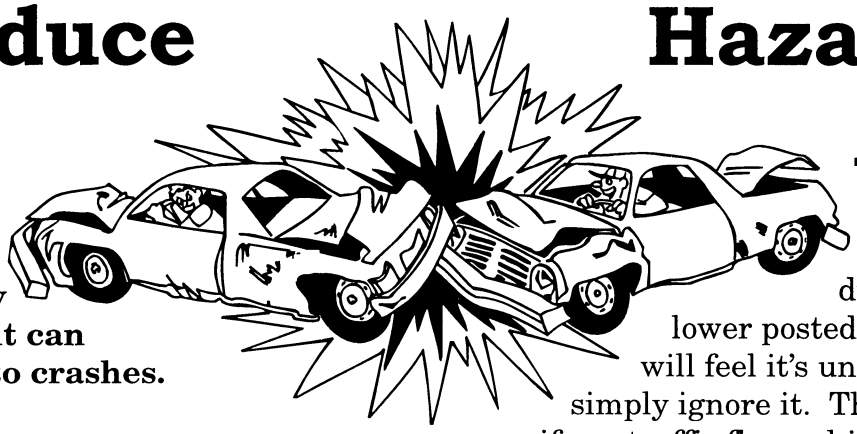
Baystate Roads Program

Tech Notes

Tech Note #13

SPRING 1997

Why not Lower the Speed Limit to Reduce Hazards in Your Area?



Because an unrealistically low speed limit can actually lead to crashes. Here's why:

First, many studies conducted over several decades in all parts of the country have shown that a driver's speed is influenced more by the appearance of the roadway and the prevailing traffic conditions than it is by the posted speed limit.

Second, some drivers will obey the lower posted speed while others will feel it's unreasonable and simply ignore it. This disrupts the uniform traffic flow, which creates conflict, and increases crash potential between the faster and the slower drivers.

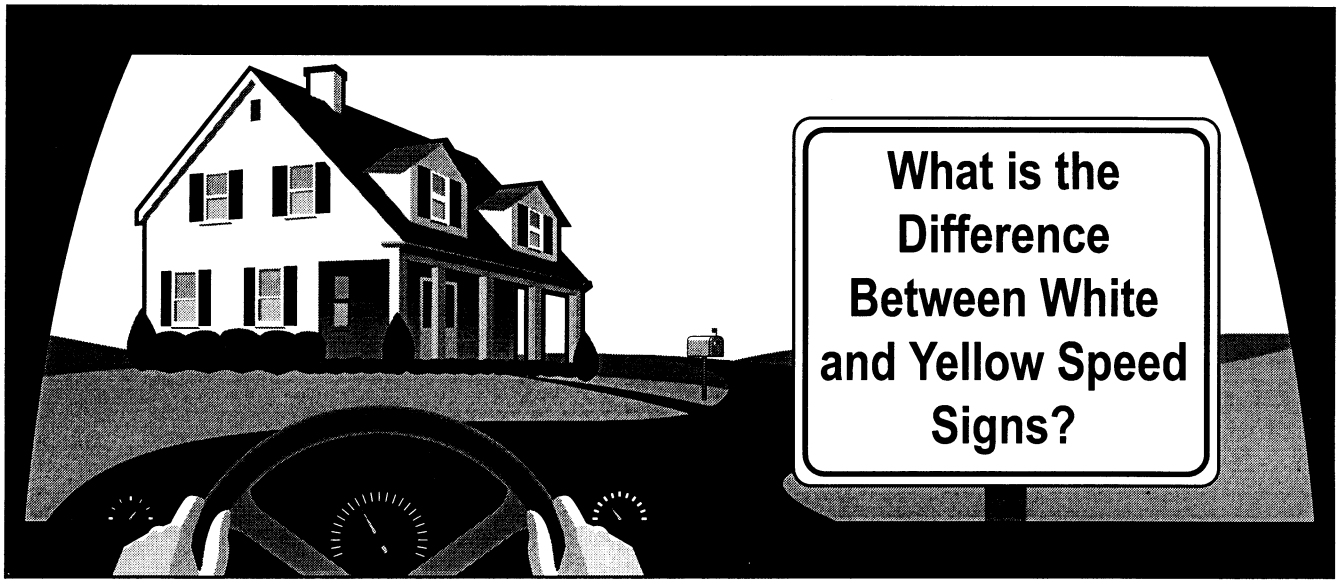
Third, when traffic is traveling at different speeds, the number of breaks in traffic to permit safe crossing is reduced; pedestrians also have greater difficulty in judging the speed of approaching vehicles.

MASSACHUSETTS GENERAL LAW
Chapter 90, Section 17

Deals with unlawful speed, i.e. no person shall drive a vehicle on a highway at a speed greater than is reasonable or prudent under the conditions, and addresses actual and potential hazards.

MASSACHUSETTS GENERAL LAW
Chapter 90, Section 18

Authorizes MHD to set maximum and minimum speed limits for travel over these roadways under its authority as it deems safe and advisable, including city and town roads.



What is the difference between the white and yellow speed signs?

Speed Limit signs with a black message on a white background are regulatory signs; while Speed Advisory signs with a black message on a yellow background are warning signs.

Regulatory Sign (rectangular) Black Message on a White Background

Regulatory signs are used to impose legal restrictions applicable to particular locations and the restrictions are enforceable.

Warning Sign (advisory, square) Black Message on a Yellow Background

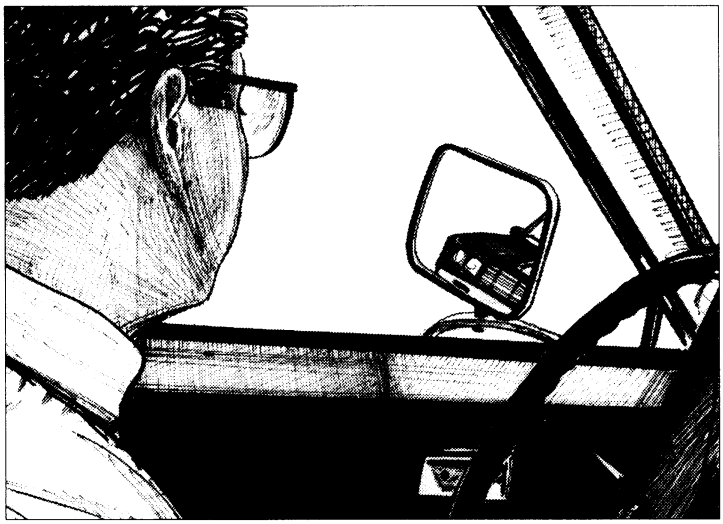
Warning signs are used to call attention to hazardous conditions, actual or potential, which otherwise would not be readily apparent, (i.e. Advisory Speed signs around a curve.) The established Advisory Speed at a curve is based on the safe and comfortable speed for the driver. Advisory speed signs are not enforceable.

Speed Limit Sign (R2-1)

The Speed Limit sign shall display the limit established by law, or by regulation, after an engineering and traffic investigation has been made in accordance with established traffic engineering practices. The speed limits shown shall be in multiples of 5 miles per hour.
In order to determine the proper numerical value for a speed zone on the basis of an engineering and traffic investigation, the following factors should be considered:

1. Road surface characteristics, shoulder conditions, grade, alignment and sight distance.
2. The 85-percentile speed and pace speed.
3. Roadside development and culture, and roadside friction.
4. Safe speed for curves or hazardous locations within the zone.
5. Parking practices and pedestrian activity.
6. Reported accident experience for a recent 12-month period.

Passing And Being Passed



One of the most common causes of deadly head-on collisions is improper passing. Before undertaking any pass, ask yourself, "Is this pass really necessary? Is it safe?" The majority of passes don't save enough time to be worth the risk. If you must pass another vehicle, follow these safety tips.

Before Passing

When getting ready to pass another car, maintain a safe following distance. Intending to pass is no excuse for tailgating. The other car could still stop at any time. And the closer you are to the vehicle you want to pass, the harder it is to see what's in front of it.

Before passing, signal left. Scan the road ahead and behind continually. Check your blind spots, those areas right behind or on either side of you that you can't see in your mirrors, by turning your head and looking over your shoulders. Make sure nobody is trying to pass you. If there is any doubt about oncoming traffic, wait.

Moving Into the Left Lane

On a two-lane road, moving into the oncoming traffic lane is the most dangerous part of passing. In 55-mile-per-hour traffic, you and oncoming vehicles are approaching each other at an effective speed of 110 miles per hour. It takes a full mile to complete a pass at this speed. After moving left, increase your speed to pass, giving the vehicle plenty of room. You should not pass if you have to exceed the legal speed limit to do so. Signal right to begin moving into the right lane in front of the passed car.

Completing the Pass

It's safe to return to your driving lane when you can see the pavement in front of the vehicle you've passed in the rearview mirror. Move to the right and turn off your turn signal. But first check your blind spot by turning your head. This is important in a multi-lane road where another car may be moving into the lane from the right, or in a situation where the car being passed is nearly stopped, and another car may be coming onto the road in front of it.

When Not To Pass

Remember that it is illegal to pass a stopped school bus with its signals on. Other areas where it is unsafe or illegal to pass include

- No-passing zones
- School zones
- Curves with passing restrictions
- Any road with a solid line in the middle
- Within 100 feet of the crest of a hill.

It is also illegal in most cases to pass where there are

- Railroad crossings
- Intersections
- Tunnels
- or Bridges
- or within 100 feet of these areas.

Being Passed

If someone is passing you, maintain your speed or slow down if necessary to allow the vehicle to pass safely. Never speed up to prevent someone from passing you. If you are driving more slowly than the flow of traffic, find a safe place to pull off the road and let vehicles pass by. You will be safer and more relaxed without a string of cars behind you.

How many times have you passed a vehicle simply because it's in front of you? Passing on a two-lane road is a difficult and dangerous maneuver that usually cuts only a few seconds off your trip. You'll relax and enjoy your drive more if you decide to pass only when it's absolutely necessary and completely safe.

HOW ARE "SPEED LIMITS" ESTABLISHED?

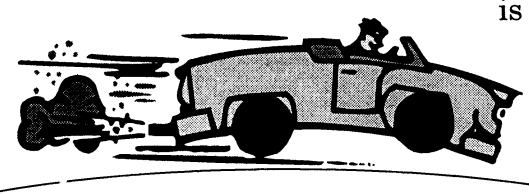
Traffic engineers throughout the country use the normal driver's speed as a guide in setting speed limits since most drivers tend to regulate their own speed according to traffic, road and weather conditions.

For a speed limit to be effective, at least 85 percent of the drivers must voluntarily comply with the law. It is important to remember that the speed regulation informs the driver of the limits in which one can safely operate a vehicle under normal circumstances and within which the driver can be expected to react safely. Setting speed limits at appropriate levels will create a reasonable uniform flow of traffic, discourage violation of the law and help keep streets and highways safe.

In Massachusetts, speed limits are set after a traffic engineering study.

It is common traffic engineering knowledge that most drivers (about 85%) travel at a reasonably safe speed for the various roadway conditions encountered regardless of speed limit signs, but it is for those drivers who don't that the practice of speed zoning does take place for the purpose of providing realistic speed restrictions to which meaningful enforcement can be applied.

The vehicle speed chosen by a driver is influenced by many factors: the presence of other vehicles, weather, road conditions, road geometrics, adjacent land use, and other factors tabulated in this report. A driver's choice of speed is a balance between expediency and safety, and is often a subconscious reaction to environment.



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MASS HIGHWAY

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