Residential Driveway Temporary Signals

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Texas Department of Transportation

April 25, 2025

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- Transportation Engineer Supervisor
- Policy & Standards Branch Manager
- Traffic Safety Division

One Lane Temporary Traffic Control - Access Points Survey

- They used barricades and cones to close low-volume access points.
- TxDOT personnel also visited property owners and residents to notify them of the changes in traffic control and what they should do when exiting their driveway.

Background

- Driveway Assistance Device dates back to early 2009
- Designed to manage residential driveway traffic within a work zone
- Displays flashing arrow in direction of traffic flow
- Operates in conjunction with Portable Traffic Signal system on mainline

Background

- 2013 TxDOT submits Request to Experiment to FHWA

Background

- FHWA Experimentation has been ongoing for over ten years, with over 26 projects in Texas
- Several different configurations were tested across ten states
- IN, KS, MA, MI, MS, NE, NY, OH, TX, VA

Driveway Assistance Devices in Texas: Findings

- Property owners found the devices to be easy to follow and to provide a safe means of accessing the one lane road.
- Driveway assistance devices significantly increased the amount of green time available to traffic on the one lane road during the morning and afternoon peak hours. On a project with 4 driveways, the green time increased between 15% and 20% during peak hours.

Moving from "Request to Experiment" to "Interim Approval"

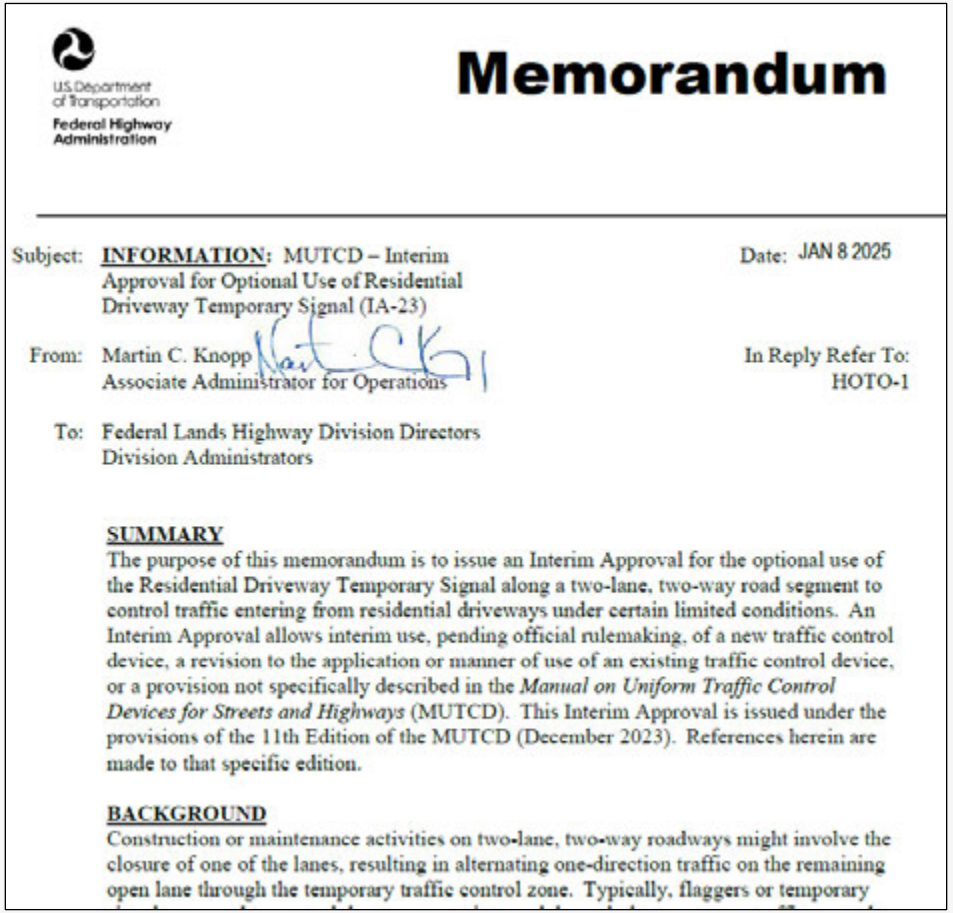
New Name

~~Driveway Assistance Device (DAD)~~

Residential Driveway Temporary Signal (RDTS)

Interim Approval – IA-23

- Published January 2025
- Allows for expanded use of the device
- Defines guidelines for the use of the device, including signal head configuration, indication colors, etc



U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: **INFORMATION:** MUTCD – Interim Approval for Optional Use of Residential Driveway Temporary Signal (IA-23)

Date: JAN 8 2025

From: Martin C. Knopp
Associate Administrator for Operations

In Reply Refer To: HOTO-1

To: Federal Lands Highway Division Directors
Division Administrators

SUMMARY

The purpose of this memorandum is to issue an Interim Approval for the optional use of the Residential Driveway Temporary Signal along a two-lane, two-way road segment to control traffic entering from residential driveways under certain limited conditions. An Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD). This Interim Approval is issued under the provisions of the 11th Edition of the MUTCD (December 2023). References herein are made to that specific edition.

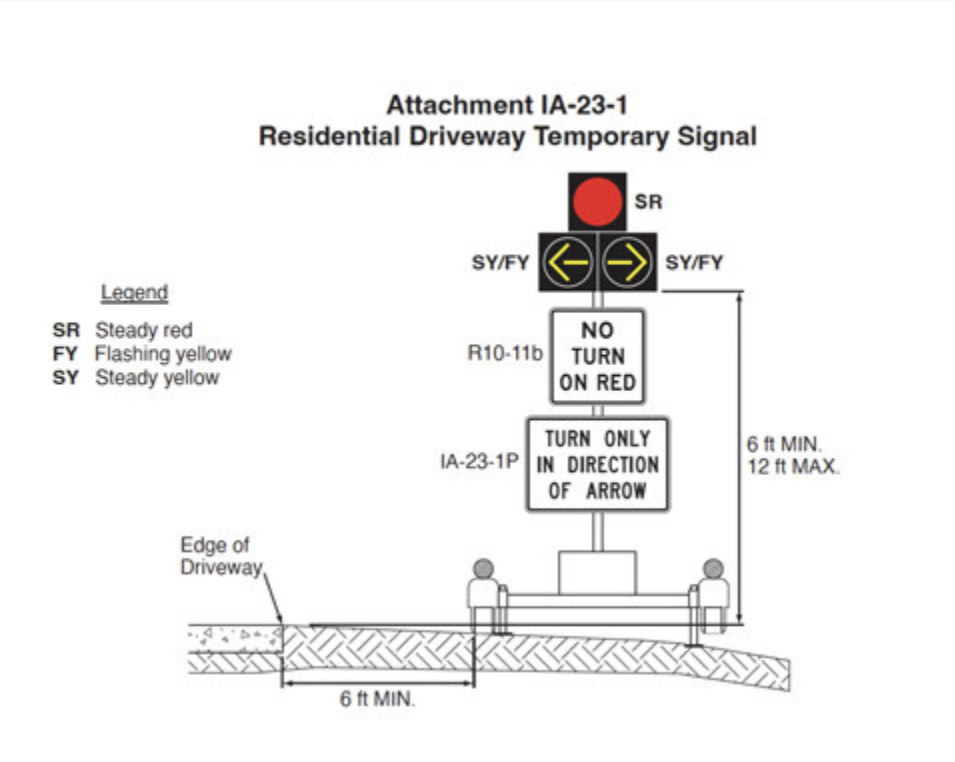
BACKGROUND

Construction or maintenance activities on two-lane, two-way roadways might involve the closure of one of the lanes, resulting in alternating one-direction traffic on the remaining open lane through the temporary traffic control zone. Typically, flaggers or temporary

Device Design

- Multiple experiments (MDOT, TxDOT, TTI, etc) found a 3-section signal face in a “Dog House” configuration to be most effective

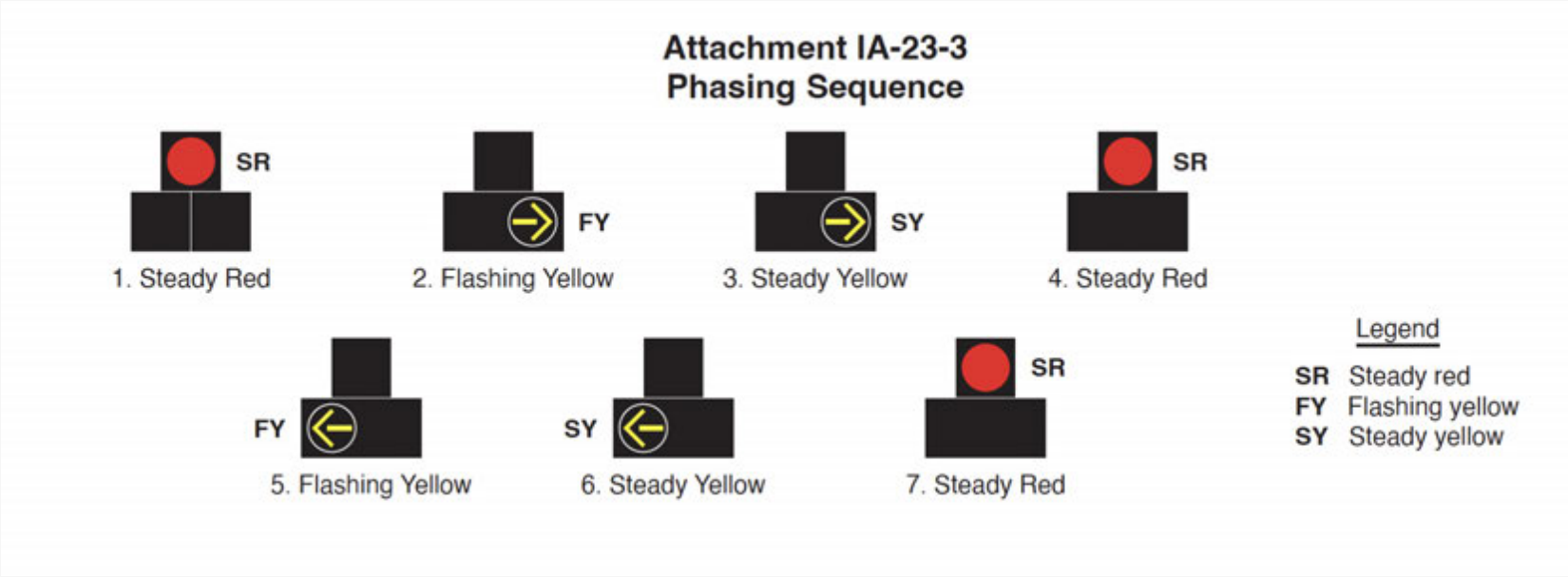
- Yellow flashing arrows had higher response rate than red flashing arrows

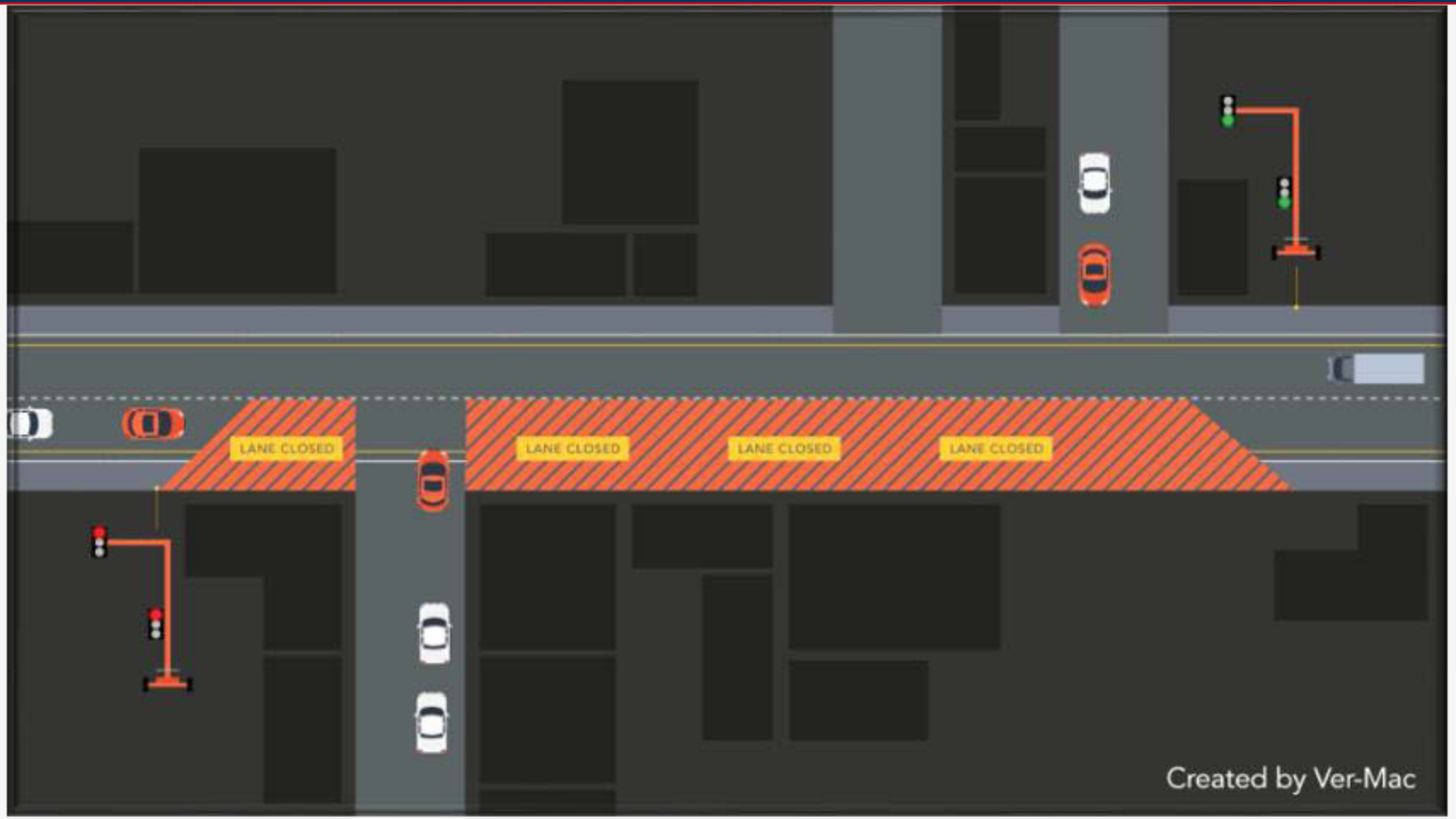


Implementation

- RDTS is limited to **residential driveways** within a one-lane, one-direction portion of a TTC work zone
- Only one signal head required per driveway
- Signage must be included

Phasing Sequence

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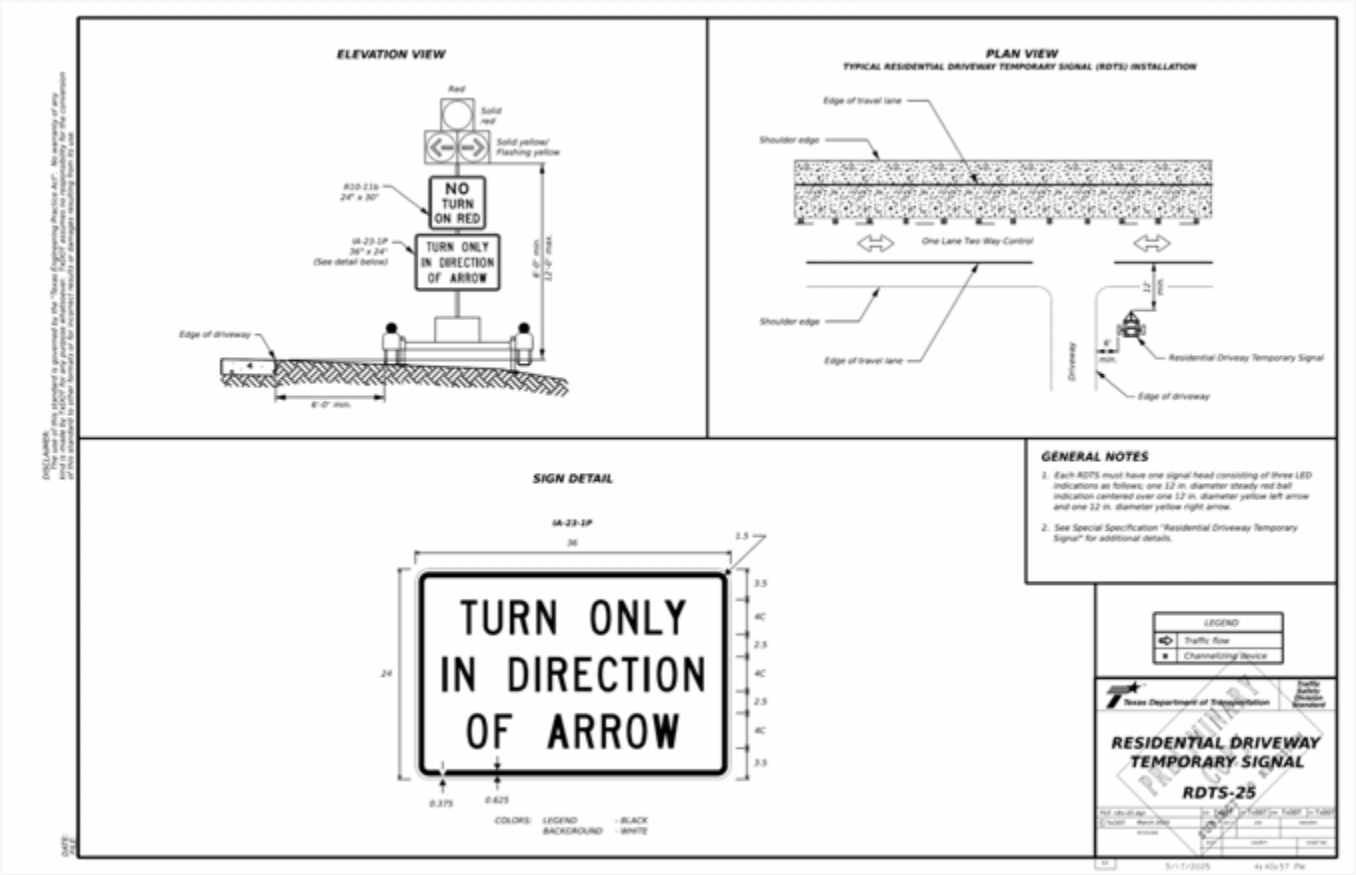
Next Steps

- FHWA has granted TxDOT permission for the optional use of RDTS under the Interim Approval.
- Submit request for approval to TRF Policy & Standards
- TxDOT will be required to maintain and periodically update a list of all locations where the Residential Driveway Temporary Signal are installed.

Next Steps

- SS 6089 - **Residential Driveway Temporary Signal** - The Residential Driveway Temporary Signal (RDTS) unit is a portable device designed to be used for residential driveways that fall within a one-lane bidirectional work zone. *This item is in Interim Approval status by FHWA. Contact TRF-P&S prior to submitting request in TxDOTCONNECT.* Replaces SS6063 . One-Time Use.

Cadd Standard



MEMO – Residential Driveway Temporary Signals

MEMO

April 30, 2025

To: District Engineers
From: Michael A. Chacon, P.E.
Director, Traffic Safety Division
Subject: Residential Driveway Temporary Signals

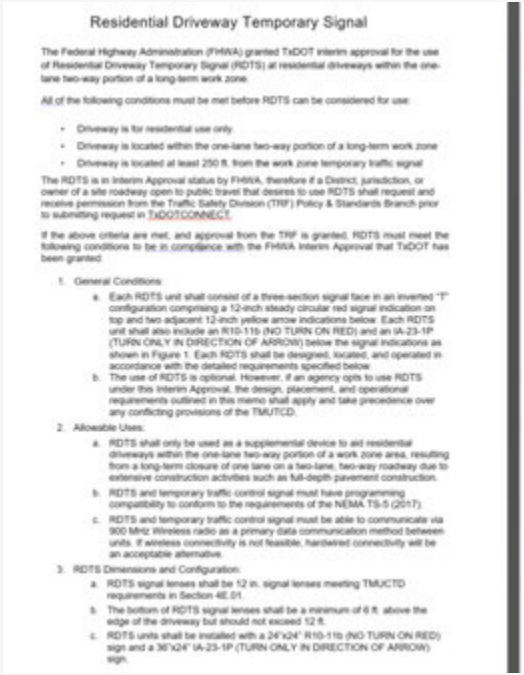
FHWA has since issued an Interim Approval for Residential Driveway Temporary Signal (RDTS) IA-23 allowing use of the device. IA-23 contains provisions for the application of the RDTS. Attached is the criteria for the use of the RDTS. Approval from TRF is necessary prior to the installation of RDTS on state highways.

Interim approvals allow interim use of a new or revised traffic control device based on experimentation, studies, or research with the intention to place the new or revised device into a future rulemaking process for MUTCD revisions. While FHWA approval is required to use an Interim Approval device, FHWA has granted blanket statewide approval to use the RDTS in Texas. A municipality that wishes to use RDTS on roads under their jurisdiction off the state highway system may do so without contacting FHWA. The TxDOT Traffic Safety Division must be notified so a list of locations can be maintained as part of the provisions for IA-23.

If you have any further questions, please contact Rafael A. Riojas at (512) 416-3120 or me at (512) 416-3200.

Attachments:

CC: ADM — District Traffic Engineers
CST — District Maintenance Engineers



Residential Driveway Temporary Signal

The Federal Highway Administration (FHWA) granted TxDOT interim approval for the use of Residential Driveway Temporary Signal (RDTS) at residential driveways within the one-lane two-way portion of a long-term work zone.

All of the following conditions must be met before RDTS can be considered for use:

- Driveway is for residential use only.
- Driveway is located within the one-lane two-way portion of a long-term work zone
- Driveway is located at least 250 ft. from the work zone temporary traffic signal

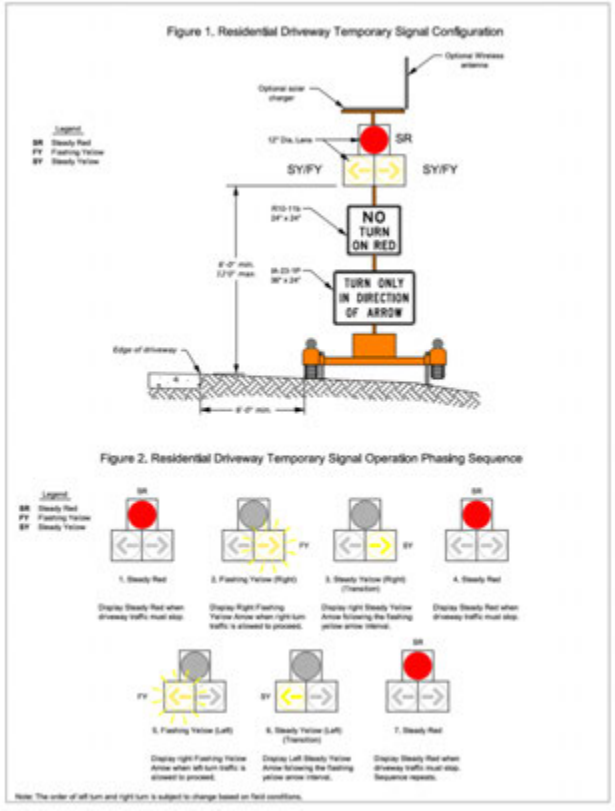
The RDTS is in Interim Approval status by FHWA, therefore if a District, jurisdiction, or owner of a site roadway open to public travel that desires to use RDTS shall request and receive permission from the Traffic Safety Division (TRF) Policy & Standards Branch prior to submitting request in TxDOTCONNECT.

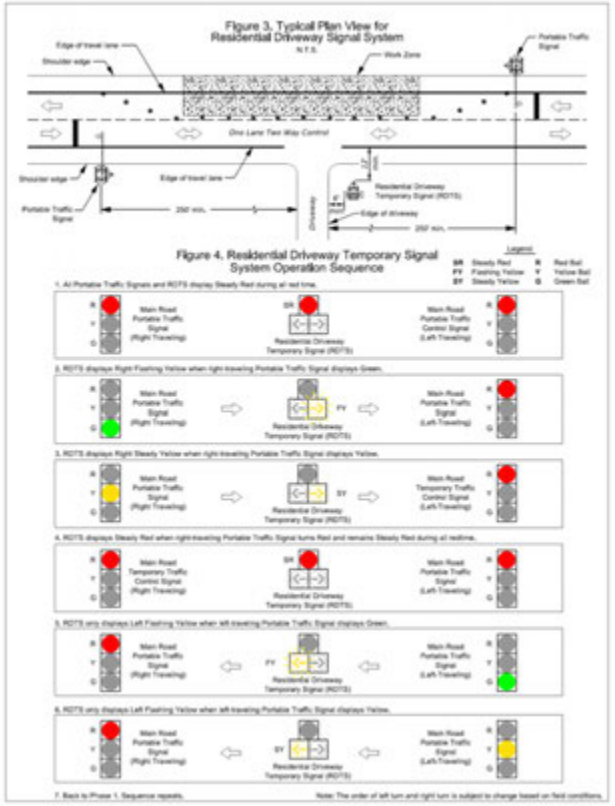
If the above criteria are met, and approval from the TRF is granted, RDTS must meet the following conditions to be in compliance with the FHWA Interim Approval that TxDOT has been granted:

1. General Conditions:
   a. Each RDTS unit shall consist of a three-section signal face in an inverted "T" configuration comprising a 12-inch steady circular red signal indication on top and two adjacent 12-inch yellow arrow indications below. Each RDTS unit shall also include an R10-11b (NO TURN ON RED) and an IA-23-1P (TURN ONLY IN DIRECTION OF ARROW) below the signal indications as shown in Figure 1. Each RDTS shall be designed, located, and operated in accordance with the detailed requirements specified below.
   b. The use of RDTS is optional. However, if an agency opts to use RDTS under this Interim Approval, the design, placement, and operational requirements outlined in this memo shall apply and take precedence over any conflicting provisions of the TMUTCD.
2. Allowable Uses:
   a. RDTS shall only be used as a supplemental device to aid residential driveways within the one-lane two-way portion of a work zone area, resulting from a long-term closure of one lane on a two-lane, two-way roadway due to extensive construction activities such as full-depth pavement construction.
   b. RDTS and temporary traffic control signal must have programming compatibility to conform to the requirements of the NEMA TS-5 (2017).
   c. RDTS and temporary traffic control signal must be able to communicate via 900 MHz Wireless radio as a primary data communication method between units. If wireless connectivity is not feasible, hardwired connectivity will be an acceptable alternative.
3. RDTS Dimensions and Configuration:
   a. RDTS signal lenses shall be 12 in. signal lenses meeting TMUCTD requirements in Section 4E.01.
   b. The bottom of RDTS signal lenses shall be a minimum of 6 ft. above the edge of the driveway but should not exceed 12 ft.
   c. RDTS units shall be installed with a 24"x24" R10-11b (NO TURN ON RED) sign and a 36"x24" IA-23-1P (TURN ONLY IN DIRECTION OF ARROW) sign.
   d. The outside edges of the RDTS signal head, including any housings, shall not project beyond the outside edges of the supplemental signs.
4. RDTS Assembly Placement:
   a. RDTS in this memo shall be installed on the near side of the residential driveway. If placing the RDTS on the near side is prohibited by the construction or other conflicts, districts might propose the placement on the far side and obtain special approval from TRF.
   b. RDTS shall be placed a minimum of 6 feet from the edge of the driveway (measured from the edge of the RDTS trailer) and a minimum of 12 feet from the edge of the one-lane two-way controlled roadway travel lane (measured from the edge of the RDTS trailer). The details are provided in Figure 3.
   c. The driveway approach may be provided with only one RDTS.
5. RDTS Operation Requirement:
   a. RDTS shall be coordinated with the temporary traffic control signal controlling the main roadway traffic entering the one-lane two-way portion of work zone. The system shall be programmed such that driveway vehicles can turn before, within, and after the main roadway traffic platoon. The all-read interval of the temporary traffic control signal shall be adjusted appropriately to account for the addition of driveway vehicles to the platoon.
   b. The RDTS system operation sequence is illustrated in Figure 4.
   c. RDTS shall exhibit a steady yellow change interval following the flashing yellow arrow interval.
   d. RDTS system may be programmed in a fixed time or actuated mode. When the actuated mode is adopted, the system should be programmed to continuously cycle with a minimum green time of 20 seconds. The maximum green time should be based on traffic volumes and site conditions.
   e. The All-Red time should be programmed based on field conditions (e.g. speed and length of one-lane two-way work zone) to provide sufficient time for the last entering vehicle to exit the work zone.
   f. RDTS shall flash red when the associated temporary traffic control signal is operating in flashing mode.
   g. RDTS shall be covered or turned to face away from traffic, when not in use.
6. Other:
   a. Each RDTS unit must be continually monitored throughout the deployment phase. A system coordinator must be locally available to maintain system components, move devices as necessary, and respond to emergencies.
   b. Except as otherwise provided herein, all other provisions of the TMUTCD that are applicable to temporary traffic control devices shall apply to RDTS.

If you have any questions or require additional information regarding RDTS, please contact Rafael A. Riojas at (512) 416-3120.

MEMO – Residential Driveway Temporary Signals





Public Notice Document

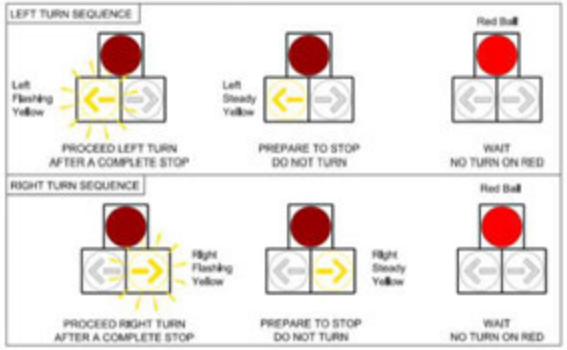
- We will provide an editable public notice document to share with property owners

Residential Driveway Temporary Signal (RDTS) for Upcoming Construction Project

Main Road will be under construction from XX-XX-XXXX to XX-XX-XXXX, and at times reduced to one lane of traffic. During this time, the Main Road traffic will be controlled by temporary traffic signals that will allow alternating traffic to proceed through the work area. Driveway traffic will be controlled by Residential Driveway Temporary Signal (see image below left).

Traffic on Main Road has the right of way. You must come to a full and complete stop before turning onto Main Road.

- When you have a **flashing yellow left arrow**, turn left safely. When the **steady yellow left arrow** or the **red ball** turns on, do not turn (see Left Turn Sequence).
- When you have a **flashing yellow right arrow**, turn right safely. When the **steady yellow right arrow** or the **red ball** turns on, do not turn (see Right Turn Sequence).



The Residential Driveway Temporary Signal will help to reduce queues and delays along Main Road during construction. Your cooperation in obeying the signals will help keep the work area safe for both the workers, and you, the drivers. Thank you for your cooperation.

Question about the project? Please Contact:
John Doe, Project Engineer
Phone: XXX-XXX-XXXX
TxDOT District Engineer
Phone:XXX-XXX-XXXX
Email: TxDOT.FeedbackDistrict@txdot.gov

Texas Department of Transportation

Read the Interim Approval Here

https://mutcd.fhwa.dot.gov/resources/interim_approval/ia23/ia23.pdf

Language will be developed for the RDTS to be added to the next version of the MUTCD

Questions?

Rafael Riojas: Rafael.Riojas@txdot.gov