth in Part 2. Before any new highway, **site**

639 **roadway ~~private road~~ open to public travel (see definition in Section 1A.13), detour, or**
640 **temporary route is opened to public travel, all necessary signs shall be in place. Signs**
641 **required by road conditions or restrictions shall be removed when those conditions cease to**
642 **exist or the restrictions are withdrawn.**

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

644 Option:

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

651

652 **Section 2A.11 Dimensions**

653

654 **Standard:**

655 ⁰² **The sign dimensions prescribed in the sign size tables in the various Parts and**
656 **Chapters in this Manual and in the “Standard Highway Signs and Markings” book (see**
657 **Section 1A.11) shall be used unless engineering judgment determines that other sizes are**
658 **appropriate. Except as provided in Paragraph 3, where engineering judgment determines**
659 **that sizes smaller than the prescribed dimensions are appropriate for use, the sign**
660 **dimensions shall not be less than the minimum dimensions specified in this Manual. The**
661 **sizes shown in the Minimum columns that are smaller than the sizes shown in the**
662 **Conventional Road columns in the various sign size tables in this Manual shall only be used**
663 **on low-speed roadways, alleys, and site roadways ~~private roads~~ open to public travel where**
664 **the reduced legend size would be adequate for the regulation or warning or where physical**
665 **conditions preclude the use of larger sizes.**

666

667 *Guidance:*

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

672

673 Option:

674 ⁰⁹ SROPT: The minimum sign sizes for site roadways open to public travel roads with
675 operating speeds less than 25 mph may be 6 inches less in both width and height than the single-
676 lane conventional road size shown in Tables 2B-1 and 2C-2. This does not apply to
677 supplemental plaques.

678

679 **Chapter 2B. Regulatory Signs, Barricades, and Gates**

680

681 **Section 2B.03 Size of Regulatory Signs**

682 *Guidance:*

683 ⁰⁹ *The minimum sizes for regulatory signs facing traffic on exit and entrance ramps at major*
684 *interchanges connecting an Expressway or Freeway with an Expressway or Freeway (see*

685 Section 2E.32Aa) [Council Approved 6/23/11] should be as shown in the column of Table 2B-1
686 that corresponds to the mainline roadway classification (Expressway or Freeway). If a minimum
687 size is not provided in the Freeway column, the minimum size in the Expressway column should
688 be used. If a minimum size is not provided in the Freeway or Expressway Column, the size in the
689 Oversized column should be used.

690 ¹⁰ The minimum size for all regulatory signs facing traffic on exit and entrance ramps at all
691 interchanges (see Section 2E.A(b) B and C) should be the regulatory sign size shown in Table
692 2B-1 Conventional Road Single Lane column for single lane ramps and Multi-Lane for multi-
693 lane ramps. [Council Approved. 6/23/11]

694 Option:

695 ¹¹ SROPT: The minimum sign sizes for site roadways open to public travel roads with
696 operating speeds less than 25 mph may be 6 inches less in both width and height than the single-
697 lane conventional road size except for supplemental plaques identified by “P” in the sign
698 designation in Table 2B-1.

699

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

701 *Guidance:*

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

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

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

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

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

716 *Support:*

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

718



719 Support:

720 ⁰⁴ SROPT: Refer to Part 3 for information about using stop lines and the STOP word marking
721 without a STOP sign on site roadways open to public travel.

722

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

724 *Guidance:*

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

726 Option:

727 ⁰⁶ SROPT: The decision to install a multi-way stop control on site roadways open to public
728 travel may be based on engineering judgment.

729

730

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

732 Option:

733 Standard:

734 01 The STOP or YIELD sign shall be installed on the near side of the intersection on the right-
735 hand side of the approach to which it applies, except as provided in paragraph 21. When the
736 STOP or YIELD sign is installed at this required location and the sign visibility is restricted, a
737 Stop Ahead sign (see Section 2C.36) shall be installed in advance of the STOP sign or a Yield
738 Ahead sign (see Section 2C.36) shall be installed in advance of the YIELD sign.

739 20 For a yield-controlled channelized right-turn movement onto a roadway without an
740 acceleration lane and for an entrance ramp onto a freeway or expressway without an acceleration
741 lane, a NO MERGE AREA (W4-5P) supplemental plaque (see Section 2C.40) may be mounted
742 below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering
743 judgment indicates that road users would expect an acceleration lane to be present.

744 21 SROPT: On the approach to a site roadway where the operating speeds are less than 25 mph,
745 a STOP or YIELD sign may be installed on other than the right hand side as necessitated by
746 physical constraints.

747

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

749 Option:

750 04 The DO NOT ENTER sign may be installed where it is necessary to emphasize the one-way
751 traffic movement on a ramp or turning lane.

752 07 SROPT: A DO NOT ENTER sign may be omitted for divided roadway median openings
753 where the operating speeds are less than 25 mph on a site roadway open to public travel.

754

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

756 Option:

757 14 The BEGIN ONE WAY (R6-6) sign (see Figure 2B-13) may be used notify road users of
758 the beginning point of a one direction of travel restriction on the street or roadway. The END
759 ONE WAY (R6-7) sign (see Figure 2B-13) may be used notify road users of the ending point of
760 a one direction of travel restriction on the street or roadway.

761 Option:

762 15 SROPT: A one-way sign may be omitted for site roadways open to public travel that
763 intersect one-way driving aisles where wrong way pavement marking arrows and/or a stop line
764 the full width of the aisle and/or stop marking are used.

765

766 **Section 2B.68 Gates**

767 **Standard:**

768 05 Except as provided in Paragraph 6, gate arms, if used, shall be fully retroreflectorized
769 on both sides, have vertical stripes alternately red and white at 16-inch intervals measured
770 horizontally as shown in Figure 8C-1.

771 17 SROPT: If a chain, cable, or other device is used to restrict access on a site roadway
772 open to public travel, it shall be clearly marked with a Type 1 object marker or a
773 retroreflective sign suspended from or attached to the chain, cable, or other device.

774

775

776

777 **Chapter 2C. Warning Signs And Object Markers**

778

779 **Section 2C.01 Function of Warning Signs**

780 Support:

781 01 Warning signs call attention to unexpected conditions on or adjacent to a highway, street, or
 782 [site roadways](#) ~~private roads~~ open to public travel and to situations that might not be readily
 783 apparent to road users. Warning signs alert road users to conditions that might call for a
 784 reduction of speed or an action in the interest of safety and efficient traffic operations.

785

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

787

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

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

789 [\[Remainder of table remains the same, Council Approved. 6/22/12\]](#)

790

791 **Section 2C.50 Non-Vehicular Warning Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22)**

792 Option:

793 01 Non-Vehicular Warning (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16
 794 through W11-22) signs (see Figure 2C-11) may be used to alert road users in advance of
 795 locations where unexpected entries into the roadway might occur or where shared use of the
 796 roadway by pedestrians, animals, or equestrians might occur.

797 Support:

798 13 [SROPT: Refer to Section 3B.18 for information about providing crosswalk markings on site roadways open to public travel without providing the associated warning sign.](#)

800

801 **Chapter 2D. Guide Signs – Conventional Roads**

802

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

804 Standard:

805 01 The provisions of this Chapter shall apply to any road or street ~~other than low-volume roads (as defined in Section 5A.01)~~ [\[Deleted by Council 1/10/14\]](#), expressways, and
 806 freeways, [or site roadways open to public travel](#).

807

808 **Section 2D.03 Color, Retroreflection, and Illumination**

809 Support:

810 01 Requirements for illumination, retroreflection, and color are stated under the specific
 811 headings for individual guide signs or groups of signs. General provisions are given in Sections
 812 2A.07, 2A.08, and 2A.10.

813 Standard:

814 02 Except where otherwise provided in this Manual for individual signs or groups of
 815 signs, guide signs on streets and highways shall have a white message and border on a
 816
 817

818 **green background. All messages, borders, and legends shall be retroreflective and all**
819 **backgrounds shall be retroreflective or illuminated.**

820 Option:

821 02a SROPT: Optional sign message and background colors complying with the provisions of
822 Section 2D.50 may be used for Destination (D1) signs on site roadways open to public travel.

823 Support:

824 03 Color coding is sometimes used to help road users distinguish between multiple potentially
825 confusing destinations. Examples of valuable uses of color coding include guide signs for
826 roadways approaching or inside an airport property with multiple terminals serving multiple
827 airlines, on site roadways open to public travel, and community wayfinding guide signs for
828 various traffic generator destinations within a community or area.

829

830 **Section 2D.04 Size of Signs**

831 Option:

832 03 Signs larger than those shown in Table 2D-1 may be used (see Section 2A.11).

833 Support:

834 04 For other guide signs, the legends are so variable that a standardized design or size is not
835 appropriate. The sign size is determined primarily by the length of the message, and the size of
836 lettering and spacing necessary for proper legibility.

837 Option:

838 05 Reduced letter height, reduced interline spacing, and reduced edge spacing may be used on
839 guide signs if sign size must be limited by factors such as lane width or vertical or lateral
840 clearance and on site roadways open to public travel with operating speeds less than 25 mph.

841

842 **Section 2D.06 Size of Lettering**

843 **Standard:**

844 02 **Design layouts for conventional road guide signs showing interline spacing, edge**
845 **spacing, and other specification details shall be as shown in the “Standard Highway Signs**
846 **and Markings” book (see Section 1A.11).**

847 03 **The principal legend on guide signs shall be in letters and numerals at least 6 inches in**
848 **height for all upper-case letters, or a combination of 6 inches in height for upper-case**
849 **letters and 4.5 inches in height for lower-case letters. Where speeds are 25 mph or less on** 
850 **roadways or on site roadways open to public travel where speeds are less than 25 mph. On**
851 **~~low-volume roads (as defined in Section 5A.01) with speeds of 25 mph or less, and on urban~~**
852 **~~streets with speeds of 25 mph or less,~~ the principal legend shall be in letters at least 4 inches**
853 **in height for all upper-case letters, or a combination of 4 inches in height for upper-case**
854 **letters and 3 inches in height for lower-case letters.**

855

856 **Section 2D.07 Amount of Legend**

857 Support:

858 01 The longer the legend on a guide sign, the longer it will take road users to comprehend it,
859 regardless of letter size.

860 *Guidance:*

861 02 *Except where otherwise provided in this Manual, guide signs should be limited to no more*
862 *than three lines of destinations, which include place names, route numbers, street names, and*
863 *cardinal directions. Where two or more signs are included in the same overhead display, the*

864 amount of legend should be further minimized. Where appropriate, a distance message or action
865 information, such as an exit number, NEXT RIGHT, or directional arrows, should be provided
866 on guide signs in addition to the destinations.

867 Option:

868 03 SROPT: Four destinations may be used on Guide signs on site roadways open to public
869 travel where the operating speed is less than 25 mph.

870

871 **Section 2D.11 Design of Route Signs**

872 Option:

873 18 SROPT: A minimum sign size of 18×18 inch route signs may be used for any route sign on
874 site roadways open to public travel where the operating speed is less than 25 mph.

875

876 **Section 2D.37 Destination Signs (D1 Series)**

877 *Guidance:*

878 *11 If space permits, four destinations should be displayed as two separate signs at two separate*
879 *locations.*

880 Option:

881 *11a* Where space does not permit, where all four destinations are in one direction, or on site
882 roadways open to public travel, a single sign may be used. Where a single sign is used and all
883 destinations are in the same direction, the arrow may be placed below the destinations for the
884 purpose of enhancing the conspicuity of the arrow.

885

886 **Section 2D.40 Location of Destination Signs**

887 Option:

888 *02* In urban areas or on site roadways open to public travel, shorter advance distances may be
889 used.

890

891 **Section 2D.41 Distance Signs (D2 Series)**

892 *Guidance:*

893 *03* The distance displayed should be selected on a case-by-case basis by the jurisdiction that
894 owns the road, owners of site roadways open to public travel, or by statewide policy. A well-
895 defined central area or central business district should be used where one exists. In other cases,
896 the layout of the community should be considered in relation to the highway being signed and the
897 decision based on where it appears that most drivers would feel that they are in the center of the
898 community in question.

899 *04* The top name on the Distance sign should be that of the next place on the route having a
900 post office or a railroad station, a route number or name of an intersected highway, or any other
901 significant geographical identity. The bottom name on the sign should be that of the next major
902 destination or control city. If three destinations are displayed, the middle line should be used to
903 indicate communities of general interest along the route or important route junctions.

904 Option:

905 *05* The choice of names for the middle line may be varied on successive Distance signs to give
906 road users additional information concerning communities served by the route.

907 09 SROPT: Four destinations may be used on Distance signs on site roadways open to public
908 travel where the operating speed is less than 25 mph.

909

910 **Section 2D.43 Street Name Signs (D3-1 or D3-1a)**

911 Option:

912 06 For local roads with speed limits of 25 mph or less [and site roadways open to public travel](#)
913 [with operating speeds less than 25 mph](#), the lettering on post-mounted Street Name signs may be
914 composed of initial upper-case letters at least 4 inches in height and lower-case letters at least 3
915 inches in height.

916

917 **Section 2D.47 Parking Area Guide Sign (D4-1)**

918 **Standard:**

919 02 If used, the Parking Area (D4-1) guide sign shall be a horizontal rectangle with a
920 standard size of 30×24 inches, or with a smaller size of 18×15 inches for minor, low-speed
921 streets [or site roadways open to public travel](#). It shall carry the word PARKING, with the
922 letter P five times the height of the remaining letters, and a directional arrow. The legend
923 and border shall be green on a retroreflectorized white background.

924

925 **Section 2D.50 Community Wayfinding Signs**

926 **Standard:**

927 04 The use of community wayfinding guide signs shall be limited to conventional roads
928 [and site roadways open to public travel](#). Community wayfinding guide signs shall not be
929 installed on freeway or expressway mainlines or ramps. Direction to community
930 wayfinding destinations from a freeway or expressway shall be limited to the use of a
931 Supplemental Guide sign (see Section 2E.35) on the mainline and a Destination sign (see
932 Section 2D.37) on the ramp to direct road users to the area or areas within which
933 community wayfinding guide signs are used. The individual wayfinding destinations shall
934 not be displayed on the Supplemental Guide and Destination signs except where the
935 destinations are in accordance with the State or agency policy on Supplemental Guide
936 signs.

937 *Guidance:*

938 08 *If used, a community wayfinding guide sign system should be established on a local*
939 *municipal or equivalent jurisdictional level or for an urbanized area of adjoining municipalities*
940 *or equivalent that form an identifiable geographic entity that is conducive to a cohesive and*
941 *continuous system of signs. Community wayfinding guide signs should not be used on a regional*
942 *or statewide basis where infrequent or sparse placement does not contribute to a continuous or*
943 *coordinated system of signing that is readily identifiable as such to the road user. In such cases,*
944 *Destination or other guide signs detailed in this Chapter should be used to direct road users to*
945 *an identifiable area in which the type of eligible destination described in Paragraph 1 is located.*

946 08a [SROPT: Wayfinding signs on site roadways open to public travel that are visible to vehicle](#)
947 [traffic should follow the provisions of this section as guidance for the design and placement of](#)
948 [these signs.](#)

949 **Support:**

950 09 The specific provisions of this Section regarding the design of community wayfinding sign
951 legends apply to vehicular community wayfinding signs and do not apply to those signs that are
952 intended only to provide information or direction to pedestrians or other users of a sidewalk or
953 roadside area.

954 09a [SROPT: The specific provisions of this section are intended to be wayfinding sign design](#)
955 [and installation guidance.](#)

956 *Guidance:*

957 21 *Community wayfinding guide signs, exclusive of any identification enhancement marker*
958 *used, should be rectangular in shape. Simplicity and uniformity in design, position, and*
959 *application as described in Section 2A.06 are important and should be incorporated into the*
960 *community wayfinding guide sign design and location plans for the area.*

961 22 *Community wayfinding guide signs should be limited to three destinations per sign (see*
962 *Section 2D.07).*

963 Option:

964 22a SROPT: Four destinations per sign may be used on site roadways open to public travel with
965 operating speeds less than 25 mph.

967 **Chapter 2M. Recreational and Cultural Interest Area Signs**

969 **Section 2M.02 Application of Recreational and Cultural Interest Area Signs**

970 *Option:*

971 03 *Recreational and cultural interest area guide signs may be used on any road to direct persons*
972 *to facilities, structures, and places, and to identify various services available to the general*
973 *public. These guide signs may also be used in recreational or cultural interest areas and on site*
974 *roadways open to public travel for signing non-vehicular events and amenities such as trails,*
975 *structures, and facilities.*

977 **Section 2M.05 Symbol Sign Sizes**

978 *Guidance:*

979 01 *Recreational and cultural interest area symbol signs should be 24×24 inches. Where*
980 *greater visibility or emphasis is needed, larger sizes should be used. Symbol sign enlargements*
981 *should be in 6-inch increments.*

982 02 *Recreational and cultural interest area symbol signs should be 30×30 inches when used on*
983 *guide signs on freeways or expressways.*

984 *Option:*

985 03 *A smaller size of 18×18 inches may be used on low-speed, low-volume roadways, on site*
986 *roadways open to public travel with operating speeds less than 25 mph, and on non-road*
987 *applications.*

989 **PART 3: MARKINGS**

991 **Chapter 3A. General**

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

994 *Support:*

995 01 *Markings ~~on highways and on private roads open to public travel~~ have important functions*
996 *in providing guidance and information for the road user. Major marking types include pavement*
997 *and curb markings, delineators, colored pavements, channelizing devices, and islands. In some*
998 *cases, markings are used to supplement other traffic control devices such as signs, signals, and*
999 *other markings. In other instances, markings are used alone to effectively convey regulations,*
1000 *guidance, or warnings in ways not obtainable by the use of other devices.*

1001

1002 **Section 3A.02 Standardization of Application**

1003 Guidance:

1004 02 Before any new highway, [site roadway](#) ~~private road~~ open to public travel (see definition in
1005 Section 1A.13), paved detour, or temporary route is opened to public travel, all necessary
1006 markings should be in place.

1007

1008 **Section 3A.06 Functions, Widths, and Patterns of Longitudinal Pavement Markings**

1009 Guidance:

1010 04 Broken lines should consist of 10-foot line segments and 30-foot gaps, or dimensions in a
1011 similar ratio of line segments to gaps ([i.e., 1:3](#)) as appropriate for traffic speeds and need for
1012 delineation.

1013 Option:

1014 [04a SROPT: Broken lines may be 5-foot line segments and 15-foot gaps on site roadways open
1015 to public travel where the operating speed is less than 25 mph.](#)

1016

1017 **Chapter 3B. Pavement and Curb Markings**

1018 **Section 3B.02 No-Passing Zone Pavement Markings and Warrants**

1019 **Standard:**

1020 04 On roadways with center line markings, no-passing zone markings shall be used at
1021 horizontal or vertical curves where the passing sight distance is less than the minimum
1022 shown in Table 3B-1 for the 85th-percentile speed or the posted or statutory speed limit.
1023 The passing sight distance on a vertical curve is the distance at which an object 3.5 feet
1024 above the pavement surface can be seen from a point 3.5 feet above the pavement (see
1025 Figure 3B-4). Similarly, the passing sight distance on a horizontal curve is the distance
1026 measured along the center line (or right-hand lane line of a three-lane roadway) between
1027 two points 3.5 feet above the pavement on a line tangent to the embankment or other
1028 obstruction that cuts off the view on the inside of the curve (see Figure 3B-4).

1029 Option

1030 [04a SROPT: No-passing zone pavement markings may be omitted based on engineering
1031 judgment on site roadways open to public travel where the operating speed is less than 25 mph.](#)

1032 Guidance:

1033 16 The minimum lane transition taper length should be 100 feet in urban areas and 200 feet in
1034 rural areas.

1035 [17 SROPT: The minimum taper length should be computed by the formula \$L=WS^2/60\$ on site
1036 roadways open to public travel where the operating speed is less than 25 mph.](#)

1037

1038 **Section 3B.09 Lane-Reduction Transition Markings**

1039 Option:

1040 03 On low-speed urban roadways [and on site roadways with operating speeds less than 25 mph](#)
1041 where curbs clearly define the roadway edge in the lane-reduction transition, or where a through
1042 lane becomes a parking lane, the edge line and/or delineators shown in Figure 3B-14 may be
1043 omitted as determined by engineering judgment.

1044 Guidance:

1045 [05a SROPT: The minimum taper length should be computed by the formula \$L=WS^2/60\$ on site
1046 roadways open to public travel with operating speeds of less than 25 mph.](#)



1047 06 Where observed speeds exceed posted or statutory speed limits, longer tapers should be
1048 used.

1049

1050 **Section 3B.10 Approach Markings for Obstructions**

1051 *Guidance:*

1052 05 The minimum taper length should be 100 feet in urban areas and 200 feet in rural areas.

1053 05a SROPT: The minimum taper length should be computed by the formula $L=WS^2/60$ on site
1054 roadways open to public travel where the operating speed is less than 25 mph.

1055

1056 **Section 3B.16 Stop and Yield Lines**

1057 *Guidance:*

1058 01 Stop lines should be used to indicate the point behind which vehicles are required to stop in
1059 compliance with a traffic control signal.

1060 *Option:*

1061 02 Stop lines may be used to indicate the point behind which vehicles are required to stop in
1062 compliance with a STOP (R1-1) sign, a Stop Here For Pedestrians (R1-5b or R1-5c) sign, or
1063 some other traffic control device that requires vehicles to stop, except YIELD signs that are not
1064 associated with passive grade crossings.

1065 03 Yield lines may be used to indicate the point behind which vehicles are required to yield in
1066 compliance with a YIELD (R1-2) sign or a Yield Here To Pedestrians (R1-5 or R1-5a) sign.

1067 Option:

1068 19 SROPT: On site roadways open to public travel with operating speeds less than 25 mph, a
1069 stop line or yield line may be used without an accompanying STOP or YIELD sign (see Part 2B).

1070 Standard:

1071 20 SROPT: Where a Stop line or Yield line is used without an accompanying sign, a
1072 STOP or YIELD pavement marking message shall be used in advance of the stop or yield
1073 line.

1074

1075 **Section 3B.18 Crosswalk Markings**

1076 *Guidance:*

1077 11 Because non-intersection pedestrian crossings are generally unexpected by the road user,
1078 warning signs (see Section 2C.50) should be installed for all marked crosswalks at non-
1079 intersection locations and adequate visibility should be provided by parking prohibitions.

1080 Option:

1081 19 SROPT: On site roadways open to public travel where the operating speed is less than 25
1082 mph, crosswalk warning signs may be omitted (see Section 2C.50) for marked crosswalks at
1083 non-intersection locations where pedestrian crossings are generally expected by the road user
1084 (such as along a Building Frontage Road) and where adequate visibility is provided.

1085

1086 **Section 3B.20 Pavement Word, Symbol, and Arrow Markings**

1087 *Option:*

1088 12 On narrow, low-speed shared-use paths, the pavement words, symbols, and arrows may be
1089 smaller than suggested, but to the relative scale.

1090 12a SROPT: On site roadways open to public travel where the operating speed is less than 25
1091 mph, the pavement words, symbols, and arrows may be half-size or larger, but in proportion to
1092 the associated full-size word, symbol, or arrow.

1093 13 Pavement markings simulating Interstate, U.S., State, and other official highway route shield
1094 signs (see Figure 2D-3) with appropriate route numbers, but elongated for proper proportioning
1095 when viewed as a marking, may be used to guide road users to their destinations (see Figure 3B-
1096 25).

1097 **Standard:**

1098 14 ~~Except at the ends of aisles in parking lots, the word STOP shall not be used on the~~
1099 ~~pavement unless accompanied by a stop line (see Section 3B.16) and STOP sign (see Section~~
1100 ~~2B.05).~~ The word STOP shall not be used on the pavement unless accompanied by a stop
1101 line, except at the end of aisle in parking areas and for site roadways open to public travel
1102 as noted in Section 3B.16.

1103 15 The word STOP shall not be placed on the pavement in advance of a stop line, unless
1104 every vehicle is required to stop at all times.

1105

1106 **Section 3B.24 Chevron and Diagonal Crosshatch Markings**

1107 *Guidance:*

1108 05 *The chevrons and diagonal lines used for crosshatch markings should be at least 12 inches*
1109 *wide for roadways having a posted or statutory speed limit of 45 mph or greater, and at least 8*
1110 *inches wide for roadways having posted or statutory speed limit of less than 45 mph. The*
1111 *longitudinal spacing of the chevrons or diagonal lines should be determined by engineering*
1112 *judgment considering factors such as speeds and desired visual impacts. The chevrons and*
1113 *diagonal lines should form an angle of approximately 30 to 45 degrees with the longitudinal*
1114 *lines that they intersect.*

1115 06 SROPT: Chevrons and diagonal lines used for crosshatch markings should be at least 4
1116 inches wide on site roadways open to public travel where the operating speed is less than 25
1117 mph.

1118

1119 **PART 4: SIGNALS**

1120

1121 **Chapter 4D. Traffic Control Signal Features**

1122

1123 **Section 4D.02 Responsibility for Operation and Maintenance**

1124 *Guidance:*

1125 01 *Prior to installing any traffic control signal, the responsibility for the maintenance of the*
1126 *signal and all of the appurtenances, hardware, software, and the timing plan(s) should be clearly*
1127 *established ~~by the~~ ~~The~~ responsible agency or owner of site roadways open to public travel*
1128 *~~should provide for the maintenance of the traffic control signal and all its appurtenances in a~~*
1129 *~~competent manner.~~*

1130 02 *To this end the agency or site roadway owner should:*

- 1131 A. *Keep every controller assembly in effective operation in accordance with its*
1132 *predetermined timing schedule; check the operation of the controller assembly frequently*
1133 *enough to verify that it is operating in accordance with the predetermined timing*
1134 *schedule; and establish a policy to maintain a record of all timing changes and that only*
1135 *authorized persons are permitted to make timing changes;*
1136 B. *Clean the optical system of the signal sections and replace the light sources as frequently*
1137 *as experience proves necessary;*

- 1138 C. Clean and service equipment and other appurtenances as frequently as experience proves
1139 necessary;
- 1140 D. Provide for alternate operation of the traffic control signal during a period of failure,
1141 using flashing mode or manual control, or manual traffic direction by proper authorities
1142 as might be required by traffic volumes or congestion, or by erecting other traffic control
1143 devices;
- 1144 E. Have properly skilled maintenance personnel available without undue delay for all signal
1145 malfunctions and signal indication failures;
- 1146 F. Provide spare equipment to minimize the interruption of traffic control signal operation
1147 as a result of equipment failure;
- 1148 G. Provide for the availability of properly skilled maintenance personnel for the repair of all
1149 components; and
- 1150 H. Maintain the appearance of the signal displays and equipment.

1151
1152 **Section 4D.07 Size of Vehicular Signal Indications**

1153 **Standard:**

1154 **01 There shall be two nominal diameter sizes for vehicular signal indications: 8 inches and**
1155 **12 inches.**

1156 **02 Except as provided in Paragraph 3 below, 12-inch signal indications shall be used for**
1157 **all signal sections in all new signal faces.**

1158 **Option:**

1159 **03 Eight-inch circular signal indications may be used in new signal faces only for:**

- 1160 A. The green or flashing yellow signal indications in an emergency-vehicle traffic control
1161 signal (see Section 4G.02);
- 1162 B. The circular indications in signal faces controlling the approach to the downstream
1163 location where two adjacent signalized locations are close to each other and it is not
1164 practical because of factors such as high approach speeds, horizontal or vertical curves,
1165 or other geometric factors to install visibility-limited signal faces for the downstream
1166 approach;
- 1167 C. The circular indications in a signal face that is located less than 120 feet from the stop
1168 line on a roadway with a posted or statutory speed limit ([or operating speed on site](#)
1169 [roadway open to public travel](#)) of 30 mph or less;
- 1170 D. The circular indications in a supplemental near-side signal face;
- 1171 E. The circular indications in a supplemental signal face installed for the sole purpose of
1172 controlling pedestrian movements (see Section 4D.03) rather than vehicular movements;
1173 and
- 1174 F. The circular indications in a signal face installed for the sole purpose of controlling a
1175 bikeway or a bicycle movement.

1176 **04 Existing 8-inch circular signal indications that are not included in Items A through F G in**
1177 **Paragraph 3 may be retained for the remainder of their useful service life.**

PART 6: TEMPORARY TRAFFIC CONTROL

1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229

Chapter 6A. General

Section 6A.01 General

Standard:

02 The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on [site roadways](#) ~~private roads~~ open to public travel (see definition in Section 1A.13), including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a TTC zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.

Support:

03 When the normal function of the roadway, or a [site roadway](#) ~~private road~~ open to public travel, is suspended, TTC planning provides for continuity of the movement of motor vehicle, bicycle, and pedestrian traffic (including accessible passage); transit operations; and access (and accessibility) to property and utilities.

Standard:

10 TTC plans and devices shall be the responsibility of the ~~authority of a~~ public body or official [or the owners of site roadways open to public travel](#) ~~authority~~ having jurisdiction for guiding road users. There shall be adequate statutory authority for the implementation and enforcement of needed road user regulations, parking controls, speed zoning, and the management of traffic incidents. Such statutes shall provide sufficient flexibility in the application of TTC to meet the needs of changing conditions in the TTC zone.

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.

1230 **Section 6C.04 Advance Warning Area**

1231 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

1232

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

1233

1234 * Speed category to be determined by the highway agency [or owner of site roadways open to](#)
 1235 [public travel authority](#).

1236

1237 ** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46.
 1238 The A dimension is the distance from the transition or point of restriction to the first sign. The B
 1239 dimension is the distance between the first and second signs. The C dimension is the distance
 1240 between the second and third signs. (The “first sign” is the sign in a three-sign series that is
 1241 closest to the TTC zone. The “third sign” is the sign that is furthest upstream from the TTC
 1242 zone.)

1242

1243 **Chapter 6D. Pedestrian and Worker Safety**

1244

1245 **Section 6D.01 Pedestrian Considerations**

1246

Support:

1247

06 It must be recognized that pedestrians are reluctant to retrace their steps to a prior
 1248 intersection for a crossing or to add distance or out-of-the-way travel to a destination. [This is](#)
 1249 [especially true for site roadways open to public travel where pedestrians will seek the shortest](#)
 1250 [route, e.g., from a site building to their parked vehicle.](#)

1250

Guidance:

1251

09 *Consideration should be made to separate pedestrian movements from both worksite activity
 1252 and vehicular traffic. Unless an acceptable route that does not involve crossing the roadway can
 1253 be provided, pedestrians should be appropriately directed with advance signing that encourages
 1254 them to cross to the opposite side of the roadway. In urban and suburban areas with high
 1255 vehicular traffic volumes, these signs should be placed at intersections (rather than midblock
 1256 locations) so that pedestrians are not confronted with midblock worksites that will induce them
 1257 to attempt skirting the worksite or making a midblock crossing.*

1258

1259 09a Due to the likelihood of high pedestrian presence in site roadways open to public travel,
1260 TTC zones should be designed to minimize conflicts between vehicular and pedestrian
1261 movements.

1263 **Section 6F.01 Types of Devices**

1264 Support

1265 03 Various Sections of the MUTCD require certain traffic control devices, their supports,
1266 and/or related appurtenances to be crashworthy. Such MUTCD crashworthiness provisions apply
1267 to all streets, highways, and site roadways ~~private roads~~ open to public travel. Also, State
1268 Departments of Transportation and local agencies might have expanded the NCHRP Report 350
1269 crashworthy criteria to apply to certain other roadside appurtenances.

1270 **Standard**

1271 06 **Traffic control devices shall be defined as all signs, signals, markings, and other**
1272 **devices used to regulate, warn, or guide road users, placed on, over, or adjacent to a street,**
1273 **highway, site roadways ~~private roads~~ open to public travel (see definition in Section 1A.13),**
1274 **pedestrian facility, or bikeway by authority of a public body or official having jurisdiction.**

1275 07 **All traffic control devices used for construction, maintenance, utility, or incident**
1276 **management operations on a street, highway, or site roadway ~~private road~~ open to public**
1277 **travel (see definition in Section 1A.13) shall comply with the applicable provisions of this**
1278 **Manual.**

1279

1280 **PART 9. TRAFFIC CONTROL FOR BICYCLE FACILITIES**

1281

1282 **Chapter 9A. General**

1283

1284 **Section 9A.02 Scope**

1285

1286 Support:

1287 01 Part 9 covers signs, pavement markings, and highway traffic signals specifically related to
1288 bicycle operation on ~~both~~ roadways, ~~and~~ shared-use paths, and site roadways open to public
1289 travel.

1290 *Guidance:*

1291 02 *Parts 1, 2, 3, and 4 should be reviewed for general provisions, signs, pavement markings,*
1292 *and signals.*

1293

1294 **Chapter 9B. Signs**

1295

1296 **Section 9B.09 Selective Exclusion Signs**

1297

1298 Option:

1299 04 Where bicyclists, pedestrians, and motor-driven cycles are all prohibited, it may be more
1300 desirable to use the R5-10a word message sign that is described in Section 2B.39.

1301 *Guidance:*

1302 05 SROPT: While discouraged, if selective modal exclusions are utilized on a site roadway
1303 open to public travel, then directional signs should be provided to access points or other site
1304 roadways where bicyclists, pedestrians and motor-driven cycles are permitted.

1305
1306
1307
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320

Section 9B.23 Bicycle Parking Area Sign (D4-3)

Option:

01 The Bicycle Parking Area (D4-3) sign (see Figure 9B-4) may be installed where it is desirable to show the direction to a designated bicycle parking area. The arrow may be reversed as appropriate.

Standard:

02 **The legend and border of the Bicycle Parking Area sign shall be green on a retroreflectorized white background.**

Guidance :

03 SROPT: On site roadways open to public travel, the Bicycle Parking Area Sign should be installed at the first logical location where entering bicyclists would see it in order to direct bicyclists to the Bicycle Parking Area.