

THE STATE OF VERMONT  
AGENCY OF TRANSPORTATION

*Guidelines for the Use of Radar Speed Feedback Signs on  
the State Highway System*

General Information:

The Vermont Agency of Transportation (VTrans) has adopted policy to allow municipalities to install and maintain Radar Speed Feedback Signs (RSFS) within the rights-of-way on the State Highway System. The policy incorporates both temporary (speed trailer) and permanent (dynamic speed sign) uses of these signs. The policy does not cover the use of these types of signs within work zones.

Where the governing body of a municipality desires the use of these signs as part of a work zone sign package, a written request following the requirements outlined in **Section H** will be submitted to the VTrans Utilities and Permits Unit and will be evaluated on a case by case basis.

VTrans may also provide the technical expertise for the use of RSFS on local roads. Such uses must be approved by the officials of the municipality involved, and all costs shall be paid by the municipality.

A. Purpose & Objective:

Radar speed feedback signs are installed to provide a real-time dynamic display of a driver's vehicular speed at a particular location where speeding has been documented to be a problem. When used in conjunction with a regulatory speed limit sign (R2-1), drivers receive immediate confirmation of their actual speed in comparison to the legal speed limit static signs. When the RSFS are activated, the display format shall **not include** animation, rapid flashing, or other dynamic elements as stated in Section 2A.07 *Changeable Message Signs* of the Manual on Uniform Traffic Control Devices (MUTCD.) RSFS are typically used at locations where a speed limit transition occurs or in an area where driving the appropriate speed for the highway conditions is particularly critical, such as around school speed zones. Because law enforcement agencies cannot be expected to constantly monitor speeds in a particular location, the RSFS serve to supplement regular enforcement of speed limits alerting drivers to specific driving behavior.

RSFS are allowed under, and guidance is provided for their use in, Part 2 of the MUTCD.

B. Conditions for Use:

When requested, RSFS will be considered for use on the State Highway System where all of the following conditions exist:

1. The 85<sup>th</sup> percentile speed, as determined by a speed study, exceeds the posted speed limit by at least 3 MPH during the time period of concern (e.g. the ½ hour before to ½ hour after a school arrival/dismissal time or other peak traffic period)
2. Where a speed transition exists (e.g. going from a 40 MPH posted speed to a 30 MPH posted speed or in a School Speed Zone)
3. Where the posted speed is 35 MPH or less

Installation may be considered for locations where crash data can be clearly linked to excessive speed.

C. Technical Requirements:

RSFS must meet the following specifications and documentation to that effect must be supplied to the VTrans Utilities and Permits Chief as outlined in Section H:

1. Installation shall be in conjunction with a Speed Limit sign (standard or school speed zone).
2. Installation is restricted to one RSFS in each direction for the transition area being addressed.
3. The RSFS shall include the legend “YOUR SPEED xx MPH” or similar legend. The color of the changeable message legend shall be a yellow legend on a black background or the reverse of these colors.
4. The changeable display shall be programmed to go blank/no display when the vehicle speed exceeds 15 MPH over the posted speed.
5. When activated, the RSFS display shall give drivers immediate feedback on their individual driving speed when the posted speed is exceeded without animation, rapid flashing, or other dynamic elements.
6. When installed in association with school speed zones, the RSFS shall operate only when the school speed zone is in effect. (Generally, the RSFS will operate only on days that schools are in session, for thirty minutes before and fifteen minutes after the time in which the school day begins; and fifteen minutes before and thirty minutes after the time in which the school day ends). Use of RSFS in conjunction with school speed zones “when children are present” is not allowed.
7. Information shall be supplied that documents that the RSFS and sign support assembly and installation meet the requirements for crash-worthiness as defined in the National Cooperative Highway Research Program (NCHRP) Report 350.
8. The installation shall **not** interfere with the visibility and general effectiveness of any other signs in the area.
9. All elements of the RSFS shall conform to the guidance and standards as outlined in the latest edition of the MUTCD.

10. Identification and contact information for the municipality in which it is installed shall be displayed on the case of the RSFS.

D. Eligible Requesting Entities:

All requests for RSFS on the Vermont State Highway System shall be submitted by the governing body of a municipality *unless* the RSFS is a specific permit condition on a private developer. Where the RSFS has been made a permit condition to a developer, the municipality shall be the co-applicant on the 19 Vermont Statutes Annotated (VSA) Section 1111 TA-210 permit application.

E. Municipal Responsibility:

Municipalities shall be responsible for the installation, maintenance, and removal of RSFS located within the state's highway right-of-way (ROW). If existing signs must be relocated due to conflicts with the proposed RSFS, replacement signs must meet current MUTCD requirements and the responsibility for installing replacement signs shall be at the expense of the municipality.

Municipalities shall be responsible for ongoing electric costs and all maintenance of the RSFS, including annual maintenance and replacement if damaged.

F. Permits:

Access Permits for work performed by non-VTrans personnel in the ROW, must be obtained through the VTrans Utilities and Permits Unit for the installation of permanent post mounted RSFS. The local VTrans District Transportation Administrators or designees are responsible to process permits for the temporary use of portable speed trailers.

G. Special Considerations for Speed Trailers:

1. Speed trailers shall be in place for a **maximum** of 2 weeks.
2. Speed Trailers *shall not interfere* with the operation of the highway for motor vehicles, bicyclists or pedestrians
3. Speed trailers *shall include* the legend "Speed Limit xx MPH" that is consistent with the regulatory speed limit of the road on which it is used.

H. Application Process:

**Permanent Signs**

Requests from the governing bodies of municipalities shall include the following information:

1. Cover letter addressed to the VTrans Utilities and Permits Chief requesting permission for installation of the RSFS.
2. Submission of a 19 VSA Section 1111, TA-210 Application form.
3. Supporting data that, at a minimum, consists of a speed study at the proposed location.

4. A sketch or plan that shows the existing regulatory speed signs and their legends; the location and legend of other nearby signs, and adjacent features (sidewalks, driveways, traffic signals, adjacent land uses). The sketch or plan must either be at a specific scale or include measured distances between pertinent features.
5. A diagram or plan indicating how the RSFS will be powered (solar or hard-wired, including connections to power poles and their location).
6. Documentation that the technical requirements outlined in Section C have been met.

### **Trailer Mounted Signs**

1. Cover letter addressed to the VTrans District Transportation Administrator requesting permission for placing the trailer.
2. Submission of a 19 VSA Section 1111, TA-210 Application form.
3. A sketch, plan or other material that clearly indicates where the trailer will to be located.

#### **I. Ongoing Maintenance and Evaluation of Permanent Signs:**

Once every two years, municipalities will be required to submit a letter and a 19 VSA Section 1111, TA-210 application form requesting that the permit be renewed for two years. Applicants shall submit a follow up speed study as part of the permit renewal process. VTrans personnel will determine if the RSFS have had an effect on the 85<sup>th</sup> percentile speed.

The Agency reserves the right to remove any non-compliant RSFS if they are determined not in conformance with the statutory requirements and conditions set forth in the 19 VSA Section 1111, TA-210 permit.

#### **J. Removal of Permanent Signs:**

If the governing body of a municipality no longer desires the RSFS, or the Agency determines that the RSFS are no longer warranted, the municipality is responsible for all costs associated with the removal or restoration of the State Highway ROW to the satisfaction of VTrans.

#### **K. Approval Process:**

The VTrans Utilities and Permits Unit or the Maintenance District Office will issue the governing body of the municipality a permit in accordance with 19 VSA Section 1111, after determining that the proposed RSFS meets the Conditions and Technical Requirements outlined in Sections B and C, above. Assurance of financial and maintenance responsibility of the municipality is a requirement of the permit and every other year permit renewal.

VTrans reserves the right to modify these guidelines as it deems appropriate.