



National Committee on Uniform Traffic Control Devices

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Item No.: 25A-EDT-01

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

COMMITTEE / TASK FORCE: Edit Committee
ITEM NUMBER: 25A-EDT-01
TOPIC: Definitions of Highway, Roadway, and Road
ORIGIN OF REQUEST: Edit Committee Task Force: Randy Dittberner, Scott Wainwright, Harry Campbell, and Rob Weber (and late member Jim Pline)
AFFECTED SECTIONS OF MUTCD: 1A.01, 1A.02, 1A.03, 1B.01, 1B.03, 1B.05, 1B.06, 1B.07, 1B.08, 1C.02, 1D.01, 1D.02, 1D.03, 1D.09, 1D.11

DEVELOPMENT HISTORY:

Approved by Edit Committee: 06/24/2026
Concurrence by ROR JTF: 11/13/2025
Approved by NCUTCD Council: 06/26/2026

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

SUMMARY:

This recommendation would redefine several terms, including the following:

- *Road, highway, and street* would be defined as synonyms but their common uses would be acknowledged.
- Because *road* is expected to be the most preferred of these three, the definition of the three synonyms would be moved from *highway* to *road*. The definition of *road* would include facilities that prohibit vulnerable road users, exclude facilities where motor vehicles are prohibited, and include private roads.
- *Roadway* would include shoulders and exclude pathways.

This recommendation is the first step of a two-step process; it includes associated changes to Part 1 of the MUTCD. This is sent to FHWA as a conceptual recommendation, not intended for implementation until the Council approves one or more additional proposals that address the remainder of the Manual.

DISCUSSION:

Following is a brief discussion of this issue. A complete discussion, including examples, figures, rationale, and impacts, can be found in the appendix.

The MUTCD defines *highway* as a “public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right-of-way.” *Roadway* means a “portion of a highway” that includes only the “vehicular travel and parking lanes.” *Roadway* specifically excludes “the sidewalk, berm, or shoulder.” The MUTCD also defines *street* as a synonym for *highway* and *road* as a synonym for *roadway*.

The definition of *highway* has three problems:

1. **Vulnerable Road Users.** *Highway* is defined to be for “travel by vehicles and vulnerable road users.” If a facility does not permit travel by **both** vehicles **and** vulnerable road users, it does not meet the definition of *highway*. Most freeways, for example, prohibit vulnerable road users and therefore do not meet the definition of *highway*.
2. **Bikeways.** *Highway* is defined as a facility “for purposes of vehicular travel.” Because bicycles are vehicles, a facility for purposes of bicycle travel meets the definition of *highway* even if motor vehicles are prohibited. For instance, a shared-use path on an independent alignment meets the definition of *highway*, which is counterintuitive.
3. **Private Facilities.** *Highway* is defined as “a public way.” This phrase might mean “a publicly owned facility,” or it might mean “a facility open to public travel.” This ambiguity does not allow a clear understanding of what types of facilities are considered highways.

The definition of *roadway* has four problems:

1. **Shoulders.** Some provisions in the MUTCD are written as though *roadway* is defined to include shoulders, which is not the case. Example: Paragraph 15 of Section 2G.03 requires that certain signs comply with the provisions for overhead mounting “if any portion of the sign extends over the roadway.” This standard should also apply if any portion of a sign extends over a shoulder.

This issue is more concerning now that the 11th Edition of the MUTCD sanctions part-time motor vehicle travel on shoulders. Shoulders are excluded from the definition of *roadway* even when a shoulder is open to part-time motor vehicle travel. However, the word *roadway* is often intended to include shoulders open to part-time motor vehicle travel. Example: Section 1C.02 defines *crosswalk* as “part of a roadway . . .” Since shoulders are not part of the roadway, it is impossible for a crosswalk to exist across a shoulder.

2. **Bicycle Facilities.** The roadway is the portion of a highway “used for vehicular travel.” Because bicycles are vehicles, any portion of the highway used for bicycle travel is part of the roadway, except the sidewalk, berm, and shoulder. It is complicated to determine whether shared-use paths are part of the roadway.

Sidewalks are expressly excluded from the roadway. *Sidewalk* is defined as a “portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property

line or on easements of private property that is paved or improved and intended for use by pedestrians.” To meet the definition of *sidewalk*, a facility must run alongside a roadway and be intended for use by pedestrians.

Shared-use path is defined as “a bikeway . . . also used by pedestrians” and other authorized users. A bikeway is “any road, street, path, or way that in some manner is specifically designated for bicycle travel.” To meet the definition of *shared-use path*, a facility must be open to pedestrians and designated for bicycle travel.

By these definitions, if a facility runs alongside a street, is open to pedestrians, and is designated for bicycle travel, it meets the definitions of **both** *sidewalk* and *shared-use path*. If a facility meets the definition of *shared-use path* but not *sidewalk*, then the facility is a roadway, because it is intended for bicycle travel, and bicycles are vehicles.

This complicated relationship causes several contradictions. Example: Paragraph 7 of Section 9D.06 says, “Certain uninterrupted, long-distance interstate bicycle routes can largely be on shared-use paths, or other off-roadway facilities.” A shared-use path is only an “off-roadway facility” if it is also a sidewalk, and this does not appear to be what this provision intends to refer to.

3. **Road User.** *Road user* is defined as someone “within the highway,” even though *road* is only a subset of *highway*. A pedestrian or bicyclist on a sidewalk is not using the “road,” because sidewalks are excluded from the road. Bicyclists and pedestrians on the shoulder are also not using the road, because the shoulder is not part of the road. It is counterintuitive that *road user* includes people who are not using the road.

Furthermore, *road user* includes people using a highway or site roadway open to public travel, but it does not include people using bikeways that are not also highways, even though the MUTCD legally applies to all bikeways.

4. **Parking Lanes.** The definition of *roadway* uses the term *parking lane*, but *parking lane* is undefined. It is unclear whether *parking lane* is intended to include perpendicular and angle parking in addition to parallel parking.

In addition to these problems with the definitions of *highway* and *roadway*, the MUTCD sometimes uses a term that does not accurately convey the intent. Example: In Section 1C.02, *conventional road* is defined as “a street or highway other than an expressway or freeway.” It is inconsistent to use *road* as part of the defined term *conventional road* when the definition refers to “a street or highway.” A road is “a portion of a highway,” so it is inconsistent for *conventional road* to be defined to include the entire right-of-way.

Proposed Solution

The proposed solution can be separated into two steps:

- **Step 1:** Decide on any changes to definitions.
- **Step 2:** Review the MUTCD to ensure that the text, figures, and tables are consistent with the definitions. This step is likely to involve all technical committees because changes are expected to be needed in every part of the MUTCD.

Because of the scale involved in Step 2, it is not reasonable for a single NCUTCD ballot proposal to address the entire issue at once. Rather, this recommendation is intended to accomplish Step 1 by proposing updates to several definitions. In addition, this recommendation provides a sample of Step 2, showing how the definition changes would be applied to a portion (Part 1) of the MUTCD. The intent is to illustrate that the proposed definitions are reasonable when applied to MUTCD content.

This recommendation is sent to FHWA as a conceptual recommendation not intended for immediate implementation. After this Step 1 recommendation, technical committees will begin work on Step 2. Both Step 1 and Step 2 proposals would be intended for implementation only after Council approves Step 2. (It may be necessary to revisit Step 1 during Step 2.)

The following terms are proposed for revised definitions:

- *Road, highway, and street* are proposed to be defined as synonyms.
- Because *road* is expected to be the most preferred term of these three, the definition of the three synonyms is proposed to be moved from *highway* to *road*. The term *road* is proposed to be redefined so it applies to facilities open to motor vehicle travel even when vulnerable road users are prohibited. The definition is proposed **not** to include facilities where motor vehicles are prohibited, such as pathways. Lastly, the definition is proposed to clarify that it includes roads open to public travel, including private roads and site roads open to public travel.

The definitions of *freeway, expressway, conventional road, arterial road, collector road, and alley* are proposed to be nested as sub-definitions of *road*. This will more clearly establish the hierarchical relationship among these types and classifications of roads. In the same hierarchy, a new definition of *local road* is proposed for parallelism with other conventional road functional classifications.

- *Highway* and *street* are proposed to be redefined as synonyms of *road* with additional text to describe how these terms are commonly used.
- *Roadway* is proposed to be redefined to include shoulders and exclude pathways. The undefined term *parking lane* is proposed to be replaced with the defined term *on-street parking*.
- *Shared-use path* is proposed to be redefined as a “type of pathway...” rather than “a bikeway ...” This would emphasize that shared-use paths are, first and foremost, intended for multiple modes, as indicated by the word *shared*. This change would also eliminate situations where the same facility could be considered both a sidewalk and a shared-use path, because sidewalks are expressly excluded from the definition of *pathway*. Lastly, the definition proposes to expressly acknowledge that all shared-use paths are bikeways.
- *Shoulder* is proposed to be redefined to clarify that shoulders are part of the roadway. The definition is also proposed to clarify that shoulders are within the traveled way only when they are open to part-time travel by motor vehicles.

- *Traveled way* is proposed to be redefined to include shoulders only when they are open to part-time motor vehicle travel.
- Several other definitions are proposed to be changed for consistency with the changes above. The rationale for these changes is annotated below.

The definition of *bikeway* is not proposed to change substantively. *Bikeway* would be defined as “a generic term for any road, pathway, or way that in some manner is specifically designated for bicycle travel.”

RECOMMENDED MUTCD CHANGES:

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

[For brevity, this recommendation includes only sections and paragraphs with proposed changes and nearby text where context is needed.]

PART 1. GENERAL

CHAPTER 1A. GENERAL

Section 1A.01 Purpose and Scope of the MUTCD [24B-EDT-01, Jan 2025]

Support:

01 The purpose of the MUTCD is to establish uniform national criteria for the use of traffic control devices that meet the needs and expectancy of road users on all roads, including streets, highways, pedestrian and bicycle facilities, and ~~site roadways~~ roads open to public travel, and bikeways. [Road user is currently defined to include people using only highways and site roadways open to public travel, but it is proposed to be redefined to also include people using bikeways. There are several problems with the list of facility types in this sentence: (1) Mentioning both *street* and *highway* is redundant since they are synonyms. (2) The words “pedestrian and” have been identified by FHWA in correspondence to the Edit Committee as an error. The MUTCD is not intended to apply broadly to all “pedestrian facilities.” (3) The MUTCD does not apply to all “bicycle facilities” as this term is defined. For example, the MUTCD does not apply to bicycle parking facilities outside the right-of-way. The defined term *site roadway open to public travel* is proposed to be changed to *site road open to public travel* for internal consistency, and the sentence is proposed to be recast so *site road open to public travel* is clearly a subset of *road*.]

02 This purpose is achieved through the following objectives:

- Promote safety, inclusion, and mobility for all users of ~~the roads~~ and bikeways network; [Safety, inclusion, and mobility are as important for people using bikeways, to which the MUTCD legally applies, as for people using roads.]
- Promote efficiency through creating national uniformity in the meaning and appearance of traffic control devices;
- Promote national consistency in the use, installation, and operation of traffic control devices; and

D. Provide basic principles for traffic engineers to use in making decisions regarding the use, installation, operation, maintenance, and removal of traffic control devices.

02a The scope of the MUTCD is limited to the meaning, design, application, installation, and operation of traffic control devices. The MUTCD is not a ~~roadway road~~ design manual nor is it a comprehensive safety manual. It is not a policy or directive on the design or character of communities or the geometric design of ~~roadways roads~~. The MUTCD also is not intended to prioritize any particular travel mode or to influence land use or access by any mode of travel. Such policies are determined by the responsible State and local authorities and ~~road roadway~~ owners.

02b The MUTCD governs how traffic control devices communicate directly with road users about how the road network is intended to be navigated safely and efficiently, within the context and constraints of the ~~road's highway or street's~~ physical space, design features, and surrounding environment. [24B-EDT-01, Jan. 2025.]

03 Uniformity of the meaning of traffic control devices is vital to their effectiveness. Uniformity means treating similar situations in a similar way. Uniformity of devices simplifies the task of the road user because it aids in recognition and understanding, thereby reducing perception/reaction time. Uniformity assists road users, law enforcement officers, and traffic courts by giving everyone the same interpretation. Uniformity assists ~~public-highway officials~~ road and bikeway agencies through efficiency in manufacture, installation, maintenance, and administration. [Public highway officials might be read to include only officials of publicly owned highways, but this sentence should also apply to officials overseeing private roads and all bikeways regardless of ownership.]

Section 1A.02 Traffic Control Devices – General Description

Support:

01 As defined in Section 1C.02 of this Manual, traffic control devices include all signs, signals, markings, channelizing devices, or other devices that use colors, shapes, symbols, words, sounds, and/or tactile information for the primary purpose of communicating a regulatory, warning, or guidance message to road users on ~~a street, highway, pedestrian facility, bikeway, pathway, or all roads, including site roadway roads~~ open to public travel, and bikeways. [According to Paragraphs 1 and 2 of Section 1B.01, the MUTCD does not apply to “pedestrian facilities” or “pathways.” The list of facility types in this sentence is proposed to match the list in paragraph 1 of Section 1A.01 (and elsewhere).]

02 Infrastructure elements that restrict the road user’s travel paths or vehicle speeds, such as islands, curbs, speed humps, and other raised roadway surfaces, are not traffic control devices. Transverse or longitudinal rumble strips are also not traffic control devices. Operational devices associated with the application of traffic control strategies such as fencing, roadway lighting, barriers, and attenuators are shown in this Manual for context, but their design, application, and usage are not specified since they are not traffic control devices.

03 Certain types of signs and other devices that do not have any traffic control purpose are sometimes placed within ~~the highway a road or bikeway~~ right-of-way by or with the permission of the ~~public~~ agency or the official having jurisdiction over the ~~street or highway facility~~. These signs and other devices are not considered to be traffic control devices and provisions regarding their design and use are not included in this Manual. Among these signs and other devices are the following: [This paragraph refers to the “highway right-of-way,” but it needs to also apply to bikeways, to which the MUTCD also legally applies. The definition of agency includes those overseeing both public and private roads.]

A. Devices whose purpose is to assist ~~highway road~~ maintenance personnel, such as markers to guide snowplow operators, devices that identify culvert and drop inlet locations, and devices that precisely identify ~~highway~~ locations for maintenance or mowing purposes;

B. Devices whose purpose is to assist fire or law enforcement personnel, such as markers that identify fire hydrant locations, signs that identify fire or water district boundaries, speed

- measurement pavement markings, small indicator lights to assist in enforcement of red light violations, and photo enforcement systems;
- C. Devices whose purpose is to assist utility company personnel and ~~highway~~ road contractors, such as markers that identify underground utility locations;
- D. Signs posting local non-traffic ordinances; and
- E. Signs giving civic organization meeting information.

Section 1A.03 Target Road Users

Support:

- 01 Traffic control devices can be targeted at operators of motor vehicles, including driving automation systems, and at vulnerable road users.
- 02 Targeted operators of motor vehicles include motorists, public transportation operators, truck drivers, and motorcyclists. Targeted users also include vulnerable road users, who have little to no protection from crash forces. These users are defined in Title 23, U.S.C. 148(a). They include bicyclists and pedestrians, including persons with disabilities. Pedestrians with disabilities might be blind or vision-impaired, have mobility limitations, or other impairments. Protection of vulnerable road users is a priority in this Manual as directed in Section 11135 of the Infrastructure Investment and Jobs Act. [The Pedestrian Joint Task Force is considering a definition for vulnerable road user, which could involve changes to this section.]
- 03 Operators of motor vehicles and vulnerable road users are both likely to be present on ~~roadways~~ roads where adjacent land use suggests that trips could be served by varied modes. Application of traffic control devices on these ~~roadways~~ roads requires careful consideration of measures to set and design for appropriate speeds; separation of various users in time and space; improvement of connectivity and access for pedestrians, bicyclists, and transit riders, including for people with disabilities; and implementation of safety countermeasures.

CHAPTER 1B. LEGAL REQUIREMENTS FOR TRAFFIC CONTROL DEVICES

Section 1B.01 National Standard

Standard:

- 01 The Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) is incorporated by reference in 23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall be recognized as the national standard for all traffic control devices installed on ~~any street, highway, bikeway, or all roads, including~~ site roadway roads open to public travel (see definition in Section 1C.02), and bikeways in accordance with 23 U.S.C. 109(d) and 402(a).

- 02 In accordance with 23 CFR 655.603(a), the MUTCD shall apply to all of the following types of facilities:

- A. ~~Any street, roadway, or~~ Roads and bikeways open to public travel, either publicly or privately owned, including the following: [Roadway is a subset of street. Using street alone is sufficient, but the proposed more generic term road is more likely to be correctly interpreted.]
1. Site roads open to public travel;
 2. Publicly owned toll roads, including those under the jurisdiction of a public agency, public authority, or public-private partnership; and
 3. Privately owned toll roads where the public is allowed to travel without access restriction, including gated toll roads or roads the public is able to pay to access.
- [Items 1, 2, and 3 in this list are moved here from items B, C, and D below. They are numbered rather than lettered because they are all subsets of road.]

- ~~B.—Streets and roadways on sites that are off the public right-of-way that are open to public travel without full-time access restrictions. Examples include roadways within shopping~~

~~centers, office parks, airports, sports arenas, other similar business and/or recreation facilities, governmental office complexes, schools, universities, recreational parks, and other similar publicly owned complexes and/or recreation facilities. The above described examples of streets and roadways are referred to in this Manual as site roadways open to public travel;~~ [It is not necessary to provide a detailed description of a site road open to public travel because this definition is included in Section 1C.02.]

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

~~D. Privately owned toll roads facilities where the public is allowed to travel without access restriction. This includes gated toll roads facilities or roadways facilities where the general public is able to pay to access the facility; and~~

~~E.B.~~ Grade crossings of publicly-owned ~~roadways~~ roads with railroads or light rail transit.

03 The MUTCD shall not apply to the following types of facilities:

A. ~~Roadways~~ Facilities within private gated properties where access to the general public is restricted at all times; [The definitions of *roadway* and *road* do not include facilities where access to the general public is restricted at all times.]

B. Grade crossings of privately-owned ~~roadways~~ facilities with railroads; ~~and~~

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

D. Bicycle facilities that are not part of a road or bikeway; and

E. Pedestrian facilities that are not part of a road or bikeway.

Section 1B.03 Compliance of Devices

Standard:

01 The U.S. Secretary of Transportation, under authority granted by the Highway Safety Act of 1966, decreed that traffic control devices on all ~~streets and highways~~ roads open to public travel in accordance with 23 U.S.C. 109(d) and 402(a) in each State shall be in substantial conformance with the Standards issued or endorsed by the FHWA.

Support:

02 23 CFR 655.603 also requires traffic control devices on all ~~streets, highways, roads and~~ bikeways, and site roadways open to public travel in each State to be in substantial conformance with standards issued or endorsed by the Federal Highway Administrator. [23 CFR 655.603 uses the phrase “on any street, highway, or bicycle trail,” but this paragraph is not a direct quote from CFR, so *road* is preferred.]

Standard:

03 After the effective date of a new edition of the MUTCD or a revision thereto, or after the adoption thereof by the State, whichever occurs later, new or reconstructed devices installed shall comply with the new edition or revision, as required by 23 CFR 655.603.

04 In cases involving Federal-aid projects for new construction, reconstruction, resurfacing, restoration, or rehabilitation of a facility to which this Manual applies, the traffic control devices installed (temporary or permanent) shall comply with the most recent edition of the National MUTCD before that highway facility is opened or re-opened to the public for unrestricted travel [23 CFR 655.603(d)(2) and (d)(3)]. [The word *facility* should be used at the end of the sentence for consistency with the use of this term toward the beginning of the sentence.]

05 Unless a particular device is no longer serviceable (see definition in Section 1C.02), non-compliant devices on existing ~~highways~~ roads and bikeways shall be brought into compliance with the current edition of the National MUTCD as part of the systematic upgrading of substandard traffic control devices (and installation of new required traffic control devices) required pursuant to the Highway Safety Program, 23 U.S.C. §402(a).

Section 1B.05 Experimentation

Standard:

02 A traffic control device or application that does not comply with the provisions of this Manual shall not be used on any ~~street, highway, road or~~ bikeway, ~~or site roadway open to public travel (see definition in Section 1C.02)~~ without first receiving official approval to experiment from the FHWA's Office of Transportation Operations.

Support:

03 A request for permission to experiment (see Section 1B.08) will be considered only when submitted by the ~~public~~ agency, including a ~~or~~ toll facility authority, responsible for the operation of the road or ~~street~~ bikeway on which the experiment is to take place. For a site ~~roadway~~ road open to public travel, the request will be considered only if it is submitted by the ~~private owner or~~ official having jurisdiction.

[Agency includes those overseeing both public and private roads. There are many authorities that own and maintain private roads other than "toll facility authorities." Not all site roads open to public travel are privately owned.]

04 A request for experimentation with a novel device or application across multiple jurisdictions as a single experiment with a common hypothesis, evaluation plan, and evaluation team will be considered when submitted jointly by all the authorities responsible for operation of the roads or ~~streets~~ bikeways on which the experiment is to take place. Similarly, a request to add experimental sites to an experimentation approved for another jurisdiction will be considered when submitted jointly by the all the authorities for operation of the roads or ~~streets~~ bikeways on which the experiment is then to take place.

05 Manufacturers or inventors of novel devices are encouraged to engage the services of a qualified traffic engineer or other professional who is versed in traffic control devices. Early engagement during the concept and development processes will help ensure the efficacy of the device with regard to human factors, operational, safety, and other considerations prior to an agency requesting experimentation.

06 In some cases, an off-~~road~~ ~~roadway~~ closed-course or laboratory study might be required before a request for experimentation can be considered. The purpose of such a study is to determine whether testing the experimental device or application in an open-road setting could result in an undue safety risk.

Section 1B.06 Changes to the MUTCD

Support:

01 Continuing advances in technology and approaches to traffic safety will produce changes in ~~the~~ ~~highway~~ roads, vehicles, and road-user proficiency; therefore, portions of the system of traffic control devices in this Manual will require updating. It is important to have a procedure for recognizing these developments and for introducing new ideas and modifications into the system.

Section 1B.07 Interim Approvals

Support:

01 Interim approval allows for provisional use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in this Manual.

02 The FHWA issues an interim approval by official memorandum signed by the Associate Administrator for Operations and posts this memorandum on the MUTCD Web site.

03 Interim approval allows for the optional use of a traffic control device or application and does not create a new mandate or recommendation for its use. Interim approval includes conditions that ~~jurisdictions~~ agencies, including ~~toll facility operators, or~~ owners of toll roads, private roads, and site

~~roadways~~ roads open to public travel, agree to comply with in order to use the traffic control device or application until an official rulemaking action has occurred. The issuance by FHWA of an interim approval might result in the traffic control device or application being proposed for adoption in the next scheduled rulemaking process to issue a new edition or revision of this Manual. [Agency includes those overseeing both public and private roads. A toll facility operator is one of many authorities that own and operate public or private roads.]

04 If the device or application under interim approval is not proposed in the next rulemaking for a new edition or revision, then a statement of the status of the interim approval, whether it is to be rescinded or remain in effect, will be included in the Federal Register notice for the rulemaking.

05 Interim approval is considered based on the results of experimentation, and/or results of analytical or laboratory studies with a traffic control device or application that analytically demonstrates a device effectively communicates its intended meaning. Interim approval considerations include an assessment of relative risks, benefits, costs, impacts, and other factors.

06 Section 1B.08 contains information on submitting a request for interim approval.

07 Interim approval is ordinarily considered only after published authoritative research and experimentation sufficiently demonstrate that the device or application provides a significant safety or operational improvement. Individual experiments by various jurisdictions, without a research report on the overall findings of the experimental device or application, will not ordinarily qualify for issuance of an interim approval.

08 Interim approval ordinarily is not considered based solely on non-U.S. experience with a new traffic control device or application. Differences in regulations, enforcement and penalties, and driver licensing requirements, among other factors, can result in dissimilar road-user behavior. Additionally, due to variations in conventions for traffic control device design, a non-U.S. traffic control device concept might need to be adapted to U.S. criteria to ensure consistency with the provisions and principles of this Manual. However, documented non-U.S. experience can be considered in the development of requests for experimentation (see Section 1B.05) and within the evaluation plan for traffic control device research.

Standard:

09 ~~An agency, jurisdiction, toll facility operator, or~~ including the owner of a toll road, private road, or site ~~roadway~~ road open to public travel, that desires to use a traffic control device or application for which FHWA has issued an interim approval shall request and receive permission from FHWA in writing prior to applying the device or application.

10 The request to place a traffic control device or application under an existing interim approval shall contain the following:

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

Option:
11 A State may submit a request for permission to use a device or application under an existing interim approval for all jurisdictions in that State, as long as the request contains the information required in Paragraph 10 of this Section.

Standard:

12 ~~An agency, jurisdiction, toll facility operator, or~~ including the owner of a toll road, private road, or site roadway road open to public travel, that elects to use a device or application under a statewide interim approval shall inform the State of its use of the device or application.

13 Under a statewide interim approval, the respective ~~jurisdictions~~ agencies, including toll facility operators, or owners of toll roads, private roads, and site roadways roads open to public travel, shall maintain and continually update a record of all locations on their roads or bikeways where the device or application is implemented (see Item C of Paragraph 10 of this Section) and shall furnish this information to the State.

Section 1B.08 Requesting Official Interpretations, Experiments, Changes to the MUTCD, or Interim Approvals

Guidance:

01 ~~An agency, local jurisdiction, toll facility operator, or~~ including the owner of a toll road, private road, or site roadway road open to public travel, that is requesting permission to experiment or permission to use a device or application under an existing interim approval should first check for any State laws, regulations, and/or directives covering the application of the MUTCD provisions that might apply.

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

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

Standard:

01 Unless otherwise defined in this Section, or in other Parts of this Manual, words or phrases shall have the meaning(s) as defined in the “Uniform Vehicle Code,” “AASHTO Transportation Glossary (Highway Definitions),” or other appropriate publications.

Support:

01a A term defined in this Section might have a different definition in State law and in other documents and resources.

Standard:

02 Where a term that is defined in this Section or elsewhere in this Manual has a different definition in another resource or in common use, the definition herein shall govern for purposes of the applicability of the provisions of this Manual.

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

[Only relevant definitions are included. Other definitions are omitted.]

8. **Advisory Speed**—a recommended speed for **all** vehicles operating on a section of ~~highway road or bikeway~~ and based on the ~~highway road or bikeway~~ design, operating characteristics, and conditions. [Advisory speeds are used on both roads and bikeways. (The MUTCD legally applies to both roads and bikeways.) “All” is proposed to be removed because advisory speeds on roads are usually not “recommended” for bicycles.]

9. Agency—an organization with the responsibility for providing, maintaining, and/or operating **a at least one** public or private roads **and/or bikeway system**. [*Bikeway* is proposed to be added because the MUTCD applies to bikeways in addition to roads. *System* is proposed to be removed to include organizations even if the roads or bikeways they oversee might not be considered a system.]
10. Alley—~~see Road, a street or highway intended to provide access to the rear or side of lots or buildings in urban areas and not intended for the purpose of through vehicular traffic.~~ [Definition moved to #202, nested under *road*.]
11. Annual Average Daily Traffic (AADT)—the total volume of traffic passing a point or segment of a ~~highway facility~~ **road or bikeway** in both directions for one year divided by the number of days in the year. Normally, periodic daily traffic volumes are adjusted for hours of the day counted, days of the week, and seasons of the year to arrive at annual average daily traffic.
13. Approach—all lanes of traffic moving toward an intersection or a midblock location from one direction, including any adjacent **on-street** parking ~~lane(s)~~. [*Parking lane* is undefined; it is proposed to be replaced by the defined term *on-street parking* for consistency with the definitions of *roadway* and *traveled way*.]
14. Arterial ~~Highway (Street) Road~~—~~see Road, a general term denoting a highway primarily used by through traffic, usually on a continuous route or a highway designated as part of an arterial system.~~ [Definition moved to #202, nested under *road*.]
22. Bicycle—a pedal-powered vehicle upon which the human operator sits.
24. Bicycle ~~Facilities~~ **Facility**—a general term denoting ~~improvements and a~~ provisions that accommodates or encourages bicycling, including **bikeways, bicycle** parking and storage facilities, and shared roadways ~~not specifically defined for bicycle use~~. [Definitions are usually singular rather than plural. A shared roadway must be “officially designated and marked as a bicycle route,” according to the definition, although this proposal would omit the phrase “and marked” from the definition of *shared roadway*. It does not appear to be possible that a shared roadway could be “not specifically defined for bicycle use.”]
25. Bicycle Lane—a portion of a roadway that has been designated for preferential or exclusive use by bicyclists. A typical bicycle lane is delineated from the adjacent general-purpose lane(s) by longitudinal pavement markings and bicycle lane symbol or word markings and, if used, signs. Other types of bicycle lanes include:
- (a) Buffer-Separated Bicycle Lane—a bicycle lane that is separated from the adjacent general-purpose lane(s) by a pattern of standard longitudinal pavement markings that is wider than a normal or wide lane line marking.
 - (b) Counter-Flow Bicycle Lane—a one-directional bicycle lane that provides a lawful path of travel for bicycles in the opposite direction from general traffic on a roadway that allows general traffic to travel in only one direction. Counter-flow bicycle lanes are designated by the traffic control devices used for other bicycle lanes.
 - (c) Separated Bicycle Lane—an exclusive facility for bicyclists that is located within ~~or directly adjacent to~~ the roadway and ~~that is~~ physically separated from motor vehicle traffic with a vertical element. Separated bicycle lanes are differentiated from other bicycle lanes by a vertical element. [All bicycle lanes are “within the roadway,” according to the definitions of *roadway* and *bicycle lane*. It is not possible for a separated bicycle lane to be anywhere other than “within the roadway.” Note: the BTC is proposing additional changes to the definition of *bicycle lane*, including adding a definition for *conventional bicycle lane*, in 25A-BIK-04.]
28. Bikeway—a generic term for any road, ~~street, path~~ **pathway**, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. [The defined term is *pathway*, not *path*.]

39. Clear Storage Distance—when used in Part 8, the distance available for vehicle storage measured between 6 feet from the rail nearest the intersection to the intersection stop line or the normal stopping point on the **highway roadway**. At skewed grade crossings and intersections, the 6-foot distance shall be measured perpendicular to the nearest rail either along the center line or edge line of the **highway roadway**, as appropriate, to obtain the shorter distance. Where exit gates are used, the distance available for vehicle storage is measured from the point where the rear of the vehicle would be clear of the exit gate arm. In cases where the exit gate arm is parallel to the track(s) and is not perpendicular to the **highway roadway**, the distance is measured either along the center line or edge line of the **highway roadway**, as appropriate, to obtain the shorter distance.
41. Collector **Highway Road**—~~see Road, a term denoting a highway that in rural areas connects small towns and local highways to arterial highways, and in urban areas provides land access and traffic circulation within residential, commercial, and business areas and connects local highways to the arterial highways.~~ [Definition moved to #202, nested under **road**.]
47. Conventional Road—~~see Road, a street or highway other than an expressway or freeway.~~ [Definition moved to #202, nested under **road**.]
50. Crosswalk—(a) that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the **highway road** measured from the curbs or in the absence of curbs, from the edges of the ~~traversable~~ roadway, and in the absence of a sidewalk on one side of the roadway, the part of a roadway included within the extension of the lateral lines of the sidewalk at right angles to the center line; (b) any portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian crossing by pavement marking lines on the surface, which might be supplemented by contrasting pavement texture, style, or color. [Under the current definition of **roadway**, this definition is not ideal, because it does not permit crosswalks to exist across shoulders. The proposed definition of **roadway** causes this definition to be largely appropriate as written. However, the term *traversable roadway* is erroneous. The entire roadway is traversable.]
83. Expressway—~~see Road, a divided highway with partial control of access.~~ [Definition moved to #202, nested under **road**.]
91. Freeway—~~see Road, a divided highway with full control of access.~~ [Definition moved to #202, nested under **road**.]
94. General-Purpose Lane—a **highway roadway** lane ~~or set of lanes~~, other than a Managed Lane (see definition in this Section) or a Preferential Lane (see definition in this Section), that all or most of the traffic that is allowed on that **highway roadway** is also allowed to use. Certain classes of vehicles, such as commercial vehicles or vehicles exceeding a certain weight or size, might be prohibited from using one or more of the general-purpose lanes. A general-purpose lane might also be restricted to certain uses, such as passing or turning or as an auxiliary lane. [General-purpose lane (singular) should not be defined as “a set of lanes” (plural).]
96. Grade Crossing—the general area where a **highway road or bikeway** and a railroad and/or light rail transit route cross at the same level, within which are included the tracks, **highway road or bikeway**, and traffic control devices for traffic traversing that area.
98. Guide Sign—a sign that shows route designations, **highway street** names, destinations, directions, distances, services, points of interest, or other geographical, recreational, or cultural information.
100. Highway—~~a road, often connecting cities or towns, a general term for denoting a public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right-of-way.~~
104. HOV Lane—any preferential lane designated for exclusive use by high-occupancy vehicles for all or part of a day—~~including a designated lane~~ on a freeway, ~~other highway, street,~~

- 613 ~~expressway, or conventional road independent roadway on a separate right-of-way.~~ [The
614 portion of the definition proposed for deletion is repetitive and uses inconsistent terminology.]
- 615 105. Hybrid Beacon—a special type of beacon that is intentionally placed in a dark mode (no
616 indications displayed) between periods of operation and, when operated, displays both
617 steady and flashing traffic control signal indications. Hybrid beacons include:
- 618 (a) Emergency-Vehicle Hybrid Beacon—used to warn and control traffic at an
619 unsignalized location to assist authorized emergency vehicles in entering or crossing a
620 ~~street or highway~~ road.
- 621 (b) Pedestrian Hybrid Beacon—used to warn and control traffic at an unsignalized
622 location to assist pedestrians in crossing a ~~street or highway~~ road at a marked
623 crosswalk.
- 624 109. Interchange—a system of interconnecting roadways providing for traffic movement
625 between two or more ~~highways~~ roads that do not intersect at grade.
- 626 112. Intersection—intersection is defined as follows:
- 627 (a) The area embraced within the prolongation or connection of the lateral curb lines, or
628 if none, the lateral boundary lines of the roadways of two ~~highways~~ roads that join
629 one another at, or approximately at, right angles, or the area within which vehicles
630 traveling on different ~~highways~~ roads that join at any other angle might come into
631 conflict. [The proposed definition of *roadway* would change the area within an
632 intersection. The revised definition of *roadway* appears to be more appropriate for the
633 definition of *intersection* than the current definition of *roadway*, because the definition of
634 *intersection* also refers to areas “within which vehicles... might come into conflict.”
635 Vehicles on shoulders, including bicycles and motorists using shoulders open to part-time
636 motor vehicle travel, should be considered within an intersection.]
- 637 (b) The junction of an alley, driveway, or site ~~roadway~~ road open to public travel with a
638 public ~~roadway or highway~~ road shall not constitute an intersection, unless the public
639 ~~roadway or highway~~ road at said junction is controlled by a traffic control device.
- 640 (c) If a ~~highway~~ road includes two roadways separated by a median, then every crossing
641 of each roadway of such divided ~~highway~~ road by an intersecting ~~highway~~ roadway
642 shall be a separate intersection if the opposing left-turn paths cross and there is
643 sufficient interior storage for the design vehicle (see Figure 2A-5).
- 644 (d) At a location controlled by a traffic control signal, regardless of the distance between
645 the separate ~~intersections~~ roadways as defined in (c) above:
- 646 (1) If a stop line, yield line, or crosswalk has not been designated ~~on the roadway~~
647 ~~(within the median)~~ between the separate ~~intersections~~ roadways, the crossings of
648 both roadways ~~two intersections~~ and the ~~roadway (median)~~ between them shall
649 be considered as one intersection; [The proposed changes resolve the contradictory
650 phrase “two intersections . . . shall be considered as one intersection.”]
- 651 (2) Where a stop line, yield line, or crosswalk is designated on the roadway on the
652 intersection approach, the area within the crosswalk and/or beyond the
653 designated stop line or yield line shall be part of the intersection; and
- 654 (3) Where a crosswalk is designated on a roadway on the departure from the
655 intersection, the intersection shall include the area extending to the far side of
656 such crosswalk.
- 657 117. Lane Drop—a through lane that becomes a mandatory turn lane on a conventional
658 ~~roadway~~ road, or a through lane that becomes a mandatory exit lane on a freeway or
659 expressway. The end of an acceleration lane and reductions in the number of through
660 lanes that do not involve a mandatory turn or exit are not considered lane drops. [The
661 defined term is *conventional road*.]
- 662 119. Lane Reduction—a gradual narrowing of the ~~travel pavement~~ roadway (taper) through
663 physical construction or pavement markings at which traffic in the lane being eliminated

must merge into the adjacent through lane and continue in the same direction of travel. A lane reduction can occur outside the influence of an intersection or interchange, or within an interchange a short distance downstream of the gore of an exit ramp. Through lanes that become a mandatory turn or exit are considered lane drops rather than lane reductions.

129. Low-Volume Rural Road—a category of paved or unpaved conventional or special-purpose ~~roadways~~ road having an AADT of less than 400 vehicles and lying outside of built-up or urbanized areas of cities, towns, and communities. [*Road is used in both the defined terms conventional road and special-purpose road.*]
133. Managed Lane—a ~~highway~~ lane ~~or set of lanes, or a highway facility,~~ for which variable operational strategies such as direction of travel, tolling, pricing, and/or vehicle type or occupancy requirements are implemented and managed in real-time in response to changing conditions. Managed lanes are typically buffer-separated or barrier-separated lanes parallel to the general-purpose lanes of a ~~highway~~ road in which access is restricted to designated locations. There are ~~also~~ some ~~highways~~ roads on which ~~more than one lane, or all lanes,~~ are managed. [*Managed lane (singular) should not be defined as “a set of lanes” (plural). The last sentence clarifies that there can be multiple managed lanes on a road.*]
136. Median—the portion of a ~~highway~~ road separating opposing directions of ~~the traveled way~~ or the area between two roadways of a divided ~~highway~~ road measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges, and at opposite approaches of the same intersection. [*Use of “the traveled way” implies that there is only one traveled way on a highway. Where a median exists, a highway usually has two traveled ways.*]
137. Minimum Track Clearance Distance—the length along a ~~highway~~ roadway over the track(s) where a vehicle could be struck by rail traffic. The minimum track clearance distance is measured from a point upstream from the track(s) on the approach to the grade crossing to a point downstream from the track(s) on the departure from the grade crossing. The length along the ~~highway~~ roadway between the two points is the minimum track clearance distance.
144. Multi-Lane—more than one lane moving in the same direction. A multi-lane ~~street, highway, road~~ or roadway has a basic cross-section comprised of two or more through lanes in at least one ~~or both~~ directions. A multi-lane approach has two or more lanes moving toward the intersection, including turning lanes. [*“One or both directions” might be read to contradict the first part of the definition, which only counts the number of lanes “in the same direction.”*]
147. Occupancy Requirement—any restriction that regulates the use of ~~a facility or~~ one or more lanes of a ~~facility~~ road for any period of the day based on a specified minimum number of persons in a vehicle.
149. On-Street Parking—parallel, perpendicular, or angle parking for motor vehicles within ~~or along,~~ and accessed directly from, a ~~public~~ roadway ~~or a site roadway open to public travel.~~ [*The phrase “parallel, perpendicular, or angle” has been moved from definition #156, “Parking Area.” The phrase “within or along” is not quite right. All on-street parking is “within” the roadway. “Along” sounds like it was included to cover situations where on-street parking is not “within” the roadway, but this does not appear to ever be the case. The phrase “for motor vehicles” is proposed to be added to exclude bicycle parking from the definition of on-street parking.*]
150. Open-Road ETC Lane—a non-attended lane that is designed to allow toll payments to be electronically collected from vehicles traveling at normal ~~highway~~ speeds. Open-Road ETC lanes are typically physically separated from the toll plaza, often following the alignment of the mainline lanes, with toll plaza lanes for cash toll payments being on a different alignment after diverging from the mainline lanes or a subset thereof.

154. Overhead Sign—a sign that is placed such that a portion or the entirety of the sign or its support is directly above ~~the a~~ roadway or ~~shoulder~~ bikeway such that vehicles travel below it. Typical installations include signs placed on cantilever arms that extend over the roadway ~~or shoulder~~, signs placed on sign support structures that span the entire width of the ~~pavement~~ roadway, signs placed on mast arms or span wires either independently or that also support traffic control signals, and signs placed on ~~highway road~~ bridges that cross over the roadway. [The proposed definition of *roadway* includes shoulders, so it is no longer necessary to mention shoulders here. However, overhead signs can be used on bikeways that do not meet the definition of *roadway*.]
155. Parking Area—a parking lot or parking garage that is separated from a ~~roadway road~~. ~~Parallel, perpendicular, or angle parking spaces along a roadway are~~ On-street parking is not considered a parking area. [This definition is proposed to refer to the defined term *on-street parking* for brevity and to avoid potential confusion associated with “along a roadway.”]
158. Pathway—a general term denoting a public way for purposes of travel by authorized users outside the traveled way and physically separated from the roadway by an open space or barrier and either within the ~~highway road~~ right-of-way or ~~within on~~ an independent alignment. Pathways include shared-use paths ~~and bikeways on independent alignments where motor vehicles are prohibited~~, but ~~pathways~~ do not include sidewalks. [The proposed changes are intended to clarify the relationship between *pathway* and *bikeway*.]
160. Paved—having a 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. [Facilities other than roadways can be paved.]
164. Pedestrian Facility—a general term denoting ~~a location where improvements and a~~ provisions, ~~such as a sidewalk or pathway, have been made to that~~ accommodates or encourages pedestrian activity. [The proposed changes better align the definitions of *pedestrian facility* and *bicycle facility*.]
174. Post-Mounted Sign—a sign that is placed to the side of ~~the a~~ roadway ~~or bikeway~~ such that no portion of the sign or its support is directly above the roadway, ~~including the or~~ shoulder, ~~or the bikeway~~.
180. Preferential Lane—a ~~highway lane or set of lanes, or a highway facility~~, reserved for the exclusive use of one or more specific types of vehicles or of vehicles with a specific minimum number of occupants. ~~Some roadways have more than one preferential lane.~~ [The term *preferential lane* (singular) should not be defined to refer to “a set of lanes” (plural). The last sentence clarifies that there can be multiple preferential lanes on a roadway.]
186. Private Road—~~see Site Roadways Open to Public Travel. a road open to public travel but not under the jurisdiction of or maintained by a public agency.~~ [The existing definition is undesirable because: (1) Some roads other than site roads open to public travel are privately owned. (2) Not all site roads open to public travel are privately owned. The proposed definition is structured similar to *public road*. Note: According to the definition, a *road* must be open to public travel. A privately-owned facility not open to public travel does not meet the definition of *road*.]
189. Public Road—~~any a road, street, or similar facility~~ under the jurisdiction of and maintained by a public agency and open to public travel.
197. Raised Pavement Marker—a device mounted on or in a ~~road~~ paved surface that has a height generally not exceeding approximately 1 inch above the ~~road~~ paved surface for a permanent marker, or not exceeding approximately 2 inches above the ~~road~~ paved surface for a temporary flexible marker, and that is intended to be used as a positioning guide and/or to supplement or substitute for pavement markings. Raised pavement markers might also be recessed into or flush with the ~~pavement~~ paved surface.
202. Road—~~see Roadway. a general term for denoting a way open to public travel and for purposes of travel by motor vehicles and, in some cases, vulnerable road users, including~~

the entire area within the right-of-way. All site roads open to public travel are roads. Roads include: [Nesting the following definitions is intended to provide more clarity about the hierarchy of different types of roads.]

(a) Freeway—a divided road with full control of access. [Old #91, modified]

(b) Expressway—a divided road with partial control of access. [Old #83, modified]

(c) Conventional Road - a road other than an expressway or freeway. Conventional roads include: [Old #47, modified. The definition of *conventional road* is inconsistent with the definition of *road*, because a conventional road is defined as “a street or highway . . .” *Road* is a subset of *street* and *highway*. The proposed definition of *road* allows the defined term *conventional road* to continue to be used, because *road* is proposed to be synonymous with *street* and *highway*.]

(1) Arterial Road—a road primarily used by through traffic, usually on a continuous route or a road designated as part of an arterial road system. [Old #14, modified. *Arterial* is used most often in the MUTCD without being followed by “street” or “highway,” but adding *road* is recommended for consistency with other functional classifications.]

(2) Collector Road—a road that in rural areas connects small towns and local roads to arterial roads, and in urban areas provides land access and traffic circulation within residential, commercial, and business areas and connects local roads to arterial roads. [Old #41, modified]

(3) Local Road—a road used mainly for access to residential neighborhoods, businesses, commercial, industrial, farms, and abutting property; characterized by lower vehicle speed and volumes than collector and arterial roads. [This definition of *local road* is recommended to be added. The term is used in about 25 sections, two figures and two entire sections of the MUTCD. It is built from the AASHTO Glossary for Residential Streets – “Very low volume local streets that typically serve to provide access to single and multiple family residences in urban areas” and for Farm Roads – “very low volume local road in a rural area that serve primarily to provide access to fields and farming operations.”]

(4) Alley—a road intended to provide access to the rear or side of lots or buildings in urban areas and not intended for the purpose of through vehicular traffic. [Old #10, modified]

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

204. Roadway—that portion of a ~~highway road~~ improved, designed, or ordinarily used for vehicular travel, including shoulders and on-street parking lanes, but exclusive of the sidewalk, berm, or ~~shoulder pathway~~ even though such sidewalk, berm, or ~~shoulder pathway~~ is used by persons riding bicycles or other human-powered vehicles. In the event a ~~highway road~~ includes two or more separate roadways, the term roadway as used in this Manual shall refer to any such roadway separately, but not to all such roadways collectively.

205. ~~Roadway Road~~ Network—a geographical arrangement of intersecting ~~roadways roads~~. [Network is used in a high-level sense and is not intended to be limited to just the roadway.]

207. Rumble Strip—a series of intermittent, narrow, transverse areas of rough-textured, slightly raised, or depressed ~~road-paved~~ surface that extend across the travel lane to alert vehicle operators to unusual traffic conditions or are located along the shoulder, along the roadway center line, or within islands formed by pavement markings to alert road users that they are leaving the travel lanes.

208. Rural ~~Highway Road~~—a type of ~~roadway road~~ normally characterized by lower volumes, higher speeds, fewer turning conflicts, and less conflict with pedestrians. [The existing

definition incorrectly defines “rural highway” as “a type of roadway.” *Highway* and *roadway* mean different things.]

217. Shared Roadway—a roadway that is officially designated ~~and marked~~ as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated. [It is not reasonable to expect all shared roadways to have bicycle route pavement markings. Roadways designated for bicycle travel using signs alone, such as BIKE ROUTE signs, are typically considered shared roadways.]
219. Shared-Use Path—~~a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by a type of pathway improved, designed, or ordinarily used for travel by bicyclists,~~ pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers), and other authorized motorized and non-motorized users, and designated for bicycle travel. All shared-use paths are bikeways, and no shared-use paths are sidewalks.
220. Shoulder—a longitudinal ~~area~~ portion of the roadway ~~contiguous with the traveled way~~ that is used for accommodation of stopped vehicles for emergency use and for lateral support of base and surface courses, and that is graded for emergency stopping. A shoulder might be paved or unpaved. A paved shoulder might be opened to part-time travel by some or all vehicles and might also be available for use by pedestrians and/or bicycles in the absence of other pedestrian or bicycle facilities. Shoulders are within the traveled way only when they are open to part-time travel by motor vehicles.
221. Sidewalk—that portion of a road ~~street~~ between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians.
226. Sign Illumination—either internal or external lighting that shows similar color by day or night. ~~Street or highway~~ Roadway lighting shall not be considered as meeting this definition.
247. Site ~~Roadways~~ Road Open to Public Travel—~~roadways and bikeways~~ a road on the sites of a shopping centers, office parks, airports, schools, universityies, sports arenas, recreational parks, ~~and or~~ other similar business, governmental, and/or recreation facilityies that ~~are is~~ publicly or privately owned but where the public is allowed to travel without full-time access restrictions. Two types of ~~roadways~~ facilities are not included in this definition: (1) ~~roadways~~ facilities where access is restricted at all times by gates and/or guards to residents, employees, or other specifically authorized persons; and (2) private highway-rail grade crossings. Site ~~roadways~~ roads open to public travel do not include parking areas (see definition in this Section), including the driving aisles (see definition in this Section) within those parking areas. [The proposed definition of *road*, rather than *roadway*, more accurately describes this facility. Defined terms are usually singular, not plural. It is inconsistent with the definition of *bikeway* for *site road open to public travel* to be defined as a roadway or bikeway. The definition of *bikeway* includes both public and private facilities, so it is not necessary to mention here. The facilities numbered (1) and (2) do not meet the definition of *roadway*.]
250. Speed Limit—the maximum (or minimum) speed applicable to a section of ~~highway~~ roadway or bikeway as established by law or regulation.
251. Speed Zone—a section of ~~highway~~ roadway or bikeway with a speed limit that is established by law or regulation, but which might be different from a legislatively-specified statutory speed limit.
254. Statutory Speed Limit—a speed limit established by legislative action (such as Federal or State law) that typically is applicable for a particular class of ~~highways~~ roads with specified design, functional, jurisdictional, and/or location characteristics and that is not necessarily displayed on Speed Limit signs.

257. Street—~~see Highway.~~ a road, often within a city or town.
262. Temporary Traffic Control Zone—an area of a ~~highway, pedestrian or bicycle facility~~ road, including the sidewalk, or a bikeway where ~~road-user~~ conditions are changed because of a work zone, planned special event, or incident by the use of temporary traffic control devices, flaggers, emergency responders, uniformed law enforcement officers, or other authorized personnel. [The changes align this definition with the MUTCD’s legal applicability in Section 1B.01, but *sidewalk* is added to emphasize that a TTC zone is needed for work that affects a sidewalk. *Sidewalk* is proposed, rather than *pedestrian facility*, because there are many pedestrian facilities to which the MUTCD does not apply. The meaning of “road user conditions” is unclear.] [Previous changes from 25A-TTC-04, June 2025.]
267. Toll Collection—manual or electronic methods and elements used to collect a fee for use of a toll facility. Toll collection methods include:
- (a) Electronic Toll Collection (ETC)—a cashless system for automated collection of tolls from moving or stopped vehicles through wireless technologies such as radio-frequency communication or optical scanning. ETC systems are classified as one of the following:
 - (1) systems that require users to have registered toll accounts, with the use of equipment inside or on the exterior of vehicles, such as a transponder or barcode decal, that communicates with or is detected by roadside or overhead receiving equipment, or with the use of license plate optical scanning, to automatically deduct the toll from the registered user account,
 - (2) systems that do not require users to have registered toll accounts because vehicle license plates are optically scanned and invoices for the toll amount are typically sent through postal mail to the address of the vehicle owner, or
 - (3) systems that allow electronic toll collection for both registered and non-registered toll accounts.
 - (b) Open-Road Tolling (ORT)—a system designed to allow electronic toll collection (ETC) from vehicles traveling at posted speeds. Open-road tolling might be used on toll roads or toll facilities in conjunction with toll plazas. Open-road tolling is also typically used on managed lanes and on toll facilities that only accept payment by ETC.
 - (c) Manual Toll Collection—a system of toll collection from stopped vehicles through acceptance of cash, toll tickets, tokens, or credit cards, and may involve issuance of receipts. Toll collection may be by a machine or toll booth attendant.
 - (1) Toll-Ticket System—a toll system in which the user of a toll ~~road~~ facility must stop to receive a ticket from a machine or toll booth attendant upon entering the toll facility. The ticket denotes the user’s point of entry and, upon exiting the toll system, the user surrenders the ticket and is charged a toll based on the distance traveled between the points of entry and exit. [Road is proposed to be changed to facility for consistency with the end of the sentence.]
 - (2) Attended Lane (Manual Lane)—a toll lane adjacent to a toll booth occupied by a human toll collector who makes change, issues receipts, and performs other toll-related functions. Attended lanes at toll plazas typically require vehicles to stop to pay the toll.
 - (3) Exact Change Lane (Automatic Lane)—a non-attended toll lane that has a receptacle into which road users deposit coins totaling the exact amount of the toll. Exact Change lanes at toll plazas typically require vehicles to stop to pay the toll.
272. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other conveyances either singularly or together while using for purposes of travel any ~~highway or road, including a site roadway~~ road open to public travel, or bikeway.

273. Traffic Control Device—all signs, signals, markings, ~~channelizing~~ ~~channelization~~ devices, or other devices that use colors, shapes, symbols, words, sounds, and/or tactile information for the primary purpose of communicating a regulatory, warning, or guidance message to road users on ~~a street, highway, pedestrian facility, bikeway, pathway, or all roads,~~ including site roadway roads open to public travel, and bikeways. Section 1A.02 contains information regarding items that are not traffic control devices. [Channelization is proposed to change to channelizing for consistency with Sec. 1A.02 paragraph 01.]
277. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive of ~~the shoulders, berms, sidewalks, and on-street~~ parking lanes. The traveled way includes shoulders only when they are open to part-time travel by motor vehicles.
284. Vehicle—every device in, upon, or by which any person or property can be transported or drawn upon a highway road, except trains and light rail transit operating in exclusive or semi-exclusive alignments. Light rail transit equipment operating in a mixed-use alignment, to which other traffic is not required to yield the right-of-way by law, is a vehicle.
291. Wayside Horn System—a stationary horn (or a series of horns) located at a grade crossing that is used in conjunction with train-activated or light rail transit-activated warning systems to provide audible warning of approaching rail traffic to road users on the highway road approaches to a grade crossing or pathway users on the pathway approaches to a grade crossing, either as a supplement or alternative to the sounding of a locomotive horn. [Road user is defined to include people using roads and bikeways, but not all pathways are bikeways. Since this definition applies to all pathways, the term pathway users is proposed.]
- 291a. Work Zone—an area of a road (including associated pedestrian facilities) or bikeway highway, pedestrian or bicycle facility with construction, maintenance or utility work activities (see Temporary Traffic Control Zone). [25A-TTC-04, June 2025.]
292. Worker—a person on foot whose duties place him or her within the right-of-way of a ~~street, highway, or pathway~~ road or bikeway, such as: construction and maintenance forces; survey crews; utility crews; responders to incidents within the right-of-way; and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way.

CHAPTER 1D. PROVISIONS APPLICABLE TO TRAFFIC CONTROL DEVICES IN GENERAL

Section 1D.01 Purpose and Principles of Traffic Control Devices

Support:

- 01 The purpose of traffic control devices, as well as the principles for their use, is to promote highway transportation safety, inclusion and mobility of ~~all~~ road users, and efficiency by providing for the orderly movement of road users on ~~streets, highways, bikeways, and roads,~~ including site roadway roads open to public travel, and bikeways throughout the Nation. Section 1A.03 contains additional information on target road users.
- 02 This Manual contains the basic principles that govern the design and use of traffic control devices for all ~~streets, highways, roads and~~ bikeways, ~~and site roadways open to public travel (see definition in Section 1C.02)~~ regardless of type or class or the ~~public~~ agency, official, or owner having jurisdiction. The text of this Manual 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:

03 To be effective, a traffic control device should:

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.

04 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 be consistent with the five principles listed in Paragraph 3 of this Section. Vehicle speed and road-user types should be carefully considered as an element that governs the design, operation, placement, and location of various traffic control devices.

05 The proper use of traffic control devices should provide ~~the~~ road users with the information necessary to travel safely, efficiently, and lawfully ~~use the streets, highways, pedestrian facilities, and bikeways~~. [It is not necessary to provide another list of facility types; this section already has a list in two other places. This list incorrectly includes pedestrian facilities, to which the MUTCD may not apply.]

Standard:

06 Traffic control devices used on site ~~roadways~~ roads open to public travel shall have the same shape, color, and meaning as those required by the MUTCD for use on public ~~highways~~ roads, except as provided otherwise elsewhere in this Manual. Sign size exceptions are noted in each Part as applicable.

Section 1D.02 Responsibility and Authority for Traffic Control Devices

Standard:

01 The responsibility for the design, placement, operation, maintenance, and uniformity of traffic control devices in compliance with the provisions of this Manual shall rest with the ~~public~~ agency or the official having jurisdiction, ~~or, in the case of site roadways open to public travel, with the private owner or private official having jurisdiction~~. [Agency is defined to include organizations overseeing both public and private roads. Site roads open to public travel do not necessarily have private owners.]

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

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

04 When the ~~public~~ agency or the official having jurisdiction over a ~~street or highway~~ road or bikeway ~~or, in the case of site roadways open to public travel, the private owner or private official having jurisdiction~~, has granted proper authority, others such as contractors and public utility companies shall be allowed to install temporary traffic control devices in temporary traffic control zones. Such traffic control devices shall comply with the provisions of this Manual.

05 Signs and other devices that do not have any traffic control purpose that are placed within the ~~highway~~ right-of-way of a road or bikeway shall not be located where they will interfere with, or detract from, traffic control devices.

Section 1D.03 Engineering Study and Engineering Judgment

Support:

04 The MUTCD does not mandate, and is not intending to imply, that an engineer must make the final decision whether to implement or execute the determination or advice of an engineer by installing or

constructing the traffic control device to the engineer's specification in the field. Rather, the engineer, individual under supervision of an engineer, or other individual as duly authorized by State law to engage in the practice of engineering, develops an engineering-based solution that includes the specifications for selection and placement of traffic control devices, but the responsibility for a final decision to implement that solution rests with the agency having jurisdiction over the ~~roadway~~ road or bikeway, after consultation with and based on advice from the engineer.

Guidance:

05 *The decision to use a particular device at a particular location should be made on the basis of either an engineering study or the application of engineering judgment by an engineer, someone under the direct supervision of an engineer, or other individual as duly authorized by State law to engage in the practice of engineering. Thus, while this Manual provides Standards, Guidance, and Options for design and application of traffic control devices, this Manual should not be considered a substitute for engineering judgment. Engineering judgment should be exercised in the selection and application of traffic control devices, as well as in the location and design of roads and ~~streets~~ bikeways that the devices complement.*

06 *Early in the processes of location and design of roads and ~~streets~~ bikeways, engineers should coordinate such location and design with the design and placement of the traffic control devices to be used with such roads and ~~streets~~ bikeways.*

07 *~~Jurisdictions~~ Agencies, ~~or including~~ owners of site ~~roadways~~ roads or private ~~toll~~ roads open to public travel, with responsibility for traffic control that do not have an engineer on their staff who is trained and/or experienced in traffic control devices should seek engineering assistance from others, such as the State transportation agency, their county, a nearby large city, or a traffic engineering consultant.*

**Table 1D-2. Abbreviations that Shall be Used Only for
Temporary Messages on Portable Changeable Message Signs**

[Only revised rows are included]

Word Message	Standard Abbreviation	Prompt Word Preceding the Abbreviation	Prompt Word Following the Abbreviation	Example
Lane(s) (travel lanes of a highway <u>road</u>)	LN, LNS	Right, Left, Center	—	LEFT LN ONLY 2 RIGHT LNS
State, County, or other non-U.S. or non-Interstate numbered route	[Route Abbreviation determined by highway agency]*	—	[Number]**	NY 7, CR 43

Section 1D.09 Placement and Operation of Traffic Control Devices

Standard:

01 **Before any ~~highway, site roadway open to public travel (see definition in Section 1C.02)~~ road or bikeway, detour, or temporary route is opened to public travel, all traffic control devices necessary for safe operation shall be in place. [Detours and “temporary routes” fall under the broad category of road. There does not appear to be a need to list them separately.]**

Option:

02 Temporary traffic control devices, as provided for in Part 6 of this Manual, may be used in place of permanent devices that have yet to be installed for safe operation.

Guidance:

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

Section 1D.11 Crashworthiness of Traffic Control Devices and Other Roadside Appurtenances

Standard:

01 **In accordance with various Sections of this Manual, certain traffic control devices and their supports, and/or related appurtenances shall be crashworthy (see definition in Section 1C.02). Crashworthiness provisions in this Manual shall apply to all ~~streets, highways, and site roadways open to public travel~~ roads. [The definition of *crashworthy* indicates that it is intended to apply to roads but not bikeways.]**

APPENDIX – COMPLETE DISCUSSION OF PROPOSED CHANGES

Section 1C.02 of the MUTCD currently defines *highway* and *roadway* as follows:

100. Highway—a general term for denoting a public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right-of-way.

204. Roadway—that portion of a highway improved, designed, or ordinarily used for vehicular travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though such sidewalk, berm, or shoulder is used by persons riding bicycles or other human-powered vehicles. In the event a highway includes two or more separate roadways, the term roadway as used in this Manual shall refer to any such roadway separately, but not to all such roadways collectively.

Highway is a broad term that encompasses the entire right-of-way, including the roadway, median, shoulders, and sidewalks. A *roadway* is a “portion of a highway” that includes only the “vehicular travel and parking lanes.” The definition of *roadway* specifically excludes “the sidewalk, berm, or shoulder.”

Table 1 shows which key elements in the highway right-of-way are included in the definition of *roadway*.

Table 1: Parts of the Highway Included in the Roadway

Elements of a highway right-of-way	Part of the roadway?
raised median	NO
motor vehicle lanes, including turn lanes	YES
bicycle lanes (contiguous or separated)	YES
parking lanes (undefined)	YES
shoulder	NO
sidewalk	NO

Bicycle lanes are part of the roadway because the roadway is intended for “vehicular travel,” and bicycles are vehicles, according to the MUTCD definition:

22. Bicycle—a pedal-powered vehicle upon which the human operator sits.

A related term, *traveled way*, is defined in the MUTCD as follows:

277. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes.

There is only one difference between *roadway* and *traveled way*: Parking lanes are included in the roadway but excluded from the traveled way. *Parking lane* is not defined in the MUTCD. Figure 1 illustrates the extents of the highway, roadway, and traveled way for examples of two cross sections.

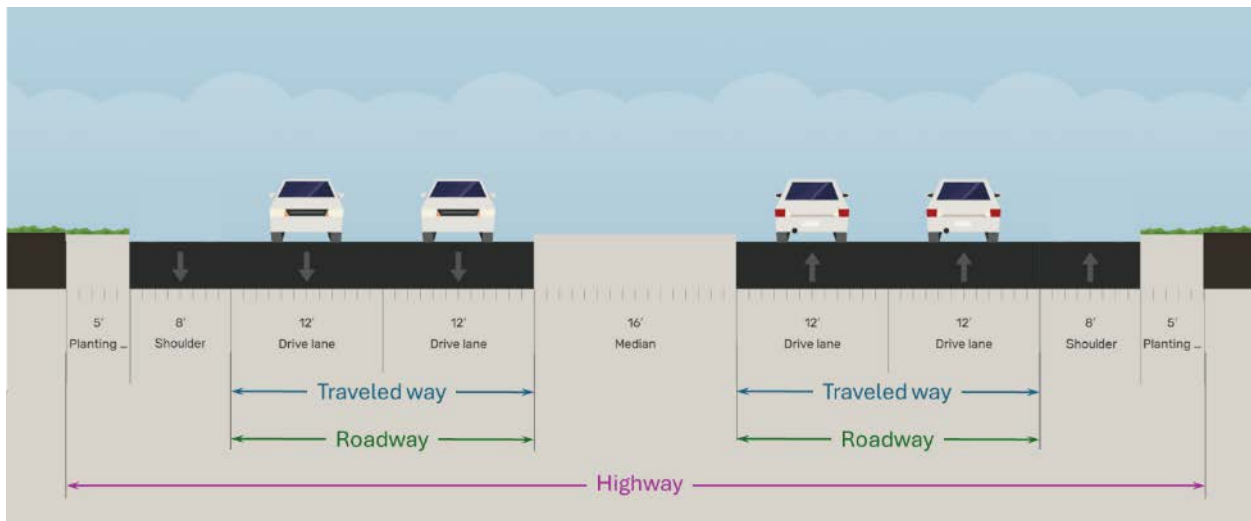
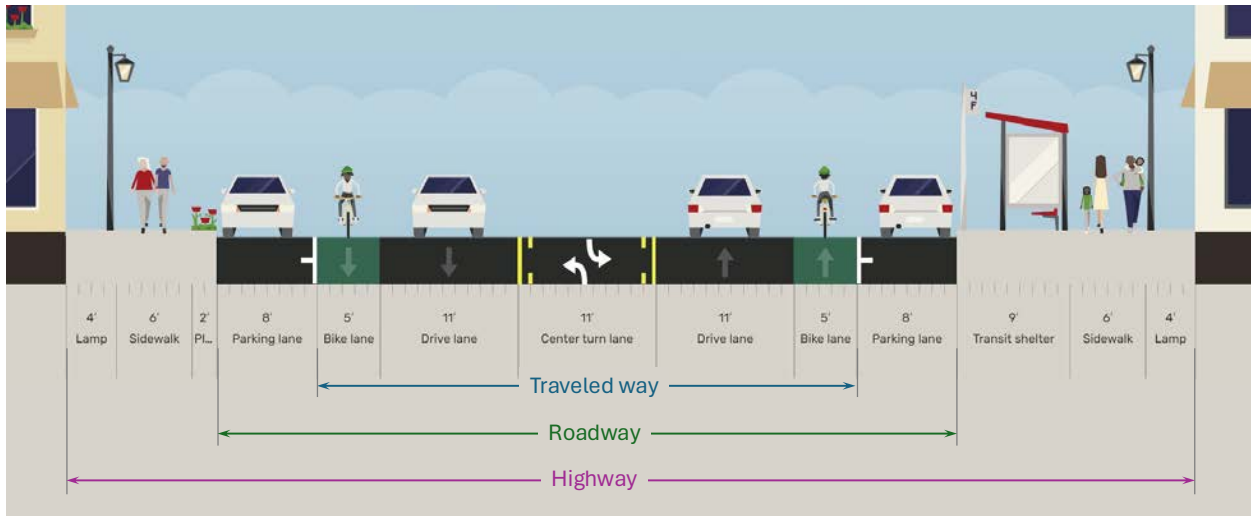


Figure 1: Locations of the Traveled Way, Roadway, and Highway on Example Cross-Sections

The Millennium (2000) Edition of the MUTCD was the first to include a list of definitions in Part 1. The definitions of *roadway* and *traveled way* in the 11th Edition of the MUTCD are identical to those in the Millennium Edition. Few terms were defined in the MUTCD prior to the Millennium Edition, but *roadway* was defined starting in the 1978 Edition. Its definition in 1978 was very similar to its current definition:

Unless otherwise defined herein, the term "roadway" shall be defined as: "That portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, the term 'roadway' as used herein, refers to any such roadway separately, but not to all such roads collectively."

The only substantive changes to the definition of *roadway* since 1978 are the inclusion of parking lanes and the exclusion of sidewalks. Both of these changes were effective with the Millennium Edition.

The MUTCD also defines *street* as a synonym for *highway* and *road* as a synonym for *roadway*:

257. Street—see Highway.

202. Road—see Roadway.

The MUTCD's use of *highway*, *street*, and *road* somewhat interchangeably dates back to the First Edition of the MUTCD, published in 1935, which combined two predecessor publications:

- The 1927 *Manual and Specifications for the Manufacture, Display, and Erection of U.S. Standard Road Markers and Signs* was oriented toward rural roads.
- The 1930 *Manual on Street Traffic Signs, Signals, and Markings* was urban oriented.

Figure 2 illustrates the number of times *highway*, *street*, and *road* are used in each of these predecessor publications.

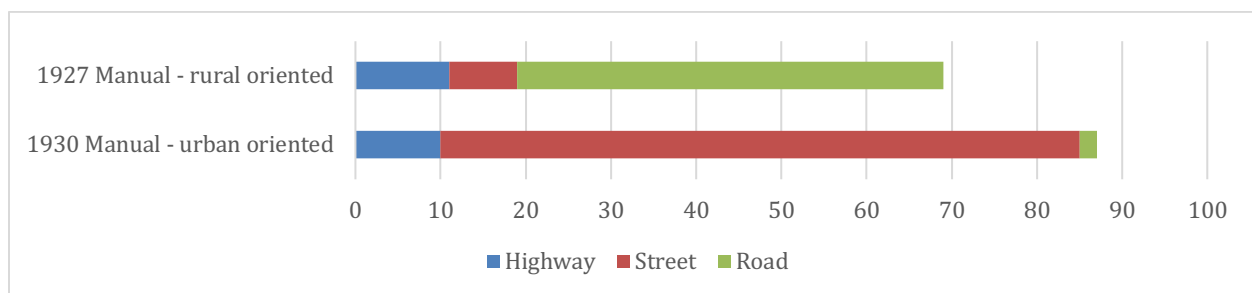


Figure 2: Number of Uses of *Highway*, *Street*, and *Road* in MUTCD Predecessor Publications

Road was overwhelmingly the most common term in the rural-oriented 1927 manual, while *street* was most frequently used in the urban-oriented 1930 manual. The use of these words in the 11th Edition of the MUTCD is largely an artifact of their original use almost 100 years ago.

The Problem with *Highway*

The definition of *highway* changed in the 11th Edition of the MUTCD. In the 2009 edition, it was defined as follows:

84. Highway—a general term for denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

The definition in the 11th Edition is as follows:

100. Highway—a general term for denoting a public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right-of-way.

There are three known problems with this definition.

Highway Problem Category 1: Vulnerable Road Users

The first problem was introduced in the 11th Edition. The definition says a highway is for “travel by vehicles and vulnerable road users.” The conjunction *and* means that a facility is only considered a highway if it accommodates **both** vehicles **and** vulnerable road users. The MUTCD does not contain a definition for *vulnerable road user* in Section 1C.02 among the other defined terms, but Section 1A.03 mentions a definition of this term in Title 23, U.S.C. 148(a): “bicyclists and pedestrians, including persons with disabilities.” Under this definition of *highway*, for example, most freeways are not considered highways, because freeways typically accommodate only vehicles and not vulnerable road users.

This problem compounds because *highway* is used in so many other defined terms. For instance, *freeway* is defined in Section 1C. 02 as “a divided highway with full control of access.” However, if a facility does not meet the definition of *highway* because of the vulnerable road user issue, then it also does not meet the definition of *freeway*, since all freeways are highways.

The phrase “vehicles and vulnerable road users” is also somewhat contradictory when it comes to bicyclists. A bicycle is a vehicle, according to the MUTCD definition. A person riding a bicycle is both a vehicle and a vulnerable road user. The phrase “vehicles and vulnerable road users” may erroneously lead MUTCD readers to think that bicycles are not vehicles since bicyclists are likely considered vulnerable road users.

Highway Problem Category 2: Bikeways

The second problem existed in the 2009 and prior editions of the MUTCD and continues to be an issue in the 11th Edition. Because bicycles are vehicles, the term *highway* includes facilities that only accommodate bicycles and **not** motor vehicles. For instance, a shared-use path on an independent alignment meets the definition of *highway*. This is not consistent with the plain-English definition of *highway* and is likely counterintuitive for many MUTCD readers.

An example of this problem can be found in Paragraph 16 of Section 9D.12, which says, “Where a shared-use path is within the highway right-of-way or crosses a street or highway, an alternative lettering style shall not be used.” A shared-use path is, by definition, a bikeway. A bikeway, by definition, accommodates bicycles. A bicycle, by definition, is a vehicle. A highway, by definition, accommodates vehicular travel. Therefore, **all** shared-use paths are highways. This is not consistent with the wording of Paragraph 16, which is worded as though some shared-use paths are “within the highway right-of-way” and some are not. This paragraph is more consistent with common usage that does not consider shared-use paths to be highways.

Highway Problem Category 3: Private Facilities

The third problem, also long-standing, relates to the phrase *public way* in the definition of *highway*. *Public way* is potentially ambiguous. It could mean either of the following:

1. A way that is publicly owned
2. A way that is open to public travel, whether publicly or privately owned

The following MUTCD text suggests that the second of these interpretations is intended:

- Paragraph 2 of Section 1B.01 refers to “any street, roadway, or bikeway open to public travel, either publicly or privately owned.” The mention of public or private ownership in this

section is only appropriate if some highways are public and some are private, which appears to preclude the first interpretation above.

- Paragraph 5 of Section 1A.01 says the MUTCD is intended to apply “to facilities open to public travel independent of the type of ownership or jurisdiction (public or private).” This wording closely matches the second interpretation of *public way*.
- The definition of *site roadway open to public travel* in Section 1C.02 includes the phrase “publicly or privately owned.”

While context suggests that the second interpretation of *public way* is intended by the MUTCD, the ambiguity could lead some MUTCD readers to be confused about whether private facilities are included in the definition of *highway*. Some private facility owners are unaware of the MUTCD’s applicability, so the manual should be very clear about whether private roads open to public travel are included in the definition of *highway*.

The Problem with *Road* and *Roadway*

The MUTCD does not always use *roadway* and *road* consistent with their definitions. The MUTCD uses *roadway* 1,308 times and *road* 674 times.¹ For many of these uses, the definitions of the terms are not particularly important. For example, the phrase “right-hand side of the roadway” is usually understandable regardless of the definition. However, of the total 1,982 uses of *road* and *roadway*, about 270 uses (nearly 14 percent) are not consistent with the definitions. The inconsistent uses of the terms can be grouped broadly into four categories.

***Roadway* Problem Category 1: Shoulders**

Some provisions in the MUTCD are written as though *roadway* is defined to include shoulders, which is not the case. Following are examples of this problem category:

- Paragraph 15 of Section 2G.03 requires that certain signs comply with the provisions for overhead mounting “if any portion of the sign extends over the roadway.” This standard should also apply where any portion of a sign extends over a shoulder.
- Paragraph 5 of Section 2N.03 requires that the Evacuation Route sign be mounted “not less than 6 feet or more than 10 feet to the right of the right-hand roadway edge.” This standard is perhaps acceptable for roadways with no adjacent shoulder. But on roadways with adjacent shoulders, this standard is unacceptable, because it requires the lateral offset of the sign to be measured from the right-hand edge of the right-most lane, not the right-hand edge of the shoulder. On roadways with adjacent shoulders that are more than 10 feet wide, this standard requires that the sign be installed *within* the shoulder, which is contrary to common sense.
- Paragraph 1 of Section 3K.01 refers to rumble strips as “slightly raised or depressed road surfaces.” It is true that some rumble strips, such as center line rumble strips, are located on the “road.” However, rumble strips installed in the shoulder are not within the “road.” It

¹ This count does not include uses of *road* as part of the compound term *road user*. The count also excludes uses of the words in proper names, the legend of signs, the table of contents, and closed compounds such as *railroad*, *roadside*, and *roadblock*.

is incorrect to refer to rumble strips as “road surfaces” when they are located outside the road.

- Paragraph 8 of Section 9E.01 requires that “a portion of the roadway shall not be established as both a shoulder and a bicycle lane.” It is impossible to establish a portion of the roadway as both a shoulder and a bicycle lane, by definition, because it is impossible for a portion of the roadway to be established as a shoulder at all. Shoulders are expressly excluded from the definition of *roadway*.

The shoulder issue is more concerning now that the 11th Edition of the MUTCD for the first time sanctions part-time motor vehicle travel on shoulders. Shoulders are excluded from the definition of *roadway*, and this exclusion apparently applies even when a shoulder is open to part-time motor vehicle travel.

The exclusion of shoulders is problematic because many uses of *roadway* appear to be intended to include shoulders open to part-time motor vehicle traffic, such as the following:

- Section 1C.02 defines *crosswalk* as “part of a roadway . . .” Since shoulders are not part of the roadway, it is impossible for a crosswalk to exist across a shoulder. This appears to be unintentional, because crosswalks are frequently striped across shoulders (even when the shoulders are not open to part-time motor vehicle travel).
- According to Item A.3 of Paragraph 1 in Section 4A.03, pedestrians facing a CIRCULAR GREEN indication “are permitted to proceed across the roadway within any marked or unmarked associated crosswalk.” Apparently pedestrians are not permitted to proceed across a shoulder, since shoulders are not part of the roadway and a crosswalk cannot exist across a shoulder, as noted above.
- Item C.3 of the same paragraph admonishes pedestrians to “not enter the roadway” when facing a CIRCULAR RED or steady RED ARROW indication. However, pedestrians are not prohibited from entering the shoulder, even when the shoulder is open to part-time motor vehicle travel.
- Paragraph 11 of Section 6H.01 recommends advance warning signs “where any part of the roadway is obstructed or closed,” but does not recommend any such signs where the shoulder is obstructed or closed, even where the shoulder is open to part-time motor vehicle travel.

There is also a disconnect between the MUTCD’s definition of *roadway* and the definition in *A Policy on Geometric Design of Highways and Streets*, also known as the Green Book, published by the American Association of State Highway and Transportation Officials (AASHTO) most recently in 2018. The Green Book defines *roadway* as follows:

Roadway—The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

The Green Book’s definition is very similar to the definition in the AASHTO *Transportation Glossary*, which is referred to in Paragraph 1 of Section 1C.02 of the MUTCD for definitions of terms other than those included in the manual:

Roadway 1) The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways. 2) In construction specifications, the portion of a highway within limits of construction.

The AASHTO *Highway Safety Manual* (HSM) continues the theme:

roadway—the portion of a highway, including shoulders, for vehicular use.

The Green Book, the *Transportation Glossary*, and the HSM include shoulders in their definitions of *roadway*, exactly the opposite of the MUTCD’s treatment of shoulders. It is challenging for practitioners to contend with substantially different definitions of *roadway*—including and excluding shoulders—in such fundamental publications.

Roadway Problem Category 2: Bicycle Facilities

As noted earlier, *roadway* is defined as the portion of a highway “used for vehicular travel.” Because the MUTCD defines bicycles as vehicles, any portion of the highway used for bicycle travel is part of the roadway, except the sidewalk, berm, and shoulder, which are expressly excluded.

Bicyclists frequently operate in bicycle lanes, which are unquestionably part of the roadway, and they frequently operate on sidewalks, which are unquestionably **not** part of the roadway. Bicyclists also frequently operate on shared-use paths, and it is not as easy to determine whether shared-use paths are part of the roadway.

The relationship between sidewalks and shared-use paths is not straightforward. Some agencies, for instance, construct what they call a “sidewalk” on one side of a street and what they call a “shared-use path” on the opposite side. One example of such a street is shown in Figure 3.



Figure 3: Different Pedestrian and Bicyclist Accommodations by Side of the Street

On such streets, the sidewalks might be narrower than shared-use paths and constructed with concrete pavement. The shared-use paths might be wider than sidewalks, wide enough to allow two-way bicycle traffic, and constructed with asphalt pavement. However, the definitions of *sidewalk* and *shared-use path* in the MUTCD make no mention of either width or pavement surface material:

221. Sidewalk—that portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians.

219. Shared-Use Path—a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users.

Shared-use path is defined as “a bikeway . . .” The MUTCD’s definition of *bikeway* is helpful for a complete understanding of what constitutes a shared-use path:

28. Bikeway—a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Although some MUTCD readers might consider a particular pedestrian facility to be *either* a sidewalk *or* a shared-use path, the MUTCD permits some facilities to meet *both* definitions. To meet the MUTCD’s definition of *sidewalk*, a pedestrian facility must meet two criteria:

- It must run alongside a roadway.
- It must be “paved or improved and intended for use by pedestrians.”

Under this definition, the pedestrian facilities on *both* sides of the street in Figure 3 are considered sidewalks, even though they vary in width and surface material.

To meet the MUTCD’s definition of *shared-use path*, a facility must be “a bikeway.” To be a bikeway, a facility must be “designated for bicycle travel.” As such, if a facility meets the

MUTCD's definition of *sidewalk* **and** is designated for bicycle travel, then it is **both** a sidewalk and a shared-use path. The facility in Figure 4 is one example. It runs alongside a roadway, is intended for use by pedestrians, and is designated for bicycle travel, so it is both a sidewalk and a shared-use path.

If a facility is designated for bicycle travel but does **not** run alongside a roadway, then it is a shared-use path but not a sidewalk. Figure 5 shows an example of this type of facility. It does not run alongside a roadway, so it is not a sidewalk, but it is designated for bicycle travel, so it is a shared-use path.

The reason this distinction is important is that sidewalks are expressly excluded from the definition of *roadway*, but shared-use paths are not. If a facility meets the definition of *shared-use path* but not *sidewalk*, such as the facility in Figure 4, then the facility is a roadway, because it is intended for bicycle travel, and bicycles are vehicles.



Figure 4: A Facility that is a Shared-Use Path and a Sidewalk



1370 **Figure 5: A Facility that is a Shared-Use Path but not a Sidewalk**

1371
1372 There is a further complicating factor. The MUTCD defines *pathway* as follows:

1373
1374 **161. Pathway**—a general term denoting a public way for purposes of travel by authorized
1375 **users outside the traveled way and physically separated from the roadway by an open**
1376 **space or barrier and either within the highway right-of-way or within an independent**
1377 **alignment. Pathways include shared-use paths, but do not include sidewalks.**

1378 This definition indicates that pathways are “separated from the roadway” and that pathways
1379 “include shared-use paths, but do not include sidewalks.” This definition is inconsistent with the
1380 discussion above for two reasons:

- 1381
- 1382 • It considers pathways, even shared-use paths, to be “separated from the roadway,” even
1383 though, as discussed above, other MUTCD definitions indicate that shared-use paths
1384 are *part* of the roadway when they do not also meet the definition of *sidewalk*.
 - 1385 • It does not appear to consider that some pedestrian facilities meet the definition of both
1386 *shared-use path* and *sidewalk*. It is not clear whether these facilities are included in the
1387 definition of *pathway*, because shared-use paths are expressly included and sidewalks
1388 are expressly excluded from *pathway*.
- 1389

1390 This convoluted relationship among *sidewalk*, *shared-use path*, *pathway*, and *roadway* is
1391 unlikely to be what the authors of the MUTCD intended. The plain-English definition of *roadway*
1392 does not include situations such as Figure 5. There are many provisions in the MUTCD that
1393 refer to roadways but are clearly not intended to apply to situations such as Figure 5. Following
1394 are a few examples of these provisions:

- 1395
- 1396 • Paragraph 5 of Section 3B.01 says, “a single solid yellow line shall not be used as a center
1397 line marking on a two-way roadway.” A two-way shared-use path that is not a sidewalk *is* a
1398 roadway, so this standard should apply. However, Paragraph 1 of Section 9E.13
1399 conflicts with it: “Where shared-use paths are of sufficient width to designate two minimum
1400 width lanes, a solid yellow center line may be used to separate the two directions of travel.”
 - 1401
 - 1402 • Paragraph 7 of Section 9D.06 says, “Certain uninterrupted, long-distance interstate bicycle
1403 routes can largely be on shared-use paths, or other off-roadway facilities.” A shared-use path is
1404 only an “off-roadway facility” if it is also a sidewalk, and this does not appear to be what
1405 this provision intends to refer to.
 - 1406
 - 1407 • Paragraph 4 of Section 9E.09 prohibits the use of shared-lane markings in “physically-
1408 separated bikeways, either in the roadway or on an independent right-of-way.” A physically
1409 separated bikeway is in the roadway unless it is also a sidewalk. A physically separated
1410 bikeway on an independent right-of-way is in the roadway because it is not a sidewalk,
1411 and this is exactly the opposite of the way this provision is framed.
- 1412

1413 **Roadway Problem Category 3: Road User**

1414 In over 70 percent of the places where *road* is used in the MUTCD, it is part of the compound
1415 term *road user*, which is used 844 times in the MUTCD and is defined as follows:

1417 **203. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,**
1418 **within the highway or on a site roadway open to public travel.**

1419 It is curious that *road user* is defined as someone “within the highway,” even though *road* is only
1420 a subset of *highway*. For instance, a pedestrian or bicyclist on a sidewalk is not using the “road,”
1421 because sidewalks are excluded from the definition of *road*. Bicyclists and pedestrians traveling
1422 on the shoulder are also not using the road, because the shoulder is not part of the road. It is
1423 counterintuitive that *road user* includes people who are not using the road, and this lack of
1424 precise language likely contributes to the misuse of the terms elsewhere.

1425
1426 The 11th Edition of the MUTCD introduced the term *vulnerable road user* for the first time; it is
1427 used ten times. As noted earlier, Section 1A.03 points out that this term is defined in Title 23,
1428 U.S.C. 148(a) to mean “bicyclists and pedestrians, including persons with disabilities.” However, a
1429 complete review of 23 U.S.C. 148 reveals that the term is defined parenthetically as “vulnerable
1430 road users (including motorcyclists, bicyclists, pedestrians).”² The MUTCD does not
1431 acknowledge that motorcyclists are considered vulnerable road users in 23 U.S.C. 148.
1432 It is a support statement in which the 23 U.S.C. 148 definition is mentioned. In contrast, the
1433 definitions in Section 1C.02 are standards. This difference in level of mandate suggests that the
1434 definition of *vulnerable road user* in 23 U.S.C. 148 does not carry the same force of law as the
1435 definitions in Section 1C.02. It appears that MUTCD users are not required to consider the
1436 definition in 23 U.S.C. 148 as the official definition of *vulnerable road user*.

1437
1438 The definition in 23 U.S.C. 148 also does not limit vulnerable road users to highways and site
1439 roads open to public travel (SROPT), as is the case for the official MUTCD definition of *road*
1440 *user*. According to 23 U.S.C. 148, a person is apparently a vulnerable road user when walking
1441 on a private walkway from the street to a single-family home, and a person is apparently a
1442 vulnerable road user when walking inside a building. A vulnerable road user only becomes a
1443 road user when that person begins to travel on a highway.

1444
1445 The Pedestrian Joint Task Force is currently considering a definition for *vulnerable road user*.

1446
1447 **Roadway Problem Category 4: Parking Lanes**

1448 The definition of *roadway* uses the term *parking lane*, but *parking lane* is undefined in the
1449 MUTCD. Most readers might agree that parallel parking adjacent to a travel lane is intended to
1450 be considered a parking lane, but readers might not agree about whether other types of on-
1451 street parking, such as perpendicular or angle parking, are considered to be parking lanes. This
1452 uncertainty can create confusion about whether perpendicular and angle parking are intended to
1453 be included in the definition of *roadway*.

1454
1455 **Word Choice Problems**

1456 In addition to the problems with the definitions of *highway* and *roadway* discussed above, the
1457 text of the MUTCD sometimes uses a term that does not accurately convey the intent. A few
1458 examples are as follows:

² <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title23-section148&num=0&edition=prelim>.

- In Section 1C.02, *conventional road* is defined as “a street or highway other than an expressway or freeway.” It is inconsistent to use *road* as part of the defined term *conventional road* when the definition refers to “a street or highway.” A road is “a portion of a highway,” so it is inconsistent for *conventional road* to be defined to include the entire right-of-way.
- Paragraph 8 of Section 3B.25 refers to “the left shoulder of a one-way or divided roadway.” While it is possible for a highway to be divided, the term *divided roadway* is not consistent with the definitions of *highway* and *roadway*.
- Paragraph 8 of Section 4S.02 says, “An Intersection Control Beacon should not be mounted on a pedestal in the roadway unless the pedestal is within the confines of a traffic or pedestrian island.” It is impossible to install a pedestal “in the roadway,” because if a pedestal were in place, that area would cease to be a portion of the highway “ordinarily used for vehicular travel.” A pedestal on a “traffic or pedestrian island” is also not within the roadway, for the same reason, which contradicts the wording of this provision.

Usually, word-choice problems are relatively easy to correct by selecting a more appropriate term that is consistent with the MUTCD definitions.

Proposed Solution

Correcting the problems noted above will be a large undertaking because the terms at issue are widely used in the MUTCD. The terms are also used in contexts beyond the MUTCD, such as in federal regulations and state laws. Changing the MUTCD definitions for *highway*, *roadway*, and *road* may present challenges due to the amount of coordination needed for implementation, and this coordination may extend well beyond the MUTCD.

Conversely, the purpose of the definitions in the MUTCD is to allow users of the manual to best understand when and where its provisions apply or do not apply. MUTCD definitions that conflict with each other complicate users’ ability to obtain complete and accurate information about traffic control devices.

While it is true that federal and state laws and regulations often have meanings for terms such as *roadway*, *road*, and *highway*, these meanings are in many cases already inconsistent between jurisdictions. The Edit Committee task force reviewed state motor vehicle codes from every state in the U.S. and the District of Columbia. The review focused on two questions relevant to this proposal:

- **Are shoulders included in the jurisdiction’s definition of *roadway*?** The task force found that the majority of jurisdictions, 42 of 51, exclude shoulders from the roadway. While the definitions in some jurisdictions were not entirely clear on this issue, it is likely that shoulders are included in the roadway in the other nine jurisdictions.
- **Are shared-use paths included in the jurisdiction’s definition of *roadway*?** Typically, this situation occurs when a jurisdiction considers a roadway to be “for vehicular travel” and the jurisdiction also defines bicycles as vehicles. (This is the same reason shared-use paths are considered roadways by the current MUTCD definitions.) The task force found that shared-use paths are likely included in the roadway in 28

jurisdictions and excluded from the roadway in 23 jurisdictions. As with shoulders, the definitions in some jurisdictions were not perfectly clear.

These findings document considerable disagreement among jurisdictions about definitions of common terms. Many jurisdictions already have definitions that conflict with the MUTCD.

If the question is whether or not a traffic control device complies with the MUTCD, it is the MUTCD definitions that control, not how terms are defined in federal, state, or local law or regulation. The MUTCD has an obligation to provide definitions that are clear to readers and free of internal conflicts. The process of changing definitions may indeed affect publications and documents other than the MUTCD, and it may affect agencies other than the Federal Highway Administration's MUTCD Team. However, this fact alone does not appear to be a sufficient reason to allow conflicting and unclear definitions to remain in the MUTCD for years or decades to come.

If the definitions are to be improved, the NCUTCD is a reasonable and sensible organization to start the process. NCUTCD's acknowledgement of these issues and support for the proposed revisions can help call attention to the issues among the affected agencies and help lead the charge for change.

The solution can be separated into the following two steps:

- **Step 1: Decide on any changes to definitions.** MUTCD definitions could be written in more than one way, but the most uniformity is likely to be achieved when the definitions most closely conform to plain English usage.
- **Step 2: Review the MUTCD to ensure that the text, figures, and tables are consistent with the definitions.** This step is likely to involve all technical committees because changes are expected to be needed in every part of the MUTCD.

Because of the scale involved in Step 2, it is not reasonable for a single NCUTCD ballot proposal to address the entire issue at one time. Rather, this proposal is intended to accomplish Step 1 by proposing updates to several definitions. In addition, this proposal provides a sample of Step 2, illustrating how the definition changes would be applied to a portion of the MUTCD. The intent of the sample is to help confirm that the proposed definitions are reasonable when applied to actual MUTCD content. Part 1 of the MUTCD was chosen for this purpose, for two reasons:

- Part 1 is entirely within the purview of the Edit Committee.
- This proposal includes changes to several definitions other than those noted above, all of which are in Part 1. It is important to identify all changes to definitions to ensure that defined terms are applied correctly during Step 2.

Based on the number of pages, Part 1 constitutes about 3.4 percent of the MUTCD.

The subsequent discussion in this proposal offers rationale for the changes in definitions proposed as part of Step 1.

This Step 1 recommendation is sent to FHWA as a conceptual recommendation not intended for immediate implementation. After this Step 1 recommendation, technical committees will begin

work on Step 2. Both Step 1 and Step 2 proposals would be intended for implementation only after Council approves Step 2. (It may be necessary to revisit Step 1 during Step 2.)

Proposed Definitions of *Highway*, *Street*, and *Road*

It is possible that the MUTCD's definitions of *highway* and *street* contribute to the problems with *road* and *roadway*. *Highway* and *street* are synonyms in the MUTCD, but this is not the way the two words are commonly used in plain English. Common definitions of these words are as follows, based on a review of a few dictionaries:

- Highway: A main road, especially one connecting major towns or cities
- Street: A thoroughfare, especially in a city or town

Typically, when two terms are synonyms, it is not necessary to mention both terms in a sentence (in either the MUTCD or any other text). For example, the MUTCD defines *dynamic message sign* and *variable message sign* as synonyms of *changeable message sign*. It does so in exactly the same way it defines *street* as a synonym of *highway*:

70. Dynamic Message Sign—see Changeable Message Sign.

283. Variable Message Sign—see Changeable Message Sign.

257. Street—see Highway.

Other than these definitions, when the MUTCD refers to changeable message signs, it never mentions the synonyms. For example, the title of Chapter 2L is merely "Changeable Message Signs," not "Changeable Message Signs, Dynamic Message Signs, and Variable Message Signs." Any one of the synonyms is sufficient to convey the intent, and using more than one is redundant and excessively wordy.

The same principle is not applied to *highway* and *street*. Although they are synonyms, the MUTCD uses both terms together in the same sentence frequently (in at least 62 places), such as the phrases "streets and highways" and "street or highway." (Perhaps the most notable of these instances is the title of the MUTCD: *Manual on Uniform Traffic Control Devices for Streets and Highways*.)

If the terms *highway* and *street* were truly synonyms, there would never be a need to refer to them together in this way, just as *changeable message sign* is universally used alone. It is possible that *street* and *highway* are used together so pervasively because the MUTCD's authors are concerned that referring only to a highway might cause some readers to envision a plain-English definition of *highway* ("a main road, especially one connecting major towns or cities") and not consider that a street ("a thoroughfare, especially in a city or town") is also a highway.

This is one reason why it would be helpful to define *road* as a synonym of *highway* and *street*. *Road* is a more generic term than *highway* and *street* in plain-English usage. A plain-English definition of road is: "a way leading from one place to another, especially one with a surface vehicles can use." It seems possible that using *road* instead of *highway* or *street* might help convey the intent that the term is intended to apply to both rural highways and urban streets.

In virtually every instance where *road* is used in the MUTCD, it is used in a generic sense and is not intended as a synonym of *roadway*. An initial review reveals that among the 1,518 times that *road* is used in the MUTCD, only about nine might need to be revised if *road* is redefined to be a synonym of *highway*. These nine instances consist of the following:

- Paragraph 10 of Section 2B.53 says, “In rural and certain other areas the legends NO PARKING ON PAVEMENT (R8-1) or NO STOPPING ON PAVEMENT (R8-5) are generally suitable and may be used where parking or stopping is allowed on an unpaved shoulder or border adjacent to the paved portion of the road.” If *road* is redefined as proposed, the “paved portion of the road” might have different limits, so a revision may be necessary.
- Four instances in Parts 2 and 6 refer to the “edge of the road” where the precise location of the edge of the road is relevant to the context. One example is in Paragraph 1 of Section 2C.72, which says, “Obstructions not actually within the roadway are sometimes so close to the edge of the road that they need a marker.” This sentence uses both *road* and *roadway* interchangeably, and if *road* is redefined as proposed, “edge of the road” should probably be revised to “edge of the roadway” for consistency.
- Four instances in Parts 3 and 6 refer to “run-off-the-road” crashes or vehicles. The term *run-off-the-road* to describe this crash type is common in the industry, but it is not consistent with the proposed new definition of *road*. (A vehicle can be involved in a run-off-the-road crash even if it does not leave the highway.) It might be appropriate to instead refer to these crashes as “roadway departure” or “lane departure” crashes. These terms are also common in the industry and are more consistent with the existing and proposed MUTCD definitions.

A more detailed review might identify other instances.

Redefining *road* as a synonym of *highway* would largely address the first problem associated with the term *road user*. If *road* included the entire area within the right-of-way, then *road user* would more accurately convey that it is intended to include pedestrians, bicyclists, and other travelers who are not using the roadway itself.

If *road* and *roadway* were no longer synonymous, then future NCUTCD ballot proposals and other new MUTCD content would need to be deliberate about which of these two words is most appropriate.

Because *road* is expected to be a more generic term than either *highway* or *street*, the existing definition of *highway* is proposed to be moved to *road*. The definition of *highway* is proposed to indicate that *highway* and *road* are synonyms and also communicate when *highway* is commonly used, as follows:

100. Highway—~~a general term for denoting a public way for purposes of travel by vehicles and vulnerable road users, including the entire area within the right-of-way.~~ a road, often connecting cities or towns.

The existing definition of *street* is “see **Highway**.” For parallelism with the definition of *highway*, the definition of *street* is also proposed to indicate synonymity with *road* and note the common uses of *street*, as follows:

1651 257. Street—~~see Highway.~~ a road, often within a city or town.

1652 The proposed definition of *road* is intended to accomplish three goals, which correspond to the
1653 three problems with the existing definition of *highway* discussed beginning on page 26:

- 1654 • To recognize facilities that prohibit vulnerable road users (such as freeways) as roads
- 1655 • To prevent *road* from applying to facilities where motor vehicles are prohibited, such as
- 1656 shared-use paths on independent alignments
- 1657 • To resolve the ambiguity about whether private facilities are roads

1658
1659 These goals can be achieved with the following definition:

1660
1661 202. Road—a general term for denoting a public way open to public travel and for purposes of
1662 travel by motor vehicles and, in some cases, vulnerable road users, including the entire
1663 area within the right-of-way. All site roads open to public travel are roads.³

1664 The phrase “in some cases” solves the first problem in the list above, because a facility would
1665 not be required to accommodate vulnerable road users to meet the definition of *road*.

1666
1667 Under this definition, shared-use paths on independent alignments would no longer meet the
1668 definition of *road*, which is more consistent with plain English. This is accomplished with the
1669 phrase “travel by motor vehicles,” which excludes facilities open only to bicycles. Each use of
1670 the terms *road*, *highway*, and *street* in the MUTCD would need to be reviewed to determine if
1671 they are intended to apply to facilities where motor vehicles are prohibited in addition to those
1672 where motor vehicles are permitted.

1673
1674 The proposed definition also resolves the ambiguity about private facilities by replacing the
1675 phrase “public way” with “way open to public travel.” This text clarifies that a facility can meet
1676 the definition of *road* whether it is publicly or privately owned as long as it is open to public
1677 travel.

1678
1679 The existing definition of *highway* and the proposed definition of *road* are both broad enough to
1680 include SROPT. The MUTCD is not consistent in whether SROPT are included as a subset of
1681 *highway*. The following examples illustrate two differing treatments:

- 1682 • In Section 1C.02, SROPT are defined as “roadways and bikeways.” A roadway is “a
- 1683 portion of a highway,” so an SROPT must therefore be a subset of *highway*.
- 1684 • Paragraph 1 of Section 1A.01 provides this list of facilities to which the MUTCD applies:
- 1685 “streets, highways, pedestrian and bicycle facilities, and site roadways open to public travel.” This
- 1686 list has several problems, but it lists SROPT separate from “streets” and “highways,”
- 1687 suggesting that SROPT are in a different category altogether and not part of the
- 1688 highway. If SROPT were intended to be a subset of *highway*, this list could have been
- 1689 rendered as “streets and highways, including site roadways open to public travel, and
- 1690 pedestrian and bicycle facilities.”

1691
1692 The final sentence in the proposed definition of *road* resolves this issue by clarifying that all
1693 SROPT are roads. If SROPT is used in the MUTCD in a way that conflicts with this definition
1694 (such as the example in the second bullet above), a change will be needed to MUTCD content.

³ This definition marks up the existing definition of *highway* to note the changes. The existing definition of *road* is:
“see Highway.”

Furthermore, clearly distinguishing SROPT as roads will help ensure that MUTCD provisions that refer to *road*, *street*, *highway*, or *roadway* will apply to SROPT (in addition to other roads) even when SROPT is not specifically mentioned.

An additional change is proposed to nest the definitions of several types of roads under the definition of *road*. This change is intended to more clearly communicate the hierarchy of *freeway*, *expressway*, *conventional road*, *arterial road*, *collector road*, and *alley*. In addition, a new definition of *local road* is proposed for parallelism with other street classifications.

Proposed Definitions of Roadway and Shared-Use Path

As discussed above, *roadway* expressly excludes shoulders, which is inconsistent with context in many cases, and *roadway* does not clearly exclude shared-use paths, some of which meet the definition of *roadway* when considering other MUTCD definitions.

The first problem is proposed to be solved by adding shoulders to the definition of *roadway*. This treatment of shoulders would be consistent with the overwhelming majority of uses in the MUTCD. However, If shoulders were added to the definition of *roadway*, several changes to MUTCD content would be needed:

- About 25 instances in the MUTCD use the phrase “over the roadway” or similar wording. One example is in Section 4H.09, which says, “The bottom of the signal housing (including brackets) of a bicycle signal face that is not located over a roadway or shoulder shall be a minimum of 7 feet above the sidewalk or ground.” This example is consistent with the current MUTCD definitions, but the phrase “or shoulder” should be deleted if *roadway* is redefined to include shoulders. Alternatively, if there is a need for a provision to emphasize that it applies to shoulders, the phrase “over a roadway or shoulder” could be revised to “over a roadway, including the shoulder.” (About a third of the 25 instances use “over the roadway” incorrectly under the current definition of *roadway*, where by context they should say “over the roadway or shoulder.” The proposed redefinition of *roadway* would correct these erroneous instances without any changes to MUTCD content.)
- About 40 instances in the MUTCD use the phrase “edge of the roadway” or similar wording. Revisions would be needed to many of these instances to acknowledge that the revised definition of *roadway* would change the location of the “edge of the roadway.” (Notably, “edge of the roadway” is used incorrectly in the MUTCD to refer to the edge of the shoulder in many cases. The proposed new definition of *roadway* would correct these instances.)
- Many other common phrases are also likely to need a review to determine if wording changes are needed. These include phrases such as “crossing the roadway,” “portion of the roadway,” and “outside the roadway,” in which the specific boundary of the roadway may be relevant to context. Most of these uses are unlikely to require changes, but a complete review is needed, and some changes undoubtedly will be identified.

A key benefit of adding shoulders to the definition of *roadway* is that the new definition would better align with most readers’ understanding of the word. It would also provide a better parallel with the definition in AASHTO publications.

The second problem, dealing with shared-use paths, is more complicated to solve. It appears that two changes to MUTCD definitions are necessary to untangle the contradictions related to bicycle facilities. First, the definition of *shared-use path* should be changed, as follows:

219. Shared-Use Path—~~a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by a type of pathway improved, designed, or ordinarily used for travel by bicyclists, pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers), and other authorized motorized and non-motorized users, and designated for bicycle travel. All shared-use paths are bikeways, and no shared-use paths are sidewalks.~~

This definition would redefine *shared-use path* as a “type of pathway . . .” rather than “a bikeway . . .” The existing definition of *pathway* is repeated here for reference:

161. Pathway—a general term denoting a public way for purposes of travel by authorized users outside the traveled way and physically separated from the roadway by an open space or barrier and either within the highway right-of-way or within an independent alignment. Pathways include shared-use paths, but do not include sidewalks.

The current definition of *shared-use path* is somewhat counterintuitive for two reasons:

- A key feature of a shared-use path is that it is open to use by multiple modes, including pedestrians and bicyclists. The word *shared* in the name clearly indicates permissible use by more than one mode. Defining *shared-use path* first and foremost as “a bikeway” disregards the primary intent that a shared-use path serves multiple modes.
- The term *bikeway* is very broad and includes every facility “designated for bicycle travel,” which includes more types of facilities than just pathways. This breadth is another reason why *bikeway* is not a logical starting point for the definition of *shared-use path*. However, all shared-use paths are indeed bikeways, and the first part of the last sentence proposed to be added to the definition clarifies this point.

There is considerable overlap in the current definitions of *pathway* and *shared-use path*. Both definitions indicate that they are “outside the traveled way and physically separated . . . by an open space or barrier and either within the highway right-of-way or within an independent alignment.” The wording is not identical in both definitions, but it is similar enough that the repetition is unnecessary. Defining *shared-use path* as a “type of pathway” means that the repetitive text would not be needed in the definition of *shared-use path*, because all pathways, including shared-use paths, would have these characteristics in common.

Defining *shared-use path* as a “type of pathway” would also eliminate the case where a particular facility is considered both a shared-use path and a sidewalk. If a shared-use path is defined first as a “type of pathway,” it becomes clear from the definition of *pathway* that sidewalks are not considered pathways. This means that no facility could ever meet the definitions of both *shared-use path* and *sidewalk*. To make the relationship between the terms as clear as possible, the second part of the last sentence clarifies that a shared-use path cannot be a sidewalk.

The penultimate clause proposed to be added to the definition acknowledges that shared-use paths must be “designated for bicycle travel.” The reason that all shared-use paths are bikeways is that they are designated for bicycle travel. To meet the definition of *bikeway*, a facility must be “specifically designated for bicycle travel.”

The 5th Edition of AASHTO’s *Guide for the Development of Bicycle Facilities*, published in December 2024, has a slightly different definition of *shared use path*:

shared use path—a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space, buffer or barrier and either within the highway right-of-way (also referred to as a side path) or within an independent alignment. Shared use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users and therefore must meet pedestrian accessibility surface requirements.

Much of the AASHTO definition is identical to the definition in the 11th Edition of the MUTCD. However, if the MUTCD were to adopt the AASHTO definition, it would not be possible to resolve the issues discussed above. Consequently, it appears that the MUTCD and AASHTO definitions are likely to differ, at least in the near term.

Some adjustments to MUTCD content will be necessary to reflect the proposed change in the definition of *shared-use path*. For instance, paragraph 15 of Section 6N.04 says, “On-road bicyclists should not be directed onto a path or sidewalk intended for pedestrian use except where such a path or sidewalk is a shared-use path . . .” This provision considers that a sidewalk might also be a shared-use path, which is consistent with the current definition but would not be consistent with the proposed definition.

The second change necessary to resolve the issue with bicycle facilities is in the definition of *roadway* itself. The definition of *roadway* should be changed to expressly exclude pathways. The definition of *pathway* already indicates that pathways are “physically separated from the roadway,” but adding this exclusion to the definition of *roadway* would ensure consistency between these two definitions.

While the proposed definition changes related to bicycle facilities are more extensive than those related to shoulders, there are fewer related instances of text in the MUTCD. In many of the instances where *roadway* is used in the MUTCD related to shared-use paths, the context suggests that shared-use paths are considered to be out of the roadway, potentially conflicting with the current definition. The proposed new definitions would cause these instances to be correct as written.

An additional change to the definition of *roadway* is needed to address the uncertainty of the undefined term *parking lane*. The MUTCD appears to intend that **all** on-street parking is within the roadway, whether or not the parking complies with a reader’s vision of what a parking lane might be. This intent can be determined from MUTCD provisions such as the following:

- The definition of *overhead sign* in Section 1C.02 indicates that it is a sign “directly above the roadway or shoulder such that vehicles travel below it.” This definition must apply to all on-street parking, whether or not it is considered a parking lane. An overhead sign

mounted above angled parking must have the same mounting height as an overhead sign mounted above any other part of the roadway.

- Likewise, the definition of *post-mounted sign* applies to signs where “no portion of the sign or its support is directly above the roadway or shoulder.” A sign mounted directly above any kind of on-street parking certainly does not conform with the plain-English definition of *post-mounted sign*. Therefore, this definition appears to intend that all on-street parking is included in the definition of *roadway*.
- Section 4H.09 refers to the mounting height of bicycle signal faces, permitting a mounting height as low as 7 feet for signal faces “not located over a roadway or shoulder.” This provision cannot apply to any on-street parking, because if a bicycle signal face were mounted above any kind of on-street parking, more than 7 feet would be needed to ensure adequate clearance.

Because *roadway* is intended to include all on-street parking, not just “parking lanes,” the undefined term *parking lane* is proposed to be replaced with the defined term *on-street parking* in the definition of *roadway*.

When considering the shoulder issue, the bicycle facility issue, and the parking-lane issue, the proposed new definition of *roadway* is as follows:

204. Roadway—that portion of a **highway road** improved, designed, or ordinarily used for vehicular travel, **including shoulders** and **on-street parking lanes**, but exclusive of the sidewalk, berm, or **shoulder pathway** even though such sidewalk, berm, or **shoulder pathway** is used by persons riding bicycles or other human-powered vehicles. In the event a **highway road** includes two or more separate roadways, the term *roadway* as used in this Manual shall refer to any such roadway separately, but not to all such roadways collectively.

Proposed Definitions of *Traveled Way* and *Shoulder*

A change to the definition of *traveled way* is necessary to address the shoulder issue. Normally, shoulders are appropriately excluded from the traveled way. However, when shoulders are open to part-time motor vehicle travel, the shoulders need to be included in the traveled way.

Following are a few examples of conflicts that exist when shoulders open to part-time motor vehicle travel are excluded from the traveled way:

- *Clear zone* is defined to start from “the edge of the traveled way.” When shoulders are open to part-time motor vehicle travel, it would be more appropriate to measure the clear zone from the edge of the shoulder open to motor vehicle travel.
- *Pedestrian clearance time* is defined as the time for a pedestrian “to travel to the far side of the traveled way.” If shoulders open to part-time motor vehicle travel were not included in the definition of *traveled way*, then the pedestrian clearance time would not be long enough to account for pedestrian crossings of these shoulders.

Two additional changes to the definition of *traveled way* are proposed:

- As noted above, *traveled way* is defined as a “portion of the roadway.” As such, components that are not included in the roadway cannot be included in the traveled way. Specifically, it is not necessary to exclude berms and sidewalks from the definition of *traveled way*, because berms and sidewalks are already excluded from the definition of *roadway*. The mention of berms and sidewalk as specific exclusions from *traveled way* may incorrectly communicate that these elements are included in the roadway.
- For consistency with the definition of *roadway*, the undefined term *parking lane* is proposed to be replaced with the defined term *on-street parking*.

The proposed new definition of *traveled way* is as follows:

277. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive of ~~the shoulders, berms, sidewalks, and on-street parking lanes~~. The traveled way includes shoulders only when they are open to part-time travel by motor vehicles.

This change to the definition of *traveled way* also creates a need for a change to the definition of *shoulder*, which is currently defined as follows:

220. Shoulder—a longitudinal area contiguous with the traveled way that is used for accommodation of stopped vehicles for emergency use and for lateral support of base and surface courses, and that is graded for emergency stopping. A shoulder might be paved or unpaved. A paved shoulder might be opened to part-time travel by some or all vehicles and might also be available for use by pedestrians and/or bicycles in the absence of other pedestrian or bicycle facilities.

The problematic portion is that shoulders are defined as “contiguous with the traveled way.” The proposed new definition of *traveled way* considers shoulders to be *within* the traveled way, not contiguous with it, when the shoulders are open to part-time motor vehicle travel. A proposed new definition of *shoulder* is as follows:

220. Shoulder—a longitudinal ~~area portion of the roadway contiguous with the traveled way~~ that is used for accommodation of stopped vehicles for emergency use and for lateral support of base and surface courses, and that is graded for emergency stopping. A shoulder might be paved or unpaved. A paved shoulder might be opened to part-time travel by some or all vehicles and might also be available for use by pedestrians and/or bicycles in the absence of other pedestrian or bicycle facilities. Shoulders are within the traveled way only when they are open to part-time travel by motor vehicles.

The phrase “contiguous with the traveled way” is proposed to be replaced with a sentence at the end of the definition that clarifies when shoulders are in the traveled way.

Proposed Definition of *Road User*

The proposed definition of *road user* is as follows:

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

The proposed changes to this definition are as follows:

- Replacing *highway* with *road* to be consistent with the term *road user* and to be more likely interpreted to include both urban streets and rural highways
- Omitting *site roadway open to public travel*, which is included in the proposed definition of *road*
- Adding *bikeway*
- Recasting the definition to acknowledge that *bicyclist* is a subset of *vehicle operator*.

The proposed definition of *road* corrects the first problem with *road user* discussed on page 33. The sidewalk and shoulder are currently excluded from the definition of *road*, but they are included in the proposed definition. Consequently, a person using the sidewalk or shoulder would be consistently considered a road user if *road* is redefined as proposed.

Because *road* is proposed to be redefined to include only facilities open to motor vehicle travel, a new problem is introduced with respect to *road user*. Bikeways meet the current definition of *highway*, because bicycles are vehicles and a highway is any public way open to vehicular travel. Under the proposed definition of *road*, bikeways where motor vehicles are prohibited would no longer be considered roads (which is consistent with the plain-English definition of *road*).

Without an additional change, *road user* would no longer apply to people using bikeways where motor vehicles are prohibited. It appears that there are two possible solutions to this problem:

- *Road user* could be redefined to include people on bikeways in addition to roads.
- A new term could be defined to include people traveling on both bikeways and roads.

Each of these approaches has advantages and disadvantages. The task force initially considered the second option, because by adding *bikeway* to the definition of *road user*, a road user might be someone who is not using the road (a situation that also exists in the 11th Edition). However, a new term could be difficult to institutionalize, considering the widespread use of *road user* in the MUTCD. If a new term is introduced, each instance of *road user* would need to be evaluated to determine if it should be kept or changed to the new term. This process would be laborious. As such, the task force elected to add *bikeway* to the definition of *road user* as the more preferable of these two options.

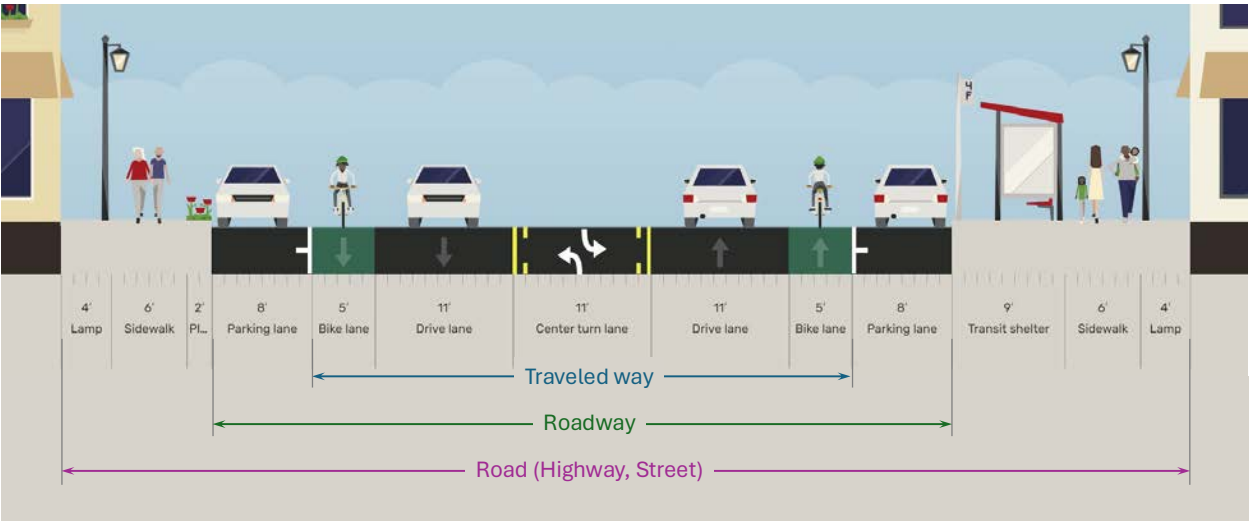
The task force observes that automated vehicles might also be considered road users, considering that automated vehicles increasingly obtain information from traffic control devices. The task force elected not to include automated vehicles in the definition of *road user* because it is beyond the scope of this proposal. Others, such as the Connected and Automated Vehicles Joint Task Force, may wish to consider this issue.

This proposal also does not recommend a definition of *vulnerable road user* because this definition does not appear to be necessary to address issues with *road*, *roadway*, and *highway*. A definition of *vulnerable road user* is being considered by the Pedestrian Joint Task Force.

Overview of Proposed Changes to Definitions

Existing MUTCD definitions are shown on example cross-sections in Figure 1 on page 25. As a comparison, Figure 6 shows how these terms would apply to the same sections using the new definitions. Only the second example has changes when compared to existing definitions; the changes are highlighted with yellow circles.

1975



1976
1977

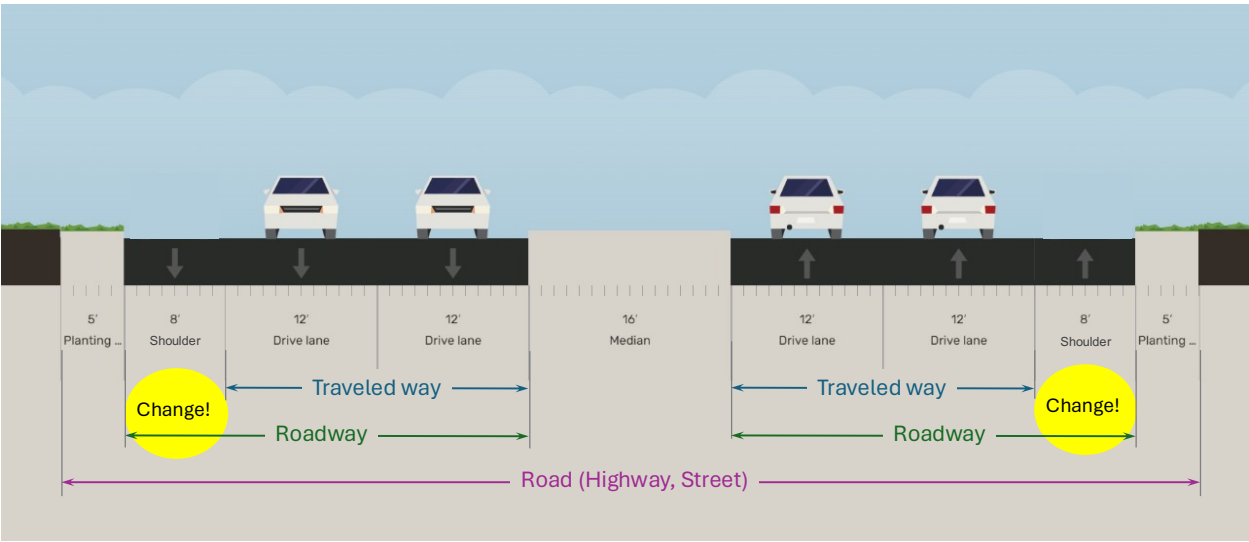
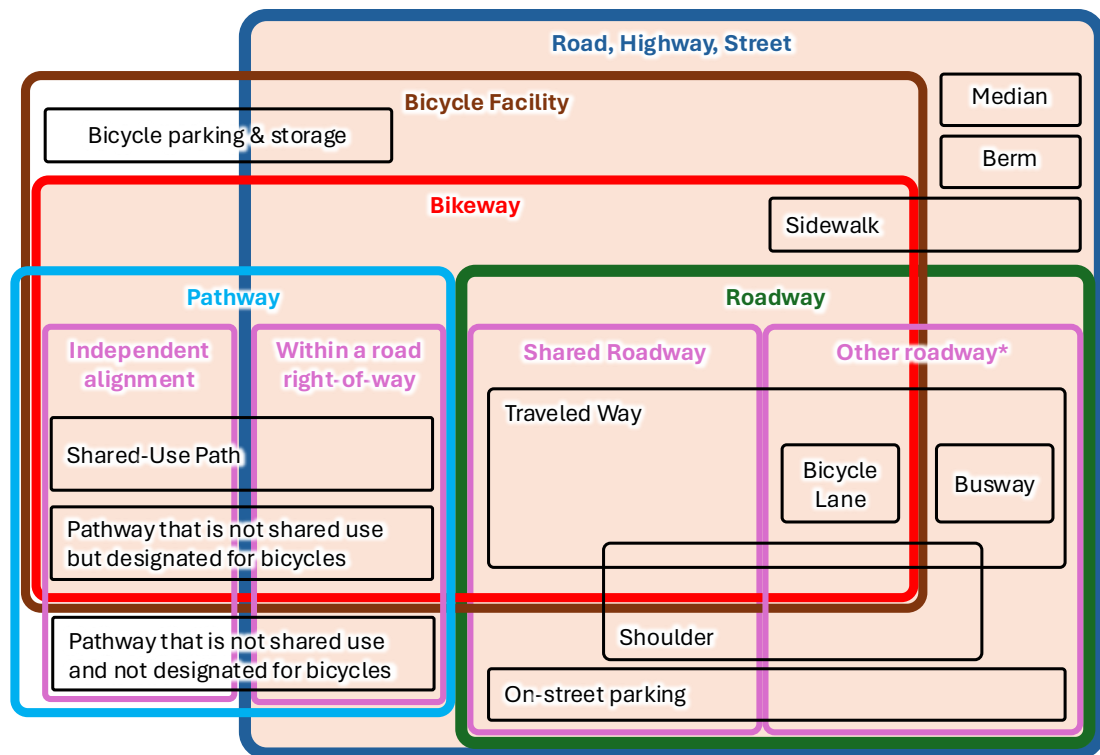


Figure 6: Locations of Proposed Definitions of the Traveled Way, Roadway, and Highway on Example Cross-Sections

Figure 7 shows this proposal's intended relationship among several MUTCD defined terms. Figure 8 shows this proposal's intended relationship among MUTCD ownership and applicability terms.



* This term is not defined in the MUTCD but is shown here for parallelism.

Background color legend:

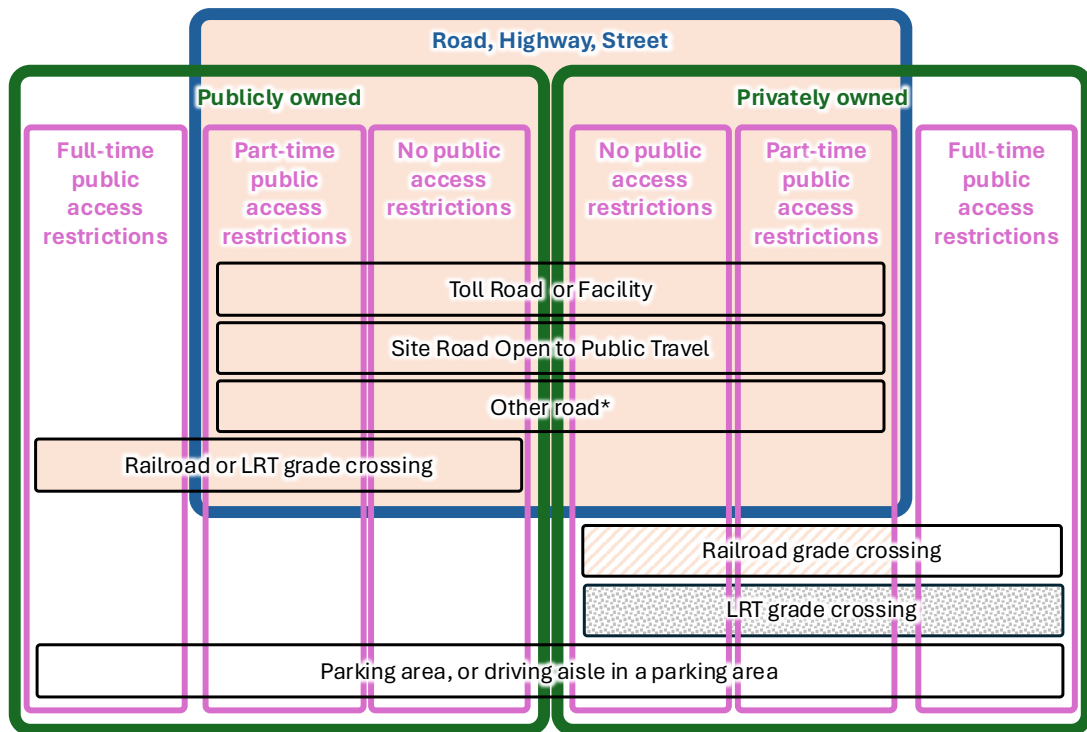
- ☐ The MUTCD legally does not apply.
- ☒ The MUTCD legally applies.

Figure 7: Proposed Relationship Among MUTCD Terms

Next Steps

Following this Step 1 recommendation, the Edit Committee task force can assist technical committees with Step 2. It may be desirable to expand the task force to include representation from technical committees. The task force would create guidelines for technical committees' use as they prepare proposals to ensure that all portions of the MUTCD are consistent with the definitions in Step 1. Technical committees may also need individual task forces.

Relationship among MUTCD ownership and applicability terms



* This term is not defined in the MUTCD but is shown here for parallelism.

Background color legend:

The MUTCD legally does not apply.

The MUTCD legally applies.

The MUTCD has conflicting provisions about whether it legally applies.

The MUTCD is silent on whether it legally applies.

Figure 8: Proposed MUTCD Applicability by Ownership and Access

Conclusion

MUTCD users look to the manual for clear direction on the use of traffic control devices. The authors of the MUTCD (including members of the NCUTCD and FHWA) are typically exceptionally precise about the provisions that apply to different devices. One reason for the precision is well stated in Paragraph 5 of Section 1D.09, which says, "Inconsistent placement or use of a device can result in disrespect for the device at locations where the device is needed and appropriate."

It is also true that inconsistent use of terminology in the MUTCD can result in disrespect for the same terminology when used correctly elsewhere in the manual. The authors of the MUTCD must strive to be as precise about word choice as they are about traffic control device provisions. The definition changes in this proposal should help eliminate some inconsistencies and encourage more accurate word choice in the manual in the future.