



## Traffic Guidelines Manual

ORIGINATOR State Traffic Engineer	2-1-7
CHAPTER 2	Signing
SECTION 1	General
SUBJECT 7	Dynamic Speed Display Signs

### A. Purpose

The 2009 MUTCD [section 2A.07](#) allows usage of Dynamic Speed Display Signs to measure and display individual speeds at a specific location. These signs are commonly referred to as “speed display signs”, “driver feedback signs” or “your speed is” signs. The signs are activated by radar to detect and display individual vehicle speeds to the vehicle driver. The expectation is that the driver will compare his speed with the legal posted speed and adjust accordingly. These sign installations may be portable installations that are installed on a temporary basis or may be permanent installations attached to new or existing signing. Local units of government have requested to install this signing. This policy provides guidance on the usage of these signs on state maintained roadways.

### B. Definitions

Freeways are defined as divided highways with fully controlled access at interchanges only. Interstate Highways are freeways with the interstate route designation.

Expressways are defined as divided highways with partially controlled access by a combination of interchanges, at-grade intersections, and driveways.

Conventional Highways are defined as streets or roads other than freeways or expressways. They may be divided or undivided, two-lane or multi-lane, and access is available at intersections and driveways.

### C. Policy

Requests to install and maintain dynamic speed display signs on DOT maintained roadways **shall** be made in writing by a local unit of government. Each request **shall** include a map showing the proposed location of the dynamic speed display sign(s). Upon Region review, approval or denial **shall** be made by a letter to the local unit of government. If approval is granted, the letter **shall** confirm that all provisions of this policy are met by the request. If approval is given, the Region *should* also provide a copy of the R2-1C standard sign plate with the approval letter so consistency is maintained in the design and manufacture of the signs.

## D. Qualifying Criteria

The following criteria **shall** be used by the Region to determine whether a roadway would qualify for dynamic speed display signs.

1. Dynamic Speed Display Signs *may* be allowed in the following locations on the state highway system.
  - School Speed Limit Zones
  - Reductions in Speed Zones within a community
  - Work Zone speed limit areas
2. Portable mounted dynamic speed display signs *may* be permitted at locations where they can safely be deployed for a time period not to exceed eight days.
3. Dynamic speed display signs for work zones *may* be allowed for the duration of the project. The decision to utilize dynamic speed display signs for construction work zones is determined through the work zone transportation management plan process.
4. Except for work zone areas, dynamic speed display signs **shall not** be allowed on freeways and expressways, including ramps.
5. The usage of dynamic speed display signs is limited to one sign per approach of speed transition zones such as at city limits, school zones or speed reduction transitions. Transition points from expressways to conventional highways may be permitted.
6. Dynamic Speed Display sign installations **shall** comply with all NCHRP 350 crashworthy requirements.
7. When permanent mounted dynamic speed display signs are used, they **shall** be placed next to or downstream (typically 100' – 200') of the regulatory speed limit sign (R2-1 sign) or school speed assembly sign (S4-51 sign). The signs **shall** be at the same mounting height.
8. Dynamic speed display signs that do not conform to this policy **shall** be removed. Notification to communities **shall** be made by written letter. If existing non-permitted signs are not removed, WisDOT will remove the sign(s) at the owners expense.
9. The local unit of government **shall** be responsible for manufacture, liability, installation and maintenance costs.
10. The local unit of government **shall** affix an identification label to the back of each sign, per Wisconsin State Statute 86.19(5).

11. WisDOT reserves the right to remove or move dynamic speed display signs in the event of a speed zone change, maintenance work or improvement project. WisDOT will notify the local unit of government, in writing, of the work and all costs associated with moving or removing the dynamic message speed signs. All costs for such moves **shall** be paid by the local unit of government.
12. The size lettering used on dynamic message speed sign **shall**, at a minimum, match the adjacent speed limit sign (see R2-1C sign plate).

#### E. Usage Criteria

1. Dynamic speed display signs installed in permanent speed zones *should* operate 24 hours a day 7 days a week.
2. Dynamic speed display signs installed on a temporary speed zones *should* operate for the time period that the speed zone is in effect (e.g. School zones or work zones).
3. For work zones, the dynamic speed display signs *should not* be overused. Only one dynamic speed display sign *should* be used per direction of traffic flow.

#### F. Sign Design Criteria

1. The R2-1C sign (See Figure 1) **shall** be used for permanent applications.
2. The changeable portion of the dynamic speed display sign **shall** have a black background with an amber (yellow) legend). On devices equipped with flip discs, the legend color *may* be yellow or green. Only one sign, in each direction of a two-way street approach or back-to-back signs, will be allowed for each crosswalk approach.
3. The changeable message portion of the sign **shall** display the speed of the approaching vehicle as “XX” in miles per hour. The following standards apply to the changeable message portion of the sign:
  - The sign **shall** flash at drivers traveling over the posted speed limit.
  - The flash rate *should* be between 50 and 60 cycles per minute.
  - Threshold speed settings *should* be set at 20 mph below and above the posted speed.
  - For speeds measured over the speed threshold setting, the dynamic speed display sign **shall** go blank.
  - The dynamic speed display sign **shall** be either blank or display zeroes when no vehicles are present.

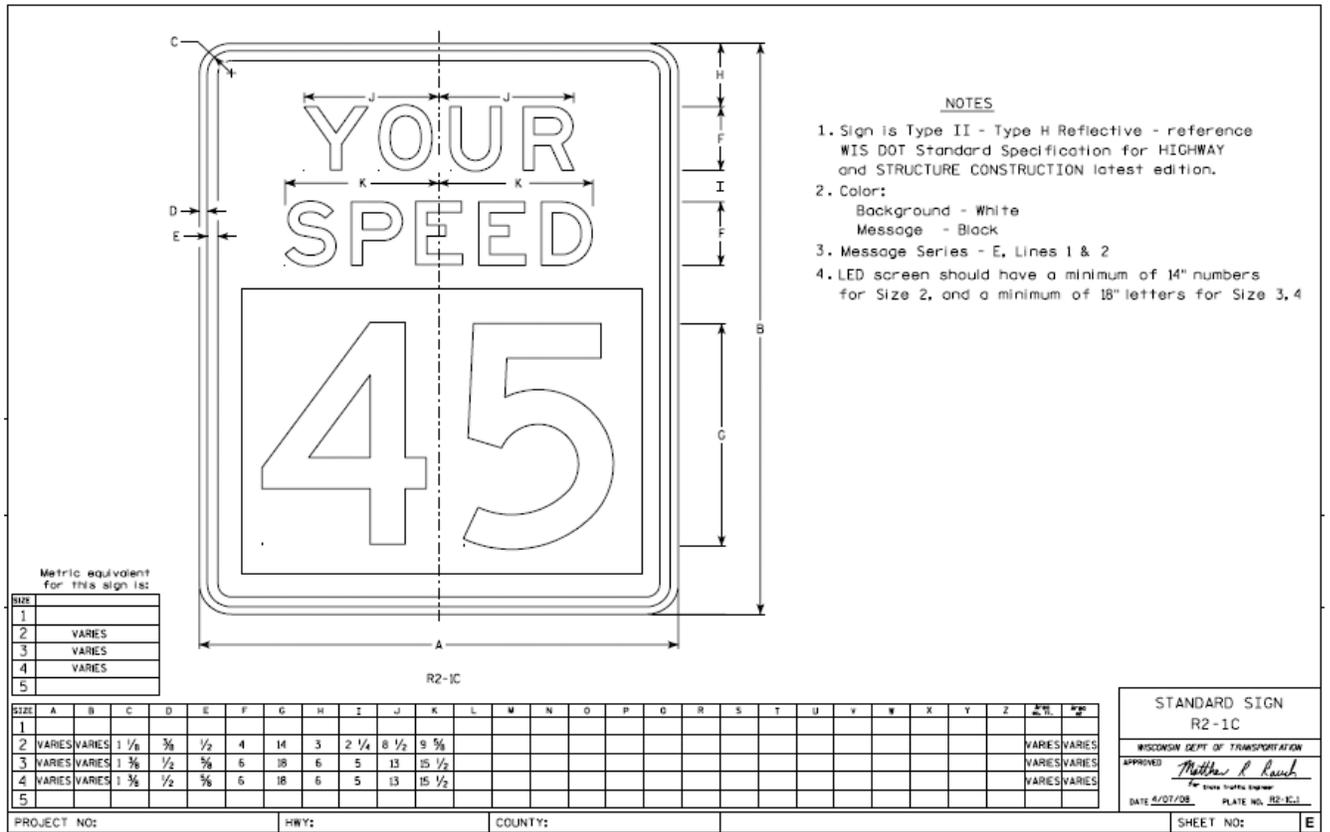


Figure 1. Dynamic Speed Display Sign R2-1C