

South Carolina Department of Transportation
Traffic Engineering Guidelines

NUMBER: TG-10

SUBJECT: School Speed Limit Assemblies

BACKGROUND: The Manual of Traffic Control Devices (MUTCD) provides general guidance on traffic control for school areas including standard signs, pavement markings, crossing supervision, and school sign color. The MUTCD has designated that school signs shall have fluorescent yellow-green sign sheeting. In addition to the MUTCD color designation, EDM 4 on Reflective Sheeting for Rigid Highway Signs details all signs that shall use Type IX or Type XI micro prismatic yellow-green fluorescent sheeting.

Supplemental plaques are frequently used with school speed limit assemblies when flashers are not used. The messages "WHEN CHILDREN PRESENT", "SCHOOL DAYS", or "MONDAY – FRIDAY" with times of day, have been used in varying combinations. The MUTCD allows all of these plaques to be used with the exception of "SCHOOL DAYS". In addition, Section 7B.15.16 states that a Speed Limit Sign Beacon may also be used with a "WHEN FLASHING" legend to identify the periods that the school speed limit is in effect.

This guideline has been developed to establish a consistent and uniform method for signing school zones with speed limit assemblies without flashers, speed limit assemblies with flashers, and overhead speed limit assemblies with flashers.

GUIDELINE: General Criteria:

When reviewing requests for school speed limit signs at new and existing schools, the engineer may employ the following criteria to determine if school speed limits should be installed:

1. Speed reduction for area requiring a school speed limit should have a minimum of 10-mph reduction with a maximum reduction of 25-mph. A 5-mph reduction may be used in special cases where the statutory speed limit is posted 35-mph or lower or for a lower volume roadway.
2. The District Traffic Engineer should set the appropriate speed reduction based on criteria and engineering judgement. The typical speed limit reduction is 10-mph for roadways with a posted speed limit between 35-50 mph, and a 15-mph reduction for a posted speed limit between 50-60 mph.

3. School Flashers should not be used with the posted speed limit is 30-mph or below. In this case, the School Sign (S1-1) should be used.
4. Section 7B.16 of the MUTCD addresses the use of “REDUCED SCHOOL SPEED LIMIT AHEAD” sign (S4-5). These signs should not be used for a school speed limit reduction of 10-mph or less. They shall be used for any reduction over 10-mph and the speed limit on the S4-5 sign shall match the school speed limit.
5. School Flashers should be limited to one roadway or zone per school site. The roadway carrying the most school traffic is where the speed reduction should be implemented.
6. School speed zones and flashers shall not be installed on interstates or other control-of-access facilities.
7. School Zones and School Flashers shall be removed when a school closes or relocates.
8. Overhead assemblies should be considered as an option for installation on multilane roads when roadway geometry restricts the installation or visibility of shoulder mounted flashers or when conditions dictate the need for more advanced notice of the school speed limit.

Installation Criteria:

The following criteria should be considered when the type of treatment is being determined for a school speed assembly.

Treatment	Typical Installation Thresholds	
	School Speed Limits without Flashers	School Speed Limits with Flashers
AADT	<1500 AADT	>1,500 AADT
Speed	<40 mph	40-60 mph
Average School Attendance	<300	>300

Sign Installation Details:

1. Fluorescent yellow-green reflective strips may be placed on the school speed limit assemblies to help enhance the visibility of school speed limit signs. Engineering judgement should be used to determine if the use of reflective strips will be beneficial on a

case-by-case basis. Refer to TG-20 on Reflective Sign Post Panels for use.

2. Chapter 7 in the MUTCD contains several different examples of the complement of signs that should be used at each school speed zone. School speed zones should be installed a minimum of 200 feet in advance of the first school driveway and end a minimum of 200 feet after the last driveway. Engineering judgement should be used in the exact sign placement as to avoid obstructing view of signs and other objects.
3. School Flashers shall be programmable. The programmable flashers allow for the school schedule to be uploaded at the beginning of the school year to minimize the cases where the flasher is operational and school is not in session.
4. Flashing times shall be held to 45 minutes of flashing when possible. During the AM school take-in period, the flasher would begin flashing 30 minutes before the beginning of school and continue flashing until 15 minutes after the beginning of school. During the PM school dismissal period, the flasher would begin flashing 15 minutes before the dismissal time and continue flashing until 30 minutes after the dismissal time. Flashing time may extend to 1 hour based on engineering judgement for reasons such as minimal stacking capacity or other atypical situations.

Treatment Options:

The following are three different types of installations that should be considered for a school speed zone.

School Speed Limit Sign Assembly without Flashers

When school speed limit assemblies without flashers are used, an assembly shall consist of a top plaque (S4-3P) with the legend "SCHOOL", a speed limit sign (R2-1), and a bottom plaque indicating the specific periods of the day (S4-1P) and/or days of the week (S4-6P) that the school speed limit is in effect. The time periods shown should be reasonable in duration and indicate the time periods that the reduced speeds are appropriate. The sign "WHEN CHILDREN PRESENT" shall not be used for any new installations. Any of these existing signs should be removed and replaced at the end of the sign life.

School Speed Limit Sign Assembly with Flashers

When school speed limit assemblies with flashers are used, an assembly shall consist of a school speed limit sign (S5-1) with the appropriate speed limit within. Section 4L.04 of the MUTCD details the operation of flashing beacons.

Divided highways with wide median availability may add an additional school speed limit sign with flashers in the median to increase awareness. If the school is located on the left side of the roadway, then school speed limit signs should be considered on both sides of the road on initial installation unless an engineering study deems otherwise.

On divided highways and multilane facilities, oversized school speed limit signs should be considered for use. These will provide more visibility for the upcoming school speed limit zone.

Overhead School Speed Limit Sign with Flasher Assemblies

The MUTCD does not provide an alternative sign that allows for the school speed limit sign to be mounted overhead. However, SCDOT created a sign to be used for this application. The SCDOT Supplement to the MUTCD includes a special sign, (S5-6-108) that can be mounted overhead in cases where shoulder mounted flashers would not provide sufficient notice or visibility of the school speed zone. The overhead school speed limit may also be used on a multilane facility where no median is present to install a secondary shoulder mounted flasher or where right of way is limited by items such as sidewalks and utilities.

Locations where Installation is not Recommended

1. Neighborhoods where speeds are low, pedestrians are expected, or in areas with well-established schools.
2. Strip mall schools or schools that do not have a stand-alone facility or campus.

Approved: Rob Perry
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