



## National Committee on Uniform Traffic Control Devices

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### ATTACHMENT NO. 4

**Edit #1**

**TECHNICAL COMMITTEE:**Edit Committee

**DATE OF ACTION:**1/9/2014, 1/28/2014, 04/03/2014, 4/10/2014, 6/25/14, 6/26/14

**TASK FORCE:**Jim Pline, Scott Wainwright, Randy McCourt, Gene Hawkins

**TECH COM APPROVAL DATE:**6/25/2014

**TRANSMITTAL TO SPONSORS:**Spring 2014

**COUNCIL APPROVAL DATE:**June 26, 2014

**TOPIC:** FHWA Consolidation and Reorganization of MUTCD Introduction and Part 1

**AFFECTED PORTIONS OF MUTCD:** Introduction and Part 1 General

#### **SUMMARY:**

About a year ago, Jim Pline and Scott Wainwright started a consolidation and reorganization of the MUTCD material in the Introduction and Part 1 General. During 2013, the FHWA initiated a program of MUTCD reorganizing, using the material prepared by Jim and Scott as their base. The FHWA work on a draft consolidated Introduction and Part 1, which also includes some proposed downgrading of Standards, has been completed and has been provided to the Edit Committee for their consideration and approval. The FHWA proposed changes to the MUTCD appear acceptable with some minor revisions.

**RESEARCH:** None required

#### **DISCUSSION:**

The FHWA consolidation and reorganization of the MUTCD Introduction and Part 1 is largely editorial in nature except for three items: 1) new definitions, 2) changes to the consolidation/reorganization of the Introduction and Part 1, and 3) changes to the section regarding “principles of traffic control devices.”

#### **1. New Definitions**

In the Introduction/Part 1 draft, FHWA added three new definitions and requested the NCUTCD to develop six new definitions (agency, application, prevailing speed, reconstructed, shoulder, and uncontrolled approach). The NCUTCD proposes definitions for five of the requested terms and includes a seventh definition (driveway) which added by the Edit Committee as the term is used in the Manual in several locations. It is the usual practice to use the AASHTO definition if one exists. There are AASHTO definitions for shoulder and driveway with the driveway definition revised to recognize the new MUTCD provisions for “Sites Open to Public Travel”. The other new definitions have been developed based on the dictionary and consideration of MUTCD applications.

The NCUTCD proposes that the term “prevailing speed” not be defined as it is used only three times in the MUTCD as follows:

- Section 2C.06(P2) uses the term as a Standard for the determination of horizontal alignment signing. This requirement has been considered and the recommendation was made by Council to delete the term from this Section on January 20, 2011.
- Section 3D.01(P9) uses prevailing speed as one of the engineering judgment considerations for the spacing of preferential lane word and symbol markings.
- Section 9B.04(P2) uses prevailing speed as one of the engineering judgment considerations for the spacing of periodic bike lane signs and plaques.

There is a definition for prevailing speed in ITE’s “Methods and Practices for Setting Speed Limits: An Informational Report”: “the average of the 85th percentile speed, the upper limit of the 10 mph pace, and the average test run speed, rounded to the nearest 5 mph increment.” However, it is not a widely used speed statistic and it assumes that speed data has been collected. For the remaining two uses of “prevailing speed” (Guidance statements in 3D.01 and 9B.04), it is suggested that the Markings and Bicycles technical committees review the text and consider replacing the term with “operating or average speed”, which would serve the engineering judgment considerations, or “85<sup>th</sup> percentile speed” if a quantifiable speed statistic is needed.

The NCUTCD also recommends changes to three of the FHWA proposed changes to definitions.

## **2. Consolidation and Reorganization of the MUTCD Introduction and Part 1**

The Introduction to the 2009 MUTCD has been consolidated into Part 1, and all of Part 1 has been reorganized with duplications and unneeded text deleted. Some of the text has been revised to improve the clarity and consistency. The NCUTCD concurs with the consolidation and reorganization, which is editorial in nature except for the items identified in this ballot. The major revisions relative to Standard statements are detailed in the Tables (“Status of Standard Paragraphs”) near the front of the FHWA document. Note that the reasons for each deletion, addition, relocation, and revision have been noted by FHWA in Green boxes following each applicable sentence or paragraph. The major Standard statement revisions are covered in the recommendations below.

## **3. MUTCD Section on Principles of Traffic Control Devices**

The Regulatory and Warning Sign Committee noted some inconsistent terminology in Section 1A.02 Principles of Traffic Control Devices and recommended text revisions that corrected the text. This proposed change was inadvertently transmitted to Sponsors, December 2013, with limited response and minor suggested changes as a result of Sponsor comments. That proposed change is Section 1D.01 in the FHWA reformat. It is recommended that the NCUTCD follow through with these recommendations to correct the inconsistencies as indicated in the recommended revisions.

The Regulatory/Warning Sign Technical Committee previously sent this item to sponsors before the summer 2013 NCUTCD meeting but the item was not presented to Council as it was associated with Part 1 instead of Part 2.

## RECOMMENDED MUTCD PROVISIONS/REVISIONS:

Note: Proposed changes to the 2009 MUTCD language are shown in blue underlined and deleted text is shown as ~~red strikethrough~~. NCUTCD changes to FHWA proposed language for the next MUTCD are indicated by blue double underline or ~~red double strikethrough~~ indicates language proposed by FHWA that the NCUTCD proposes to delete. **Yellow highlight** indicates NCUTCD recommended changes to new language proposed by the FHWA. The following revisions reflect the new Sections numbers and Subjects as used in the FHWA reformatting.

### 1. New, Revised, or Deleted Definitions

*The NCUTCD concurs with adding the following definition as proposed by FHWA:*

#### Section ~~1A.13~~1C.02 Definitions of Headings, Words, and Phrases in this Manual

- Active Grade Crossing – a grade crossing equipped with automatic traffic control devices, such as flashing-light signals, gates, and/or traffic control signals, that are activated upon the detection of approaching rail traffic. Definition added for term used in Manual.

*The NCUTCD concurs with adding the following definition as proposed by FHWA but recommends the changes shown. Recommended NCUTCD changes are indicated by ~~red double strikethrough~~ for deletions and indicated by blue double underline for additions and **highlighted in yellow**.*

#### Section ~~1A.13~~1C.02 Definitions of Headings, Words, and Phrases in this Manual

- Signal Dimming – the reduction of the light intensity level of a signal indication, typically for nighttime conditions, to a level that is lower than the minimum level required used for daytime conditions. Definition added for term used in several places in Part 4.
- Toll Road (facility) – a road or facility that is open to traffic only by payment of a direct user toll or fee. Definition added for frequently-used term.

*The NCUTCD proposes additional changes to the revised definitions developed by FHWA. Recommended NCUTCD changes are indicated by ~~red double strikethrough~~ for deletions and indicated by blue double underline for additions and **highlighted in yellow**.*

- **Crashworthy**—a characteristic of a roadside appurtenance that ~~has been successfully crash tested~~ is intended to reduce injuries to vehicle occupants ~~by allows allowing an impacting vehicle impacting the appurtenance to be stopped, slowed, slowed before stopping, or redirected, or to pass through the appurtenance~~ continue without significant resistance, in accordance with a national standard such as the National Cooperative Highway Research Program Report 350,

“Recommended Procedures for the Safety Performance Evaluation of Highway Features” or the AASHTO “Manual for Assessing Safety Hardware” (see Section 1A.04). Roadside appurtenances include longitudinal barriers, bridge railings, permanent and portable sign supports, barricades, crash cushions, and other permanent or temporary traffic control devices within the clear zone. Definition revised to reflect addition of latest procedures for assessing crashworthiness.

Editorial note - text without markup: Crashworthy—a characteristic of a roadside appurtenance that is intended to reduce injuries to vehicle occupants by allowing a vehicle impacting the appurtenance to be slowed, slowed before stopping, redirected, or to continue without significant resistance, in accordance with a national standard such as the National Cooperative Highway Research Program Report 350, “Recommended Procedures for the Safety Performance Evaluation of Highway Features” or the AASHTO “Manual for Assessing Safety Hardware” (see Section 1A.04). Roadside appurtenances include longitudinal barriers, bridge railings, permanent and portable sign supports, barricades, crash cushions, and other permanent or temporary traffic control devices within the clear zone.

- Emergency-Vehicle Traffic Control Signal—a special traffic control signal that assigns the right-of-way directs all conflicting traffic to stop in order to permit the driver of to an authorized emergency vehicle to safely proceed into the roadway or intersection. Revised to avoid use of term “assigns the right-of-way.”
- Pedestrian Clearance Time—the time provided for a pedestrian crossing in a crosswalk, after leaving the curb or shoulder edge of pavement traveled way, to travel to the far side of the traveled way or to a median. Revised to clarify intent.

The FHWA requested the NCUTCD develop a definition for the following term but the NCUTCD recommends that use of the term be removed from the MUTCD.

- ~~Prevailing Speed—Add definition for this term.~~ [NCUTCD note: this term should be deleted from use in the MUTCD. Used in 3D.01 and 9B.04 as guidance stmt regarding placement of devices based on prevailing speed and use in 2C has been approved to be removed by NCUTCD.]

The NCUTCD developed and recommends adding the following definitions requested by FHWA or recommends deleting a definition requested by FHWA:

#### Section ~~1A.13~~ 1C.02 Definitions of Headings, Words, and Phrases in this Manual

- Agency – an organization with the responsibility for providing, maintaining, and/or operating a private or public road system.
- Application – the act of deciding to use something and/or putting something to use.
- Driveway – a private access from a roadway to a building, site, or abutting property.
- Reconstructed – a term used to describe a roadway or a traffic control device. When used to describe a roadway, it describes a roadway that has been rebuilt or restored to its former use or that has been improved through major renovation of structural elements. When used to describe a traffic control device, it describes a

device that has been rebuilt or improved through major renovation of structural or control elements.

- Shoulder –a longitudinal area contiguous with the traveled way primarily for accommodation of stopped vehicles for emergency use and for lateral support of base and surface courses.
- Uncontrolled Approach – an approach on which vehicles are not controlled by a traffic control signal, hybrid beacon, STOP sign, or YIELD sign.

*The NCUTCD concurs with the FHWA proposed changes to the following definitions as recommended by FHWA:*

#### Section ~~1A.13~~ 1C.02 Definitions of Headings, Words, and Phrases in this Manual

- Highway Traffic Signal—a power-operated traffic control device by which traffic is warned or directed to take some specific action. These devices do not include power-operated signs, steadily-illuminated pavement markers, gates, flashing light signals (see Section 8C.02), warning lights (see Section 6F.83), or steady burning electric lamps. Revised for clarity of intent.
- Paved—having a roadway surface that has both a structural (weight bearing) and a sealing purpose for the roadway, such as a bituminous surface treatment, mixed bituminous concrete, or Portland cement concrete ~~roadway surface that has both a structural (weight bearing) and a sealing purpose for the roadway.~~ Revised to clarify that the term applies to all 3 types of surfaces.
- Private Road Open to Public Travel—private toll roads and roads (including any adjacent sidewalks that generally run parallel to the road) within shopping centers, airports, sports arenas, and other similar business and/or recreation facilities that are privately owned, or any roads within a residential development that are privately owned or maintained, but where the public is allowed to travel without access restrictions. Roads within private gated properties (except for gated toll roads) where access is restricted at all times, parking areas, driving aisles within parking areas, and private highway-rail grade crossings shall not be included in this definition. Revised to clarify re private residential roads. NCUTCD should also consider whether private highway-LRT grade crossings should also be exempted.
- Traffic Control Signal (Traffic Signal)—any highway traffic signal by which traffic is alternately directed to stop and permitted to proceed. These devices do not include pedestrian hybrid beacons (see Chapter 4F) or emergency-vehicle hybrid beacons (see Section 4G.04). Revised to clarify.

## 2. Consolidation and Reorganization of the MUTCD Introduction and Part 1

The NCUTCD recommends the FHWA proposed text below be revised as shown by ~~red double strikethrough~~ for deletions and indicated by blue double underline for additions

Section 1A.05 – page 6, line 49, to page 7, line 3 -- the last 2 paragraphs are new

49 An organization no longer exists to maintain the UVC. As new devices and applications have been added to  
50 the MUTCD, periodic updates to the UVC Rules of the Road are being made for consistency by the National  
51 Committee on Uniform Traffic Control Devices (NCUTCD) and are available on the NCUTCD website.New  
52 paragraph added to explain current situation  
1 ~~This Manual and the devices it contains have been developed to be consistent with the UVC Rules of the~~  
2 ~~Road. Accordingly, some adjustments in a traffic control device's legend might be necessary to comply with the~~  
3 ~~statutory requirements of a specific jurisdiction.~~New paragraph added for clarity  
An organization no longer exists to update and maintain the UVC. As new devices and applications have been  
added to the MUTCD, periodic updates to the UVC Rules of the Road have been made by the National  
Committee on Uniform Traffic Control Devices (NCUTCD) to maintain consistency between the devices, their  
applications, and the Rules of the Road. These updates are available on the NCUTCD website.

The NCUTCD **concurs** with the following revisions to Standard statements recommended by FHWA.

Section 1B.03 – page 9, lines 5-10 and lines 25-28 – two Standard paragraphs have been reduced to Support

5 ~~Standard~~Support:  
6 23 CFR 655.603 also ~~states that~~requires traffic control devices on all streets, highways, bikeways, and  
7 private roads open to public travel in each State ~~shall to~~ be in substantial conformance with standards issued or  
8 endorsed by the Federal Highway Administrator. This paragraph has been moved from existing Section  
9 1A.07 paragraph 2, and changed from a Standard to Support, as it is a statement of fact rather than a  
10 mandate of the MUTCD  
25 Support:  
26 The FHWA has the authority to establish other target compliance dates for implementation of particular  
27 changes to the MUTCD [23 CFR 655.603(d)(1)]. This paragraph, moved from Introduction (paragraph  
28 22), has been changed from Standard to Support because it does not contain a “shall”.

Section 1B.03 – page 9, lines 41-48 -- the Option statement has been consolidated into the Standard that precedes it

29 Standard:

30 ~~These target compliance dates established by the FHWA shall be as shown in Table I-2. This~~  
31 ~~paragraph has been moved from Introduction (paragraph 22)~~

32 Design, application, and placement of traffic control devices other than those adopted in this Manual  
33 shall be prohibited unless the provisions of ~~this~~ Sections 1B.04 through 1B.07 are followed regarding  
34 official interpretations, experiments, changes to the MUTCD, and interim approvals as granted by the  
35 FHWA. This paragraph has been moved from existing Section 1A.10, paragraph 1

36 ~~Except as provided in Paragraph 24, when a~~ A non-compliant traffic control device that is being  
37 replaced or refurbished because it is damaged, missing, or no longer serviceable for any reason, ~~it~~ shall  
38 be replaced with a compliant device, except when engineering judgment indicates that replacement in  
39 kind is more appropriate because: This paragraph has been moved from Introduction (paragraph 23) and  
40 combined with Introduction paragraph 24

41 Option:

42 ~~A damaged, missing, or otherwise non-serviceable device that is non-compliant may be replaced in kind if~~  
43 ~~engineering judgment indicates that:~~

- 44 A. One compliant device in the midst of a series of adjacent non-compliant devices would be  
45 confusing to road users; and/or  
46 B. The schedule for replacement of the whole series of non-compliant devices will result in achieving  
47 timely compliance with the MUTCD. This paragraph has been moved from Introduction  
48 (paragraph 24) and combined into the Standard paragraph that preceded it

*Section 1B.08 – page 12, line 47, to page 13, line 3 – the Standard has been reduced to Guidance*

47 Standard:Guidance:

48 ~~Except as provided in Paragraph 4, r~~Requests for any interpretation, permission to experiment, a change to  
49 the MUTCD, or an interim approval, or change shall should be submitted electronically to the Federal

1 Highway Administration (FHWA), Office of Transportation Operations, MUTCD team, at the following e-  
2 mail address: MUTCDofficialrequest@dot.gov. This paragraph has been revised from Standard to  
3 Guidance.

*Section 1D.02 – page 33, lines 36-39 – Standard reduced to Guidance*

36 Standard:Guidance:

37 Signs and other devices that do not have any traffic control purpose that are placed within the highway  
38 right-of-way ~~shall~~ should not be located where they will interfere with, or detract from, traffic control  
39 devices. Revised to Guidance.

*Section 1D.04 – 2nd paragraph of Guidance and the Option paragraph have been revised*

29 ~~Aspects of a traffic control device's standard~~ design that is specified in this Manual as mandatory should  
30 be modified only if there is a demonstrated need in unusual circumstances based on an engineering study or  
31 engineering judgment. Revised for clarity of intent

36 Option:

37 ~~With the e~~Exception of for symbols and colors, minor modifications in the specific design elements of a  
38 device may be made based on an engineering study or engineering judgment, provided the essential appearance  
39 characteristics are preserved. Revised for clarity of intent

*The NCUTCD recommends that the “shall” be changed to “should” in Section 1B.05. Recommended NCUTCD changes are indicated by ~~red double strikethrough~~ for deletions and indicated by blue double underline for additions and highlighted in yellow.*

Section 1B.05 – page 10, lines 38-47 -- text about patented devices in experimentation has been expanded

38 E. A legally binding statement from the agency conducting the experiment, the manufacturer of the  
39 device, and the supplier of the device certifying that the concept of the traffic control device or its  
40 application is not protected by a patent, trademark, or copyright and that the traffic control device  
41 and its application is in the public domain and can be used freely in traffic control device design and  
42 application without infringement. The legally binding statement ~~shall~~ should also state that the agency  
43 conducting the experiment, the manufacturer of the device, and the supplier of the device are aware  
44 that if patent, trademark, or copyright protection is established in the future for the device concept  
45 and/or application, such protection would preclude its eligibility for use in traffic control device  
46 design or application and/or result in its removal from the MUTCD or in a cancellation of its Interim  
47 Approval. Revised to address patent issues

### 3. Relation to Other Publications

Note that the Edit Committee initially proposed to add publications to the new Section 1A.04 but after sending to sponsors for comment, decided that publications should not be included in this Section unless they are specifically referenced in the MUTCD. The NCUTCD recommends that FHWA reviews the list of publications in this Section and make sure that each is cited in the MUTCD. .

### 3. MUTCD Section on Principles of Traffic Control Devices

Revise section 1D.01 as follows:

#### Section ~~1A.02~~ 1D.01 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, and private roads open to public travel (see definition in Section ~~1A.13~~ 1C.02) regardless of type or class or the public agency, official, or owner 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~~ be consistent with these principles:

- A. Full-fill 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~~ be consistent with the five principles 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.*

*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.*

**Support:**

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