

CHAPTER 1A. GENERAL

Section 1A.01 Purpose of Traffic Control Devices

Support:

The purpose of traffic control devices, as well as the principles for their use, is to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, public facilities, and private property open to public travel throughout the Nation.

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

Standard:

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

Support:

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

Section 1A.02 Principles of Traffic Control Devices

Support:

This Manual contains the basic principles that govern the design and use of traffic control devices for all streets, highways, bikeways, public facilities, and private property open to public travel regardless of type or class or the public agency or official having jurisdiction. This Manual's text specifies the restriction on the use of a device if it is intended for limited application or for a specific system. It is important that these principles be given primary consideration in the selection and application of each device.

Guidance:

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

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

Design, placement, operation, maintenance, and uniformity are aspects that should be carefully considered in order to maximize the ability of a traffic control device to meet the five requirements listed in the previous paragraph. Vehicle speed should be carefully considered as an element that governs the design, operation, placement, and location of various traffic control devices.

Support:

The definition of the word "speed" varies depending on its use. The definitions of specific speed terms are contained in Section 1A.13.

Guidance:

The actions required of road users to obey regulatory devices should be specified by State statute, or in cases not covered by State statute, by local ordinance or resolution. Such statutes, ordinances, and resolutions should be consistent with the "Uniform Vehicle Code" (see Section 1A.11).

The proper use of traffic control devices should provide the reasonable and prudent road user with the information necessary to efficiently and lawfully use the streets, highways, pedestrian facilities, and bikeways in a manner intended to minimize the occurrences of crashes.

Support:

Uniformity of the meaning of traffic control devices is vital to their effectiveness. The meanings ascribed to devices in this Manual are in general accord with the publications mentioned in Section 1A.11.

Section 1A.03 Design of Traffic Control Devices

Guidance:

Devices should be designed so that features such as size, shape, color, composition, lighting or retroreflection, and contrast are combined to draw attention to the devices; that size, shape, color, and

1 simplicity of message combine to produce a clear meaning; that legibility and size combine with placement to
2 permit adequate time for response; and that uniformity, size, legibility, and reasonableness of the message
3 combine to command respect.

4 Aspects of a device's standard design should be modified only if there is a demonstrated need.

5 Support:

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

9 Option:

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

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

13 Guidance:

14 Placement of a traffic control device should be within the road user's view so that adequate visibility is
15 provided. To aid in conveying the proper meaning, the traffic control device should be appropriately
16 positioned with respect to the location, object, or situation to which it applies. The location and legibility of
17 the traffic control device should be such that a road user has adequate time to make the proper response in
18 both day and night conditions.

19 Traffic control devices should be placed and operated in a uniform and consistent manner.

20 Unnecessary traffic control devices should be removed. The fact that a device is in good physical
21 condition should not be a basis for deferring needed removal or change.

22 **Section 1A.05 Maintenance of Traffic Control Devices**

23 Guidance:

24 Functional maintenance of traffic control devices should be used to determine if certain devices need to be
25 changed to meet current traffic conditions.

26 Physical maintenance of traffic control devices should be performed to retain the legibility and visibility
27 of the device, and to retain the proper functioning of the device.

28 Support:

29 Clean, legible, properly mounted devices in good working condition command the respect of road users.

30 **Section 1A.06 Uniformity of Traffic Control Devices**

31 Support:

32 Uniformity of devices simplifies the task of the road user because it aids in recognition and understanding,
33 thereby reducing perception/reaction time. Uniformity assists road users, law enforcement officers, and traffic
34 courts by giving everyone the same interpretation. Uniformity assists public highway officials through
35 efficiency in manufacture, installation, maintenance, and administration. Uniformity means treating similar
36 situations in a similar way. The use of uniform traffic control devices does not, in itself, constitute uniformity.
37 A standard device used where it is not appropriate is as objectionable as a nonstandard device; in fact, this
38 might be worse, because such misuse might result in disrespect at those locations where the device is needed
39 and appropriate.

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

41 Standard:

42 **The responsibility for the design, placement, operation, maintenance, and uniformity of traffic**
43 **control devices shall rest with the public agency or the official having jurisdiction. 23 CFR 655.603**
44 **adopts the Manual on Uniform Traffic Control Devices as the national standard for all traffic control**
45 **devices installed on any street, highway, or bikeway, public facility, or private property open to public**
46 **travel. When a State or other Federal agency manual or supplement is required, that manual or**
47 **supplement shall be in substantial conformance with the National MUTCD.**

48 **23 CFR 655.603 also states that traffic control devices on all streets, highways, public facilities, and**
49 **private property open to public travel in each State shall be in substantial conformance with standards**
50 **issued or endorsed by the Federal Highway Administrator.**

1 Support:

2 The Introduction of this Manual contains information regarding the meaning of substantial conformance
3 and the applicability of the MUTCD to private property open to public travel.

4 The “Uniform Vehicle Code” (see Section 1A.11) has the following provision in Section 15-104 for the
5 adoption of a uniform manual:

6 “(a) The [State Highway Agency] shall adopt a manual and specification for a uniform system of
7 traffic control devices consistent with the provisions of this code for use upon highways within this
8 State. Such uniform system shall correlate with and so far as possible conform to the system set forth
9 in the most recent edition of the Manual on Uniform Traffic Control Devices for Streets and
10 Highways, and other standards issued or endorsed by the Federal Highway Administrator.”

11 “(b) The Manual adopted pursuant to subsection (a) shall have the force and effect of law.”

12 The National MUTCD has also been adopted by the National Park Service, the U.S. Forest Service, the
13 U.S. Military Command, the Bureau of Indian Affairs, the Bureau of Land Management, and the U.S. Fish
14 and Wildlife Service.

15 Guidance:

16 Additionally, States should adopt Section 15-116 of the “Uniform Vehicle Code,” which states that, “No
17 person shall install or maintain in any area of private property used by the public any sign, signal, marking, or
18 other device intended to regulate, warn, or guide traffic unless it conforms with the State manual and
19 specifications adopted under Section 15-104.”

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

21 **Standard:**

22 **Traffic control devices, advertisements, announcements, and other signs or messages within the**
23 **highway right-of-way shall be placed only as authorized by a public authority or the official having**
24 **jurisdiction, for the purpose of regulating, warning, or guiding traffic.**

25 **When the public agency or the official having jurisdiction over a street or highway has granted**
26 **proper authority, others such as contractors and public utility companies shall be permitted to install**
27 **temporary traffic control devices in temporary traffic control zones. Such traffic control devices shall**
28 **conform with the Standards of this Manual.**

29 **All regulatory traffic control devices shall be supported by laws, ordinances, or regulations.**

30 Support:

31 Provisions of this Manual are based upon the concept that effective traffic control depends upon both
32 appropriate application of the devices and reasonable enforcement of the regulations.

33 Although some highway design features, such as curbs, median barriers, guardrails, impact attenuators
34 (crash cushions), speed humps or tables, and textured pavement, have a significant impact on traffic
35 operations and safety, they are not considered to be traffic control devices and provisions regarding their
36 design and use are generally not included in this Manual.

37 Certain types of signs and other devices that do not have any traffic control purpose are sometimes placed
38 within the highway right-of-way by or with the permission of the public agency or the official having
39 jurisdiction over the street or highway. Most of these signs and other devices are not intended for use by road
40 users in general, and their message is only important to individuals who have been instructed in their
41 meanings. These signs and other devices are not considered to be traffic control devices and provisions
42 regarding their design and use are not included in this Manual. Among these signs and other devices are the
43 following:

- 44 A. Devices whose purpose is to assist highway maintenance personnel. Examples include markers to
45 guide snowplow operators, devices that identify culvert and drop inlet locations, and devices that
46 precisely identify highway locations for maintenance or mowing purposes.
- 47 B. Devices whose purpose is to assist fire or law enforcement personnel. Examples include markers that
48 identify fire hydrant locations, signs that identify fire or water district boundaries, speed measurement
49 pavement markings, and small indicator lights to assist in enforcement of red light violations.
- 50 C. Devices whose purpose is to assist utility company personnel and highway contractors, such as
51 markers that identify underground utility locations.
- 52 D. Signs posting local non-traffic ordinances.
- 53 E. Signs giving civic organization meeting information.

1 Guidance:

2 Signs and other devices that do not have any traffic control purpose that are placed within the highway
3 right-of-way by or with the permission of the public agency or the official having jurisdiction over the street
4 or highway should be located where they will not interfere with, or detract from, traffic control devices.

5 Any unauthorized traffic control device or other sign or message placed on the highway right-of-way by a
6 private organization or individual constitutes a public nuisance and should be removed. All unofficial or
7 nonessential traffic control devices, signs, or messages should be removed.

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

9 **Standard:**

10 **This Manual describes the application of traffic control devices, but shall not be a legal requirement**
11 **for their installation.**

12 Guidance:

13 The decision to use a particular device at a particular location should be made consistent with the
14 principles of this Manual and, if required by this Manual, on the basis of either an engineering study or the
15 application of engineering judgment. Thus, while this Manual provides Standards, Guidance, and Options for
16 design and application of traffic control devices, this Manual should not be considered a substitute for
17 engineering judgment.

18 Engineering judgment should be exercised in the selection and application of traffic control devices, as
19 well as in the location and design of the roads and streets that the devices complement. Jurisdictions with
20 responsibility for traffic control that do not have engineers on their staffs who are trained and/or experienced
21 in traffic control devices should seek engineering assistance from others, such as the State transportation
22 agency, their county, a nearby large city, or a traffic engineering consultant.

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

24 **Standard:**

25 **Design, application, and placement of traffic control devices other than those adopted in this**
26 **Manual shall be prohibited unless the provisions of this Section are followed.**

27 Support:

28 Continuing advances in technology will produce changes in the highway, vehicle, and road user
29 proficiency; therefore, portions of the system of traffic control devices in this Manual will require updating.
30 In addition, unique situations often arise for device applications that might require interpretation or
31 clarification of this Manual. It is important to have a procedure for recognizing these developments and for
32 introducing new ideas and modifications into the system.

33 **Standard:**

34 **Except as noted in the Option below, requests for any interpretation, permission to experiment,**
35 **interim approval, or change shall be submitted electronically to the Federal Highway Administration**
36 **(FHWA), Office of Transportation Operations, MUTCD team, at the following e-mail address:**
37 **MUTCDofficialrequest@dot.gov.**

38 Option:

39 Although electronic submittal is strongly preferred by the FHWA, requests for interpretations, permission
40 to experiment, interim approvals, or changes may instead be mailed to the Office of Transportation
41 Operations, HOTO-1, Federal Highway Administration, 1200 New Jersey Avenue, SE, Washington,
42 DC 20590 if electronic submittal is not possible.

43 Support:

44 Communications regarding other MUTCD matters that are not related to official requests will receive
45 quicker attention if they are submitted electronically to the MUTCD Team Leader or to the appropriate
46 individual MUTCD team member. Their e-mail addresses are available through the links contained on the
47 "Who's Who" page on the MUTCD website at <http://mutcd.fhwa.dot.gov/team.htm>.

48 An interpretation includes a consideration of the application and operation of standard traffic control
49 devices, official meanings of standard traffic control devices, or the variations from standard device designs.

50 Guidance:

51 Requests for an interpretation of this Manual should contain the following information:

52 A. A concise statement of the interpretation being sought;

- 1 B. A description of the condition that provoked the need for an interpretation;
- 2 C. Any illustration that would be helpful to understand the request; and
- 3 D. Any supporting research data that is pertinent to the item to be interpreted.

4 Support:

5 Requests to experiment include consideration of field deployment for the purpose of testing or evaluating
6 a new traffic control device, its application or manner of use, or a provision not specifically described in this
7 Manual.

8 A request for permission to experiment will be considered only when submitted by the public agency or
9 private toll facility responsible for the operation of the road or street on which the experiment is to take place.

10 A diagram indicating the process for experimenting with traffic control devices is shown in Figure 1A-1.

11 Guidance:

12 The request for permission to experiment should contain the following:

- 13 A. A statement indicating the nature of the problem.
- 14 B. A description of the proposed change to the traffic control device or application of the traffic control
15 device, how it was developed, the manner in which it deviates from the standard, and how it is
16 expected to be an improvement over existing standards.
- 17 C. Any illustration that would be helpful to understand the traffic control device or use of the traffic
18 control device.
- 19 D. Any supporting data explaining how the traffic control device was developed, if it has been tried, in
20 what ways it was found to be adequate or inadequate, and how this choice of device or application
21 was derived.
- 22 E. A legally binding statement certifying that the concept of the traffic control device is not protected by
23 a patent or copyright. (An example of a traffic control device concept would be countdown pedestrian
24 signals in general. Ordinarily an entire general concept would not be patented or copyrighted, but if it
25 were it would not be acceptable for experimentation unless the patent or copyright owner signs a
26 waiver of rights acceptable to the FHWA. An example of a patented or copyrighted specific device
27 within the general concept of countdown pedestrian signals would be a manufacturer's design for its
28 specific brand of countdown signal, including the design details of the housing or electronics that are
29 unique to that manufacturer's product. As long as the general concept is not patented or copyrighted,
30 it is acceptable for experimentation to incorporate the use of one or more patented devices of one or
31 several manufacturers.)
- 32 F. The time period and location(s) of the experiment.
- 33 G. A detailed research or evaluation plan that must provide for close monitoring of the experimentation,
34 especially in the early stages of its field implementation. The evaluation plan should include before
35 and after studies as well as quantitative data describing the performance of the experimental device.
- 36 H. An agreement to restore the site of the experiment to a condition that complies with the provisions of
37 this Manual within 3 months following the end of the time period of the experiment. This agreement
38 must also provide that the agency sponsoring the experimentation will terminate the experimentation
39 at any time that it determines significant safety concerns are directly or indirectly attributable to the
40 experimentation. The FHWA's Office of Transportation Operations has the right to terminate
41 approval of the experimentation at any time if there is an indication of safety concerns. If, as a result
42 of the experimentation, a request is made that this Manual be changed to include the device or
43 application being experimented with, the device or application will be permitted to remain in place
44 until an official rulemaking action has occurred.
- 45 I. An agreement to provide semiannual progress reports for the duration of the experimentation, and an
46 agreement to provide a copy of the final results of the experimentation to the FHWA's Office of
47 Transportation Operations within 3 months following completion of the experimentation. The
48 FHWA's Office of Transportation Operations has the right to terminate approval of the
49 experimentation if reports are not provided in accordance with this schedule.

50 Support:

51 A change includes consideration of a new device to replace a present standard device, an additional device
52 to be added to the list of standard devices, or a revision to a traffic control device application or placement
53 criteria.

54 Guidance:

55 Requests for a change to this Manual should contain the following information:

- 1 A. A statement indicating what change is proposed;
- 2 B. Any illustration that would be helpful to understand the request; and
- 3 C. Any supporting research data that is pertinent to the item to be reviewed.

4 Support:

5 Interim approval allows interim use, pending official rulemaking, of a new traffic control device, a
6 revision to the application or manner of use of an existing traffic control device, or a provision not specifically
7 described in this Manual. The FHWA issues an Interim Approval by official memorandum signed by the
8 Associate Administrator for Operations and posts this memorandum on the MUTCD website. The issuance
9 by FHWA of an interim approval will typically result in the traffic control device or application being placed
10 into the next scheduled rulemaking process for revisions to this Manual.

11 Interim approval is considered based on the results of successful experimentation, results of analytical or
12 laboratory studies, and/or review of non-U.S. experience with a traffic control device or application. Interim
13 approval considerations include an assessment of relative risks, benefits, costs, impacts, and other factors.

14 Interim approval allows for optional use of a traffic control device or application and does not create a
15 new mandate or recommendation for use. Interim approval includes conditions that jurisdictions agree to
16 comply with in order to use the traffic control device or application until an official rulemaking action has
17 occurred.

18 **Standard:**

19 **A jurisdiction desiring to use a traffic control device for which FHWA has issued an interim**
20 **approval shall request permission from FHWA.**

21 Guidance:

22 The request for permission to place a traffic control device under an interim approval should contain the
23 following:

- 24 A. A description of where the device will be used, such as a list of specific locations or highway
25 segments or types of situations, or a statement of the intent to use the device jurisdiction-wide;
- 26 B. An agreement to abide by the specific conditions for use of the device as contained in the FHWA's
27 interim approval document;
- 28 C. An agreement to maintain and continually update a list of locations where the device has been
29 installed; and
- 30 D. An agreement to:
 - 31 1. Restore the site(s) of the interim approval to a condition that complies with the provisions in this
32 Manual within 3 months following the issuance of a Final Rule on this traffic control device; and
 - 33 2. Terminate use of the device or application installed under the interim approval at any time that it
34 determines significant safety concerns are directly or indirectly attributable to the device or
35 application. The FHWA's Office of Transportation Operations has the right to terminate the
36 interim approval at any time if there is an indication of safety concerns.

37 Option:

38 A State may submit a request for the use of a device under interim approval for all jurisdictions in that
39 State, as long as the request contains the information listed in the Guidance above.

40 Guidance:

41 A local jurisdiction using a traffic control device or application under an interim approval that was granted
42 by FHWA either directly to that jurisdiction or on a statewide basis based on the State's request should inform
43 the State of the locations of such use.

44 Option:

45 A device or application installed by a jurisdiction under an interim approval may remain in place, under
46 any conditions established in the interim approval, until an official rulemaking action has occurred.

47 Support:

48 A diagram indicating the process for incorporating new traffic control devices into this Manual is shown
49 in Figure 1A-2.

50 For additional information concerning interpretations, experimentation, changes, or interim approvals,
51 visit the MUTCD website at <http://mutcd.fhwa.dot.gov>.

52 **Section 1A.11 Relation to Other Publications**

1 **Standard:**

2 **To the extent that they are incorporated by specific reference, the latest editions of the following**
3 **publications, or those editions specifically noted, shall be a part of this Manual: “Standard Highway**
4 **Signs and Markings” book (FHWA); and “Color Specifications for Retroreflective Sign and Pavement**
5 **Marking Materials” (appendix to subpart F of Part 655 of Title 23 of the Code of Federal Regulations).**

6 Support:

7 The “Standard Highway Signs and Markings” book includes standard alphabets and symbols for signs and
8 pavement markings.

9 For information about the above publications, visit the Federal Highway Administration’s MUTCD
10 website at <http://mutcd.fhwa.dot.gov>, or write to the FHWA, 1200 New Jersey Avenue, SE, HOTO,
11 Washington, DC 20590.

12 The 2000 FHWA publication entitled “Roundabouts-An Informational Guide” (FHWA-RD-00-067) is
13 available at <http://www.tfhrc.gov/safety/00068.htm>, or write to the FHWA, 1200 New Jersey Avenue, SE,
14 HSA-1, Washington, DC 20590.

15 The 2001 FHWA publication entitled “Federal-Aid Highway Program Guidance on High Occupancy
16 Vehicle (HOV) Lanes” is available at <http://www.fhwa.dot.gov/operations/hovguide01.htm>, or write to the
17 FHWA, 1200 New Jersey Avenue, SE, HOTM, Washington, DC 20590.

18 The 2001 FHWA publication entitled “Designing Sidewalks and Trails for Access—Part 2—Best
19 Practices Design Guide” (FHWA-EP-01-027) is available by writing to the FHWA, 1200 New Jersey Avenue,
20 SE, HEP, Washington, DC 20590.

21 The 2003 FHWA publication entitled “Travel Better, Travel Longer: A Pocket Guide to Improving
22 Traffic Control and Mobility for Our Older Population” (FHWA-OP-03-098) is available at
23 <http://mutcd.fhwa.dot.gov/pdfs/PocketGuide0404.pdf>, or write to the FHWA, 1200 New Jersey Avenue, SE,
24 HOTO, Washington, DC 20590.

25 The January 2006 FHWA publication entitled “Ramp Management and Control Handbook” (FHWA-
26 HOP-06-001) is available at
27 http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/default.htm, or write to the
28 FHWA, 1200 New Jersey Avenue, SE, HOTM, Washington, DC 20590.

29 Other publications that are useful sources of information with respect to the use of this Manual are listed
30 below. See Page i of this Manual for ordering information for the following publications (later editions might
31 also be available as useful sources of information):

- 32 1. “AAA School Safety Patrol Operations Manual,” 2006 Edition (AAA)
- 33 2. “A Policy on Geometric Design of Highways and Streets,” 2004 Edition (American Association of
34 State Highway and Transportation Officials—AASHTO)
- 35 3. “Guide for the Development of Bicycle Facilities,” 1999 Edition (AASHTO)
- 36 4. “Guide to Metric Conversion,” 1993 Edition (AASHTO)
- 37 5. “Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to
38 Freeways,” 2001 Edition (AASHTO)
- 39 6. “Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to
40 Freeways, 4th Edition / Guide Signs, Part II: Guidelines for Airport Guide Signing / Guide Signs, Part
41 III: List of Control Cities for Use in Guide Signs on Interstate Highways,” Item Code: GSGLC-4,
42 2001 Edition (AASHTO)
- 43 7. “Roadside Design Guide,” 2001 Edition (AASHTO)
- 44 8. “Standard Specifications for Movable Highway Bridges,” 1988 Edition (AASHTO)
- 45 9. “Traffic Engineering Metric Conversion Folders—Addendum to the Guide to Metric Conversion,”
46 1993 Edition (AASHTO)
- 47 10. “2000 AREMA Communications & Signals Manual,” American Railway Engineering &
48 Maintenance-of-Way Association (AREMA)
- 49 11. “Practice for Roadway Lighting,” RP-8, 2001, Illuminating Engineering Society (IES)
- 50 12. “Safety Guide for the Prevention of Radio Frequency Radiation Hazards in the Use of Commercial
51 Electric Detonators (Blasting Caps),” Safety Library Publication No. 20, July 2001 Edition, Institute
52 of Makers of Explosives
- 53 13. “American National Standard for High-Visibility Public Safety Vests,” (ANSI/ISEA 207-2006), 2006
54 Edition (International Safety Equipment Association—ISEA)

14. "American National Standard for High-Visibility Safety Apparel and Headwear," (ANSI/ISEA 107-2004), 2004 Edition (ISEA)
15. "Manual of Traffic Signal Design," 1998 Edition (Institute of Transportation Engineers—ITE)
16. "Manual of Transportation Engineering Studies," 1994 Edition (ITE)
17. "Pedestrian Traffic Control Signal Indications," Part 1—1985 Edition; Part 2 (LED Pedestrian Traffic Signal Modules)—2004 Edition (ITE)
18. "Preemption of Traffic Signals Near Railroad Crossings," 2006 Edition (ITE)
19. "Purchase Specification for Flashing and Steady Burn Warning Lights," 1981 Edition (ITE)
20. "Traffic Detector Handbook," 1991 Edition (ITE)
21. "Traffic Engineering Handbook," 1999 Edition (ITE)
22. "Traffic Signal Lamps," 1980 Edition (ITE)
23. "Traffic Control Devices Handbook," 2001 Edition (ITE)
24. "Vehicle Traffic Control Signal Heads," Part 1—1985 Edition; Part 2 (LED Circular Signal Supplement)—2005 Edition; Part 3 (LED Vehicular Arrow Traffic Signal Supplement)—2004 Edition (ITE)
25. "Uniform Vehicle Code (UVC) and Model Traffic Ordinance," 2000 Edition (National Committee on Uniform Traffic Laws and Ordinances)
26. "Occupational Safety and Health Administration Regulations (Standards - 29 CFR), General Safety and Health Provisions - 1926.20," amended June 30, 1993, Occupational Safety and Health Administration (OSHA)
27. "Highway Capacity Manual," 2000 Edition (Transportation Research Board—TRB)
28. "Recommended Procedures for the Safety Performance Evaluation of Highway Features," (NCHRP Report 350), 1993 Edition (TRB)
29. "Accessible Pedestrian Signals," A-37, 1998 Edition, U.S. Architectural and Transportation Barriers Compliance Board (The U.S. Access Board)
30. "Building a True Community—Final Report—Public Rights-of-Way Access Advisory Committee (PRWAAC)," 2001 Edition (The U.S. Access Board)
31. "The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)," July 1998 Edition (The U.S. Access Board)

Section 1A.12 Color Code

Support:

The following color code establishes general meanings for 11 colors of a total of 13 colors that have been identified as being appropriate for use in conveying traffic control information. Tolerance limits for each color are contained in 23 CFR Part 655, Appendix to Subpart F and are available at the Federal Highway Administration's MUTCD website at <http://mutcd.fhwa.dot.gov> or by writing to the FHWA, Office of Safety Research and Development (HRD-T-301), 6300 Georgetown Pike, McLean, VA 22101.

The two colors for which general meanings have not yet been assigned are being reserved for future applications that will be determined only by FHWA after consultation with the States, the engineering community, and the general public. The meanings described in this Section are of a general nature. More specific assignments of colors are given in the individual Parts of this Manual relating to each class of devices.

Standard:

The general meaning of the 13 colors shall be as follows:

- A. Black—regulation**
- B. Blue—road user services guidance, tourist information, and evacuation route**
- C. Brown—recreational and cultural interest area guidance**
- D. Coral—unassigned**
- E. Fluorescent Pink—incident management**
- F. Fluorescent Yellow-Green—pedestrian warning, bicycle warning, playground warning, school bus and school warning**
- G. Green—indicated movements permitted, direction guidance**
- H. Light Blue—unassigned**
- I. Orange—temporary traffic control**
- J. Purple—electronic toll collection (ETC)**
- K. Red—stop or prohibition**
- L. White—regulation**
- M. Yellow—warning**

1 **Section 1A.13 Definitions of Words and Phrases in This Manual**

2 **Standard:**

3 Unless otherwise defined in this Section, or in other Parts of this Manual, words or phrases shall
4 have the meaning(s) as defined in the most recent editions of the “Uniform Vehicle Code,” “AASHTO
5 Transportation Glossary (Highway Definitions),” and other publications listed in Section 1A.11.

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

- 7 1. **Active Grade Crossing Warning System**—the flashing-light signals, with or without warning
8 gates, together with the necessary control equipment used to inform road users of the approach
9 or presence of trains at highway-rail or highway-light rail transit grade crossings.
- 10 2. **Alley**—a street or highway intended to provide access to the rear or side of lots or buildings in
11 urban areas and not intended for the purpose of through vehicular traffic.
- 12 3. **Approach**—all lanes of traffic moving towards an intersection or a midblock location from one
13 direction, including any adjacent parking lane(s).
- 14 4. **Arterial Highway (Street)**—a general term denoting a highway primarily used by through
15 traffic, usually on a continuous route or a highway designated as part of an arterial system.
- 16 5. **Average Annual Daily Traffic (AADT)**—the total volume of traffic passing a point or segment
17 of a highway facility in both directions for one year divided by the number of days in the year.
18 Normally, periodic daily traffic volumes are adjusted for hours of the day counted, days of the
19 week, and seasons of the year to arrive at average annual daily traffic.
- 20 6. **Average Day**—a day representing traffic volumes normally and repeatedly found at a location.
21 Where volumes are primarily influenced by employment, the average day is typically a
22 weekday. When volumes are primarily influenced by entertainment or recreation, the average
23 day is typically a weekend day.
- 24 7. **Barrier-Separated Lane**—a preferential lane or other special purpose lane that is separated
25 from the adjacent general purpose lane(s) by a physical barrier.
- 26 8. **Beacon**—a highway traffic signal with one or more signal sections that operates in a flashing
27 mode.
- 28 9. **Bicycle**—a pedal-powered vehicle upon which the human operator sits.
- 29 10. **Bicycle Lane**—a portion of a roadway that has been designated for preferential or exclusive use
30 by bicyclists by pavement markings and, if used, signs.
- 31 11. **Bikeway**—a generic term for any road, street, path, or way that in some manner is specifically
32 designated for bicycle travel, regardless of whether such facilities are designated for the
33 exclusive use of bicycles or are to be shared with other transportation modes.
- 34 12. **Buffer-Separated Lane**—a preferential lane or other special purpose lane that is separated from
35 the adjacent general purpose lane(s) by a pattern of standard longitudinal pavement markings
36 that is wider than a normal or wide lane line marking. The buffer area might include
37 channelizing devices such as tubular markers or traversable curbs, but does not include a
38 physical barrier.
- 39 13. **Center Line Markings**—the yellow pavement marking line(s) that delineates the separation of
40 traffic lanes that have opposite directions of travel on a roadway. These markings need not be
41 at the geometrical center of the pavement.
- 42 14. **Changeable Message Sign**—a sign that is capable of displaying more than one message (one of
43 which might be a “blank” display), changeable manually, by remote control, or by automatic
44 control. These signs are referred to as Dynamic Message Signs in the National Intelligent
45 Transportation Systems (ITS) Architecture.
- 46 15. **Channelizing Line Markings**—a wide or double solid white line used to form islands where
47 traffic in the same direction of travel is permitted on both sides of the island.
- 48 16. **Circular Intersection**—an intersection that has an island, generally circular in design, located in
49 the center of the intersection where traffic passes to the right of the island. Circular
50 intersections include roundabouts, rotaries, and traffic circles.
- 51 17. **Circulatory Roadway**—the roadway within a circular intersection on which traffic travels in a
52 counterclockwise direction around an island in the center of the circular intersection.
- 53 18. **Clear Zone**—the total roadside border area, starting at the edge of the traveled way, that is
54 available for an errant driver to stop or regain control of a vehicle. This area might consist of a
55 shoulder, a recoverable slope, and/or a nonrecoverable, traversable slope with a clear run-out
56 area at its toe.

- 1 19. **Collector Highway**—a term denoting a highway that in rural areas connects small towns and
2 local highways to arterial highways, and in urban areas provides land access and traffic
3 circulation within residential, commercial, and business areas and connects local highways to
4 the arterial highways.
- 5 20. **Concurrent Flow Preferential Lane**—a preferential lane that is operated in the same direction
6 as the adjacent mixed flow lanes, separated from the adjacent general purpose freeway lanes by
7 a standard lane stripe, painted buffer, or barrier.
- 8 21. **Contiguous Lane**—a lane, preferential or otherwise, that is separated from the adjacent lane(s)
9 only by a normal or wide lane line marking.
- 10 22. **Conventional Road**—a street or highway other than a low-volume road (as defined in Section
11 5A.01), expressway, or freeway.
- 12 23. **Counter-flow Lane**—a lane operating in a direction opposite to the normal flow of traffic
13 designated for peak direction of travel during at least a portion of the day. Counter-flow lanes
14 are usually separated from the off-peak direction lanes by tubular markers or other flexible
15 channelizing devices, or by moveable or permanent barrier.
- 16 24. **Crashworthy**—a characteristic of a roadside appurtenance that has been successfully crash
17 tested in accordance with a national standard such as the National Cooperative Highway
18 Research Program Report 350, “Recommended Procedures for the Safety Performance
19 Evaluation of Highway Features.”
- 20 25. **Crosswalk**—(a) that part of a roadway at an intersection included within the connections of the
21 lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or in the
22 absence of curbs, from the edges of the traversable roadway, and in the absence of a sidewalk on
23 one side of the roadway, the part of a roadway included within the extension of the lateral lines
24 of the sidewalk at right angles to the centerline; (b) any portion of a roadway at an intersection
25 or elsewhere distinctly indicated as a pedestrian crossing by pavement marking lines on the
26 surface, which might be supplemented by contrasting pavement texture, style, or color.
- 27 26. **Crosswalk Lines**—white pavement marking lines that identify a crosswalk.
- 28 27. **Delineator**—a retroreflective device mounted on the roadway surface or at the side of the
29 roadway in a series to indicate the alignment of the roadway, especially at night or in adverse
30 weather.
- 31 28. **Detectable**—having a continuous edge within 150 mm (6 in) of the surface so that pedestrians
32 who have visual disabilities can sense its presence and receive usable guidance information.
- 33 29. **Dynamic Envelope**—the clearance required for the train and its cargo overhang due to any
34 combination of loading, lateral motion, or suspension failure.
- 35 30. **Edge Line Markings**—white or yellow pavement marking lines that delineate the right or left
36 edge(s) of a traveled way.
- 37 31. **Electronic Toll Collection (ETC)**—a system for collection of toll fees via equipment that
38 communicates wirelessly with transponders mounted in vehicles (moving or stopped) to
39 automatically deduct the toll fee from a pre-paid toll account.
- 40 32. **End-of-Roadway Marker**—a device used to warn and alert road users of the end of a roadway
41 in other than temporary traffic control zones.
- 42 33. **Engineering Judgment**—the evaluation of available pertinent information, and the application
43 of appropriate principles, Standards, Guidance, and practices as contained in this Manual and
44 other sources, for the purpose of deciding upon the applicability, design, operation, or
45 installation of a traffic control device. Engineering judgment shall be exercised by an engineer,
46 or by an individual working under the supervision of an engineer, through the application of
47 procedures and criteria established by the engineer. Documentation of engineering judgment is
48 not required.
- 49 34. **Engineering Study**—the comprehensive analysis and evaluation of available pertinent
50 information, and the application of appropriate principles, Standards, Guidance, and practices
51 as contained in this Manual and other sources, for the purpose of deciding upon the
52 applicability, design, operation, or installation of a traffic control device. An engineering study
53 shall be performed by an engineer, or by an individual working under the supervision of an
54 engineer, through the application of procedures and criteria established by the engineer. An
55 engineering study shall be documented.
- 56 35. **Expressway**—a divided highway with partial control of access.

- 1 36. **Flagger**—a person who actively controls the flow of vehicular traffic into and/or through a
2 temporary traffic control zone using hand-signaling devices or an Automated Flagger
3 Assistance Device (AFAD).
4 37. **Flashing**—an operation in which a light source, such as a signal indication, is turned on and off
5 repetitively.
6 38. **Freeway**—a divided highway with full control of access.
7 39. **Gate**—an automatically-operated or manually-operated traffic control device that is used to
8 physically obstruct road users such that they cannot proceed past a particular point on a
9 roadway or pathway, or such that they cannot enter a particular ramp, lane, roadway, or
10 facility.
11 40. **Guide Sign**—a sign that shows route designations, destinations, directions, distances, services,
12 points of interest, or other geographical, recreational, or cultural information.
13 41. **High-Occupancy Vehicle (HOV)**—a motor vehicle carrying at least two or more persons,
14 including carpools, vanpools, and buses.
15 42. **Highway**—a general term for denoting a public way for purposes of travel by vehicular travel,
16 including the entire area within the right-of-way.
17 43. **Highway-Light Rail Transit Grade Crossing**—the general area where a highway and a light rail
18 transit's right-of-way cross at the same level, within which are included the light rail transit
19 tracks, highway, and traffic control devices for traffic traversing that area.
20 44. **Highway-Rail Grade Crossing**—the general area where a highway and a railroad's right-of-way
21 cross at the same level, within which are included the railroad tracks, highway, and traffic
22 control devices for highway traffic traversing that area.
23 45. **Highway Traffic Signal**—a power-operated traffic control device by which traffic is warned or
24 directed to take some specific action. These devices do not include power-operated signs,
25 steadily-illuminated pavement markers, warning lights (see Section 6F.79), or steady burning
26 electric lamps.
27 46. **HOV Lane**—any preferential lane designated for exclusive use by high-occupancy vehicles for
28 all or part of a day—including a designated lane on a freeway, other highway, street, or
29 independent roadway on a separate right-of-way.
30 47. **Hybrid Signal**—a special type of highway traffic signal that is intentionally placed in a dark
31 mode (no indications displayed) between periods of operation and, when operated, displays both
32 steady and flashing traffic control signal indications.
33 48. **Inherently Low Emission Vehicle (ILEV)**—any kind of vehicle that, because of inherent
34 properties of the fuel system design, will not have significant evaporative emissions, even if its
35 evaporative emission control system has failed.
36 49. **Interchange**—a system of interconnecting roadways providing for traffic movement between
37 two or more highways that do not intersect at grade.
38 50. **Intermediate Interchange**—an interchange with an urban or rural route that is not a major or
39 minor interchange as defined herein.
40 51. **Intersection**—intersection is defined as follows:
41 (a) The area embraced within the prolongation or connection of the lateral curb lines, or if
42 none, the lateral boundary lines of the roadways of two highways that join one another at,
43 or approximately at, right angles, or the area within which vehicles traveling on different
44 highways that join at any other angle might come into conflict.
45 (b) The junction of an alley or driveway with a roadway or highway shall not constitute an
46 intersection.
47 (c) If a highway includes two roadways that are 9 m (30 ft) or more apart, then every crossing
48 of each roadway of such divided highway by an intersecting highway shall be a separate
49 intersection; in the event such intersecting highway also includes two roadways that are 9 m
50 (30 ft) or more apart, then every crossing of two roadways of such highways shall be a
51 separate intersection (see definition of Median). However, regardless of the distance
52 between the separate intersections as defined herein, where a stopping point has not been
53 designated on the roadway (within the median) between the separate intersections, the two
54 intersections and the roadway (median) between them shall be deemed to be one
55 intersection.

- 1 (d) Where a stopping point is designated on a roadway approaching an intersection as defined
2 in Items (a) and (c) above, a vehicle of which any part is legally beyond said designated
3 stopping point shall be deemed to be legally in the intersection.
4 (e) A vehicle, which is deemed to have or which has legally entered the intersection as defined
5 in Items (a) and (c) above, upon departing said intersection shall be deemed to still be legally
6 in the intersection until:
7 (1) The rear of the vehicle and any attached trailer(s) clears the intersection; or
8 (2) Where a marked or unmarked associated crosswalk is present, the rear of the vehicle
9 and any attached trailer(s) clears said crosswalk.

- 10 52. **Island**—a defined area between traffic lanes for control of vehicular movements or for
11 pedestrian refuge. It includes all end protection and approach treatments. Within an
12 intersection area, a median or an outer separation is considered to be an island.
13 53. **Lane Line Markings**—white pavement marking lines that delineate the separation of traffic
14 lanes that have the same direction of travel on a roadway.
15 54. **Lane-Use Control Signal**—a signal face displaying indications to permit or prohibit the use of
16 specific lanes of a roadway or to indicate the impending prohibition of such use.
17 55. **Legend**—see Sign Legend.
18 56. **Logo**—a distinctive emblem or trademark that identifies a commercial business and/or the
19 product or service offered by the business.
20 57. **Longitudinal Markings**—pavement markings that are generally placed parallel and adjacent to
21 the flow of traffic such as lane lines, center lines, edge lines, channelizing lines, and others.
22 58. **Major Interchange**—an interchange with another freeway or expressway, or an interchange
23 with a high-volume multi-lane highway, principal urban arterial, or major rural route where
24 the interchanging traffic is heavy or includes many road users unfamiliar with the area.
25 59. **Major Street**—the street normally carrying the higher volume of vehicular traffic.
26 60. **Managed Lane**—a highway lane or set of lanes, or a highway facility, for which variable
27 operational strategies such as direction of travel, tolling, pricing, and/or vehicle type or
28 occupancy requirements are implemented and managed in real-time in response to changing
29 conditions.
30 61. **Median**—the area between two roadways of a divided highway measured from edge of traveled
31 way to edge of traveled way. The median excludes turn lanes. The median width might be
32 different between intersections, interchanges, and at opposite approaches of the same
33 intersection.
34 62. **Minor Interchange**—an interchange where traffic is local and very light, such as interchanges
35 with land service access roads. Where the sum of the exit volumes is estimated to be lower than
36 100 vehicles per day in the design year, the interchange is classified as local.
37 63. **Minor Street**—the street normally carrying the lower volume of vehicular traffic.
38 64. **Multi-lane**—more than one lane moving in the same direction. A multi-lane street, highway, or
39 roadway has a basic cross-section comprised of two or more through lanes in one or both
40 directions. A multi-lane approach has two or more lanes moving towards the intersection,
41 including turning lanes.
42 65. **Object Marker**—a device used to mark obstructions within or adjacent to the roadway.
43 66. **Occupancy Requirement**—any restriction that regulates the use of a facility or one or more
44 lanes of a facility for any period of the day based on a specified number of persons in a vehicle.
45 67. **Occupant**—a person driving or riding in a car, truck, bus, or other vehicle.
46 68. **Open Road Electronic Toll Collection**—a system designed to allow electronic toll collection
47 (ETC) from vehicles traveling at normal highway speeds.
48 69. **Opposing traffic**—vehicles that are traveling in the opposite direction. At an intersection,
49 vehicles that are entering an intersection from an approach that is approximately straight ahead
50 would be considered to be opposing traffic, but vehicles that are entering an intersection from
51 the left or the right from an approach that is approximately perpendicular would not be
52 considered to be opposing traffic.
53 70. **Pathway**—a general term denoting a public way for purposes of travel by authorized users
54 outside the traveled way and physically separated from the roadway by an open space or
55 barrier and either within the highway right-of-way or within an independent alignment.
56 Pathways include shared-use paths, but are exclusive of sidewalks.

- 1 71. **Paved**—a bituminous surface treatment, mixed bituminous concrete, or Portland cement
2 concrete roadway surface that has both a structural (weight bearing) and a sealing purpose for
3 the roadway.
- 4 72. **Pedestrian**—a person on foot, in a wheelchair, on skates, or on a skateboard.
- 5 73. **Pedestrian Facilities**—a general term denoting improvements and provisions made to
6 accommodate or encourage walking.
- 7 74. **Pictograph**—a pictorial representation used to identify a governmental jurisdiction, an area of
8 jurisdiction, a governmental agency, a military base or branch of service, a governmental-
9 approved university or college, or a government-approved institution.
- 10 75. **Platoon**—a group of vehicles or pedestrians traveling together as a group, either voluntarily or
11 involuntarily, because of traffic signal controls, geometrics, or other factors.
- 12 76. **Preferential Lane**—a highway lane reserved for the exclusive use of one or more specific types
13 of vehicles or road user groups.
- 14 77. **Principal Legend**—place names, street names, and route numbers placed on guide signs.
- 15 78. **Private Property Open to Public Travel**—toll roads and roads within shopping centers, parking
16 lot areas, airports, sports arenas, and other similar business and/or recreation facilities that are
17 privately owned but where the public is allowed to travel without access restrictions. Private
18 gated properties where access is restricted and private highway-rail grade crossings shall not be
19 included in this definition.
- 20 79. **Public Facility** – any parking lot, parking garage, or accessway to or within such facilities,
21 under the jurisdiction of and maintained by a public agency and where the public is invited to
22 travel without access restrictions.
- 23 80. **Public Road**—any road, street, or public facility under the jurisdiction of and maintained by a
24 public agency and open to public travel.
- 25 81. **Raised Pavement Marker**—a device mounted on or in a road surface that has a height generally
26 not exceeding approximately 25 mm (1 in) above the road surface and that is intended to be
27 used as a positioning guide or to supplement or substitute for pavement markings.
- 28 82. **Regulatory Sign**—a sign that gives notice to road users of traffic laws or regulations.
- 29 83. **Retroreflectivity**—a property of a surface that allows a large portion of the light coming from a
30 point source to be returned directly back to a point near its origin.
- 31 84. **Right-of-Way [Assignment]**—the permitting of vehicles and/or pedestrians to proceed in a
32 lawful manner in preference to other vehicles or pedestrians by the display of sign or signal
33 indications.
- 34 85. **Road**—see Roadway.
- 35 86. **Road User**—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,
36 within the highway, on a public facility, or on private property open to public travel.
- 37 87. **Roadway**—that portion of a highway improved, designed, or ordinarily used for vehicular
38 travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though such
39 sidewalk, berm, or shoulder is used by persons riding bicycles or other human-powered
40 vehicles. In the event a highway includes two or more separate roadways, the term roadway as
41 used herein shall refer to any such roadway separately, but not to all such roadways collectively.
- 42 88. **Roadway Network**—a geographical arrangement of intersecting roadways.
- 43 89. **Roundabout**—a circular intersection with yield control at entry, which permits a vehicle on the
44 circulatory roadway to proceed, and with deflection of the approaching vehicle counter-
45 clockwise around a central island.
- 46 90. **Rumble Strip**—a series of intermittent, narrow, transverse areas of rough-textured, slightly
47 raised, or depressed road surface that extend across the travel lane to alert road users to
48 unusual traffic conditions or are located along the shoulder or within islands formed by
49 pavement markings to alert road users that they are leaving the travel lanes.
- 50 91. **Rural Highway**—a type of roadway normally characterized by lower volumes, higher speeds,
51 fewer turning conflicts, and less conflict with pedestrians.
- 52 92. **Safe-Positioned**—the positioning of emergency vehicles at an incident in a manner that attempts
53 to protect both the responders performing their duties and road users traveling through the
54 incident scene.
- 55 93. **School**—a public or private educational institution recognized by the State education authority
56 for one or more grades K through 12 or as otherwise defined by the State.

- 1 94. **School Zone**—a designated roadway segment approaching, adjacent to, and beyond school
2 buildings or grounds, or along which school related activity occurs, where special traffic law
3 enforcement activity or increased fines for traffic violations are authorized.
- 4 95. **Shared Roadway**—a roadway that is officially designated and marked as a bicycle route, but
5 which is open to motor vehicle travel and upon which no bicycle lane is designated.
- 6 96. **Shared-Use Path**—a bikeway outside the traveled way and physically separated from motorized
7 vehicular traffic by an open space or barrier and either within the highway right-of-way or
8 within an independent alignment. Shared-use paths are also used by pedestrians (including
9 skaters, users of manual and motorized wheelchairs, and joggers) and other authorized
10 motorized and non-motorized users.
- 11 97. **Sidewalk**—that portion of a street between the curb line, or the lateral line of a roadway, and
12 the adjacent property line or on easements of private property that is paved or improved and
13 intended for use by pedestrians.
- 14 98. **Sign**—any traffic control device that is intended to communicate specific information to road
15 users through a word or symbol legend. Signs do not include highway traffic signals, pavement
16 markings, delineators, or channelization devices.
- 17 99. **Sign Assembly**—a group of signs, located on the same support(s), that supplement one another
18 in conveying information to road users.
- 19 100. **Sign Illumination**—either internal or external lighting that shows similar color by day or night.
20 Street or highway lighting shall not be considered as meeting this definition.
- 21 101. **Sign Legend**—all word messages, logos, and symbol designs that are intended to convey specific
22 meanings. The border, if any, on a sign is not considered to be a part of the legend.
- 23 102. **Sign Panel**—a separate panel or piece of material containing a word or symbol legend that is
24 affixed to the face of a sign.
- 25 103. **Signing**—individual signs or a group of signs, not necessarily on the same support(s), that
26 supplement one another in conveying information to road users.
- 27 104. **Speed**—speed is defined based on the following classifications:
- 28 (a) **Advisory Speed**—a recommended speed for all vehicles operating on a section of highway
29 and based on the highway design, operating characteristics, and conditions.
- 30 (b) **Average Speed**—the summation of the instantaneous or spot-measured speeds at a specific
31 location of vehicles divided by the number of vehicles observed.
- 32 (c) **Design Speed**—a selected speed used to determine the various geometric design features of a
33 roadway.
- 34 (d) **85th-Percentile Speed**—the speed at or below which 85 percent of the motor vehicles travel.
- 35 (e) **Operating Speed**—a speed at which a typical vehicle or the overall traffic operates.
36 Operating speed might be defined with speed values such as the average, pace, or 85th-
37 percentile speeds.
- 38 (f) **Pace**—the 10 km/h or 10 mph speed range representing the speeds of the largest percentage
39 of vehicles in the traffic stream.
- 40 (g) **Posted Speed**—the speed limit determined by law or regulation and displayed on Speed
41 Limit signs.
- 42 (h) **Statutory Speed**—a speed limit established by legislative action that typically is applicable
43 for highways with specified design, functional, jurisdictional and/or location characteristic
44 and is not necessarily displayed on Speed Limit signs.
- 45 105. **Speed Limit**—the maximum (or minimum) speed applicable to a section of highway as
46 established by law or regulation.
- 47 106. **Speed Measurement Markings**—a white transverse pavement marking placed on the roadway
48 to assist the enforcement of speed regulations.
- 49 107. **Speed Zone**—a section of highway with a speed limit that is established by law or regulation,
50 but which might be different from a legislatively specified statutory speed limit.
- 51 108. **Splitter Island**—a median island used to separate opposing directions of traffic entering and
52 exiting a roundabout.
- 53 109. **Stop Line**—a solid white pavement marking line extending across approach lanes to indicate the
54 point at which a stop is intended or required to be made.
- 55 110. **Street**—see Highway.

- 1 111. **Symbol**—the approved design of a pictorial representation of a specific traffic control message
2 for signs, pavement markings, traffic control signals, or other traffic control devices, as shown
3 in the MUTCD.
- 4 112. **Temporary Traffic Control Zone**—an area of a highway where road user conditions are
5 changed because of a work zone or incident by the use of temporary traffic control devices,
6 flaggers, uniformed law enforcement officers, or other authorized personnel.
- 7 113. **Traffic**—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other
8 conveyances either singularly or together while using for purposes of travel any highway, public
9 facility, or private property open to public travel.
- 10 114. **Traffic Control Device**—a sign, signal, marking, or other device used to regulate, warn, or guide
11 traffic, placed on, over, or adjacent to a street, highway, public facility, private property open to
12 public travel, pedestrian facility, or shared-use path by authority of a public agency or official
13 having jurisdiction.
- 14 115. **Traffic Control Signal (Traffic Signal)**—any highway traffic signal by which traffic is
15 alternately directed to stop and permitted to proceed.
- 16 116. **Train**—one or more locomotives coupled, with or without cars, that operates on rails or tracks
17 and to which all other traffic must yield the right-of-way by law at highway-rail grade crossings.
- 18 117. **Transverse Markings**—pavement markings that are generally placed perpendicular and across
19 the flow of traffic such as shoulder markings, word and symbol markings, stop lines, crosswalk
20 lines, speed measurement markings, parking space markings, and others.
- 21 118. **Traveled Way**—the portion of the roadway for the movement of vehicles, exclusive of the
22 shoulders, berms, sidewalks, and parking lanes.
- 23 119. **Turn Bay**—a lane for the exclusive use of turning vehicles that is formed on the approach to the
24 location where the turn is to be made. In most cases where turn bays are provided, drivers who
25 desire to turn must move out of a through lane into the newly formed turn bay in order to turn.
26 A through lane that becomes a turn lane is considered to be a drop lane rather than a turn bay.
- 27 120. **Urban Street**—a type of street normally characterized by relatively low speeds, wide ranges of
28 traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian
29 traffic, and more businesses and houses.
- 30 121. **Vehicle**—every device in, upon, or by which any person or property can be transported or
31 drawn upon a highway, except trains and light rail transit operating in exclusive or
32 semiexclusive alignments. Light rail transit operating in a mixed-use alignment, to which other
33 traffic is not required to yield the right-of-way by law, is a vehicle.
- 34 122. **Warning Light**—a portable, powered, yellow, lens-directed, enclosed light that is used in a
35 temporary traffic control zone in either a steady burn or a flashing mode.
- 36 123. **Warning Sign**—a sign that gives notice to road users of a situation that might not be readily
37 apparent.
- 38 124. **Warrant**—a warrant describes threshold conditions to the engineer in evaluating the potential
39 safety and operational benefits of traffic control devices and is based upon average or normal
40 conditions. Warrants are not a substitute for engineering judgment. The fact that a warrant
41 for a particular traffic control device is met is not conclusive justification for the installation of
42 the device.
- 43 125. **Worker**—a person on foot whose duties place him or her within the right-of-way of a street or
44 highway, such as street or highway construction and maintenance forces, survey crews, utility
45 crews, responders to incidents within the street or highway right-of-way, and law enforcement
46 personnel when directing traffic, investigating crashes, and handling lane closures, obstructed
47 roadways, and disasters within the right-of-way of a street or highway.
- 48 126. **Wrong-Way Arrow**—a slender, elongated, white pavement marking arrow placed upstream
49 from the ramp terminus to indicate the correct direction of traffic flow. Wrong-way arrows are
50 intended primarily to warn wrong-way road users that they are going in the wrong direction.
- 51 127. **Yield Line**—a row of solid white isosceles triangles pointing toward approaching vehicles
52 extending across approach lanes to indicate the point at which the yield is intended or required
53 to be made.

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

55 **Standard:**

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

- 3 1. AADT—annual average daily traffic
- 4 2. AASHTO—American Association of State Highway and Transportation Officials
- 5 3. ADT—average daily traffic
- 6 4. AFAD—Automated Flagger Assistance Device
- 7 5. ANSI—American National Standards Institute
- 8 6. CFR—Code of Federal Regulations
- 9 7. CMS—changeable message sign
- 10 8. dBA—A-weighted decibels
- 11 9. EPA—Environmental Protection Agency
- 12 10. ETC—electronic toll collection
- 13 11. EV—electric vehicle
- 14 12. FHWA—Federal Highway Administration
- 15 13. FRA—Federal Railroad Administration
- 16 14. FTA—Federal Transit Administration
- 17 15. HOT—high occupancy tolls
- 18 16. HOTM—Highways-Office of Travel Management
- 19 17. HOTO—Highways-Office of Transportation Operations
- 20 18. HOV—high-occupancy vehicle
- 21 19. ILEV—inherently low emission vehicle
- 22 20. ISEA—International Safety Equipment Association
- 23 21. ITE—Institute of Transportation Engineers
- 24 22. ITS—intelligent transportation systems
- 25 23. km/h—kilometers per hour
- 26 24. LED—light emitting diode
- 27 25. LP—liquid petroleum
- 28 26. MPH or mph—miles per hour
- 29 27. MUTCD—Manual on Uniform Traffic Control Devices
- 30 28. NCHRP—National Cooperative Highway Research Program
- 31 29. PRT—perception-response time
- 32 30. RV—recreational vehicle
- 33 31. TDD—telecommunication devices for the deaf
- 34 32. TRB—Transportation Research Board
- 35 33. TTC—temporary traffic control
- 36 34. U.S.—United States
- 37 35. U.S.C.—United States Code
- 38 36. USDOT—United States Department of Transportation
- 39 37. UVC—Uniform Vehicle Code
- 40 38. VPH or vph—vehicles per hour

41 **Section 1A.15 Abbreviations Used on Traffic Control Devices**

42 **Standard:**

43 When the word messages shown in Table 1A-1 need to be abbreviated in connection with traffic
44 control devices, the abbreviations shown in Table 1A-1 shall be used.

45 The abbreviations shown in Table 1A-2 shall be used only on Portable Changeable Message signs.
46 When the word messages shown in Table 1A-2 need to be abbreviated on a Portable Changeable
47 Message sign, the abbreviations shown in Table 1A-2 shall be used.

48 **Guidance:**

49 The abbreviations for the words listed in Table 1A-2 that also show a prompt word should not be used on
50 a Portable Changeable Message sign unless the prompt word shown in Table 1A-2 either precedes or follows
51 the abbreviation.

52 **Standard:**

53 The abbreviations shown in Table 1A-3 shall not be used in connection with traffic control devices
54 because of their potential to be misinterpreted by road users.

55 **Guidance:**

1 If multiple abbreviations are permitted in Table 1A-1 or 1A-2, the same abbreviation should be used
2 throughout a single jurisdiction.

3 Except as otherwise provided in Table 1A-1 or 1A-2 or unless absolutely necessary to avoid confusion,
4 periods, commas, apostrophes, question marks, ampersands, and other punctuation marks or characters that
5 are not letters or numerals should not be used in any abbreviation.

6

CHAPTER 1A. GENERAL

Section 1A.01 Purpose of Traffic Control Devices

Support:

The purpose of traffic control devices, as well as the principles for their use, is to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, ~~and~~ highways, [bikeways](#), [public facilities](#), and [private property open to public travel](#) throughout the Nation.

Traffic control devices notify road users of regulations and provide warning and guidance needed for the ~~reasonably safe~~, uniform, and efficient operation of all elements of the traffic stream [in a manner intended to minimize the occurrences of crashes](#).

Standard:

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

Support:

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

Section 1A.02 Principles of Traffic Control Devices

Support:

This Manual contains the basic principles that govern the design and use of traffic control devices for all streets, ~~and~~ highways, [bikeways](#), [public facilities](#), and [private property](#) open to public travel regardless of type or class or the public agency [or official](#) having jurisdiction. This Manual's text specifies the restriction on the use of a device if it is intended for limited application or for a specific system. It is important that these principles be given primary consideration in the selection and application of each device.

Guidance:

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

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

Design, placement, operation, maintenance, and uniformity are aspects that should be carefully considered in order to maximize the ability of a traffic control device to meet the five requirements listed in the previous paragraph. Vehicle speed should be carefully considered as an element that governs the design, operation, placement, and location of various traffic control devices.

Support:

The definition of the word "speed" varies depending on its use. The definitions of specific speed terms are contained in Section 1A.13.

Guidance:

The actions required of road users to obey regulatory devices should be specified by State statute, or in cases not covered by State statute, by local ordinance or resolution. [Such statutes, ordinances, and resolutions should be edited to increase clarity](#) consistent with the "Uniform Vehicle Code" ([see Section 1A.11](#)).

The proper use of traffic control devices should provide the reasonable and prudent road user with the information necessary to ~~reasonably safely~~ [efficiently](#) and lawfully use the streets, highways, pedestrian facilities, and bikeways [in a manner intended to minimize the occurrences of crashes](#).

Support:

Uniformity of the meaning of traffic control devices is vital to their effectiveness. The meanings ascribed to devices in this Manual are in general accord with the publications mentioned in Section 1A.11.

Section 1A.03 Design of Traffic Control Devices

Guidance:

Devices should be designed so that features such as size, shape, color, composition, lighting or retroreflection, and contrast are combined to draw attention to the devices; that size, shape, color, and

1 simplicity of message combine to produce a clear meaning; that legibility and size combine with placement to
2 permit adequate time for response; and that uniformity, size, legibility, and reasonableness of the message
3 combine to command respect.

4 **Standard:**

5 ~~All symbols shall be unmistakably similar to or mirror images of the adopted symbol signs, all of~~
6 ~~which are shown in the “Standard Highway Signs and Markings” book (see Section 1A.11). Symbols~~
7 ~~and colors shall not be modified unless otherwise stated herein. All symbols and colors for signs not~~
8 ~~shown in the “Standard Highway Signs and Markings” book shall follow the procedures for~~
9 ~~experimentation and change described in Section 1A.10.~~ this paragraph was relocated to Section 2A.06

10 **Guidance:**

11 Aspects of a device’s [standard](#) design should be modified only if there is a demonstrated need.

12 **Support:**

13 An example of modifying a device’s design would be to modify the [Side Road \(W2-2\) Combination](#)
14 [Horizontal Alignment/Intersection \(W1-10\)](#) sign to show ~~a second offset~~ intersecting [side](#) roads [on both sides](#)
15 [rather than on just one side of the major road within the curve.](#)

16 **Option:**

17 ~~Highway agencies may develop word message signs to notify road users of special regulations or to warn~~
18 ~~road users of a situation that might not be readily apparent. Unlike symbol signs and colors, new word~~
19 ~~message signs may be used without the need for experimentation.~~ this text was relocated to Section 2A.06

20 With the exception of symbols and colors, minor modifications in the specific design elements of a device
21 may be made provided the essential appearance characteristics are preserved. ~~Although the standard design of~~
22 ~~symbol signs cannot be modified, it may be appropriate to change the orientation of the symbol to better~~
23 ~~reflect the direction of travel.~~ this text was relocated to Section 2A.06

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

25 **Guidance:**

26 Placement of a traffic control device should be within the road user’s view so that adequate visibility is
27 provided. To aid in conveying the proper meaning, the traffic control device should be appropriately
28 positioned with respect to the location, object, or situation to which it applies. The location and legibility of
29 the traffic control device should be such that a road user has adequate time to make the proper response in
30 both day and night conditions.

31 Traffic control devices should be placed and operated in a uniform and consistent manner.

32 Unnecessary traffic control devices should be removed. The fact that a device is in good physical
33 condition should not be a basis for deferring needed removal or change.

34 **Section 1A.05 Maintenance of Traffic Control Devices**

35 **Guidance:**

36 Functional maintenance of traffic control devices should be used to determine if certain devices need to be
37 changed to meet current traffic conditions.

38 Physical maintenance of traffic control devices should be performed to retain the legibility and visibility
39 of the device, and to retain the proper functioning of the device.

40 **Support:**

41 Clean, legible, properly mounted devices in good working condition command the respect of road users.

42 **Section 1A.06 Uniformity of Traffic Control Devices**

43 **Support:**

44 Uniformity of devices simplifies the task of the road user because it aids in recognition and understanding,
45 thereby reducing perception/reaction time. Uniformity assists road users, law enforcement officers, and traffic
46 courts by giving everyone the same interpretation. Uniformity assists public highway officials through
47 efficiency in manufacture, installation, maintenance, and administration. Uniformity means treating similar
48 situations in a similar way. The use of uniform traffic control devices does not, in itself, constitute uniformity.
49 A standard device used where it is not appropriate is as objectionable as a nonstandard device; in fact, this
50 might be worse, because such misuse might result in disrespect at those locations where the device is needed
51 and appropriate.

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

2 **Standard:**

3 The responsibility for the design, placement, operation, maintenance, and uniformity of traffic
4 control devices shall rest with the public agency or the official having jurisdiction. 23 CFR 655.603
5 adopts the Manual on Uniform Traffic Control Devices as the national standard for all traffic control
6 devices installed on any street, highway, or ~~bicycle trail~~ bikeway, public facility, or private property
7 open to public travel. When a State or other Federal agency manual or supplement is required, that
8 manual or supplement shall be in substantial conformance with the ~~the National Manual on Uniform~~
9 ~~Traffic Control Devices~~ MUTCD. **edited to increase consistency**

10 23 CFR 655.603 also states that traffic control devices on all streets, ~~and~~ highways, public facilities,
11 and private property open to public travel in each State shall be in substantial conformance with
12 standards issued or endorsed by the Federal Highway Administrator.

13 **Support:**

14 The Introduction of this Manual contains information regarding the meaning of substantial conformance
15 and the applicability of the MUTCD to private property open to public travel.

16 The “Uniform Vehicle Code” (see Section 1A.11) has the following provision in Section 15-104 for the
17 adoption of a uniform ~~the~~ manual: **edited to increase accuracy**

18 “(a) The [State Highway Agency] shall adopt a manual and specification for a uniform system of
19 traffic control devices consistent with the provisions of this code for use upon highways within this
20 State. Such uniform system shall correlate with and so far as possible conform to the system set forth
21 in the most recent edition of the Manual on Uniform Traffic Control Devices for Streets and
22 Highways, and other standards issued or endorsed by the Federal Highway Administrator.”

23 “(b) The Manual adopted pursuant to subsection (a) shall have the force and effect of law.”

24 The National MUTCD has also been adopted by the National Park Service, the U.S. Forest Service, the
25 U.S. Military Command, the Bureau of Indian Affairs, the Bureau of Land Management, and the U.S. Fish
26 and Wildlife Service.

27 **Guidance:**

28 Additionally, States ~~are encouraged to~~ should adopt Section 15-116 of the “Uniform Vehicle Code,”
29 which states that, “No person shall install or maintain in any area of private property used by the public any
30 sign, signal, marking, or other device intended to regulate, warn, or guide traffic unless it conforms with the
31 State manual and specifications adopted under Section 15-104.”

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

33 **Standard:**

34 Traffic control devices, advertisements, announcements, and other signs or messages within the
35 highway right-of-way shall be placed only as authorized by a public authority or the official having
36 jurisdiction, for the purpose of regulating, warning, or guiding traffic.

37 When the public agency or the official having jurisdiction over a street or highway has granted
38 proper authority, others such as contractors and public utility companies shall be permitted to install
39 temporary traffic control devices in temporary traffic control zones. Such traffic control devices shall
40 conform with the Standards of this Manual.

41 All regulatory traffic control devices shall be supported by laws, ordinances, or regulations.

42 **Support:**

43 Provisions of this Manual are based upon the concept that effective traffic control depends upon both
44 appropriate application of the devices and reasonable enforcement of the regulations.

45 Although some highway design features, such as curbs, median barriers, guardrails, impact attenuators
46 (crash cushions), speed humps or tables, and textured pavement, have a significant impact on traffic
47 operations and safety, they are not considered to be traffic control devices and provisions regarding their
48 design and use are generally not included in this Manual.

49 Certain types of signs and other devices that do not have any traffic control purpose are sometimes placed
50 within the highway right-of-way by or with the permission of the public agency or the official having
51 jurisdiction over the street or highway. Most of these signs and other devices are not intended for use by road
52 users in general, and their message is only important to individuals who have been instructed in their

1 [meanings. These signs and other devices are not considered to be traffic control devices and provisions](#)
2 [regarding their design and use are not included in this Manual. Among these signs and other devices are the](#)
3 [following:](#)

- 4 [A. Devices whose purpose is to assist highway maintenance personnel. Examples include markers to](#)
5 [guide snowplow operators, devices that identify culvert and drop inlet locations, and devices that](#)
6 [precisely identify highway locations for maintenance or mowing purposes.](#)
7 [B. Devices whose purpose is to assist fire or law enforcement personnel. Examples include markers that](#)
8 [identify fire hydrant locations, signs that identify fire or water district boundaries, speed measurement](#)
9 [pavement markings, and small indicator lights to assist in enforcement of red light violations.](#)
10 [C. Devices whose purpose is to assist utility company personnel and highway contractors, such as](#)
11 [markers that identify underground utility locations.](#)
12 [D. Signs posting local non-traffic ordinances.](#)
13 [E. Signs giving civic organization meeting information.](#)

14 Guidance:

15 [Signs and other devices that do not have any traffic control purpose that are placed within the highway](#)
16 [right-of-way by or with the permission of the public agency or the official having jurisdiction over the street](#)
17 [or highway should be located where they will not interfere with, or detract from, traffic control devices.](#)

18 Any unauthorized traffic control device or other sign or message placed on the highway right-of-way by a
19 private organization or individual constitutes a public nuisance and should be removed. All unofficial or
20 nonessential traffic control devices, signs, or messages should be removed.

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

22 **Standard:**

23 **This Manual describes the application of traffic control devices, but shall not be a legal requirement**
24 **for their installation.**

25 Guidance:

26 The decision to use a particular device at a particular location should be made [consistent with the](#)
27 [principles of this Manual and, if required by this Manual,](#) on the basis of either an engineering study or the
28 application of engineering judgment. Thus, while this Manual provides Standards, Guidance, and Options for
29 design and application of traffic control devices, this Manual should not be considered a substitute for
30 engineering judgment.

31 Engineering judgment should be exercised in the selection and application of traffic control devices, as
32 well as in the location and design of the roads and streets that the devices complement. Jurisdictions with
33 responsibility for traffic control that do not have engineers on their staffs [who are trained and/or experienced](#)
34 [in traffic control devices](#) **added to increase accuracy** should seek engineering assistance from others, such as
35 the State transportation agency, their county, a nearby large city, or a traffic engineering consultant.

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

37 **Standard:**

38 **Design, application, and placement of traffic control devices other than those adopted in this**
39 **Manual shall be prohibited unless the provisions of this Section are followed.**

40 Support:

41 Continuing advances in technology will produce changes in the highway, vehicle, and road user
42 proficiency; therefore, portions of the system of traffic control devices in this Manual will require updating.
43 In addition, unique situations often arise for device applications that might require interpretation or
44 clarification of this Manual. It is important to have a procedure for recognizing these developments and for
45 introducing new ideas and modifications into the system.

46 **Standard:**

47 [Except as noted in the Option below,](#) requests for any interpretation, permission to experiment,
48 interim approval, or change shall be ~~sent~~ [submitted electronically](#) to the Federal Highway
49 Administration (FHWA), Office of Transportation Operations, ~~400 Seventh Street, SW, HOTO,~~
50 ~~Washington, DC 20590~~ [MUTCD team, at the following e-mail address:](#)
51 [MUTCDofficialrequest@dot.gov.](#)

52 **Option:**

1 [Although electronic submittal is strongly preferred by the FHWA, requests for interpretations, permission](#)
2 [to experiment, interim approvals, or changes may instead be mailed to the Office of Transportation](#)
3 [Operations, HOTO-1, Federal Highway Administration, 1200 New Jersey Avenue, SE, Washington,](#)
4 [DC 20590 if electronic submittal is not possible.](#)

5 Support:

6 [Communications regarding other MUTCD matters that are not related to official requests will receive](#)
7 [quicker attention if they are submitted electronically to the MUTCD Team Leader or to the appropriate](#)
8 [individual MUTCD team member. Their e-mail addresses are available through the links contained on the](#)
9 [“Who’s Who” page on the MUTCD website at <http://mutcd.fhwa.dot.gov/team.htm>.](#)

10 An interpretation includes a consideration of the application and operation of standard traffic control
11 devices, official meanings of standard traffic control devices, or the variations from standard device designs.

12 Guidance:

13 Requests for an interpretation of this Manual should contain the following information:

- 14 A. A concise statement of the interpretation being sought;
- 15 B. A description of the condition that provoked the need for an interpretation;
- 16 C. Any illustration that would be helpful to understand the request; and
- 17 D. Any supporting research data that is pertinent to the item to be interpreted.

18 Support:

19 Requests to experiment include consideration of field deployment for the purpose of testing or evaluating
20 a new traffic control device, its application or manner of use, or a provision not specifically described in this
21 Manual.

22 A request for permission to experiment will be considered only when submitted by the public agency or
23 private toll facility responsible for the operation of the road or street on which the experiment is to take place.

24 A diagram indicating the process for experimenting with traffic control devices is shown in Figure 1A-1.

25 Guidance:

26 The request for permission to experiment should contain the following:

- 27 A. A statement indicating the nature of the problem.
- 28 B. A description of the proposed change to the traffic control device or application of the traffic control
29 device, how it was developed, the manner in which it deviates from the standard, and how it is
30 expected to be an improvement over existing standards.
- 31 C. Any illustration that would be helpful to understand the traffic control device or use of the traffic
32 control device.
- 33 D. Any supporting data explaining how the traffic control device was developed, if it has been tried, in
34 what ways it was found to be adequate or inadequate, and how this choice of device or application
35 was derived.
- 36 E. A legally binding statement certifying that the concept of the traffic control device is not protected by
37 a patent or copyright. (An example of a traffic control device concept would be countdown pedestrian
38 signals in general. Ordinarily an entire general concept would not be patented or copyrighted, but if it
39 were it would not be acceptable for experimentation unless the patent or copyright owner signs a
40 waiver of rights acceptable to the FHWA. An example of a patented or copyrighted specific device
41 within the general concept of countdown pedestrian signals would be a manufacturer’s design for its
42 specific brand of countdown signal, including the design details of the housing or electronics that are
43 unique to that manufacturer’s product. As long as the general concept is not patented or copyrighted,
44 it is acceptable for experimentation to incorporate the use of one or more patented devices of one or
45 several manufacturers.)
- 46 F. The time period and location(s) of the experiment.
- 47 G. A detailed research or evaluation plan that must provide for close monitoring of the experimentation,
48 especially in the early stages of its field implementation. The evaluation plan should include before
49 and after studies as well as quantitative data describing the performance of the experimental device.
- 50 H. An agreement to restore the site of the experiment to a condition that complies with the provisions of
51 this Manual within 3 months following the end of the time period of the experiment. This agreement
52 must also provide that the agency sponsoring the experimentation will terminate the experimentation
53 at any time that it determines significant safety concerns are directly or indirectly attributable to the
54 experimentation. The FHWA’s Office of Transportation Operations has the right to terminate
55 approval of the experimentation at any time if there is an indication of safety concerns. If, as a result

1 of the experimentation, a request is made that this Manual be changed to include the device or
2 application being experimented with, the device or application will be permitted to remain in place
3 until an official rulemaking action has occurred.

- 4 I. An agreement to provide semiannual progress reports for the duration of the experimentation, and an
5 agreement to provide a copy of the final results of the experimentation to the FHWA's Office of
6 Transportation Operations within 3 months following completion of the experimentation. The
7 FHWA's Office of Transportation Operations has the right to terminate approval of the
8 experimentation if reports are not provided in accordance with this schedule.

9 Support:

10 A change includes consideration of a new device to replace a present standard device, an additional device
11 to be added to the list of standard devices, or a revision to a traffic control device application or placement
12 criteria.

13 Guidance:

14 Requests for a change to this Manual should contain the following information:

- 15 A. A statement indicating what change is proposed;
16 B. Any illustration that would be helpful to understand the request; and
17 C. Any supporting research data that is pertinent to the item to be reviewed.

18 Support: **revisions to the interim approval process were to improve clarity**

19 ~~Requests for~~ Interim approval ~~include consideration of allowing~~ allows interim use, pending official
20 rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic
21 control device, or a provision not specifically described in this Manual. The FHWA issues an Interim
22 Approval by official memorandum signed by the Associate Administrator for Operations and posts this
23 memorandum on the MUTCD website. If granted, The issuance by FHWA of an interim approval will
24 typically result in the traffic control device or application being placed into the next scheduled rulemaking
25 process for revisions to this Manual. ~~The device or application will be permitted to remain in place, under any~~
26 ~~conditions established in the interim approval, until an official rulemaking action has occurred.~~

27 Interim approval is considered based on the results of successful experimentation, results of analytical or
28 laboratory studies, and/or review of non-U.S. experience with a traffic control device or application. Interim
29 approval considerations include an assessment of relative risks, benefits, ~~and~~ costs, impacts, and other factors.

30 Interim approval allows for optional use of a traffic control device or application and does not create a
31 new mandate or recommendation for use. Interim approval includes conditions that jurisdictions agree to
32 comply with in order to use the traffic control device or application until an official rulemaking action has
33 occurred.

34 **Standard:**

35 A jurisdiction desiring to use a traffic control device for which FHWA has issued an interim
36 approval shall request permission from FHWA.

37 Guidance:

38 The request for permission to place a traffic control device under an interim approval should contain the
39 following:

- 40 ~~A. A statement indicating the nature of the problem.~~
41 ~~B. A description of the proposed change to the traffic control device or application of the traffic control~~
42 ~~device, how it was developed, the manner in which it deviates from the standard, and how it is~~
43 ~~expected to be an improvement over existing standards.~~
44 A. The location(s) A description of where ~~it~~ the device will be used, ~~and any illustration that would be~~
45 ~~helpful to understand the traffic control device or use of the traffic control device. such as a list of~~
46 specific locations or highway segments or types of situations, or a statement of the intent to use the
47 device jurisdiction-wide;
48 ~~D. A legally binding statement certifying that the concept of the traffic control device is not protected by~~
49 ~~a patent or copyright. (An example of a traffic control device concept would be countdown pedestrian~~
50 ~~signals in general. Ordinarily an entire general concept would not be patented or copyrighted, but if it~~
51 ~~were it would not be acceptable for interim approval unless the patent or copyright owner signs a~~
52 ~~waiver of rights acceptable to the FHWA. An example of a patented or copyrighted specific device~~
53 ~~within the general concept of countdown pedestrian signals would be a manufacturer's design for its~~
54 ~~specific brand of countdown signal, including the design details of the housing or electronics that are~~

1 ~~unique to that manufacturer's product. Interim approval of a specific patented or copyrighted product~~
2 ~~is not acceptable.)~~

3 ~~E. A detailed completed research or evaluation on this traffic control device.~~

4 B. An agreement to abide by the specific conditions for use of the device as contained in the FHWA's
5 interim approval document;

6 C. An agreement to maintain and continually update a list of locations where the device has been
7 installed; and

8 D. An agreement to:

- 9 1. Restore the site(s) of the interim approval to a condition that complies with the provisions in this
10 Manual within 3 months following the issuance of a Final Rule on this traffic control device; and
11 2. ~~This agreement must also provide that the agency sponsoring the interim approval will~~ Terminate
12 use of the device or application installed under the interim approval at any time that it determines
13 significant safety concerns are directly or indirectly attributable to the device or application. The
14 FHWA's Office of Transportation Operations has the right to terminate the interim approval at
15 any time if there is an indication of safety concerns.

16 Option:

17 A State may submit a request for the use of a device under interim approval for all jurisdictions in that
18 State, as long as the request contains the information listed in the Guidance above.

19 Standard Guidance:

20 ~~Once an interim approval is granted to any jurisdiction for a particular traffic control device or~~
21 ~~application, subsequent jurisdictions shall be granted interim approval for that device or application by~~
22 ~~submitting a letter to the FHWA's Office of Transportation Operations indicating they will abide by Item F~~
23 ~~above and the specific conditions contained in the original interim approval.~~

24 A local jurisdiction using a traffic control device or application under an interim approval that was granted
25 by FHWA either directly to that jurisdiction or on a statewide basis based on the State's request ~~shall~~ should
26 inform the State of the locations of such use.

27 Option:

28 A device or application installed by a jurisdiction under an interim approval may remain in place, under
29 any conditions established in the interim approval, until an official rulemaking action has occurred.

30 Support:

31 A diagram indicating the process for incorporating new traffic control devices into this Manual is shown
32 in Figure 1A-2.

33 ~~Procedures for revising this Manual are set out in the Federal Register of June 30, 1983 (48 FR 30145)~~
34 ~~deleted because these procedures are no longer used~~

35 For additional information concerning interpretations, experimentation, changes, or interim approvals,
36 ~~write to the FHWA, 400 Seventh Street, SW, HOTO, Washington, DC 20590, or~~ visit the MUTCD website at
37 <http://mutcd.fhwa.dot.gov>.

38 **Section 1A.11 Relation to Other Publications**

39 **Standard:**

40 **To the extent that they are incorporated by specific reference, the latest editions of the following**
41 **publications, or those editions specifically noted, shall be a part of this Manual: "Standard Highway**
42 **Signs and Markings" book (FHWA); and "Color Specifications for Retroreflective Sign and Pavement**
43 **Marking Materials" (appendix to subpart F of Part 655 of Title 23 of the Code of Federal Regulations).**

44 Support:

45 The "Standard Highway Signs and Markings" book includes standard alphabets and symbols for ~~highway~~
46 ~~deleted to increase consistency~~ signs and pavement markings.

47 For information about the above publications, visit the Federal Highway Administration's MUTCD
48 website at <http://mutcd.fhwa.dot.gov>, or write to the FHWA, ~~400 Seventh Street, SW,~~ 1200 New Jersey
49 Avenue, SE, HOTO, Washington, DC 20590.

50 The 2000 FHWA publication entitled "Roundabouts-An Informational Guide" (FHWA-RD-00-067) is
51 available at <http://www.tfhr.gov/safety/00068.htm>, or write to the FHWA, 1200 New Jersey Avenue, SE,
52 HSA-1, Washington, DC 20590.

1 The [2001 FHWA](#) publication entitled “Federal-Aid Highway Program Guidance on High Occupancy
2 Vehicle (HOV) Lanes” is available at <http://www.fhwa.dot.gov/operations/hovguide01.htm>, or write to the
3 FHWA, ~~400 Seventh Street, SW,~~ [1200 New Jersey Avenue, SE](#), HOTM, Washington, DC 20590.

4 [The 2001 FHWA publication entitled “Designing Sidewalks and Trails for Access—Part 2—Best
5 Practices Design Guide” \(FHWA-EP-01-027\) is available by writing to the FHWA, 1200 New Jersey Avenue,
6 SE, HEP, Washington, DC 20590.](#)

7 [The 2003 FHWA publication entitled “Travel Better, Travel Longer: A Pocket Guide to Improving
8 Traffic Control and Mobility for Our Older Population” \(FHWA-OP-03-098\) is available at
9 <http://mutcd.fhwa.dot.gov/pdfs/PocketGuide0404.pdf>, or write to the FHWA, 1200 New Jersey Avenue, SE,
10 HOTO, Washington, DC 20590.](#)

11 [The January 2006 FHWA publication entitled “Ramp Management and Control Handbook” \(FHWA-
12 HOP-06-001\) is available at
13 \[http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/default.htm\]\(http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/default.htm\), or write to the
14 FHWA, 1200 New Jersey Avenue, SE, HOTM, Washington, DC 20590.](#)

15 Other publications that are useful sources of information with respect to the use of this Manual are listed
16 below. See Page i of this Manual for ordering information for the following publications ([later editions might
17 also be available as useful sources of information](#)):

- 18 1. [“AAA School Safety Patrol Operations Manual,” 2006 Edition \(AAA\)](#)
- 19 2. [“A Policy on Geometric Design of Highways and Streets,” ~~2001~~ 2004](#) [edited to reference current
20 edition](#) (American Association of State Highway and Transportation Officials—AASHTO)
- 21 3. [“Guide for the Development of Bicycle Facilities,” 1999 Edition \(AASHTO\)](#)
- 22 4. [“Guide to Metric Conversion,” 1993 Edition \(AASHTO\)](#)
- 23 5. [“Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to
24 Freeways,” 2001 Edition \(AASHTO\)](#)
- 25 6. [“Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to
26 Freeways, 4th Edition / Guide Signs, Part II: Guidelines for Airport Guide Signing / Guide Signs, Part
27 III: List of Control Cities for Use in Guide Signs on Interstate Highways,” Item Code: GSGLC-4,
28 2001 Edition \(AASHTO\)](#) [added to increase accuracy and to assist reader in finding this document on
29 AASHTO’s website](#)
- 30 7. [“Roadside Design Guide,” 2001 Edition \(AASHTO\)](#)
- 31 8. [“Standard Specifications for Movable Highway Bridges,” 1988 Edition \(AASHTO\)](#)
- 32 9. [“Traffic Engineering Metric Conversion Folders—Addendum to the Guide to Metric Conversion,”
33 1993 Edition \(AASHTO\)](#)
- 34 10. [“2000 AREMA Communications & Signals Manual,” American Railway Engineering &
35 Maintenance-of-Way Association \(AREMA\)](#)
- 36 ~~11. “Designing Sidewalks and Trails for Access—Part 2—Best Practices Design Guide,” 2001 Edition
37 (FHWA) [Publication No. FHWA-EP-01-027]~~
- 38 11. [“Practice for Roadway Lighting,” RP-8, 2001, Illuminating Engineering Society \(IES\)](#)
- 39 12. [“Safety Guide for the Prevention of Radio Frequency Radiation Hazards in the Use of Commercial
40 Electric Detonators \(Blasting Caps\),” Safety Library Publication No. 20, \[July 2001 Edition\]\(#\), Institute
41 of Makers of Explosives](#)
- 42 13. [“American National Standard for High-Visibility Public Safety Vests,” \(ANSI/ISEA 207-2006\), 2006
43 Edition \(International Safety Equipment Association—ISEA\)](#)
- 44 14. [“American National Standard for High-Visibility Safety Apparel \[and Headwear\]\(#\),” \[added to improve
45 accuracy\]\(#\) \(ANSI/ISEA ~~107-1999~~ \[107-2004\]\(#\)\), ~~1999~~ \[2004\]\(#\) Edition, \(ISEA\) ~~The Safety Equipment
46 Association~~ \[edited to increase consistency\]\(#\)](#)
- 47 15. [“Manual of Traffic Signal Design,” 1998 Edition \(Institute of Transportation Engineers—ITE\)](#)
- 48 16. [“Manual of Transportation Engineering Studies,” 1994 Edition \(ITE\)](#)
- 49 17. [“Pedestrian Traffic Control Signal Indications,” \[Part 1—1985 Edition\]\(#\); \[Part 2 \\(LED Pedestrian Traffic
50 Signal Modules\\)—2004 Edition\]\(#\) \(ITE\)](#)
- 51 18. [“Preemption of Traffic Signals ~~at or~~ Near Railroad ~~Grade~~ Crossings ~~with Active Warning Devices~~,”
52 \[2006 Edition\]\(#\) \(ITE\)](#)
- 53 19. [“Purchase Specification for Flashing and Steady Burn Warning Lights,” 1981 Edition \(ITE\)](#)
- 54 ~~19. “School Trip Safety Program Guidelines,” 1984 Edition (ITE)~~
- 55 20. [“Traffic Detector Handbook,” 1991 Edition \(ITE\)](#)
- 56 21. [“Traffic Engineering Handbook,” 1999 Edition \(ITE\)](#)

22. "Traffic Signal Lamps," 1980 Edition (ITE)
23. "Traffic Control Devices Handbook," 2001 Edition (ITE)
24. "Vehicle Traffic Control Signal Heads," Part 1—1985 Edition; Part 2 ([LED Circular Signal Supplement](#))—~~1998~~ 2005 Edition; [Part 3 \(LED Vehicular Arrow Traffic Signal Supplement\)](#)—2004 Edition (ITE)
25. "Uniform Vehicle Code (UVC) and Model Traffic Ordinance," 2000 Edition (National Committee on Uniform Traffic Laws and Ordinances)
26. "Occupational Safety and Health Administration Regulations (Standards - 29 CFR), General Safety and Health Provisions - 1926.20," amended June 30, 1993, Occupational Safety and Health Administration (OSHA)
27. "Highway Capacity Manual," 2000 Edition (Transportation Research Board—TRB)
28. "Recommended Procedures for the Safety Performance Evaluation of Highway Features," (NCHRP Report 350), 1993 Edition (~~Transportation Research Board~~ TRB) **edited to increase consistency**
29. "Accessible Pedestrian Signals," A-37, 1998 Edition, U.S. Architectural and Transportation Barriers Compliance Board (The U.S. Access Board)
30. "Building a True Community—Final Report—Public Rights-of-Way Access Advisory Committee (PRWAAC)," 2001 Edition (The U.S. Access Board)
31. "The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)," July 1998 Edition (The U.S. Access Board)
- ~~32. "Highway-Rail Intersection Architecture," U.S. Department of Transportation, Federal Railroad Administration (USDOT/FRA)~~

Section 1A.12 Color Code

Support:

The following color code establishes general meanings for ~~10~~ 11 colors of a total of 13 colors that have been identified as being appropriate for use in conveying traffic control information. **Central values and edited to increase accuracy, as there are no central values specified for the various colors** Tolerance limits for each color [are contained in 23 CFR Part 655, Appendix to Subpart F and](#) are available ~~from~~ [at the Federal Highway Administration's 400 Seventh Street, SW, HOTO, Washington, DC 20590, and at FHWA's MUTCD website at http://mutcd.fhwa.dot.gov or by writing to the FHWA, Office of Safety Research and Development \(HRD-T-301\), 6300 Georgetown Pike, McLean, VA 22101.](#)

The ~~three~~ two colors for which general meanings have not yet been assigned are being reserved for future applications that will be determined only by FHWA after consultation with the States, the engineering community, and the general public. The meanings described in this Section are of a general nature. More specific assignments of colors are given in the individual Parts of this Manual relating to each class of devices.

Standard:

The general meaning of the 13 colors shall be as follows:

- A. Black—regulation
- B. Blue—road user services guidance, tourist information, and evacuation route
- C. Brown—recreational and cultural interest area guidance
- D. Coral—unassigned
- E. Fluorescent Pink—incident management
- F. Fluorescent Yellow-Green—pedestrian warning, bicycle warning, playground warning, school bus and school warning
- G. Green—indicated movements permitted, direction guidance
- H. Light Blue—unassigned
- I. Orange—temporary traffic control
- J. Purple—~~unassigned~~ [electronic toll collection \(ETC\)](#)
- K. Red—stop or prohibition
- L. White—regulation
- M. Yellow—warning

Section 1A.13 Definitions of Words and Phrases in This Manual

Standard:

Unless otherwise defined [herein in this Section](#), or in ~~the~~ other Parts of this Manual, ~~definitions contained~~ [words or phrases shall have the meaning\(s\) as defined](#) in the most recent editions of the

1 “Uniform Vehicle Code,” “AASHTO Transportation Glossary (Highway Definitions),” and other
2 publications ~~specified listed~~ in Section 1A.11 ~~are also incorporated and adopted by reference.~~

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

- 4 1. Active Grade Crossing Warning System—the flashing-light signals, with or without warning
5 gates, together with the necessary control equipment used to inform road users of the approach
6 or presence of trains at highway-rail or highway-light rail transit grade crossings.
- 7 2. Alley—a street or highway intended to provide access to the rear or side of lots or buildings in
8 urban areas and not intended for the purpose of through vehicular traffic.
- 9 3. Approach—all lanes of traffic moving towards an intersection or a midblock location from one
10 direction, including any adjacent parking lane(s).
- 11 4. Arterial Highway (Street)—a general term denoting a highway primarily used by through
12 traffic, usually on a continuous route or a highway designated as part of an arterial system.
- 13 5. Average Annual Daily Traffic (AADT)—the total volume of traffic passing a point or segment
14 of a highway facility in both directions for one year divided by the number of days in the year.
15 Normally, periodic daily traffic volumes are adjusted for hours of the day counted, days of the
16 week, and seasons of the year to arrive at average annual daily traffic.
- 17 6. Average Day—a day representing traffic volumes normally and repeatedly found at a location.
18 Where volumes are primarily influenced by employment, the average day is typically a
19 weekday. When volumes are primarily influenced by entertainment or recreation, the average
20 day is typically a weekend day.
- 21 7. Barrier-Separated Lane—a preferential lane or other special purpose lane that is separated
22 from the adjacent general purpose lane(s) by a physical barrier.
- 23 8. Beacon—a highway traffic signal with one or more signal sections that operates in a flashing
24 mode.
- 25 9. Bicycle—a pedal-powered vehicle upon which the human operator sits.
- 26 10. Bicycle Lane—a portion of a roadway that has been designated for preferential or exclusive use
27 by bicyclists by ~~signs and~~ pavement markings and, if used, signs ~~for preferential or exclusive use~~
28 ~~by bicyclists.~~
- 29 11. Bikeway—a generic term for any road, street, path, or way that in some manner is specifically
30 designated for bicycle travel, regardless of whether such facilities are designated for the
31 exclusive use of bicycles or are to be shared with other transportation modes. **repeated from**
32 **Section 9A.03 since “bikeway” is now used in the Introduction**
- 33 12. Buffer-Separated Lane—a preferential lane or other special purpose lane that is separated from
34 the adjacent general purpose lane(s) by a pattern of standard longitudinal pavement markings
35 that is wider than a normal or wide lane line marking. The buffer area might include
36 channelizing devices such as tubular markers or traversable curbs, but does not include a
37 physical barrier.
- 38 13. ~~Centerline~~ Center Line Markings—the yellow pavement marking line(s) that delineates the
39 separation of traffic lanes that have opposite directions of travel on a roadway. These markings
40 need not be at the geometrical center of the pavement.
- 41 14. Changeable Message Sign—a sign that is capable of displaying more than one message (one of
42 which might be a “blank” display), changeable manually, by remote control, or by automatic
43 control. These signs are referred to as Dynamic Message Signs in the National Intelligent
44 Transportation Systems (ITS) Architecture.
- 45 15. Channelizing Line Markings—a wide or double solid white line used to form islands where
46 traffic in the same direction of travel is permitted on both sides of the island.
- 47 16. Circular Intersection—an intersection that has an island, generally circular in design, located in
48 the center of the intersection where traffic passes to the right of the island. Circular
49 intersections include roundabouts, rotaries, and traffic circles.
- 50 17. Circulatory Roadway—the roadway within a circular intersection on which traffic travels in a
51 counterclockwise direction around an island in the center of the circular intersection.
- 52 18. Clear Zone—the total roadside border area, starting at the edge of the traveled way, that is
53 available for an errant driver to stop or regain control of a vehicle. This area might consist of a
54 shoulder, a recoverable slope, and/or a nonrecoverable, traversable slope with a clear run-out
55 area at its toe.
- 56 19. Collector Highway—a term denoting a highway that in rural areas connects small towns and
57 local highways to arterial highways, and in urban areas provides land access and traffic

- 1 circulation within residential, commercial, and business areas and connects local highways to
2 the arterial highways.
- 3 20. Concurrent Flow ~~HOV~~ **Preferential** Lane—~~an HOV~~ **a preferential** lane that is operated in the
4 same direction as the adjacent mixed flow lanes, separated from the adjacent general purpose
5 freeway lanes by a standard lane stripe, painted buffer, or barrier.
- 6 21. Contiguous Lane—a lane, preferential or otherwise, that is separated from the adjacent lane(s)
7 only by a normal or wide lane line marking.
- 8 22. Conventional Road—a street or highway other than a low-volume road (as defined in Section
9 5A.01), expressway, or freeway.
- 10 23. ~~Contraflow~~ **Counter-flow** Lane—a lane operating in a direction opposite to the normal flow of
11 traffic designated for peak direction of travel during at least a portion of the day. ~~Contraflow~~
12 **Counter-flow** lanes are usually separated from the off-peak direction lanes by ~~plastic pylons~~
13 tubular markers or other flexible channelizing devices, or by moveable or permanent barrier.
14 **edited to increase consistency**
- 15 24. Crashworthy—a characteristic of a roadside appurtenance that has been successfully crash
16 tested in accordance with a national standard such as the National Cooperative Highway
17 Research Program Report 350, “Recommended Procedures for the Safety Performance
18 Evaluation of Highway Features.”
- 19 25. Crosswalk—(a) that part of a roadway at an intersection included within the connections of the
20 lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or in the
21 absence of curbs, from the edges of the traversable roadway, and in the absence of a sidewalk on
22 one side of the roadway, the part of a roadway included within the extension of the lateral lines
23 of the sidewalk at right angles to the centerline; (b) any portion of a roadway at an intersection
24 or elsewhere distinctly indicated as a pedestrian crossing by pavement marking **added to**
25 **increase clarity** lines on the surface, which ~~may~~ **might** be supplemented by contrasting
26 pavement texture, style, or color.
- 27 26. Crosswalk Lines—white pavement marking lines that identify a crosswalk.
- 28 27. Delineator—a retroreflective device mounted on the roadway surface or at the side of the
29 roadway in a series to indicate the alignment of the roadway, especially at night or in adverse
30 weather.
- 31 28. Detectable—having a continuous edge within 150 mm (6 in) of the surface so that pedestrians
32 who have visual disabilities can sense its presence and receive usable guidance information.
- 33 29. Dynamic Envelope—the clearance required for the train and its cargo overhang due to any
34 combination of loading, lateral motion, or suspension failure.
- 35 30. Edge Line Markings—white or yellow pavement marking lines that delineate the right or left
36 edge(s) of a traveled way.
- 37 31. Electronic Toll Collection (ETC)—a system for collection of toll fees via equipment that
38 communicates wirelessly with transponders mounted in vehicles (moving or stopped) to
39 automatically deduct the toll fee from a pre-paid toll account.
- 40 32. End-of-Roadway Marker—a device used to warn and alert road users of the end of a roadway
41 in other than temporary traffic control zones.
- 42 33. Engineering Judgment—the evaluation of available pertinent information, and the application
43 of appropriate principles, Standards, Guidance, and practices as contained in this Manual and
44 other sources, for the purpose of deciding upon the applicability, design, operation, or
45 installation of a traffic control device. Engineering judgment shall be exercised by an engineer,
46 or by an individual working under the supervision of an engineer, through the application of
47 procedures and criteria established by the engineer. Documentation of engineering judgment is
48 not required.
- 49 34. Engineering Study—the comprehensive analysis and evaluation of available pertinent
50 information, and the application of appropriate principles, Standards, Guidance, and practices
51 as contained in this Manual and other sources, for the purpose of deciding upon the
52 applicability, design, operation, or installation of a traffic control device. An engineering study
53 shall be performed by an engineer, or by an individual working under the supervision of an
54 engineer, through the application of procedures and criteria established by the engineer. An
55 engineering study shall be documented.
- 56 35. Expressway—a divided highway with partial control of access.

- 1 36. Flagger—a person who actively controls the flow of vehicular traffic into and/or through a
2 temporary traffic control zone using hand-signaling devices or an Automated Flagger
3 Assistance Device (AFAD).
- 4 37. Flashing—an operation in which a light source, such as a signal indication, is turned on and off
5 repetitively. revised to account for other types of flashing lights such as TTC warning lights, RR
6 flashing lights, gate lights, and lights on STOP/SLOW paddles
- 7 38. Freeway—a divided highway with full control of access.
- 8 39. Gate—an automatically-operated or manually-operated traffic control device that is used to
9 physically obstruct road users such that they cannot proceed past a particular point on a
10 roadway or pathway, or such that they cannot enter a particular ramp, lane, roadway, or
11 facility.
- 12 40. Guide Sign—a sign that shows route designations, destinations, directions, distances, services,
13 points of interest, or other geographical, recreational, or cultural information.
- 14 41. High-Occupancy Vehicle (HOV)—a motor vehicle carrying at least two or more persons,
15 including carpools, vanpools, and buses.
- 16 42. Highway—a general term for denoting a public way for purposes of travel by vehicular travel,
17 including the entire area within the right-of-way.
- 18 43. Highway-Light Rail Transit Grade Crossing—the general area where a highway and a light rail
19 transit's right-of-way cross at the same level, within which are included the light rail transit
20 tracks, highway, and traffic control devices for traffic traversing that area.
- 21 44. Highway-Rail Grade Crossing—the general area where a highway and a railroad's right-of-way
22 cross at the same level, within which are included the railroad tracks, highway, and traffic
23 control devices for highway traffic traversing that area.
- 24 45. Highway Traffic Signal—a power-operated traffic control device by which traffic is warned or
25 directed to take some specific action. These devices do not include ~~signals at toll plazas~~, power-
26 operated signs, steadily-illuminated pavement markers, warning lights (see Section 6F.79), or
27 steady burning electric lamps.
- 28 46. HOV Lane—any preferential lane designated for exclusive use by high-occupancy vehicles for
29 all or part of a day—including a designated lane on a freeway, other highway, street, or
30 independent roadway on a separate right-of-way.
- 31 47. Hybrid Signal—a special type of highway traffic signal that is intentionally placed in a dark
32 mode (no indications displayed) between periods of operation and, when operated, displays both
33 steady and flashing traffic control signal indications.
- 34 48. Inherently Low Emission Vehicle (ILEV)—any kind of vehicle that, because of inherent
35 properties of the fuel system design, will not have significant evaporative emissions, even if its
36 evaporative emission control system has failed.
- 37 49. Interchange—a system of interconnecting roadways providing for traffic movement between
38 two or more highways that do not intersect at grade.
- 39 50. Intermediate Interchange—an interchange with an urban or rural route that is not a major or
40 minor interchange as defined herein.
- 41 51. Intersection—intersection is defined as follows:
- 42 (a) The area embraced within the prolongation or connection of the lateral curb lines, or if
43 none, the lateral boundary lines of the roadways of two highways that join one another at,
44 or approximately at, right angles, or the area within which vehicles traveling on different
45 highways that join at any other angle might come into conflict.
- 46 (b) The junction of an alley or driveway with a roadway or highway shall not constitute an
47 intersection.
- 48 (c) If a highway includes two roadways that are 9 m (30 ft) or more apart, then every crossing
49 of each roadway of such divided highway by an intersecting highway shall be a separate
50 intersection; in the event such intersecting highway also includes two roadways that are 9 m
51 (30 ft) or more apart, then every crossing of two roadways of such highways shall be a
52 separate intersection (see definition of Median). However, regardless of the distance
53 between the separate intersections as defined herein, where a stopping point has not been
54 designated on the roadway (within the median) between the separate intersections, the two
55 intersections and the roadway (median) between them shall be deemed to be one
56 intersection.

- 1 (d) Where a stopping point is designated on a roadway approaching an intersection as defined
2 in Items (a) and (c) above, a vehicle of which any part is legally beyond said designated
3 stopping point shall be deemed to be legally in the intersection.
4 (e) A vehicle, which is deemed to have or which has legally entered the intersection as defined
5 in Items (a) and (c) above, upon departing said intersection shall be deemed to still be legally
6 in the intersection until:
7 (1) The rear of the vehicle and any attached trailer(s) clears the intersection; or
8 (2) Where a marked or unmarked associated crosswalk is present, the rear of the vehicle
9 and any attached trailer(s) clears said crosswalk.
- 10 52. **Island**—a defined area between traffic lanes for control of vehicular movements or for
11 pedestrian refuge. It includes all end protection and approach treatments. Within an
12 intersection area, a median or an outer separation is considered to be an island.
- 13 53. **Lane Line Markings**—white pavement marking lines that delineate the separation of traffic
14 lanes that have the same direction of travel on a roadway.
- 15 54. **Lane-Use Control Signal**—a signal face displaying indications to permit or prohibit the use of
16 specific lanes of a roadway or to indicate the impending prohibition of such use.
- 17 55. **Legend**—see Sign Legend.
- 18 56. **Logo**—a distinctive emblem, ~~symbol,~~ or trademark that identifies a commercial business and/or
19 the product or service offered by the business.
- 20 57. **Longitudinal Markings**—pavement markings that are generally placed parallel and adjacent to
21 the flow of traffic such as lane lines, ~~centerlines~~ center lines, edge lines, channelizing lines, and
22 others.
- 23 58. **Major Interchange**—an interchange with another freeway or expressway, or an interchange
24 with a high-volume multi-lane highway, principal urban arterial, or major rural route where
25 the interchanging traffic is heavy or includes many road users unfamiliar with the area.
- 26 59. **Major Street**—the street normally carrying the higher volume of vehicular traffic.
- 27 60. **Managed Lane**—a highway lane or set of lanes, or a highway facility, for which variable
28 operational strategies such as direction of travel, tolling, pricing, and/or vehicle type or
29 occupancy requirements are implemented and managed in real-time in response to changing
30 conditions.
- 31 61. **Median**—the area between two roadways of a divided highway measured from edge of traveled
32 way to edge of traveled way. The median excludes turn lanes. The median width might be
33 different between intersections, interchanges, and at opposite approaches of the same
34 intersection.
- 35 62. **Minor Interchange**—an interchange where traffic is local and very light, such as interchanges
36 with land service access roads. Where the sum of the exit volumes is estimated to be lower than
37 100 vehicles per day in the design year, the interchange is classified as local.
- 38 63. **Minor Street**—the street normally carrying the lower volume of vehicular traffic.
- 39 64. **Multi-lane**—more than one lane moving in the same direction. A multi-lane street, highway, or
40 roadway has a basic cross-section comprised of two or more through lanes in one or both
41 directions. A multi-lane approach has two or more lanes moving towards the intersection,
42 including turning lanes, added to improve clarity
- 43 65. **Object Marker**—a device used to mark obstructions within or adjacent to the roadway.
- 44 66. **Occupancy Requirement**—any restriction that regulates the use of a facility or one or more
45 lanes of a facility for any period of the day based on a specified number of persons in a vehicle.
- 46 67. **Occupant**—a person driving or riding in a car, truck, bus, or other vehicle.
- 47 68. **Open Road Electronic Toll Collection**—a system designed to allow electronic toll collection
48 (ETC) from vehicles traveling at normal highway speeds.
- 49 69. **Oposing traffic**—vehicles that are traveling in the opposite direction. At an intersection,
50 vehicles that are entering an intersection from an approach that is approximately straight ahead
51 would be considered to be opposing traffic, but vehicles that are entering an intersection from
52 the left or the right from an approach that is approximately perpendicular would not be
53 considered to be opposing traffic.
- 54 70. **Pathway**—a general term denoting a public way for purposes of travel by authorized users
55 outside the traveled way and physically separated from the roadway by an open space or
56 barrier and either within the highway right-of-way or within an independent alignment.
57 Pathways include shared-use paths, but are exclusive of sidewalks.

- 1 71. Paved—a bituminous surface treatment, mixed bituminous concrete, or Portland cement
2 concrete roadway surface that has both a structural (weight bearing) and a sealing purpose for
3 the roadway.
- 4 72. Pedestrian—a person ~~a foot on foot~~, in a wheelchair, on skates, or on a skateboard.
- 5 73. Pedestrian Facilities—a general term denoting improvements and provisions made to
6 accommodate or encourage walking.
- 7 74. Pictograph—a pictorial representation used to identify a governmental jurisdiction, an area of
8 jurisdiction, a governmental agency, a military base or branch of service, a governmental-
9 approved university or college, or a government-approved institution.
- 10 75. Platoon—a group of vehicles or pedestrians traveling together as a group, either voluntarily or
11 involuntarily, because of traffic signal controls, geometrics, or other factors.
- 12 76. Preferential Lane—a highway lane reserved for the exclusive use of one or more specific types
13 of vehicles or road user groups.
- 14 77. Principal Legend—place names, street names, and route numbers placed on guide signs.
- 15 78. Private Property Open to Public Travel—toll roads and roads within shopping centers, parking
16 lot areas, airports, sports arenas, and other similar business and/or recreation facilities that are
17 privately owned but where the public is allowed to travel without access restrictions. Private
18 gated properties where access is restricted and private highway-rail grade crossings shall not be
19 included in this definition.
- 20 79. Public Facility – any parking lot, parking garage, or accessway to or within such facilities,
21 under the jurisdiction of and maintained by a public agency and where the public is invited to
22 travel without access restrictions.
- 23 80. Public Road—any road, ~~or~~ street, or public facility under the jurisdiction of and maintained by
24 a public agency and open to public travel.
- 25 81. Raised Pavement Marker—a device ~~with a height of at least 10 mm (0.4 in)~~ mounted on or in a
26 road surface that has a height generally not exceeding approximately 25 mm (1 in) above the
27 road surface and that is intended to be used as a positioning guide or to supplement or
28 substitute for pavement markings ~~or to mark the position of a fire hydrant.~~
- 29 82. Regulatory Sign—a sign that gives notice to road users of traffic laws or regulations.
- 30 83. Retroreflectivity—a property of a surface that allows a large portion of the light coming from a
31 point source to be returned directly back to a point near its origin.
- 32 84. Right-of-Way [Assignment]—the permitting of vehicles and/or pedestrians to proceed in a
33 lawful manner in preference to other vehicles or pedestrians by the display of sign or signal
34 indications.
- 35 85. Road—see Roadway.
- 36 86. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,
37 within the highway, on a public facility, or on private property open to public travel ~~including-~~
38 ~~persons with disabilities.~~
- 39 87. Roadway—that portion of a highway improved, designed, or ordinarily used for vehicular
40 travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though such
41 sidewalk, berm, or shoulder is used by persons riding bicycles or other human-powered
42 vehicles. In the event a highway includes two or more separate roadways, the term roadway as
43 used herein shall refer to any such roadway separately, but not to all such roadways collectively.
- 44 88. Roadway Network—a geographical arrangement of intersecting roadways.
- 45 89. Roundabout ~~Intersection~~—a circular intersection with yield control ~~of all entering traffic,~~
46 ~~channelized approaches, and appropriate geometric curvature, such that travel speeds on the~~
47 ~~circulatory roadway are typically less than 50 km/h (30 mph)~~ at entry, which permits a vehicle
48 on the circulatory roadway to proceed, and with deflection of the approaching vehicle counter-
49 clockwise around a central island.
- 50 90. Rumble Strip—a series of intermittent, narrow, transverse areas of rough-textured, slightly
51 raised, or depressed road surface that ~~is installed~~ extend across the travel lane to alert road
52 users to unusual traffic conditions or are located along the shoulder or within islands formed by
53 pavement markings to alert road users that they are leaving the travel lanes. **edited to be**
54 **consistent with the various uses of this phrase in Parts 3 and 6**
- 55 91. Rural Highway—a type of roadway normally characterized by lower volumes, higher speeds,
56 fewer turning conflicts, and less conflict with pedestrians.

- 1 92. Safe-Positioned—the positioning of emergency vehicles at an incident in a manner that attempts
2 to protect both the responders performing their duties and road users traveling through the
3 incident scene.
- 4 93. School—a public or private educational institution recognized by the State education authority
5 for one or more grades K through 12 or as otherwise defined by the State.
- 6 94. School Zone—a designated roadway segment approaching, adjacent to, and beyond school
7 buildings or grounds, or along which school related activity occurs, where special traffic law
8 enforcement activity or increased fines for traffic violations are authorized.
- 9 95. Shared Roadway—a roadway that is officially designated and marked as a bicycle route, but
10 which is open to motor vehicle travel and upon which no bicycle lane is designated.
- 11 96. Shared-Use Path—a bikeway outside the traveled way and physically separated from motorized
12 vehicular traffic by an open space or barrier and either within the highway right-of-way or
13 within an independent alignment. Shared-use paths are also used by pedestrians (including
14 skaters, users of manual and motorized wheelchairs, and joggers) and other authorized
15 motorized and non-motorized users.
- 16 97. Sidewalk—that portion of a street between the curb line, or the lateral line of a roadway, and
17 the adjacent property line or on easements of private property that is paved or improved and
18 intended for use by pedestrians.
- 19 98. Sign—any traffic control device that is intended to communicate specific information to road
20 users through a word or symbol legend. Signs do not include highway traffic control **edited to**
21 **increase accuracy** signals, pavement markings, delineators, or channelization devices.
- 22 99. Sign Assembly—a group of signs, located on the same support(s), that supplement one another
23 in conveying information to road users.
- 24 100. Sign Illumination—either internal or external lighting that shows similar color by day or night.
25 Street or highway lighting shall not be considered as meeting this definition.
- 26 101. Sign Legend—all word messages, logos, and symbol designs that are intended to convey specific
27 meanings. The border, if any, on a sign is not considered to be a part of the legend. **added to**
28 **increase clarity**
- 29 102. Sign Panel—a separate panel or piece of material containing a word or symbol legend that is
30 affixed to the face of a sign.
- 31 103. Signing—individual signs or a group of signs, not necessarily on the same support(s), that
32 supplement one another in conveying information to road users. **added because we use the**
33 **word “signing,” which is not found in a standard dictionary, instead of “signage,” which is**
34 **defined in a standard dictionary**
- 35 104. Speed—speed is defined based on the following classifications:
- 36 (a) Advisory Speed—a recommended speed for all vehicles operating on a section of highway
37 and based on the highway design, operating characteristics, and conditions.
- 38 (b) Average Speed—the summation of the instantaneous or spot-measured speeds at a specific
39 location of vehicles divided by the number of vehicles observed.
- 40 (c) Design Speed—a selected speed used to determine the various geometric design features of a
41 roadway.
- 42 (d) 85th-Percentile Speed—the speed at or below which 85 percent of the motor vehicles travel.
- 43 (e) Operating Speed—a speed at which a typical vehicle or the overall traffic operates.
44 Operating speed might be defined with speed values such as the average, pace, or 85th-
45 percentile speeds.
- 46 (f) Pace ~~Speed—the highest speed within a specific range of speeds that represents more~~
47 ~~vehicles than in any other like range of speed. The range of speeds typically used is~~ 10 km/h
48 or 10 mph speed range representing the speeds of the largest percentage of vehicles in the
49 traffic stream.
- 50 (g) Posted Speed—the speed limit determined by law or regulation **added to increase accuracy**
51 **and** ~~shown~~ displayed **edited to increase consistency** on Speed Limit signs.
- 52 (h) Statutory Speed—a speed limit established by legislative action that typically is applicable
53 for highways with specified design, functional, jurisdictional and/or location characteristic
54 and is not necessarily ~~shown~~ displayed **edited to increase consistency** on Speed Limit signs.
- 55 105. Speed Limit—the maximum (or minimum) speed applicable to a section of highway as
56 established by law or regulation. **added to increase accuracy**

- 1 106. Speed Measurement Markings—a white transverse pavement marking placed on the roadway
2 to assist the enforcement of speed regulations.
- 3 107. Speed Zone—a section of highway with a speed limit that is established by law or regulation,
4 **added to increase accuracy** but which might be different from a legislatively specified statutory
5 speed limit.
- 6 108. Splitter Island—a median island used to separate opposing directions of traffic entering and
7 exiting a roundabout.
- 8 109. Stop Line—a solid white pavement marking line extending across approach lanes to indicate the
9 point at which a stop is intended or required to be made.
- 10 110. Street—see Highway.
- 11 111. Symbol—the approved design of a pictorial representation of a specific traffic control message
12 for signs, pavement markings, traffic control signals, or other traffic control devices, as shown
13 in the MUTCD.
- 14 112. Temporary Traffic Control Zone—an area of a highway where road user conditions are
15 changed because of a work zone or incident by the use of temporary traffic control devices,
16 flaggers, uniformed law enforcement officers, or other authorized personnel.
- 17 113. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other
18 conveyances either singularly or together while using for purposes of travel any highway, public
19 facility, or private property open to public travel ~~for purposes of travel.~~
- 20 114. Traffic Control Device—a sign, signal, marking, or other device used to regulate, warn, or guide
21 traffic, placed on, over, or adjacent to a street, highway, public facility, private property open to
22 public travel, pedestrian facility, or shared-use path by authority of a public agency or official
23 having jurisdiction.
- 24 115. Traffic Control Signal (Traffic Signal)—any highway traffic signal by which traffic is
25 alternately directed to stop and permitted to proceed.
- 26 116. Train—one or more locomotives coupled, with or without cars, that operates on rails or tracks
27 and to which all other traffic must yield the right-of-way by law at highway-rail grade crossings.
- 28 117. Transverse Markings—pavement markings that are generally placed perpendicular and across
29 the flow of traffic such as shoulder markings, word and symbol markings, stop lines, crosswalk
30 lines, speed measurement markings, parking space markings, and others.
- 31 118. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive of the
32 shoulders, berms, sidewalks, and parking lanes.
- 33 119. Turn Bay—a lane for the exclusive use of turning vehicles that is formed on the approach to the
34 location where the turn is to be made. In most cases where turn bays are provided, drivers who
35 desire to turn must move out of a through lane into the newly formed turn bay in order to turn.
36 A through lane that becomes a turn lane is considered to be a drop lane rather than a turn bay.
- 37 120. Urban Street—a type of street normally characterized by relatively low speeds, wide ranges of
38 traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian
39 traffic, and more businesses and houses.
- 40 121. Vehicle—every device in, upon, or by which any person or property can be transported or
41 drawn upon a highway, except trains and light rail transit operating in exclusive or
42 semiexclusive alignments. Light rail transit operating in a mixed-use alignment, to which other
43 traffic is not required to yield the right-of-way by law, is a vehicle.
- 44 122. Warning Light—a portable, powered, yellow, lens-directed, enclosed light that is used in a
45 temporary traffic control zone in either a steady burn or a flashing mode. **added to assist the**
46 **reader**
- 47 123. Warning Sign—a sign that gives notice to road users of a situation that might not be readily
48 apparent.
- 49 124. Warrant—a warrant describes threshold conditions to the engineer in evaluating the potential
50 safety and operational benefits of traffic control devices and is based upon average or normal
51 conditions. Warrants are not a substitute for engineering judgment. The fact that a warrant
52 for a particular traffic control device is met is not conclusive justification for the installation of
53 the device.
- 54 125. Worker—a person on foot whose duties place him or her within the right-of-way of a street or
55 highway, such as street or highway construction and maintenance forces, survey crews, utility
56 crews, responders to incidents within the street or highway right-of-way, and law enforcement
57 personnel when directing traffic, investigating crashes, and handling lane closures, obstructed
58 roadways, and disasters within the right-of-way of a street or highway.

- 1 126. **Wrong-Way Arrow**—a slender, elongated, white pavement marking arrow placed upstream
2 from the ramp terminus to indicate the correct direction of traffic flow. Wrong-way arrows are
3 intended primarily to warn wrong-way road users that they are going in the wrong direction.
4 127. Yield Line—a row of solid white isosceles triangles pointing toward approaching vehicles
5 extending across approach lanes to indicate the point at which the yield is intended or required
6 to be made.

7 **Section 1A.14 Meanings of Acronyms and Abbreviations in This Manual** **this section added to**
8 **assist readers**

9 **Standard:**

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

- 12 1. AADT—annual average daily traffic
13 2. AASHTO—American Association of State Highway and Transportation Officials
14 3. ADT—average daily traffic
15 4. AFAD—Automated Flagger Assistance Device
16 5. ANSI—American National Standards Institute
17 6. CFR—Code of Federal Regulations
18 7. CMS—changeable message sign
19 8. dBA—A-weighted decibels
20 9. EPA—Environmental Protection Agency
21 10. ETC—electronic toll collection
22 11. EV—electric vehicle
23 12. FHWA—Federal Highway Administration
24 13. FRA—Federal Railroad Administration
25 14. FTA—Federal Transit Administration
26 15. HOT—high occupancy tolls
27 16. HOTM—Highways-Office of Travel Management
28 17. HOTO—Highways-Office of Transportation Operations
29 18. HOV—high-occupancy vehicle
30 19. ILEV—inherently low emission vehicle
31 20. ISEA—International Safety Equipment Association
32 21. ITE—Institute of Transportation Engineers
33 22. ITS—intelligent transportation systems
34 23. km/h—kilometers per hour
35 24. LED—light emitting diode
36 25. LP—liquid petroleum
37 26. MPH or mph—miles per hour
38 27. MUTCD—Manual on Uniform Traffic Control Devices
39 28. NCHRP—National Cooperative Highway Research Program
40 29. PRT—perception-response time
41 30. RV—recreational vehicle
42 31. TDD—telecommunication devices for the deaf
43 32. TRB—Transportation Research Board
44 33. TTC—temporary traffic control
45 34. U.S.—United States
46 35. U.S.C.—United States Code
47 36. USDOT—United States Department of Transportation
48 37. UVC—Uniform Vehicle Code
49 38. VPH or vph—vehicles per hour

50 **Section ~~1A.14~~ 1A.15 Abbreviations Used on Traffic Control Devices**

51 **Standard:**

52 **When the word messages shown in Table 1A-1 need to be abbreviated in connection with traffic**
53 **control devices, the abbreviations shown in Table 1A-1 shall be used.**

1 The abbreviations shown in Table 1A-2 shall be used only on Portable Changeable Message signs.
2 When the word messages shown in Table 1A-2 need to be abbreviated on a Portable Changeable
3 Message sign, the abbreviations shown in Table 1A-2 shall be used.

4 Guidance:

5 The abbreviations for the words listed in Table 1A-2 that also show a prompt word should not be used ~~in~~
6 ~~connection with on traffic control devices~~ a Portable Changeable Message sign unless the prompt word shown
7 in Table 1A-2 either precedes or follows the abbreviation.

8 **Standard:**

9 **The abbreviations shown in Table 1A-3 shall not be used in connection with traffic control devices**
10 **because of their potential to be misinterpreted by road users.**

11 Guidance:

12 ~~Where~~ If multiple abbreviations are permitted in Tables 1A-1 or 1A-2, the same abbreviation should be
13 used throughout a single jurisdiction.

14 Except as otherwise provided in Table 1A-1 or 1A-2 or unless absolutely necessary to avoid confusion,
15 periods, commas, apostrophes, question marks, ampersands, and other punctuation marks or characters that
16 are not letters or numerals should not be used in any abbreviation.

Table I-1. Evolution of the MUTCD

Year	Name	Month / Year Revised
1927	Manual and Specifications for the Manufacture, Display, and Erection of U.S. Standard Road Markers and Signs (for rural roads)	4/29, 12/31
1930	Manual on Street Traffic Signs, Signals, and Markings (for urban streets)	No revisions
1935	Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)	2/39
1942	Manual on Uniform Traffic Control Devices for Streets and Highways — War Emergency Edition	No revisions
1948	Manual on Uniform Traffic Control Devices for Streets and Highways	9/54
1961	Manual on Uniform Traffic Control Devices for Streets and Highways	No revisions
1971	Manual on Uniform Traffic Control Devices for Streets and Highways	11/71, 4/72, 3/73, 10/73, 6/74, 6/75, 9/76, 12/77
1978	Manual on Uniform Traffic Control Devices for Streets and Highways	12/79, 12/83, 9/84, 3/86
1988	Manual on Uniform Traffic Control Devices for Streets and Highways	1/90, 3/92, 9/93, 11/94, 12/96, 6/98, 1/00
2000	Manual on Uniform Traffic Control Devices for Streets and Highways — Millennium Edition	7/02
2003	Manual on Uniform Traffic Control Devices for Streets and Highways	12/04
TBD	Manual on Uniform Traffic Control Devices for Streets and Highways	

Table 1A-1. Acceptable Abbreviations

Word Message	Standard Abbreviation	Word Message	Standard Abbreviation
Afternoon / Evening	PM	Kilometers Per Hour	km/h
Alternate	ALT	Lane	LA, LN*
AM Radio	AM	Liquid Propane Gas	LP-GAS
Avenue	AVE, AV	Maximum	MAX
Bicycle	BIKE	Meter(s)	m
Boulevard	BLVD*	Metric Ton	t
Bridge	(See Table 1A-2)	Mile(s)	MI
CB Radio	CB	Miles Per Hour	MPH
Center (as part of a place name)	CTR	Minimum	MIN
Circle	CIR*	Minute(s)	MIN
Civil Defense	CD	Monday	MON
Compressed Natural Gas	CNG	Morning / Late Night	AM
Court	CT*	National	NATL
Crossing (other than highway-rail)	X-ING	North	N
Drive	DR*	Parkway	PKWY*
East	E	Pedestrian	PED
Electric Vehicle	EV	Place	PL*
Expressway	EXPWY*	Pounds	LBS
Feet	FT	Road	RD*
FM Radio	FM	Saturday	SAT
Freeway	FRWY, FWY*	South	S
Friday	FRI	Street	ST*
Hazardous Material	HAZMAT	Sunday	SUN
High Occupancy Vehicle	HOV	Telephone	PHONE
Highway	HWY*	Temporary	TEMP
Hospital	HOSP	Terrace	TER*
Hour(s)	HR, HRS	Thursday	THURS
Information	INFO	Thruway	THWY*
Inherently Low Emission Vehicle	ILEV	Tons of Weight	T
International	INTL	Township	TWP
Interstate	(See Table 1A-2)	Trail	TR*
Junction / Intersection	JCT	Tuesday	TUES
Kilogram	kg	Turnpike	TPK*
Kilometer(s)	km	Two-Way Intersection	2-WAY
		US Numbered Route	US
		Wednesday	WED
		West	W

*This abbreviation shall not be used for any application other than the name of a roadway.

**Table 1A-2. Abbreviations That Shall Only be Used
on Portable Changeable Message Signs (Sheet 1 of 2)**

Word Message	Standard Abbreviation	Prompt Word That Should Precede the Abbreviation	Prompt Word That Should Follow the Abbreviation
Access	ACCS	—	Road
Ahead	AHD	Fog	—
Blocked	BLKD	Lane	—
Bridge	BR*	[Name]	—
Cannot	CANT	—	—
Center	CNTR	—	Lane
Chemical	CHEM	—	Spill
Condition	COND	Traffic	—
Congested	CONG	Traffic	—
Construction	CONST	—	Ahead
Crossing	XING	—	—
Do Not	DONT	—	—
Downtown	DWNTN	—	Traffic
Eastbound	E-BND	—	—
Emergency	EMER	—	—
Entrance, Enter	ENT	—	—
Exit	EX	Next	—
Express	EXP	—	Lane
Frontage	FRNTG	—	Road
Hazardous	HAZ	—	Driving
Highway-Rail Grade Crossing	RR XING	—	—
Interstate	I-*	—	[Number]
It Is	ITS	—	—
Lane	LN	Right, Left, Center	—
Left	LFT	—	—
Local	LOC	—	Traffic
Lower	LWR	—	Level
Maintenance	MAINT	—	—
Major	MAJ	—	Accident
Minor	MNR	—	Accident
Normal	NORM	—	—
Northbound	N-BND	—	—
Oversized	OVRSZ	—	Load
Parking	PKING	—	—
Pavement	PVMT	Wet	—
Prepare	PREP	—	To Stop
Quality	QLTY	Air	—
Right	RT	Keep, Next	—
Right	RT	—	Lane
Roadwork	RDWK	—	Ahead, [Distance]
Route	RT, RTE	Best	—
Service	SERV	—	—

* This abbreviation, when accompanied by the prompt word, may be used on traffic control devices other than Portable Changeable Message Signs

**Table 1A-2. Abbreviations That Shall Only be Used
on Portable Changeable Message Signs (Sheet 2 of 2)**

Word Message	Standard Abbreviation	Prompt Word That Should Precede the Abbreviation	Prompt Word That Should Follow the Abbreviation
Shoulder	SHLDR	—	—
Slippery	SLIP	—	—
Southbound	S-BND	—	—
Speed	SPD	—	—
Tires With Lugs	LUGS	—	—
Traffic	TRAF	—	—
Travelers	TRVLRS	—	—
Two-Wheeled Vehicles	CYCLES	—	—
Upper	UPR	—	Level
Vehicle(s)	VEH, VEHS	—	—
Warning	WARN	—	—
Westbound	W-BND	—	—
Will Not	WONT	—	—

Table 1A-3. Unacceptable Abbreviations

Abbreviation	Intended Word	Common Misinterpretations
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (Merge)
LT	Light (Traffic)	Left
PARK	Parking	Park
POLL	Pollution (Index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
WRNG	Warning	Wrong

Figure 1A-1. Process for Requesting and Conducting Experimentations for New Traffic Control Devices

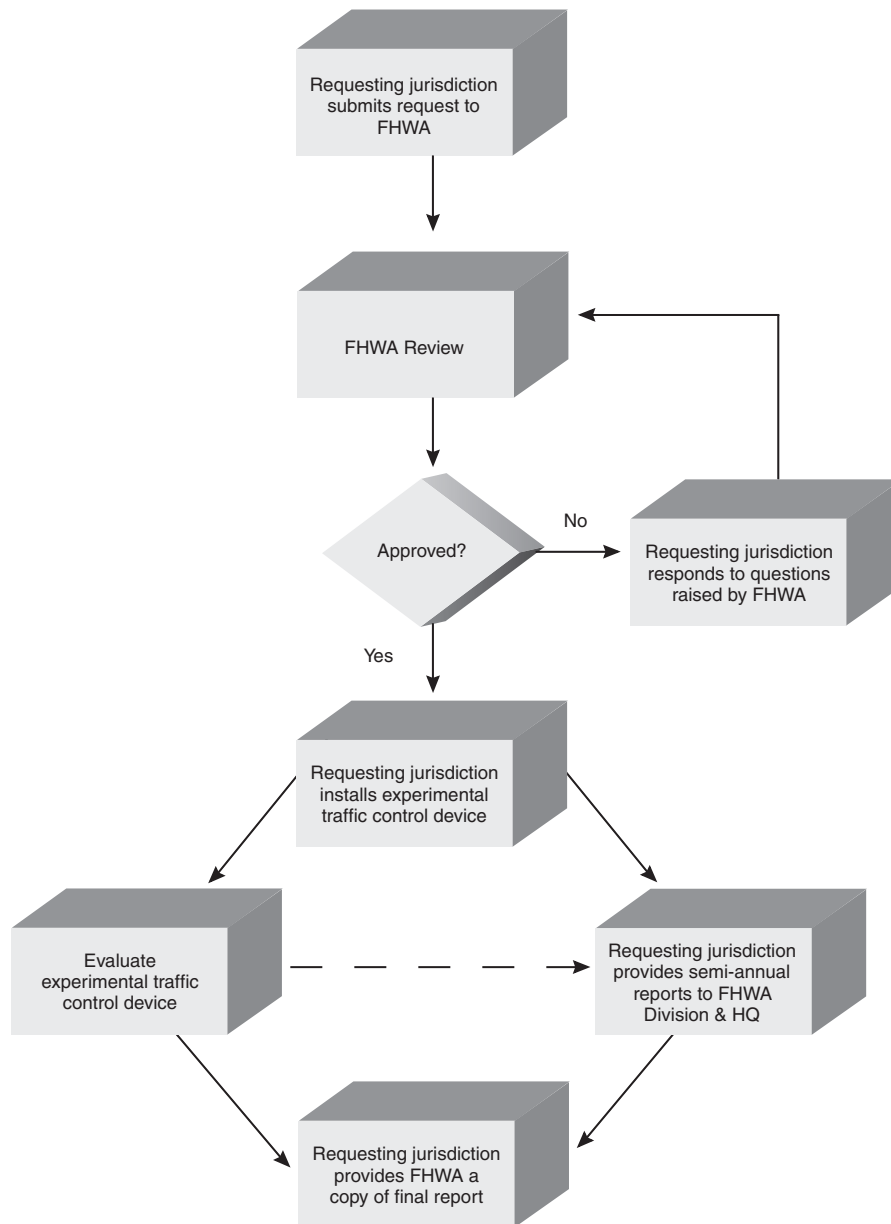


Figure 1A-2. Process for Incorporating New Traffic Control Devices into the MUTCD

