

PART 1. GENERAL

TABLE OF CONTENTS

CHAPTER 1A. GENERAL		1-1
Section 1A.01	Purpose of Traffic Control Devices	1-1
Section 1A.02	Principles of Traffic Control Devices	1-1
Section 1A.03	Design of Traffic Control Devices	1-2
Section 1A.04	Placement and Operation of Traffic Control Devices	1-3
Section 1A.05	Maintenance of Traffic Control Devices	1-4
Section 1A.06	Uniformity of Traffic Control Devices	1-4
Section 1A.07	Responsibility for Traffic Control Devices	1-5
Section 1A.08	Authority for Placement of Traffic Control Devices	1-5
Section 1A.09	Engineering Study and Engineering Judgment	1-6
Section 1A.10	Interpretations, Experimentations, and Changes	1-7
Section 1A.11	Relation to Other Documents	1-9
Section 1A.12	Color Code	1-13
Section 1A.13	Definitions of Words and Phrases in This Manual	1-14
Section 1A.14	Abbreviations Used on Traffic Control Devices	1-27

FIGURES

Figure 1A-1.	Typical Process for Requesting and Conducting Experimentations for new Traffic Control Devices	1-10
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TABLES

Table 1A-1.	Acceptable Abbreviations	1-28
Table 1A-2.	Abbreviations that are Acceptable Only with a Prompt Word	1-29
Table 1A-3.	Unacceptable Abbreviations	1-30

CHAPTER 1A. GENERAL

Section 1A.01 Purpose of Traffic Control Devices

Support:

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

Traffic control devices notify road users of regulations and provide warning and guidance needed for the safe, uniform, and efficient operation of all elements of the traffic stream.

Standard:

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

Support:

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

Section 1A.02 Principles of Traffic Control Devices

Support:

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

Guidance:

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

- A. Fulfill a need;
- B. Command attention;
- C. Convey a clear, simple meaning;

D. Command respect from road users; and

E. Give adequate time for proper response.

The following aspects of traffic control devices should be considered to ensure that the above criteria are met: design; placement and operation; maintenance; and uniformity. Vehicle speed should be carefully considered as an element that governs the design, operation, placement, and location of various traffic control devices.

Support:

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

Guidance:

The actions required of road users to obey regulatory devices are specified by the Ohio Revised Code (O.R.C.), or in cases not covered by State statute, by local ordinance or resolution.

The proper use of traffic control devices should provide the reasonable and prudent road user with the information necessary to safely and lawfully use the streets, highways, pedestrian facilities, and bikeways.

Support:

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

Additional information regarding related sections of the Ohio Revised Code (O.R.C.) is provided in Appendices B1 and B2.

Section 1A.03 Design of Traffic Control Devices

Guidance:

Devices should be designed so that features such as size, shape, and color, composition, lighting or retroreflection, and contrast are combined to draw attention to the devices; that size, shape, color, and simplicity of message combine to produce a clear meaning; that legibility and size combine with placement to permit adequate time for

response; and that uniformity, size, legibility, and reasonableness of the message combine to command respect.

Standard:

All adopted symbol signs are shown in the "Sign Design Manual" (see Section 1A.11). All symbols and colors for signs not shown in the "Sign Design Manual" shall follow the procedures for experimentation and change described in Section 1A.10. All symbols shall be unmistakably similar to or mirror images of those shown herein. Symbols and colors shall not be modified unless otherwise stated herein.

Guidance:

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

Support:

An example of modifying a device's design would be to modify the Side Road (W2-2) sign to show a second offset intersecting road.

Option:

Highway agencies may develop word message signs to notify road users of special regulations or to warn road users of a situation that may not be readily apparent. Unlike symbol signs and colors, new word message signs may be used without the need for experimentation. With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved. Although the standard design of symbol signs cannot be modified, it may be appropriate to change the orientation of the symbol to better reflect the direction of travel.

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

Guidance:

Placement of a traffic control device should be within the road user's view so that maximum visual acuity 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.

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

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

Section 1A.05 Maintenance of Traffic Control Devices

Guidance:

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

Physical maintenance of traffic control devices should be performed to ensure that legibility is retained, that the device is visible, and that it functions properly in relation to other traffic control devices in the vicinity.

Traffic control devices should be reviewed periodically to determine if they meet current traffic conditions.

Traffic control devices should be maintained to ensure that legibility is retained, that the device is visible, and that it functions properly in relation to other traffic control devices in the vicinity during both day and night conditions.

Support:

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

Section 1A.06 Uniformity of Traffic Control Devices

Support:

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, police officers, and traffic courts by giving everyone the same interpretation. Uniformity assists public highway officials through efficiency in manufacture, installation, maintenance, and administration. Uniformity means treating similar situations in a similar way. The use of uniform traffic control devices does not, in itself, constitute uniformity. A standard device used where it is not appropriate is as objectionable as a nonstandard device; in fact, this might be worse, because such misuse might result in disrespect at those locations where the device is needed and appropriate.

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

As provided in Section 4511.09 of the Ohio Revised Code (see Appendix B2), the Ohio Manual of Uniform Traffic Control Devices has been adopted by the Ohio Department of Transportation to provide for a “uniform system of traffic control devices,...for use upon highways in this state.

Standard:

The responsibilities of the public agency or local official having jurisdiction shall be as established in Sections 4511.10 and 4511.11 of the Ohio Revised Code (see Appendix B2).

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

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

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

Guidance:

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

Support:

Section 4511.16 of the Ohio Revised Code (O.R.C.) prohibits the display of any unauthorized sign, signal, marking or device which interferes with the effectiveness of any

official traffic control device and permits its removal by the authority having jurisdiction over the street or highway (see Appendix B2).

Standard:

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

Support:

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

Section 1A.09 Engineering Study and Engineering Judgment

Standard:

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

Guidance:

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. 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 the roads and streets that the devices complement. Jurisdictions with responsibility for traffic control that do not have engineers on their staffs, should seek engineering assistance from others, such as the Ohio Department of Transportation, their county, a nearby large city, or a traffic engineering consultant.

Section 1A.10 Interpretations, Experimentations, and Changes**Standard:**

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

Support:

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

Guidance:

Requests for permission to experiment should be sent to the Federal Highway Administration (FHWA), Office of Transportation Operations, 400 Seventh Street SW, HOTO, Washington, DC 20590. A copy of the request should be sent to the Administrator of the Ohio Department of Transportation (ODOT), Office of Traffic Engineering at 1980 West Broad St., P.O. Box 899, Columbus, Ohio 43216-0899.

Requests for an interpretation or change should be sent to the Ohio Department of Transportation (ODOT), Office of Traffic Engineering.

Support:

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

Guidance:

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

- A. A concise statement of the interpretation being sought;
- B. A description of the condition that provoked the need for a revised interpretation;
- C. Any illustration that would be helpful to understand the request; and

D. Any supporting research data that is pertinent to the item to be interpreted.

Support:

Requests to experiment include consideration of testing or evaluating a new traffic control device, its application or manner of use, or a provision not specifically described in this Manual.

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

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

Guidance:

The request for permission to experiment should contain the following:

- A. A statement indicating the nature of the problem.
- B. A description of the proposed change to the traffic control device or application of the traffic control device, how it was developed, the manner in which it deviates from the standard, and how it is expected to be an improvement over existing standards.
- C. Any illustration that would be helpful to understand the traffic control device or use of the traffic control device.
- D. Any supporting data explaining how the traffic control device was developed, if it has been tried, in what ways it was found to be adequate or inadequate, and how this choice of device or application was derived.
- E. A legally binding statement certifying that the traffic control device is not protected by a patent or copyright.
- F. The time period and location(s) of the experiment.
- G. A detailed research or evaluation plan that must provide for close monitoring of the experimentation, especially in the early stages of its field implementation. The evaluation plan should include before and after studies as well as quantitative data describing the performance of the experimental device.

- H. An agreement to restore the site of the experiment to a condition that complies with the provisions of this Manual within 3 months following the end of the time period of the experiment. This agreement must also provide that the agency sponsoring the experimentation will terminate the experimentation at any time that it determines significant safety concerns are directly or indirectly attributable to the experimentation. The FHWA's Office of Transportation Operations has the right to terminate approval of the experimentation at any time if there is an indication of safety concerns. If, as a result of the experimentation, a request is made that this Manual be changed to include the device or application being experimented with, the device or application will be permitted to remain in place until an official rulemaking action has occurred.
- I. An agreement to provide semiannual progress reports for the duration of the experimentation, and an agreement to provide a copy of the final results of the experimentation to the FHWA's Office of Transportation Operations within 3 months following completion of the experimentation. The FHWA's Office of Transportation Operations has the right to terminate approval of the experimentation if reports are not provided in accordance with this schedule.

Support:

Requests for changes to the Manual include consideration of a new device to replace a present standard device, an additional device to be added to the list of standard devices, or a revision to a traffic control device application or placement criteria.

Guidance:

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

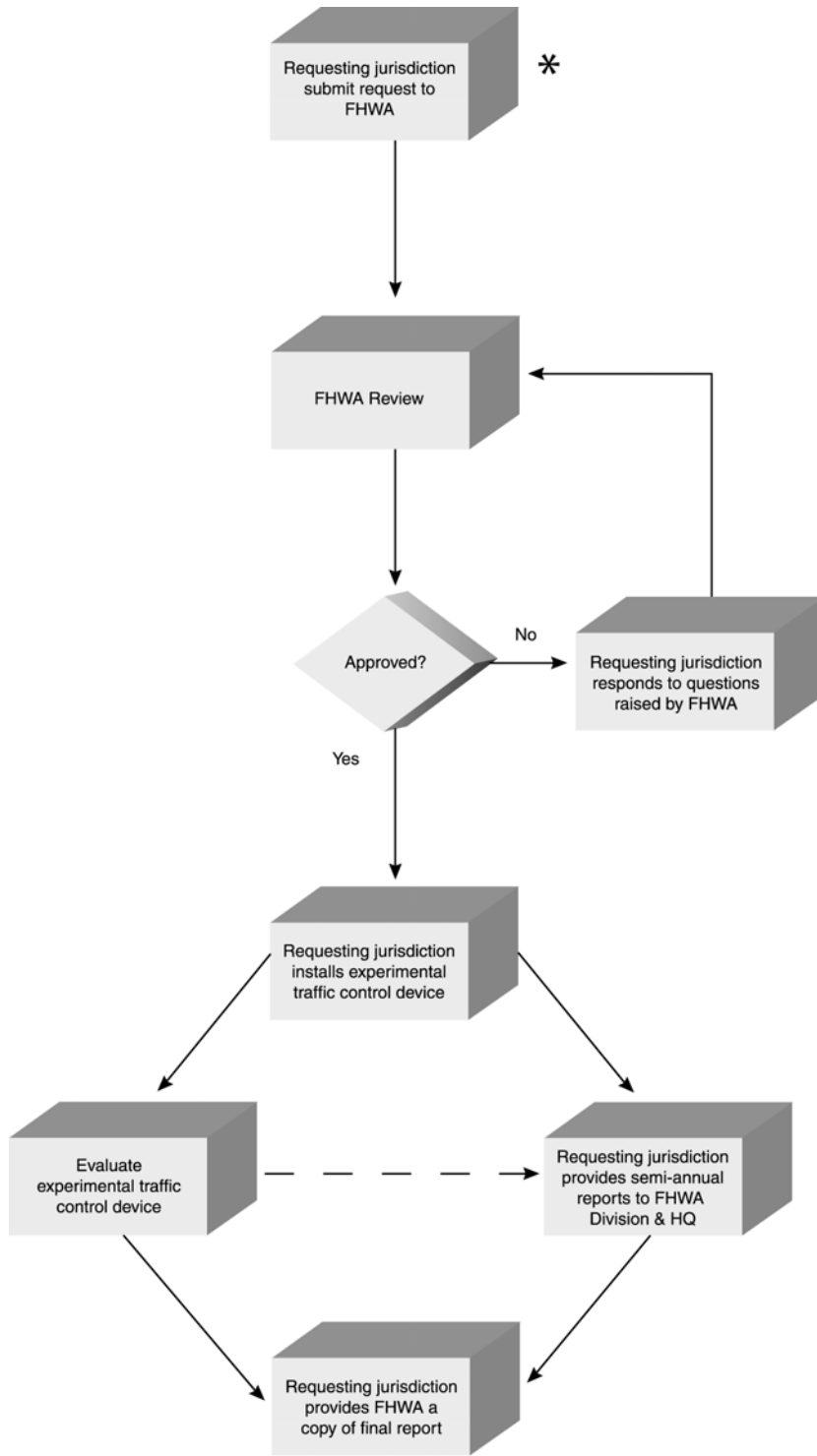
- A. A statement indicating what change is proposed;
- B. Any illustration that would be helpful to understand the request; and
- C. Any supporting research data that is pertinent to the item to be reviewed.

Section 1A.11 Relation to Other Documents

Standard:

To the extent that they are incorporated by specific reference, the latest editions of the following documents, or those editions specifically noted, shall be a part of this Manual: "Standard Alphabets for Highway Signs and Pavement Markings," 1977

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



* With copy to ODOT Office of Traffic Engineering

Edition (FHWA); "Standard Alphabets for Highway Signs," 1966 Edition (FHWA); "Standard Color Tolerance Limits," (FHWA); and the current "Sign Design Manual" (ODOT).

Support:

For ordering information for publications from FHWA, visit the Federal Highway Administration's MUTCD website at <http://mutcd.fhwa.dot.gov>, or write to the FHWA, 400 Seventh Street, SW, HOTO, Washington, DC 20590.

For ordering information for publications published by the Ohio Department of Transportation (ODOT), visit the ODOT reference resource website at www.dot.state.oh.us/drrc or write to the ODOT Office of Contracts, 1980 West Broad St., P.O. Box 899, Columbus, Ohio 43216-0899.

The latest version of other documents that are useful sources of information with respect to use of this Manual are listed below. See the **Preface** of this Manual for ordering information for the following publications:

- A. "Vehicle Traffic Control Signal Heads," Part 1 - 1985 Edition; Part 2—1998 Edition (Institute of Transportation Engineers—ITE)
- B. "Pedestrian Traffic Control Signal Indications," 1985 Edition (ITE)
- C. "Purchase Specification for Flashing and Steady Burn Warning Lights," 1981 Edition (ITE)
- D. "Traffic Signal Lamps," 1980 Edition (ITE)
- E. "Uniform Vehicle Code (UVC) and Model Traffic Ordinance," 1992 Edition (National Committee on Uniform Traffic Laws and Ordinances)
- F. "A Traffic Engineering Handbook," 1999 Edition (ITE)
- G. "Highway Capacity Manual," 1998 Edition (Transportation Research Board—TRB)
- H. "A Policy on Geometric Design of Highway and Streets," 1994 Edition (American Association of State Highway and Transportation Officials—AASHTO)
- I. "Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways," 1993 Edition (AASHTO)
- J. "List of Control Cities for Use in Guide Signs on Interstate Highways," 1993 Edition (AASHTO)

- K. "Manual of Transportation Engineering Studies," 1994 Edition (ITE)
- L. "Roadside Design Guide," 1996 Edition (AASHTO)
- M. "School Trip Safety Program Guidelines," 1984 Edition (ITE)
- N. "Manual of Traffic Signal Design," 1991 Edition (ITE)
- O. "Traffic Detector Handbook," 1991 Edition (ITE)
- P. "2000 AREMA Communications & Signals Manual," American Railway Engineering & Maintenance-of-Way Association (AREMA)
- Q. "Preemption of Traffic Signals at or Near Railroad Grade Crossings with Active Warning Devices," (ITE)
- R. "Highway-Rail Intersection Architecture," U.S. Department of Transportation, Federal Railroad Administration (USDOT/FRA)
- S. "Practice for Roadway Lighting," RP-8, 1983, Illuminating Engineering Society (IES)
- T. "Safety Guide for the Prevention of Radio Frequency Radiation Hazards in the Use of Commercial Electric Detonators (Blasting Caps)," Safety Library Publication No. 20, Institute of Makers of Explosives
- U. "Accessible Pedestrian Signals," A-37, U.S. Architectural and Transportation Barriers Compliance Board (The U.S. Access Board).
- V. "Ohio Revised Code" (O.R.C.), current version available through public libraries.
- W. "Traffic Engineering Manual" (TEM), current Edition (ODOT).
- X. "Traffic Control Devices Handbook," 2001 Edition (ITE).
- Y. "Manual on Uniform Traffic Control Devices" (MUTCD), current Edition (FHWA).
- Z. "Location & Design Manual, Volume One - Roadway Design," current Edition (ODOT).

Support:

This Manual and the other ODOT publications referenced in this Section are available electronically from the ODOT reference resource website at web address noted on page ii. The national MUTCD is available electronically from FHWA's website for the MUTCD at <http://mutcd.fhwa.dot.gov>.

Section 1A.12 Color Code

Support:

The following color code establishes general meanings for 9 colors of a total of 12 colors that have been identified as being appropriate for use in conveying traffic control information. Central values and tolerance limits for each color are available from the Federal Highway Administration, 400 Seventh Street, SW, HOTO, Washington, DC 20590, and at FHWA's MUTCD website at <http://mutcd.fhwa.dot.gov>.

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

Standard:

The general meaning of the 12 colors shall be as follows:

- A. Yellow—warning**
- B. Red—stop or prohibition**
- C. Blue—road user services guidance, tourist information, and evacuation route**
- D. Green—indicated movements permitted, direction guidance**
- E. Brown—recreational and cultural interest area guidance**
- F. Orange—temporary traffic control**
- G. Black—regulation**
- H. White—regulation**
- I. Fluorescent Yellow-Green—pedestrian warning, bicycle warning, school bus and school warning**
- J. Purple—unassigned**

K. Light Blue—unassigned

L. Coral—unassigned

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

Standard:

Unless otherwise defined herein, or in the other Parts of this Manual, definitions contained in the most recent edition of the "Ohio Revised Code," "AASHTO Transportation Glossary (Highway Definitions)," and other documents specified in Section 1A.11 are also incorporated and adopted by reference.

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

1. **Active Grade Crossing Warning System**—the flashing-light signals, with or without warning gates, together with the necessary control equipment used to inform road users of the approach or presence of trains at highway-rail grade crossings.
2. **Approach**—all lanes of traffic moving towards an intersection or a midblock location from one direction, including any adjacent parking lane(s).
3. **Arterial Highway (Street)**—*Any United States or State numbered route, controlled- access highway, or other major radial or circumferential street or highway designated by local authorities within their respective jurisdictions as part of a major arterial system of streets or highways. [4511.01(CCC), O.R.C.]*
4. **Average Day**—a day representing traffic volumes normally and repeatedly found at a location, typically a weekday when volumes are influenced by employment or a weekend when volumes are influenced by entertainment or recreation.
5. **Beacon**—a highway traffic signal with one or more signal sections that operates in a flashing mode.
6. **Bicycle**—*Every device, other than a tricycle designed solely for use as a play vehicle by a child, propelled solely by human power upon which any person may ride having either two tandem wheels, or one*

wheel in the front and two wheels in the rear, any of which is more than fourteen inches in diameter. [4511.01(G), O.R.C.]

- 7. Bicycle Lane**—a portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists.
- 8. Centerline Markings**—the yellow pavement marking line(s) that delineates the separation of traffic lanes that have opposite directions of travel on a roadway. These markings need not be at the geometrical center of the pavement.
- 9. Changeable Message Signs**—signs that are capable of displaying more than one message, changeable manually, by remote control, or by automatic control. These signs are referred to as Dynamic Message Signs in the National Intelligent Transportation Systems (ITS) Architecture.
- 10. Channelizing Line Marking**—a wide or double solid white line used to form islands where traffic in the same direction of travel is permitted on both sides of the island.
- 11. Circular Intersection**—an intersection that has an island, generally circular in design, located in the center of the intersection where traffic passes to the right of the island. Circular intersections include roundabouts, rotaries, and traffic circles.
- 12. Clear Zone**—the total roadside border area, starting at the edge of the traveled way, that is wide enough to allow an errant driver to stop or regain control of a vehicle. This area might consist of a shoulder, a recoverable slope, and/or a nonrecoverable, traversable slope with a clear run-out area at its toe.
- 13. Concurrent Flow HOV Lane**—an HOV lane that is operated in the same direction as the adjacent mixed flow lanes, separated from the adjacent general purpose freeway lanes by a standard lane stripe, painted buffer, or barrier.
- 14. Contraflow Lane**—a lane operating in a direction opposite to the normal flow of traffic designated for peak direction of travel during at least a portion of the day. Contraflow lanes are usually separated from the off-peak direction lanes by plastic pylons, or by moveable or permanent barrier.
- 15. Conventional Road**—a street or highway other than a low-volume road (as defined in Section 5A.01), expressway, or freeway.

- 16. Collector Highway**—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.
- 17. Crosswalk—Means:**
- (1) That part of a roadway at intersections ordinarily included within the real or projected prolongation of property lines and curb lines or, in the absence of curbs, the edges of the traversable roadway,*
- (2) Any portion of a roadway at an intersection or elsewhere, distinctly indicated for pedestrian crossing by lines or other markings on the surface,*
- (3) Notwithstanding divisions (1) and (2) of this section, there shall not be a crosswalk where local authorities have placed signs indicating no crossing. [4511.01(LL), O.R.C.]*
- 18. Crosswalk Lines**—white pavement marking lines that identify a crosswalk.
- 19. Delineators**—retroreflective devices mounted on the roadway surface or at the side of the roadway in a series to indicate the alignment of the roadway, especially at night or in adverse weather.
- 20. Driver (or Operator)**—*Every person who drives or is in actual physical control of a vehicle, trackless trolley, or streetcar. [4511.01 (Y), O.R.C.]*
- 21. Dynamic Envelope**—the clearance required for the train and its cargo overhang due to any combination of loading, lateral motion, or suspension failure.
- 22. Edge Line Markings**—white or yellow pavement marking lines that delineate the right or left edge(s) of a traveled way.
- 23. End-of-Roadway Marker**—a device used to warn and alert road users of the end of a roadway in other than temporary traffic control zones.
- 24. Engineering Judgment**—the evaluation of available pertinent information, and the application of appropriate principles, Standards, Guidance, and practices as contained in this Manual and other sources, for the purpose of

deciding upon the applicability, design, operation, or installation of a traffic control device. Engineering judgment shall be exercised by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. Documentation of engineering judgment is not required.

- 25. Engineering Study**—the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, Standards, Guidance, and practices as contained in this Manual and other Sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. An engineering study shall be performed by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. An engineering study shall be documented.
- 26. Expressway**—*A divided arterial highway for through traffic with full or partial control of access with an excess of fifty per cent of all crossroads separated in grade. [4511.01(ZZ), O.R.C.]*
- 27. Flashing (Flashing Mode)**—a mode of operation in which a traffic signal indication is turned on and off repetitively.
- 28. Freeway**—*A divided multi-lane highway for through traffic with all crossroads separated in grade and with full control of access. [4511.01(YZ), O.R.C.]*
- 29. Guide Sign**—a sign that shows route designations, destinations, directions, distances, services, points of interest, or other geographical, recreational, or cultural information.
- 30. High Occupancy Vehicle (HOV)**—a motor vehicle carrying at least two or more persons, including carpools, vanpools, and buses.
- 31. Highway (or Street)**—*The entire width between the boundary lines of every way open to the use of the public as a thoroughfare for purposes of vehicular travel. [4511.01(BB), O.R.C.]*
- 32. Highway, Controlled-Access**—*Every street or highway in respect to which owners or occupants of abutting lands and other persons have no legal right of access to or from the same except at such points only and in such manner as may be determined by the public*

authority having jurisdiction over such street or highway. [4511.01 (CC), O.R.C.]

33. Highway, Through—*Every street or highway as provided in section 4511.65 of the Revised Code. [4511.01(HH), O.R.C.]*

34. Highway-Rail Grade Crossing—the general area where a highway and a railroad's right-of-way cross at the same level, within which are included the railroad tracks, highway, and traffic control devices for highway traffic traversing that area.

35. Highway Traffic Signal—a power-operated traffic control device by which traffic is warned or directed to take some specific action. These devices do not include power-operated signs, illuminated pavement markers, barricade warning lights, or steady burning electric lamps.

36. 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, or independent roadway on a separate right-of-way.

37. Interchange—a system of interconnecting roadways providing for traffic movement between two or more highways that do not intersect at grade.

38. Intermediate Interchange—an interchange with an urban or rural route that is not a major or minor interchange as defined herein.

39. Intersection—Means:

(1) The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two highways which join one another at, or approximately at, right angles, or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict;

(2) Where a highway includes two roadways thirty feet or more apart, then every crossing of each roadway of such divided highway by an intersecting highway shall be regarded as a separate intersection. If an intersecting highway also includes two roadways thirty feet or more apart, then every crossing of two

roadways of such highways shall be regarded as a separate intersection;

(3) The junction of an alley with a street or highway, or with another alley, shall not constitute an intersection. [4511.01(KK), O.R.C.]

- 40. Island**—a defined area between traffic lanes for control of vehicular movements or for pedestrian refuge. It includes all end protection and approach treatments. Within an intersection area, a median or an outer separation is considered to be an island.
- 41. Lane Line Markings**—white pavement marking lines that delineate the separation of traffic lanes that have the same direction of travel on a roadway.
- 42. Lane-Use Control Signal**—a signal face displaying indications to permit or prohibit the use of specific lanes of a roadway or to indicate the impending prohibition of such use.
- 43. Legend**—see Sign Legend.
- 44. Logo**—a distinctive emblem, symbol, or trademark that identifies a product or service.
- 45. Longitudinal Markings**—pavement markings that are generally placed parallel and adjacent to the flow of traffic such as lane lines, centerlines, edge lines, channelizing lines, and others.
- 46. Major Interchange**—an interchange with another freeway or expressway, or an interchange with a high-volume multilane highway, principal urban arterial, or major rural route where the interchanging traffic is heavy or includes many road users unfamiliar with the area.
- 47. Major Street**—the street normally carrying the higher volume of vehicular traffic.
- 48. Median**—the area between two roadways of a divided highway 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.
- 49. Minor Interchange**—an interchange where traffic is local and very light, such as interchanges with land service access roads. Where the sum of the exit

volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as local.

- 50. Minor Street**—the street normally carrying the lower volume of vehicular traffic.
- 51. Object Markers**—devices used to mark obstructions within or adjacent to the roadway.
- 52. Occupancy Requirement**—any restriction that regulates the use of a facility for any period of the day based on a specified number of persons in a vehicle.
- 53. Occupants**—the people driving or riding in a car, truck, bus, or other vehicle.
- 54. Paved**—a bituminous surface treatment, mixed bituminous concrete, or Portland cement concrete roadway surface that has both a structural (weight bearing) and a sealing purpose for the roadway.
- 55. Pedestrian**—*Any natural person afoot.* [4511.01(X), O.R.C.]
- 56. Platoon**—a group of vehicles or pedestrians traveling together as a group, either voluntarily or involuntarily, because of traffic signal controls, geometrics, or other factors.
- 57. Principal Legend**—place names, street names, and route numbers placed on guide signs.
- 58. Public Road**—any road or street under the jurisdiction of and maintained by a public agency and open to public travel.
- 59. Railroad**—*A carrier of persons or property operating upon rails placed principally on a private right-of-way* [4511.01(P), O.R.C.]
- 60. Raised Pavement Marker**—a device with a height of at least 10 mm (0.4 in) mounted on or in a road surface and intended to supplement or substitute for pavement markings.
- 61. Regulatory Signs**—a sign that gives notice to road users of traffic laws or regulations.

- 62. Retroreflectivity**—a property of a surface that allows a large portion of the light coming from a point source to be returned directly back to a point near its origin.
- 63. Right-of-Way**—*Means either of the following, as the context requires:*
- (1) The right of a vehicle, streetcar, trackless trolley, or pedestrian to proceed uninterrupted in a lawful manner in the direction, in which it or the individual is moving in preference to another vehicle, streetcar, trackless trolley, or pedestrian approaching from a different direction into its or the individual's path;*
 - (2) A general term denoting land, property, or interest therein, usually in the configuration of a, strip, acquired for or devoted to transportation purposes. When used in this context, right-of-way includes the roadway, shoulders or berm, ditch, and slopes extending to the right-of-way limits under the control of the state or local authority.*
[4511.01 (UU), O.R.C.]
- 64. Road-** See Roadway.
- 65. Roadway**—*That portion of a highway improved, designed, or ordinarily used for vehicular travel, except the berm or shoulder. If a highway includes two or more separate roadways the term "roadway" means any such roadway separately but not all such roadways collectively.* [4511.01(EE), O.R.C.]
- 66. Roadway Network**—a geographical arrangement of intersecting roadways.
- 67. Road User**—a vehicle operator, bicyclist, or pedestrian within the highway, including workers in temporary traffic control zones.
- 68. Rumble Strip**—a series of intermittent, narrow, transverse areas of rough textured, slightly raised, or depressed road surface that is installed to alert road users to unusual traffic conditions.
- 69. Rural Highway**—a type of roadway normally characterized by lower volumes, higher speeds, fewer turning conflicts, and less conflict with pedestrians.

- 70. Safety Zone**—*The area or space officially set apart within a roadway for the exclusive use of pedestrians and protected or marked or indicated by adequate signs as to be plainly visible at all times. [4511.01(MM), O.R.C.]*
- 71. Shared Roadway**— a roadway which 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.
- 72. Shared-Use Path**—a bikeway 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 might also be used by pedestrians, skaters, wheelchair users, joggers, and other nonmotorized users.
- 73. Sidewalk**—*That portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians. [4511.01(FF), O.R.C.]*
- 74. Sign**—any traffic control device that is intended to communicate specific information to road users through a word or symbol legend. Signs do not include traffic control signals, pavement markings, delineators, or channelization devices.
- 75. Sign Assembly**—a group of signs, located on the same support(s), that supplement one another in conveying information to road users.
- 76. Sign Illumination**—either internal or external lighting that shows similar color by day or night. Street, highway, or strobe lighting shall not be considered as meeting this definition.
- 77. Sign Legend**—all word messages, logos, and symbol designs that are intended to convey specific meanings.
- 78. Sign Panel**—a separate panel or piece of material containing a word or symbol legend that is affixed to the face of a sign.
- 79. Speed**—speed is defined based on the following classifications:
- (a) **Advisory Speed**—a recommended speed for all vehicles operating on a section of highway and based on the highway design, operating characteristics, and conditions.

- (b) **Average Speed**—the summation of the instantaneous or spot-measured speeds at a specific location of vehicles divided by the number of vehicles observed.
 - (c) **Design Speed**—a selected speed used to determine the various geometric design features of a roadway.
 - (d) **85th-Percentile Speed**—The speed at or below which 85 percent of the motorized vehicles travel.
 - (e) **Operating Speed**—a speed at which a typical vehicle or the overall traffic operates. Operating speed may be defined with speed values such as the average, pace, or 85th-percentile speeds.
 - (f) **Pace Speed**—the highest speed within a specific range of speeds that represents more vehicles than in any other like range of speed. The range of speeds typically used is 10 km/h or 10 mph.
 - (g) **Posted Speed**—the speed limit determined by law and shown on Speed Limit signs.
 - (h) **Statutory Speed**—a speed limit established by legislative action that typically is applicable for highways with specified design, functional, jurisdictional and/or location characteristic and is not necessarily shown on Speed Limit signs.
- 80. Speed Limit**—the maximum (or minimum) speed applicable to a section of highway as established by law.
- 81. Speed Measurement Marking**—a white transverse pavement marking placed on the roadway to assist the enforcement of speed regulations.
- 82. Speed Zone**—a section of highway with a speed limit that is established by law but which may be different from a legislatively specified statutory speed limit.
- 83. State Highway**—*A highway under the jurisdiction of the department of transportation outside the limits of municipal corporations, provided that the authority conferred upon the director of transportation in section 5511.01 of the Revised Code to erect state highway route markers and signs directing traffic shall not be*

modified by sections 4511.01 to 4511.79, and 4511.99 of the Revised Code. [4511.01(II), O.R.C.]

- 84. State Route**—*Every highway which is designated with an official state route number and so marked. [4511.01(JJ), O.R.C.]*
- 85. Stop Line**—a solid white pavement marking line extending across approach lanes to indicate the point at which a stop is intended or required to be made.
- 86. Street**—see Highway.
- 87. Temporary Traffic Control Zone**—an area of a highway where road user conditions are changed because of a work zone or incident by the use of temporary traffic control devices, flaggers, police, or other authorized personnel.
- 88. Traffic**—*Pedestrians, ridden or herded animals, vehicles, streetcars, trackless trolleys, and other devices, either singly or together, while using any highway for purposes of travel. [4511.01(TT), O.R.C.]*
- 89. Traffic Control Devices**—*All flaggers signs, signals, markings, and devices placed or erected by authority of a public body or official having jurisdiction, for the purpose of regulating, warning or guiding traffic, including signs denoting names of streets and highways. [4511.01(QQ), O.R.C.]*
- 90. Traffic Control Signal (Traffic Signal)**—*A type of highway traffic signal, manually, electrically, or mechanically operated by which traffic is alternately directed to stop and permitted to proceed. [4511.01(RR), O.R.C.]*
- 91. Train**—one or more locomotives coupled, with or without cars, that operates on rails or tracks and to which all other traffic must yield the right-of-way by law at highway-rail grade crossings.
- 92. Transverse Markings**—pavement markings that are generally placed perpendicular and across the flow of traffic such as shoulder markings, word and symbol markings, stop lines, crosswalk lines, speed measurement markings, parking space markings, and others.
- 93. Traveled Way**—the portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes.

- 94. Urban Street**—a type of street normally characterized by relatively low speeds, wide ranges of traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian traffic, and more businesses and houses.
- 95. Vehicle**—*Every device in, upon, or by which any person or property may be transported or drawn upon a highway, except devices moved by power collected from overhead electric trolley wires, or used exclusively upon stationary rails or tracks, and except devices other than bicycles moved by human power. [4511.01(A), O.R.C.]*
- 96. Vehicle, Emergency**—*Emergency vehicles of municipal, township, or county departments or public utility corporations when identified as such as required by law, the director of public safety, or local authorities, and motor vehicles when commandeered by a police officer. [4511.01(D), O.R.C.]*
- 97. Vehicle, Motor**—*Every vehicle propelled or drawn by power other than muscular power or power collected from overhead electric trolley wires, except motorized bicycles, road rollers, traction engines, power shovels, power cranes, and other equipment used in construction work and not designed for or employed in general highway transportation, hole-digging machinery, welldrilling machinery, ditch-digging machinery, farm machinery, trailers used to transport agricultural produce or agricultural production materials between a local place of storage or supply and the farm when drawn or towed on a street or highway at a speed of twenty-five miles per hour or less, threshing machinery, hay-baling machinery, agricultural tractors and machinery used in the production of horticultural, floricultural, agricultural and vegetable products, and trailers designed and used exclusively to transport a boat between a place of storage and a marina, or in and around a marina, when drawn or towed on a street or highway for a distance of no more than ten miles and at a top speed of twenty-five miles per hour or less. [4511.01(B), O.R.C.]*
- 98. Vehicle, Public Safety**—*Means any of the, following:*
- (1) Ambulances, including private ambulance companies under contract to a municipal corporation, township, or county, and private ambulances and nontransport vehicles bearing license plates issued under section 4503.49 of the Revised Code,*

(2) Motor vehicles used by public law enforcement officers or other persons sworn to enforce the criminal and traffic laws of the state;

(3) Any motor vehicle when properly identified as required by the director of public safety, when used in response to fire emergency calls or to provide emergency medical service to ill or injured persons, and when operated by a duly qualified person who is a member of a volunteer rescue service or a volunteer fire department, and who is on duty pursuant to the rules or directives of that service. The state fire marshal shall be designated by the director of public safety as the certifying agency for all public safety vehicles described in division (E)(3) of this section.

(4) Vehicles used by fire departments, including motor vehicles when used by volunteer fire fighters responding to emergency calls in the fire department service when identified as required by the director of public safety.

Any vehicles used to transport or provide emergency medical service to an ill or injured person, when certified as a public safety vehicle, shall be considered a public safety vehicle when transporting an ill or injured person to a hospital regardless of whether such vehicle has already passed a hospital.

(5) Vehicles used by the commercial motor vehicle safety enforcement unit for the enforcement orders and rules of the public utilities commission as specified in section 5503.34 of the Revised Code. [4511.01(E), O.R.C.]

99. Warning Sign—a sign that gives notice to road users of a situation that might not be readily apparent.

100. Warrant—a warrant describes threshold conditions to the engineer in evaluating the potential safety and operational benefits of traffic control devices and is based upon average or normal conditions. Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification for the installation of the device.

101. Wrong-Way Arrows—slender, elongated, white pavement marking arrows placed upstream from the ramp terminus to indicate the correct direction of

traffic flow. Wrong-way arrows are intended primarily to warn wrong-way road users that they are going in the wrong direction.

Section 1A.14 Abbreviations Used on Traffic Control Devices

Standard:

When abbreviations are needed for traffic control devices, the abbreviations shown in Table 1A-1 shall be used.

Guidance:

The abbreviations for the words listed in Table 1A-2 should not be used in connection with traffic control devices unless the prompt word shown in Table 1A-2 either precedes or follows the abbreviation.

Standard:

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

Table 1A-1. Acceptable Abbreviations

Word Message	Standard Abbreviation	Word Message	Standard Abbreviation
Afternoon / Evening	PM	Liquid Propane Gas	LP-GAS
Alternate	ALT	Maintenance	MAINT
Avenue	AVE	Meter(s)	M
Bicycle	BIKE	Metric Ton	t
Boulevard	BLVD	Mile(s)	MI
Cannot	CANT	Miles per Hour	MPH or M.P.H.
CB Radio	CB	Minute(s)	MIN
Center	CNTR	Monday	MON
Civil Defense	CD	Morning / Late Night	PM
Compressed Natural Gas	CNG	Normal	NORM
Crossing (other than highway-rail)	XING	North	N
Diesel Fuel	D	Northbound	NB
Do Not	DONT	Parking	PKING
Drive	DR	Pedestrian	PED
East	E	Pounds	LBS
Eastbound	EB	Right	RHT
Electric Vehicle	EV	Road	RD
Emergency	EMER	Saturday	SAT
Entrance, Enter	ENT	Service	SERV
Expressway	EXPWY	Shoulder	SHLDR
Feet	FT	Slippery	SLIP
FM Radio	FM	South	S
Freeway	FRWY, FWY	Southbound	SB
Friday	FRI	Speed	SPD
Hazardous Material	HAZMAT	Street	ST
High Occupancy Vehicle	HOV	Sunday	SUN
Highway	HWY	Telephone	PHONE
Highway-Rail Grade Crossing Pavement Marking	RXR	Temporary	TEMP
Hospital	H	Thursday	THURS
Hour(s)	HR	Tires With Lugs	LUGS
Information	INFO	Tons of Weight	T
It Is	ITS	Traffic	TRAF
Junction / Intersection	JCT	Travelers	TRAVLRS
Kilogram	kg	Tuesday	TUES
Kilometer(s)	KM	Two-Way Intersection	2-WAY
Kilometers per hour	km/h	Two-Wheeled Vehicles	CYCLES
Lane	LN	US Numbered Route	US
Left	LFT	Vehicles	VEH
		Warning	WARN
		Wednesday	WED
		West	W
		Westbound	WB
		Will Not	WONT

Table 1A-2. Abbreviations that are Acceptable Only with a Prompt Word

Word	Abbreviation	Prompt Word
Access	ACCS	Road
Ahead	AHD	Fog*
Blocked	BLKD	Lane*
Bridge	BRDG	[Name]*
Condition	COND	Traffic*
Congested	CONG	Traffic*
Construction	CONST	Ahead
Downtown	DWNTN	Traffic*
Eastbound	E-BND	Traffic*
Exit	EX, EXT	Next*
Express	EXP	Lane
Frontage	FRNTG	Road
Hazardous	HAZ	Driving
Interstate	I	[Number]
Local	LOC	Traffic
Lower	LWR	Level
Major	MAJ	Accident
Minor	MNR	Accident
Northbound	N-BND	Traffic
Oversized	OVRSZ	Load
Prepare	PREP	To Stop
Pavement	PVMT	Wet*
Quality	QLTY	Air*
Roadwork	RDWK	Ahead [Distance]
Route	RT	Best*
Southbound	S-BND	Traffic
Township	TWNSHP	Limits
Turnpike	TRNPK	[Name]*
Upper	UPR	Level
Vehicle	VEH	Stalled*
Westbound	W-BND	Traffic

* These prompt words should precede the abbreviation.

Table 1A-3. Unacceptable Abbreviations

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