National Committee on
Uniform Traffic Control Devices

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Item Number: 26B-TTC-01

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

COMMITTEE / TASK FORCE:	Temporary Traffic Control Technical Committee
ITEM NUMBER:	26B-TTC-01
TOPIC:	Driveway Assistance Devices (DAD)
ORIGIN OF REQUEST:	DAD MCTF
AFFECTED SECTIONS OF MUTCD:	1C.02, 1C.03, 4A.01, 4D.05, 4D.07, 4D.08, 4D.09, 4D.11, 4F.02, 4F.09, 4O.03a (new), 6G.11b (new), 6L.01, 6L.04a (new), Figure 4O-X (new), Figure 6G-1, Table 6G-1

DEVELOPMENT HISTORY:

Approved by TTC TC: 06/25/2026
Concurrence by Signals TC: 06/24/2026
Concurrence by Edit Committee: 06/24/2026
Approved by NCUTCD Council: .....

This is a proposed change to the MUTCD that has been developed by a technical committee, joint committee, or joint task force of the NCUTCD. The NCUTCD is distributing this to its sponsoring organizations for review and comment. Sponsor comments will be considered in revising the proposal prior to NCUTCD Council consideration. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, options, or support. If approved by the NCUTCD Council, the recommended changes will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only through the federal rulemaking process.

SUMMARY:

The Driveway Assistance Device (DAD) in Interim Approval IA-23 issued by FHWA in January 2025 addresses the safety challenges associated with residential driveways within the limits of temporary traffic control zones controlled by one-lane, two-way temporary traffic control signals. This proposal improves uniformity in the appearance, function, and use of the device.

DISCUSSION:

The DAD was initially conceived in response to unique access challenges encountered in one-lane, two-way work zones following Hurricane Sandy. Its purpose was to provide a controlled and predictable method for residents to safely exit their driveways with minimal interference to the through-movement of traffic. Early deployments proved successful, prompting further research focused on driver recognition, signal head configuration, and optimal indication design.

Between 2013 and 2023, ten State Departments of Transportation - Indiana, Kansas, Massachusetts, Michigan, Mississippi, Nebraska, New York, Ohio, Texas, and Virginia - conducted formal experimentation of the device, then referred to as the Driveway Assistance Device. These evaluations

assessed operational performance, safety impacts, cost effectiveness, and driver comprehension over a wide variety of work zone conditions.

Across these studies, a three-section signal head in an inverted “T” configuration emerged as the most effective arrangement. Driver comprehension research supported the inclusion of a “NO TURN ON RED” sign supplemented with a regulatory plaque reading “TURN ONLY IN DIRECTION OF ARROW” to reinforce correct user behavior.

Based on the study results within the limited application of residential driveway control the DAD consistently demonstrated positive operational and safety outcomes. Participating agencies observed high driver compliance, improved egress efficiency, and uninterrupted mainline traffic operations, with no reported crashes associated with its use. The DAD also significantly reduces flagger exposure, particularly in low-visibility or high-risk environments, while providing substantial cost savings when compared to traditional flagging operations.

The collective results confirm that the DAD is a safe, efficient, and cost effective device for facilitating controlled driveway access within one-lane, two-way TTC applications. Incorporating its use and operational criteria into the MUTCD will ensure consistent nationwide implementation and strengthen safety for both roadway users and workers.

This device was referred to as a Driveway Assistance Device (DAD) in the various research efforts and experimentations between 2013-2025. However, when FHWA issued Interim Approval 23 in 2025, it elected to refer to the device as a Residential Driveway Traffic Signal (RDTS). The DAD MCTF has decided to recommend retaining the prior “Driveway Assistance Device” name since (a) that name had already received common acceptance in Industry, and at least 10 state DOTs were already routinely using devices under that name, and (b) the device is not a stand-alone traffic signal, but rather supplements the TTC traffic control signals that will always be present and controlling traffic on the road that the residential driveway intersects.

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]. Deletions made by a technical committee, joint committee, or task force after initial distribution to sponsoring organizations are shown in ~~highlighted red strikethrough and sans-serif text~~. Additions made by a technical committee, joint committee, or task force after initial distribution to sponsoring organizations are shown in underline blue and sans-serif text.

PART 1
GENERAL

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

[For brevity, only the affected paragraphs and definitions in Chapter 1C are included.]

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

Standard:

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

200a. Driveway Assistance Device (DAD) – A device used in conjunction with temporary traffic control signals along a one-lane, two-way road segment to control traffic entering a TTC Zone from a residential driveway.

Section 1C.03 Meanings of Acronyms and Abbreviations Used in this Manual

Standard:

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

47a. DAD – Driveway Assistance Device

PART 4
HIGHWAY TRAFFIC SIGNALS

CHAPTER 4A. GENERAL

[For brevity, only the affected paragraph in Section 4A.01 is included.]

Section 4A.01 Types

Support:

01 The following types and uses of highway traffic signals are discussed in Part 4: traffic control signals; bicycle signal faces; pedestrian signal heads; hybrid beacons; rectangular rapid flashing beacons; emergency-vehicle traffic control signals; traffic control signals for one-lane, two-way facilities; traffic control signals for freeway entrance ramps; movable bridge traffic signals; toll plaza traffic signals; flashing beacons; lane-use control signals; Driveway Assistance Devices (DADs); and in-roadway warning lights.

CHAPTER 4D. DESIGN FEATURES OF TRAFFIC CONTROL SIGNALS

[For brevity, only paragraph 01 of Section 4D.05 is included. This proposal does not affect paragraphs 02-08, Figure 4D-1, or Table 4D-1.]

Section 4D.05 Number of Signal Faces on an Approach

Standard:

01 The signal faces for each approach to an intersection or a midblock location shall be provided as follows:

A. If a signalized motor vehicle through movement exists on an approach, a minimum of two primary signal faces shall be provided for the through movement. Except for single lane approaches with a

combined left-turn/right-turn lane and no through movement (see Figure 4F-15 (A)), if a signalized motor vehicle through movement does not exist on an approach, a minimum of two primary signal faces shall be provided for the signalized motor vehicle turning movement that is considered to be the major movement from the approach (also see Section 4F.16).

B. See Sections 4F.02 through 4F.08 for left-turn (and U-turn to the left) signal faces.

C. See Sections 4F.09 through 4F.15 for right-turn (and U-turn to the right) signal faces.

D. See Section 4O.04 for Driveway Assistance Device (DAD) signal faces.

[For brevity, only paragraphs 01 – 04a of Section 4D.07 is included. This proposal does not affect paragraphs 05-13 or Figure 4D-2.]

Section 4D.07 Lateral Positioning of Signal Faces

Standard:

01 **At least one and preferably both of the minimum of two primary signal faces required for the through movement (or the major turning movement if there is no through movement) on the approach shall be located between two lines intersecting with the center of the approach at a point 10 feet behind the stop line, one making an angle of approximately 20 degrees to the right of the center of the approach extended, and the other making an angle of approximately 20 degrees to the left of the center of the approach extended. The signal face that satisfies this requirement shall simultaneously satisfy the longitudinal placement requirement described in Section 4D.08 (see Figure 4D-2).**

02 **If both of the minimum of two primary signal faces required for the through movement (or the major turning movement if there is no through movement) on the approach are post-mounted, they shall both be on the far side of the intersection, one on the right and one on the left of the approach lane(s).**

03 **The required signal faces for through traffic on an approach shall be located not less than 8 feet apart measured horizontally perpendicular to the approach between the centers of the signal faces.**

04 **If more than one separate turn signal face is provided for a turning movement and if one or both of the separate turn signal faces are located over the roadway, the signal faces shall be located not less than 8 feet apart measured horizontally perpendicular to the approach between the centers of the signal faces.**

Support

04a See Section 6L.04a for the lateral positioning of signal faces on a Driveway Assistance Device (DAD) used to control traffic entering from a residential driveway to a one lane, two-way section of a TTC Zone controlled by temporary traffic control signals.

Section 4D.08 Longitudinal Positioning of Signal Faces

Standard:

01 **Except where the width of an intersecting roadway or other conditions make it physically impractical, the signal faces for each approach to an intersection or a midblock location shall be provided as follows:**

A. A signal face installed to satisfy the requirements for primary left-turn signal faces (see Sections 4F.02 through 4F.08) and primary right-turn signal faces (see Sections 4F.09 through 4F.15), and at least one and preferably both of the minimum of two primary signal faces required for the through movement (or the major turning movement if there is no through movement) on the approach shall be located:

1. No less than 40 feet beyond the stop line, and

2. No more than 180 feet beyond the stop line unless a supplemental near-side signal face is provided.

B. The primary signal faces that are used to satisfy the requirements of Item A shall simultaneously satisfy the lateral placement requirement described in Section 4D.07 (see Figure 4D-2).

Support:

01a See Section 6L.04a for the longitudinal positioning of signal faces on a Driveway Assistance Device (DAD) used to control traffic entering from a residential driveway to a one lane, two-way section of a TTC Zone controlled by temporary traffic control signals.

Guidance:

02 Where the nearest signal face is located between 150 and 180 feet beyond the stop line, engineering judgment of the conditions, including the worst-case visibility conditions, should be used to determine if the provision of a supplemental near-side signal face would be beneficial.

03 Supplemental near-side signal faces should be located as near as practicable to the stop line.

Support:

04 Section 4D.05 contains additional provisions regarding longitudinal positioning of signal faces for approaches having a posted or 85th-percentile speed of 45 mph or higher.

Section 4D.09 Mounting Height of Signal Faces

Standard:

01 The bottom of the signal housing and any related attachments to a vehicular signal face located over any portion of a highway that can be used by motor vehicles shall be at least 15 feet above the pavement.

02 The bottom of the signal housing (including brackets) of a vehicular signal face that is vertically arranged or horizontally arranged and not located over a roadway:

- **A. Shall be a minimum of 8 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway.**
- **B. Shall be a minimum of 4.5 feet above the median island grade of a center median island if located on the near side of the intersection.**

Support:

02a See Section 6L.04a for the mounting height of signal faces on a Driveway Assistance Device (DAD) used to control traffic entering from a residential driveway to a one lane, two-way section of a TTC Zone controlled by temporary traffic control signals.

Guidance:

03 The top of the signal housing of a vehicular signal face located over any portion of a highway that can be used by motor vehicles should not be more than 25.6 feet above the pavement.

04 For viewing distances between 40 and 53 feet from the stop line, the maximum mounting height to the top of the signal housing of a vehicular signal face located over any portion of a highway that can be used by motor vehicles should be as shown in Figure 4D-3.

05 The bottom of the signal housing (including brackets) of a vehicular signal face that is vertically arranged and not located over a roadway or shoulder:

- *A. Should be a maximum of 19 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway.*
- *B. Should be a maximum of 19 feet above the median island grade of a center median island if located on the near side of the intersection.*

06 The bottom of the signal housing (including brackets) of a vehicular signal face that is horizontally arranged and not located over a roadway or shoulder:

- *A. Should be a maximum of 22 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway.*
- *B. Should be a maximum of 22 feet above the median island grade of a center median island if located on the near side of the intersection.*

[Incorporating 24A-TTC-06, Jan 2024]

Section 4D.11 Temporary and Portable Traffic Control Signals

Support:

01 A temporary traffic control signal is generally installed using methods that minimize the costs of installation, relocation, and/or removal. Typical temporary traffic control signals are for specific purposes, such as for one-lane, two-way sections in temporary traffic control zones (TTC Zone) (see Chapter 4O and 6L), for a haul-road intersections, or for access to a site that will have a permanent access point developed at another location in the near future. ~~Portable traffic control signals are temporary traffic control signals.~~

02 Because a portable traffic control signal is considered to be a type of temporary traffic control signal, the provisions for temporary traffic control signals are also applicable to portable traffic control signals.

02a Portable traffic control signal applications include temporary intersection control, temporary ramp metering, temporary driveway control, in a one-lane, two-way section of a ~~control~~ TTC zone~~s~~, and as a means to supplement or temporarily replace a malfunctioning or damaged traffic control signal.

Standard:

03 **Advance signing shall be used when employing a temporary traffic control signal.**

04 **A temporary traffic control signal shall:**

- **A. Meet the physical display and operational requirements of a conventional traffic control signal;**
- **B. Be removed when no longer needed; and**
- **C. Except as provided in Paragraph~~s~~ 5, 9a and 9b of this section, be placed in the flashing mode during periods when it is not desirable to operate the signal in a steady mode, or the signal heads shall be covered, turned or taken down to indicate that the signal is not in operation.**

Option:

05 If the temporary traffic control signal is capable of being operated in a semi-actuated mode, such that green signal indications are continually shown to major-street traffic except when responding to a minor-street approach vehicle call, it may be operated in a semi-actuated mode instead of being placed in a flashing mode.

Guidance:

~~06 *A temporary traffic control signal should be used only if engineering judgment indicates that installing the signal will improve the overall safety and/or operation of the location.*~~

~~07 *The use of temporary traffic control signals by a work crew on a regular basis in their work area should be subject to the approval of the jurisdiction having authority over the roadway.*~~

08 *A temporary traffic control signal should not operate longer than 30 days unless associated with a longer-term temporary traffic control zone project.*

Support:

09 Section 6L.01 contains information about the use of temporary traffic control signals in temporary traffic control zones.

Standard

09a Except as provided in Paragraph 9b, temporary traffic control signals used for a one-lane, two-way facility, shall not be placed in the flashing mode.

Option:

09b A temporary portable traffic control signal used within TTC zones on a one-lane, two-way Facility section may be placed in flashing mode when:

- A traffic is actively controlled by a law enforcement officer, or a flagger
- B. during set-up
- C. TTC zone stage changes,
- D. shutdown, or
- E. when conflicting indications or other malfunction is detected by conflict monitor or Malfunction Management System and opposing traffic is visible from both ends of the TTC zone.

Standard:

09c When used for traffic control within a TTC zone, a temporary traffic control signal shall be implemented, installed and operated, or be implemented as approved, by authorized officials having jurisdiction over the roadway.

CHAPTER 4F. STEADY (STOP-AND-GO) OPERATION OF TRAFFIC CONTROL SIGNALS

Section 4F.02 Signal Indications for Left-Turn Movements – General

Support:

01 In Sections 4F.03 through 4F.08, provisions applicable to left-turn movements and left-turn lanes are also applicable to signal indications for U-turns to the left that are provided at locations where left turns are prohibited or not geometrically possible.

02 Left-turning traffic is controlled by one of four modes as follows:

A. Permissive Only Mode—turns made on a CIRCULAR GREEN signal indication, a flashing left-turn YELLOW ARROW signal indication, or a flashing left-turn RED ARROW signal indication after yielding to pedestrians, if any, and/or opposing traffic, if any.
B. Protected Only Mode—turns made only when a left-turn GREEN ARROW signal indication is displayed.
C. Protected/Permissive Mode—both modes can occur on an approach during the same cycle.
D. Variable Left-Turn Mode—the operating mode changes among the protected only mode and/or the protected/permissive mode and/or the permissive only mode during different periods of the day or as traffic conditions change.

Option:

03 In areas having a high percentage of older drivers, special consideration may be given to the use of protected only mode left-turn phasing, when appropriate.

Standard:

04 During a permissive left-turn movement, the signal faces for through traffic on the opposing approach shall simultaneously display green or steady yellow signal indications. If pedestrians crossing the lane or lanes used by the permissive left-turn movement to depart the intersection are controlled by pedestrian signal heads, the signal indications displayed by those pedestrian signal heads shall not be limited to any particular display during the permissive left-turn movement.

05 During a protected left-turn movement, the signal faces for through traffic on the opposing approach shall simultaneously display steady CIRCULAR RED signal indications. During a protected left-turn movement, a GREEN ARROW or a YELLOW ARROW signal indication shall not simultaneously be displayed to right-turning traffic on the opposing approach, except where a separate departure lane is available for each left-turn and right-turn lane with moving traffic and pavement markings or raised channelization clearly indicate which departure lane to use (see Item H.1 in Paragraph 3 in Section 4F.01). If pedestrians crossing the lane or lanes used by the protected left-turn movement to depart the intersection are controlled by pedestrian signal heads, the pedestrian signal heads shall display a steady UPRAISED HAND (symbolizing DONT WALK) signal indication during the protected left-turn movement.

06 If a combined left-turn/through lane exists on an approach, a left-turn GREEN ARROW or left-turn YELLOW ARROW signal indication or a flashing left-turn RED ARROW signal indication shall not be displayed to the approach simultaneously with a CIRCULAR RED signal indication for the through movement, and a left-turn RED ARROW signal indication shall not be displayed to the approach simultaneously with a CIRCULAR GREEN or CIRCULAR YELLOW signal indication for the through movement.

07 A yellow change interval for the left-turn movement shall not be displayed when the status of the left-turn operation is changing from permissive to protected within any given signal sequence.

08 If the operating mode changes among the protected only mode and/or the protected/permissive mode and/or the permissive only mode during different periods of the day or as traffic conditions change, the requirements in Sections 4F.03 through 4F.08 that are appropriate to that mode of operation shall be met, subject to the following:

A. The CIRCULAR GREEN and CIRCULAR YELLOW signal indications shall not be displayed when operating in the protected only mode.
B. The left-turn GREEN ARROW and left-turn YELLOW ARROW signal indications shall not be displayed when operating in the permissive only mode.

Option:

09 When variable left-turn mode phasing is used for an approach that has a combined left-turn/straight-through lane and a flashing yellow arrow is used as the permissive turn display, a five-section shared left-turn signal face containing both circular and arrow indications may be used in combination with one or more separate left-turn signal faces for the mandatory left-turn lane(s), if any are present, on the same approach. ~~The steady left-turn YELLOW ARROW signal indication and the flashing left-turn YELLOW ARROW signal indication may be displayed in the same section of the five-section shared left-turn signal face.~~ The five-section shared left-turn signal face may include a bimodal signal section that is capable of either of the following combinations of arrow indications both pointing in the same direction, provided that both arrows are never displayed simultaneously:

1. changing ~~alternating~~ between the display of a steady left-turn YELLOW ARROW and flashing left-turn YELLOW ARROW; or
2. changing ~~alternating~~ between the display of a steady left-turn GREEN ARROW and a flashing left-turn YELLOW ARROW~~, both pointing in the same direction, provided that both arrows are never displayed simultaneously~~. [25A-SIG-02, June 2025]

10 Additional static signs or changeable message signs may be used to meet the requirements for the variable left-turn mode or to inform drivers that left-turn green arrows will not be available during certain times of the day.

Support:

11 Sections 4F.03 through 4F.08 describe the use of the following two types of signal faces for controlling left-turn movements:

A. Shared signal face – This type of signal face controls both the left-turn movement and the adjacent movement (usually the through movement) and can serve as one of the two required primary signal faces for the adjacent movement. A shared signal face always displays the same color of circular indication that is displayed by the signal face or faces for the adjacent movement. If a shared signal face that provides protected/permissive mode left turns is mounted overhead for an approach that includes a mandatory left-turn lane, it is usually positioned over or slightly to the right of the extension of the lane line separating the left-turn lane from the adjacent lane. If a shared signal face that provides protected/permissive mode left turns is mounted overhead for an approach that does not include a mandatory left-turn lane, it is usually positioned over the center of the combined left-turn/straight-through lane.

B. Separate left-turn signal face – This type of signal face controls only the left-turn movement and cannot serve as one of the two required primary signal faces for the adjacent movement (usually the through movement) because it displays signal indications that are applicable only to the left-turn movement. This type of signal face is used only for an approach that has a mandatory left-turn lane(s). If a separate left-turn signal face is mounted overhead at the intersection, it is positioned over the extension of the mandatory left-turn lane. In a separate left-turn signal face, a flashing left-turn YELLOW ARROW signal indication or a flashing left-turn RED ARROW signal indication is used to control permissive left-turn movements.

11a Section 4O.04 contains provisions for signal faces used on a Driveway Assistance Device (DAD) for permissive left turn movements entering from a residential driveway to a one-lane, two-way section of a TTC Zone controlled by temporary traffic control signals.

12 Section 4D.07 contains provisions regarding the lateral positioning of signal faces that control left-turn movements.

13 It is not necessary that the same mode of left-turn operation or same type of left-turn signal face be used on every approach to a signalized location. Selecting different modes and types of left-turn signal faces for the various approaches to the same signalized location is acceptable.

Option:

14 A signal face that is shared by left-turning and right-turning traffic may be provided for a combined left-turn/right-turn lane on an approach that has no through traffic (see Section 4F.16).

Section 4F.09 Signal Indications for Right-Turn Movements – General

Support:

01 In Sections 4F.10 through 4F.15, provisions applicable to right-turn movements and right-turn lanes are also applicable to signal indications for U-turns to the right that are provided at locations where right turns are prohibited or not geometrically possible.

02 Right-turning traffic is controlled by one of four modes as follows:

A. Permissive Only Mode—turns made on a CIRCULAR GREEN signal indication, a flashing right-turn YELLOW ARROW signal indication, or a flashing right-turn RED ARROW signal indication after yielding to pedestrians, if any.
B. Protected Only Mode—turns made only when a right-turn GREEN ARROW signal indication is displayed.
C. Protected/Permissive Mode—both modes occur on an approach during the same cycle.
D. Variable Right-Turn Mode—the operating mode changes among the protected only mode and/or the protected/permissive mode and/or the permissive only mode during different periods of the day or as traffic conditions change.

Standard:

03 During a permissive right-turn movement, the signal faces, if any, that exclusively control U-turn traffic that conflicts with the permissive right-turn movement (see Item H.1 in Paragraph 3 in Section 4F.01) shall simultaneously display steady U-turn RED ARROW signal indications. If pedestrians crossing the lane or lanes used by the permissive right-turn movement to depart the intersection are controlled by pedestrian signal heads, the signal indications displayed by those pedestrian signal heads shall not be limited to any particular display during the permissive right-turn movement.

04 During a protected right-turn movement, a GREEN ARROW or a YELLOW ARROW signal indication shall not simultaneously be displayed to left-turning traffic on the opposing approach, except where a separate departure lane is available for each left-turn and right-turn lane with moving traffic and pavement markings or raised channelization clearly indicate which departure lane to use (see Item H.1 in Paragraph 3 in Section 4F.01). Signal faces, if any, that exclusively control U-turn traffic that conflicts with the protected right-turn movement shall simultaneously display steady RED ARROW signal indications. If pedestrians crossing the lane or lanes used by the protected right-turn movement to depart the intersection are controlled by pedestrian signal heads, the pedestrian signal heads shall display a steady UPRAISED HAND (symbolizing DONT WALK) signal indication during the protected right-turn movement.

05 If a combined right-turn/through lane exists on an approach, a right-turn GREEN ARROW or right-turn YELLOW ARROW signal indication or a flashing right-turn RED ARROW signal indication shall not be displayed to the approach simultaneously with a CIRCULAR RED signal indication for the through movement, and a right-turn RED ARROW signal indication shall not be displayed to the approach simultaneously with a CIRCULAR GREEN or CIRCULAR YELLOW signal indication for the through movement.

06 If the operating mode changes among the protected only mode and/or the protected/permissive mode and/or the permissive only mode during different periods of the day or as traffic conditions change, the requirements in Sections 4F.10 through 4F.15 that are appropriate to that mode of operation shall be met, subject to the following:

A. The CIRCULAR GREEN and CIRCULAR YELLOW signal indications shall not be displayed when operating in the protected only mode.
B. The right-turn GREEN ARROW and right-turn YELLOW ARROW signal indications shall not be displayed when operating in the permissive-only mode.

Option:

07 When variable right-turn mode phasing is used for an approach that has a combined right-turn/straight-through lane and a flashing yellow arrow is used as the permissive turn display, a five-section shared right-turn signal face containing both circular and arrow indications may be used in combination with one or more separate right-turn signal faces for the mandatory right-turn lane(s), if any are present, on the same approach. ~~The steady right-turn YELLOW ARROW signal indication and the flashing right-turn YELLOW ARROW signal indication may be displayed in the same section of the five-section shared right-turn signal face~~. The five-section shared right-turn signal face may include a bimodal signal section that is capable of either of the following combinations of

arrow indications both pointing in the same direction, provided that both arrows are never displayed simultaneously:

1. changing between the display of a steady right-turn YELLOW ARROW and flashing right-turn YELLOW ARROW; or
2. changing between the display of a steady right-turn GREEN ARROW and a flashing right-turn YELLOW ARROW. [25A-SIG-02, June 2025]

08 Additional static signs or changeable message signs may be used to meet the requirements for the variable right-turn mode or to inform drivers that right-turn green arrows will not be available during certain times of the day.

Support:

09 Sections 4F.10 through 4F.15 describe the use of the following two types of signal faces for controlling right-turn movements:

A. Shared signal face – This type of signal face controls both the right-turn movement and the adjacent movement (usually the through movement) and can serve as one of the two required primary signal faces for the adjacent movement. A shared signal face always displays the same color of circular indication that is displayed by the signal face or faces for the adjacent movement.
B. Separate right-turn signal face – This type of signal face controls only the right-turn movement and cannot serve as one of the two required primary signal faces for the adjacent movement (usually the through movement) because it displays signal indications that are applicable only to the right-turn movement. If a separate right-turn signal face is mounted overhead at the intersection, it is positioned over the extension of the mandatory right-turn lane. In a separate right-turn signal face, a flashing right-turn YELLOW ARROW signal indication or a flashing right-turn RED ARROW signal indication is used to control permissive right-turn movements.

09a See Section 4O.04 for signal faces used on a Driveway Assistance Device (DAD) for permissive right turn movements entering from a residential driveway to a one-lane, two-way section of a TTC Zone controlled by temporary traffic control signals.

10 Section 4D.07 contains provisions regarding the lateral positioning of signal faces that control right-turn movements.

11 It is not necessary that the same mode of right-turn operation or same type of right-turn signal face be used on every approach to a signalized location. Selecting different modes and types of right-turn signal faces for the various approaches to the same signalized location is acceptable.

Option:

12 A signal face that is shared by left-turning and right-turning traffic may be provided for a combined left-turn/right-turn lane on an approach that has no through traffic (see Section 4F.16).

CHAPTER 4O. TRAFFIC CONTROL SIGNALS FOR ONE-LANE, TWO-WAY FACILITIES

Section 4O.03a Driveway Assistance Devices (DAD)

Option:

01 A Driveway Assistance Device (DAD) may be used in conjunction with temporary traffic control signals at a residential driveway within a one lane, two-way section of a TTC Zone (See Section 6L.04a1).

Standard:

02 DADs shall:

A. Consist of one three-section signal face in an inverted-T configuration comprised of a 12-inch steady CIRCULAR RED signal indication on top and two adjacent 12-inch YELLOW ARROW indications (see Figure 4O.X)
B. Be coordinated with the temporary traffic control signals controlling the main roadway traffic.
C. Be programed to operate in a continuous cycle.
D. Be incorporated into the malfunction management system of the Temporary Traffic Control Signals controlling the TTC Zone (see Section 6L.01).

E. Provide for an all-red clearance interval of the Temporary Traffic Control Signal System sufficient to account for the addition of driveway vehicles to the platoon.

F. Be programmed such that vehicles controlled by the DAD can turn before, within, and after the main roadway traffic platoon.

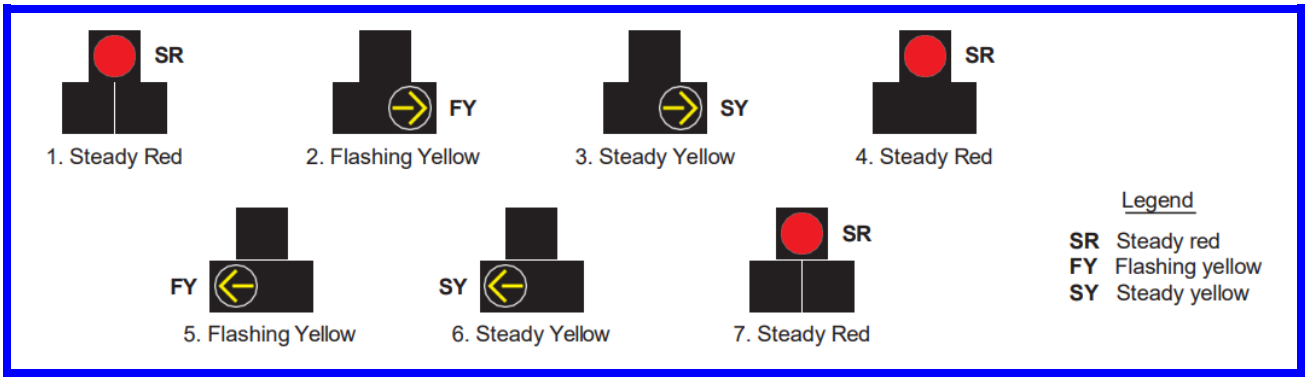
G. Display a Circular Red indication when the associated temporary traffic control signals are operating in fault mode.

H. Be covered, or turned to face away from traffic, when not in use.

Option:

03 When the TTC Zone is restored to a two-lane, two-way condition, the mainline temporary traffic control signals may operate in a flashing yellow mode, and the DAD may be placed in a flashing circular red mode or be covered or turned away from traffic.

Figure 4O-X. Driveway Assistance Device Signal Phasing Sequence

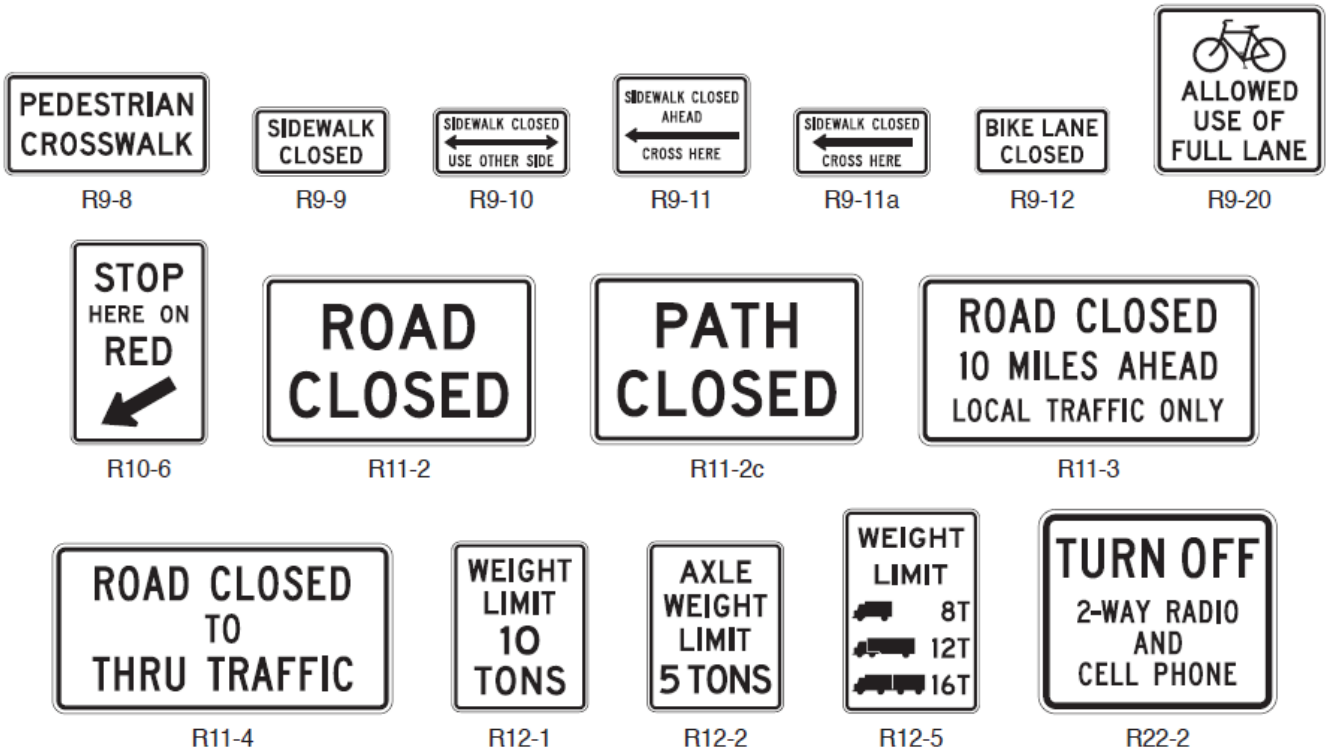


PART 6
TEMPORARY TRAFFIC CONTROL

CHAPTER 6G. TTC ZONE REGULATORY SIGNS

[For brevity, only sheet 2 of Figure 6G-1 is shown]

Figure 6G-1. Regulatory Signs and Plaques In Temporary Traffic Control Zones (Sheet 2 of 2)



Note: See Chapter 2B for information on the application of these signs.

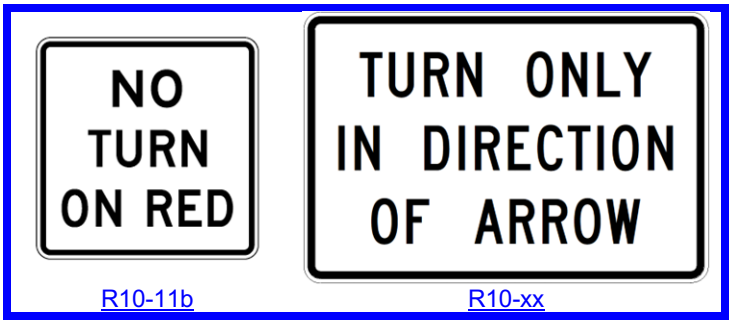


Table 6G-1. Temporary Traffic Control Zone Regulatory Signs and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Stop Here on Red	R10-6	6L.04	24 x 36	-	-
No Turn on Red	R10-11b	6L.01	24 x 24	-	-
Turn Only in Direction of Arrow	R10-XX	6L.01	36 x 24	-	-
Road Closed	R11-2, 2a, 2b, 2c	6G.04	48 x 30	-	-

[For brevity, only a portion of Table 6G-1 is shown]

Section 6G.11b Driveway Assistance Device Signs

Standard:

01 **A NO TURN ON RED (R10-11b) sign (see Figure 6G-1) shall be placed on or near the DAD.**

02 **A TURN ONLY IN DIRECTION OF ARROW (R10-33P) sign (see Figure 6G-1) shall be placed on a Driveway Assistance Device (DAD) to direct drivers when to proceed, and shall be placed below sign R10-11b.**

CHAPTER 6L. OTHER TTC ZONE TRAFFIC CONTROL DEVICES

[Incorporating 24A-TTC-06, Jan 2024]

Section 6L.01 Temporary Traffic Control Signals

Standard:

01 **Temporary traffic control signals (see Section 4D.10) used to control road user movements through TTC zones and in other TTC situations shall comply with the applicable provisions of Part 4.**

Support:

02 Temporary traffic control signals are typically used in TTC zones such as:

A. Ttemporary haul road crossings;
B. Ttemporary one-way operations along a one-lane, two-way highway with or without multiple access points;
C. Ttemporary one-way operations on bridges, reversible lanes, and intersections.
D. Temporary ramp metering,
E. Residential and commercial driveway control within a one-lane, two-way control work TTC zone,
F. A temporary access point,
G. A means to supplement or temporarily replace a malfunctioning or damaged traffic control signal

Option:

02a A temporary traffic control signal may be used in place of flaggers when determined by engineering judgment.

02b A Driveway Assistance Device (DAD) may be used to control the movement of traffic from a residential driveway into and through a one lane, two-way section of a TTC zone controlled by temporary traffic control signals.

Standard:

03 **A temporary traffic control signal that is used to control traffic through a one-lane, two-way section of roadway shall comply with the provisions of Section 4O.02.**

03a **A temporary traffic control signal operated manually shall be done through the use of a handheld module. At no time shall the operator flagger have the ability to add or change the signal program or override the programmed minimum red clearance interval, yellow change interval, and minimum green times.**

~~03b~~ **When portable traffic control signals are used, malfunction management system providing performance standards typical of traditional traffic control signal operations shall be used to detect and respond to improper and conflicting signals and improper operating voltages.**

03c **DADs shall comply with the provisions of Section 4O.04.**

~~*Guidance*~~

~~*04 When temporary traffic control signals are used, conflict monitors typical of traditional traffic control signal operations should be used.*~~

Support:

05 Where pedestrians are detoured to a temporary traffic control signal, an accessible pedestrian signal (see Chapter 4K) provides information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) so that a pedestrian with vision disabilities can know when to cross the street along the alternate route.

Option:

06 Temporary traffic control signals may be portable or temporarily mounted on fixed supports.

Guidance:

07 ~~*Temporary traffic control signals should only be used in situations where temporary traffic control signals are preferable to other means of traffic control, such as changing the work staging or work zone size to eliminate one-way vehicular traffic movements, using flaggers to control one-way or crossing movements, using STOP or YIELD signs, and using warning devices alone.*~~ *The use of temporary traffic control signals should be based on engineering judgment.*

Support:

08 Factors related to the design and application of temporary traffic control signals include the following:

A. Safety and road user needs;
B. Work staging and operations;
~~C. The feasibility of using other TTC strategies (for example, flaggers, providing space for two lanes, or detouring road users, including bicyclists and pedestrians);~~
D. Sight distance restrictions;
E. Human factors considerations (for example, lack of driver familiarity with temporary traffic control signals);
F. Road-user volumes including roadway and intersection capacity;
G. Affected side streets and driveways;
H. Vehicle speeds;
I. The placement of other TTC devices;
J. Parking;
K. Turning restrictions;
L. Pedestrians;
M. The nature of adjacent land uses (such as residential or commercial);
N. Legal authority;
O. Signal phasing and timing requirements;
P. Full-time or part-time operation;
Q. Actuated, fixed-time, or manual operation;
R. Power failures or other emergencies;
S. Inspection and maintenance needs;
T. Need for detailed placement, timing, and operation records
U. Operation by contractors or by others;
U1. Height and overhead clearance restrictions; and
U2. Adequate space to locate temporary traffic signal hardware

~~09 Although temporary traffic control signals can be mounted on trailers or lightweight portable supports, fixed supports offer superior resistance to displacement or damage by severe weather, vehicle impact, and vandalism.~~

Guidance

10 Other TTC devices should be used to supplement temporary traffic control signals, including warning and regulatory signs, pavement markings, and channelizing devices.

11 Temporary traffic control signals not in use should be covered or removed.

12 If a temporary traffic control signal is located within 1/2 mile of an adjacent traffic control signal, consideration should be given to interconnected operation.

Option:

12a When temporary or portable traffic control signals are used for one-lane two-way TTC zone facilities, signs, including portable changeable message signs (see Section 6L.05), may be considered to advise road users of:

A. Wait Time
B. TTC zone conditions

Support:

12b Portable changeable message signs used in conjunction with TTC zone portable or temporary traffic control signals are typically used in long TTC zones and/or zones with limited sight distance.

Standard:

13 Temporary traffic control signals shall not be located within 200 feet of a grade crossing unless the temporary traffic control signal is provided with preemption in accordance with Sections 4F.18, 4F.19, and 8D.09.~~, or unless a uniformed officer or flagger is provided at the crossing to prevent vehicles from stopping within the crossing.~~

Section 6L.04a Driveway Assistance Devices (DADs)

Standard:

01 A Driveway Assistance Device (DAD) shall be used only in conjunction with temporary traffic control signals as defined in Section 6L.01.

Option:

02 DADs may be portable or temporarily mounted on fixed supports.

Standard:

03 The use of the DAD shall be limited to residential driveways within the one-lane, two-way section of a TTC Zone.

Guidance

04 The use of DADs should be based on engineering judgment.

05 Residents affected by the DAD should be provided information on the role of the DAD to control traffic.

Standard:

06 DADs shall:

A. Operate in a phasing sequence as shown in Section 4O.04.
B. Display a minimum of one signal face per driveway.
C. Be installed with the bottom of the signal face mounted a minimum height of 4.5 feet and a maximum height of 10 feet above the driveway surface.
D. Be positioned to provide the motorist with a clear line of sight.
E. Be mounted in accordance with engineering judgement based on site conditions.

Support:

07 The requirements for signal face lateral positioning, longitudinal positioning, and mounting heights are specific exceptions to provisions in Sections 4D.07, 4D.08, and 4D.09, respectively.

Guidance:

08 The DAD should be positioned on the near side of the roadway adjacent to the residential driveway.

Option:

09 The DAD may be positioned on the far side of the roadway adjacent to the residential driveway.