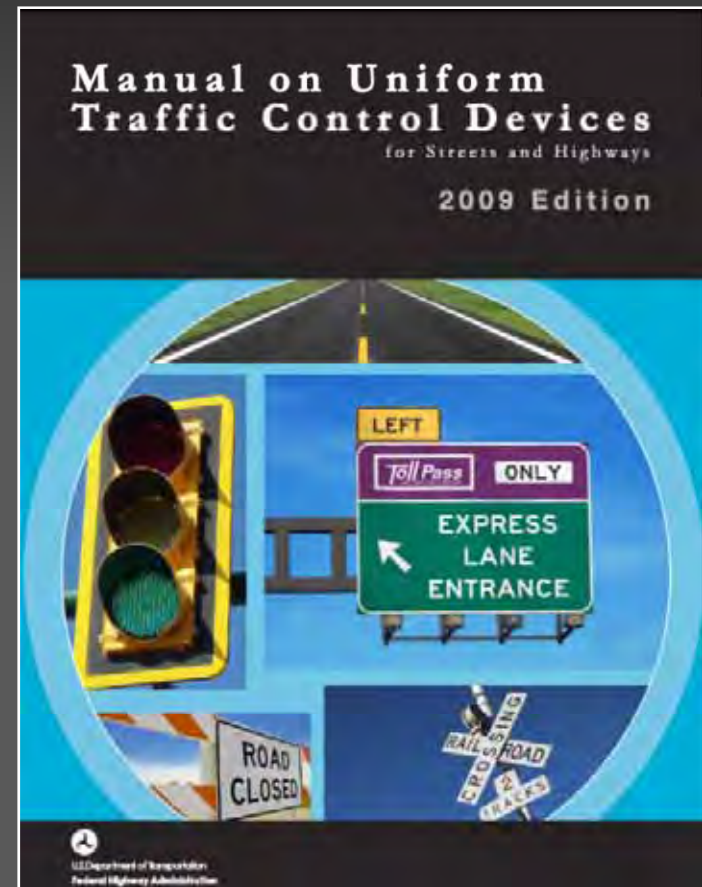


Significant Changes in the 2009 MUTCD

Presented at the
Texas ITE Summer Meeting
June 19, 2010

Gene Hawkins



Session Outline

This session highlights major changes

High altitude perspective

Focus on local agency perspective

Topics:

General Overview, Signs, Pavement Markings,
and Rail/LRT - **Gene Hawkins**

Traffic Signals - **Ronnie Bell**

Work Zones and Texas MUTCD Plans - **Mike
Chacon**

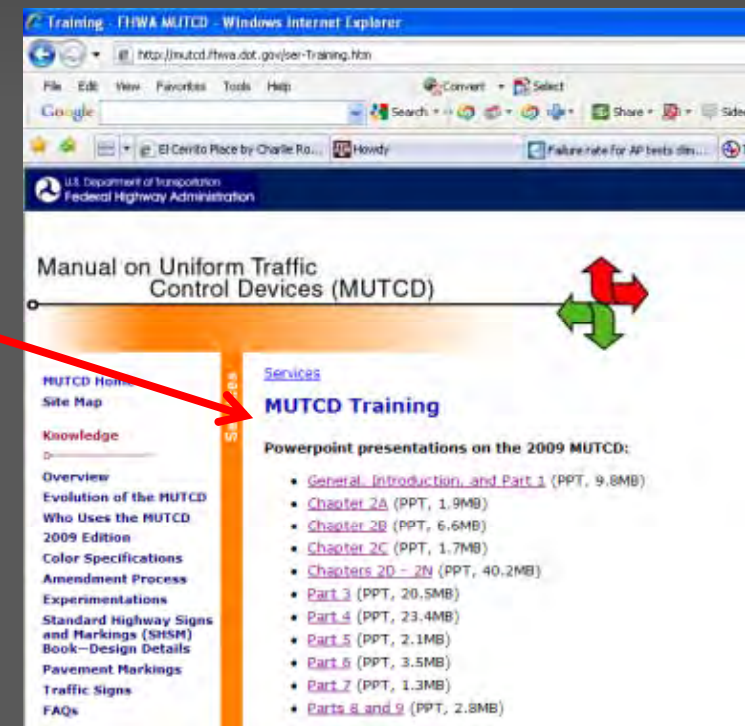
Questions at end of presentations

Additional Information

Portions of this presentation were taken from the FHWA 's Office of Transportation Operations MUTCD Team Presentations available on MUTCD web site

Go to training page for presentations on changes in chapters/parts

Presentations include speaker notes



Development of the 2009 MUTCD

NPA published in the Federal Register on
January 2, 2008

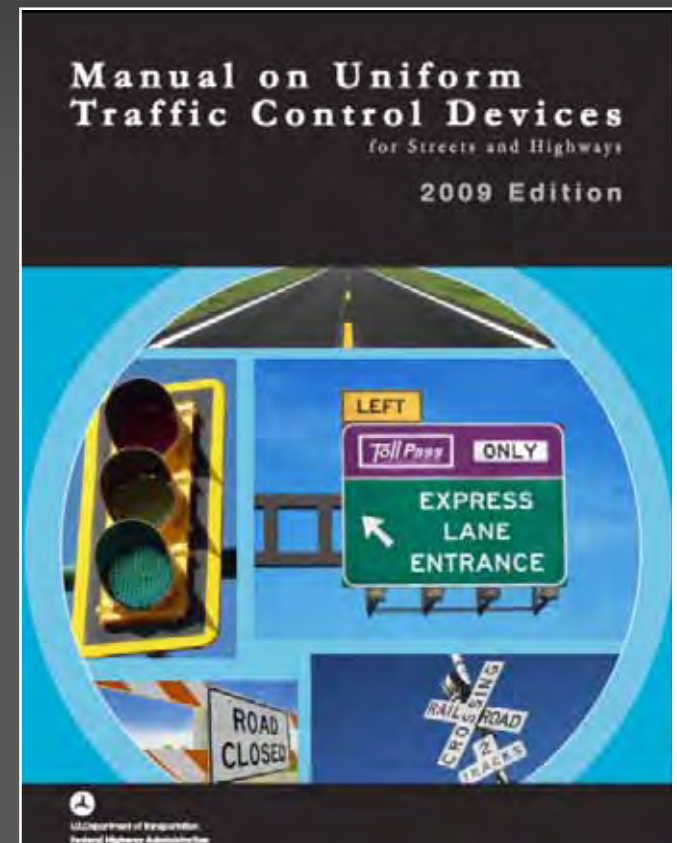
Received 1,840 individual letters with
over 15,000 comments

611 significant items in
the Federal Register final rule

Federal Register is recommended
reading

Final Rule published on
December 16, 2009

Effective date: January 15, 2010



Change in MUTCD Philosophy

More specific than previous MUTCDs

Increase in use of shall, should, and may

Compared to 2003 MUTCD: 44% more use of shall,
16% increase in should, 21% increase in may

More devices addressed

More specific guidance on using devices

Less flexibility to use alternatives

Requirements and recommendations to use
devices that were previously optional

Change in Definition of Standard

FWHA added a sentence to the definition

“Standard statements shall not be modified or compromised based on engineering judgment or engineering study”

Not in the NPA - added for the final rule

15 states objected in comments to the docket after the final rule

FHWA response: change is consistent with their long-term interpretation of the manual and did not require public comment

Much concern over this change

Section 1A.13 Definitions of Headings, Words, and Phrases in this Manual

Standard:

01 When used in this Manual, the text headings of Standard, Guidance, Option, and Support shall be defined as follows:

- A. Standard—a statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device. All Standard statements are labeled, and the text appears in bold type. The verb “shall” is typically used. The verbs “should” and “may” are not used in Standard statements. Standard statements are sometimes modified by Options. Standard statements shall not be modified or compromised based on engineering judgment or engineering study.
- B. Guidance—a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements are labeled, and the text appears in unbold type. The verb

General Changes

Compliance dates restructured

Compliance as part of systematic upgrade
11 changes with specific compliance dates

English units only

Paragraphs numbered

Guidance in italics

Section 2A.19 Lateral Offset

Standard:

01 For overhead sign supports, the minimum lateral offset from the edge of the shoulder (or if no shoulder exists, from the edge of the pavement) to the near edge of overhead sign supports (cantilever or sign bridges) shall be 6 feet. Overhead sign supports shall have a barrier or crash cushion to shield them if they are within the clear zone.

02 Post-mounted sign and object marker supports shall be crashworthy (breakaway, yielding, or shielded with a longitudinal barrier or crash cushion) if within the clear zone.

Guidance:

03 For post-mounted signs, the minimum lateral offset should be 12 feet from the edge of the traveled way. If a shoulder wider than 6 feet exists, the minimum lateral offset for post-mounted signs should be 6 feet from the edge of the shoulder.

Support:

04 The minimum lateral offset requirements for object markers are provided in Chapter 2C.

05 The minimum lateral offset is intended to keep trucks and cars that use the shoulders from striking the signs or supports.

Guidance:

06 All supports should be located as far as practical from the edge of the shoulder. Advantage should be taken to place signs behind existing roadside barriers, on over-crossing structures, or other locations that minimize the exposure of the traffic to sign supports.

Option:

07 Where permitted, signs may be placed on existing supports used for other purposes, such as highway traffic signal supports, highway lighting supports, and utility poles.

MUTCD and Private Property

MUTCD applies to private roads open to public travel

What are they?

Privately owned, but the public is allowed to travel without access restrictions

Examples: toll roads, roads within shopping centers, airports, sports arenas, theme parks, and similar business or recreation facilities

Parking areas and their driving aisles are not subject to MUTCD requirements



Part 2 (Signs) Changes

Relocated material

Gates and barricades to Chapter 2B

Object markers from Part 3 to Chapter 2C

New chapters

2F - Toll Road Signs

2G - Preferential and Managed Lanes

2H - General Information Signs

2I - General Service Signs

2L - Changeable Message Signs

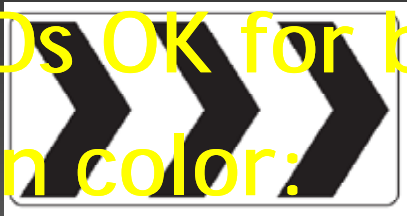
General Signing Changes

New symbols

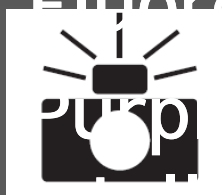
Legibility index = 30 ft/in

LEDs OK for border or legend

Sign color:



Fluorescent OK including fluorescent red
Purple for panels and plaques for electronic
toll collection



Require FYG for school area signs (yellow not allowed)

FYG OK for ped and bicycle application signs

Speed Changes

Speed Limits

Speed zones required to be based on an engineering study performed in accordance with traffic engineering practices

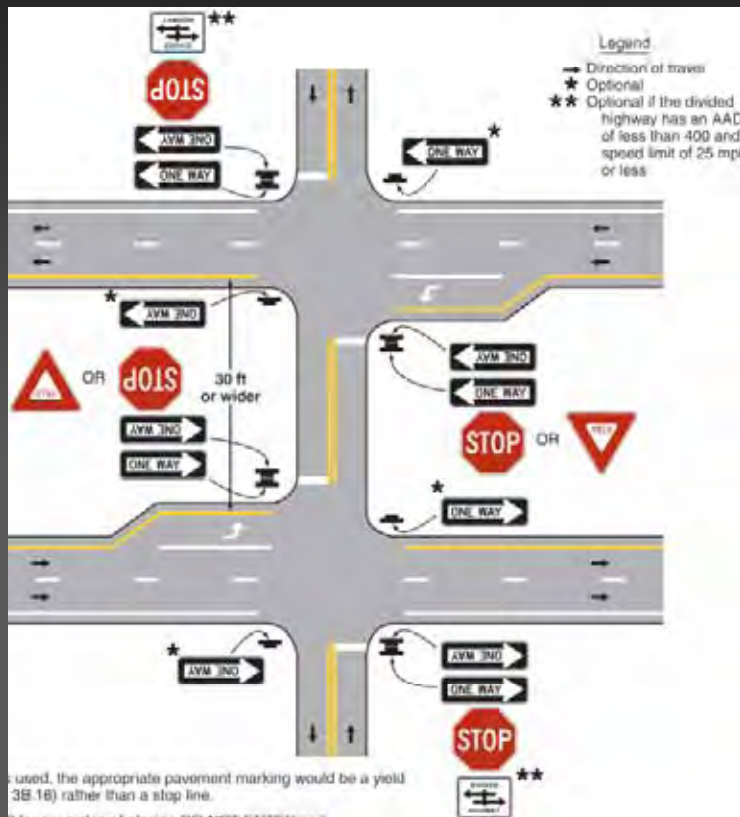
Reduced Speed Ahead sign

Recommended if speed reduction is > 10 mph



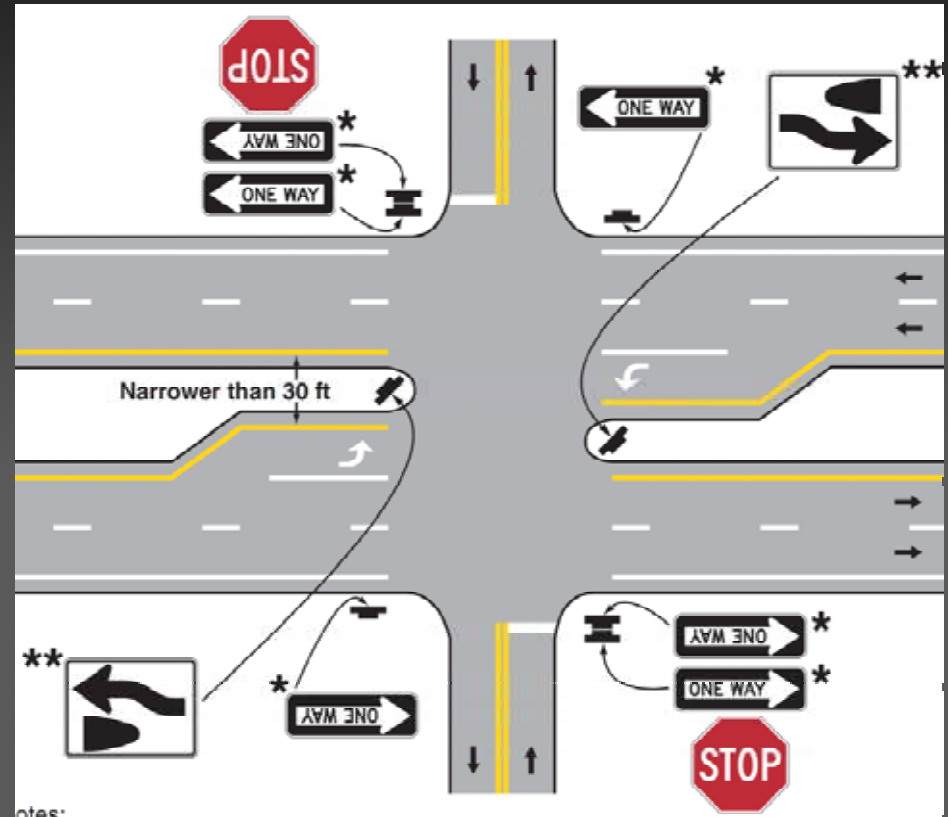
One-Way Signs

Wide median (30+ ft)



Near right and far left required
Far right optional

Narrow median (≤ 30 ft)



Either One-Way signs near right and far left or Keep Right signs in median noses

Turn/Curve Warning Signs

Requirements and recommendations for use of Turn/Curve type signs

Required on freeways, expressways, and roadways with ADT > 1,000 that are functionally classified as arterials or collectors used in accordance with Table 2C-5 based on the speed differential

Speed differential is “between the roadway’s posted or statutory speed limit or 85th-percentile speed, whichever is higher, or the prevailing speed on the approach to the curve, and the horizontal curve’s advisory speed”

Turn sign required if advisory speed \leq 30 mph

Roadway speed is on the approach tangent
Prevailing speed not defined in MUTCD

Turn/Curve Warning Signs

Table 2C-5. Horizontal Alignment Sign Selection

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W10-1) (see Section 2C.07 to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required

Recent FHWA interpretation allows agencies to use engineering judgment to select the tangent speed used to establish the speed differential

Tangent speed selected must be documented in the advisory speed engineering study

Advisory Speed Plaque

Engineering study required to establish an advisory speed

Study required to follow established engineering practices

Support statement lists examples of appropriate practices



Street Name Signs

Mixed-case lettering required for SNS

Cannot use all capital letters



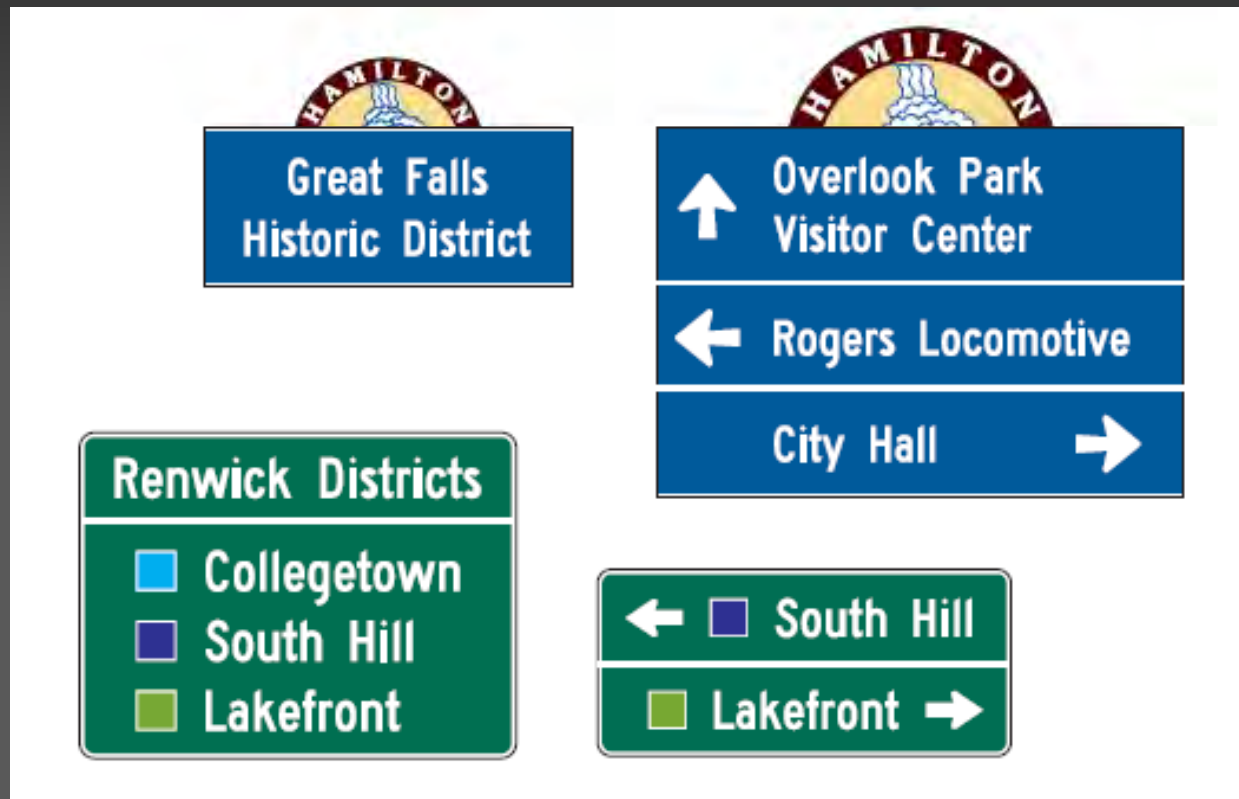
Only alternatives to the green background color are blue, brown, or white (if white, use black legend)



Alternative color recommended throughout jurisdiction

Wayfinding Signs

New provisions for the design and use of community wayfinding guide signs



Optional Lane Exit Ramps

New overhead arrow-per-lane signs for “option-lane” exits and splits feature an up arrow over each lane



Left Exit Signing

LEFT plaques are required for numbered and non-numbered exits to the left



Purple in ETC Signs

Purple background and underlay panels with Electronic Toll Collection (ETC) account pictographs

Only for portion of sign displaying ETC registration requirement

NOT for destinations or other uses



Part 3 (Markings) Changes

Dotted line required for non-continuing lane

Includes conventional roads

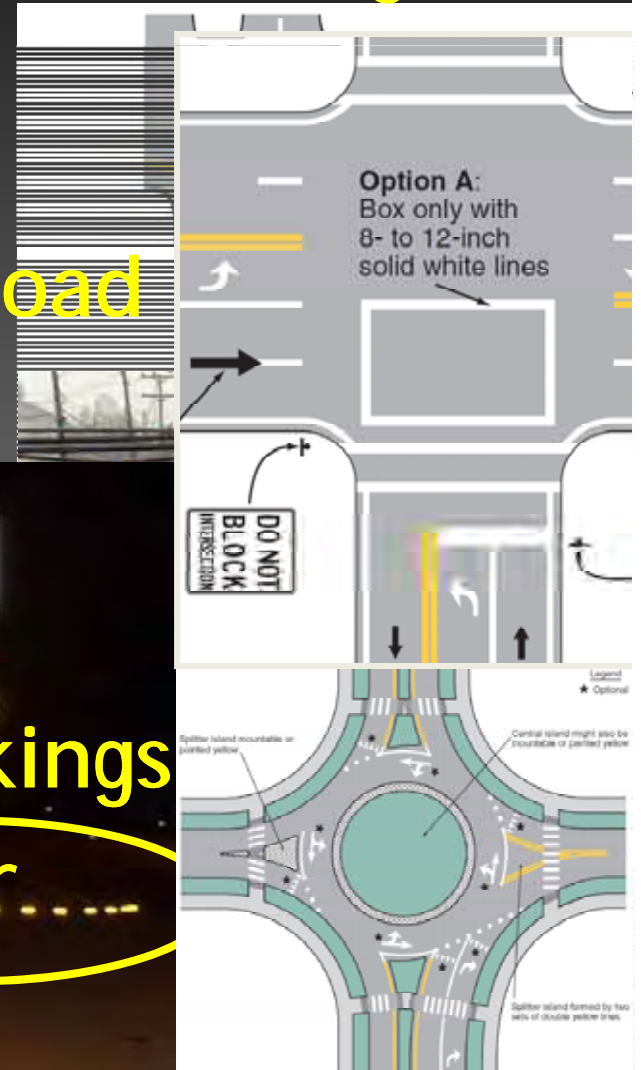
Red RRPMs OK on undivided road

RRPMs OK on island nose

Speed hump marking pattern required if used

Don't block intersection markings

Roundabout markings chapter



Toll Plaza Markings

Optional purple markings for ETC account-only lanes

Note: To be reverse pattern of that shown in the photo - white lane line with purple borders



Part 7 (Schools) Changes

FYG background color required for school warning signs (no yellow signs)

New school bus symbol

Signing requirements for school speed limit zones

Crossing guards

Student safety patrols not allowed

Required provisions for adult crossing guards



School Speed Limits

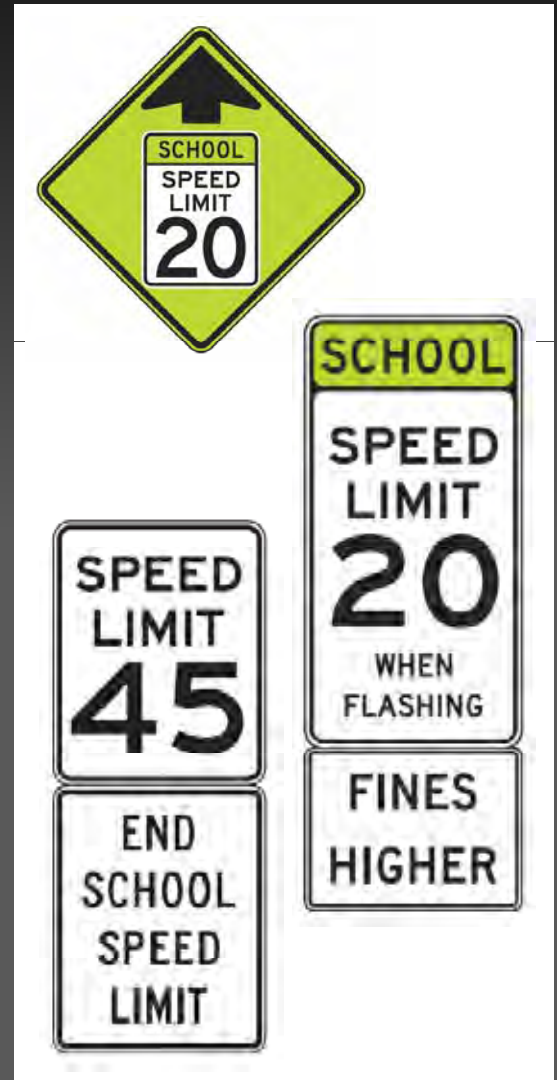
Reduced School Speed Limit Ahead
recommended if speed reduction
greater than 10 mph

Higher fines sign required if fines
are higher in school zones

End School Zone required to
indicate end of reduced school
speed zone

May be used with Speed Limit sign

Cannot use Speed Limit sign alone
to end reduced school speed limit
zone



Part 8 (RR & LRT) Changes

Parts 8 and 10 combined into a single Part 8 for highway-rail and highway-LRT grade crossings

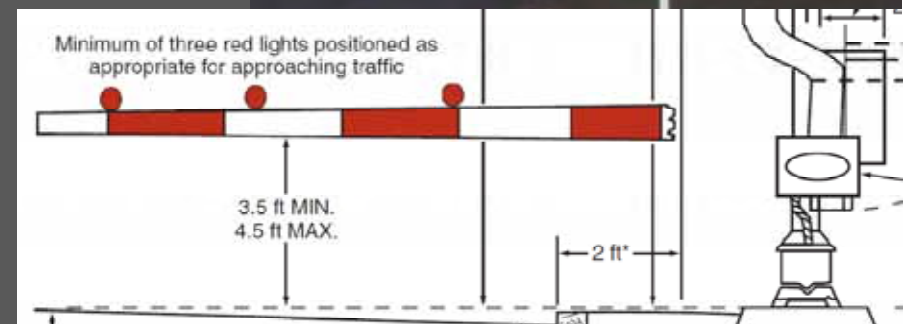
Yield or Stop signs required at passive highway-rail grade crossings

12/31/19 compliance date

Quiet zone provisions

Stop lines required for paved roads with active devices

Gate stripes are vertical

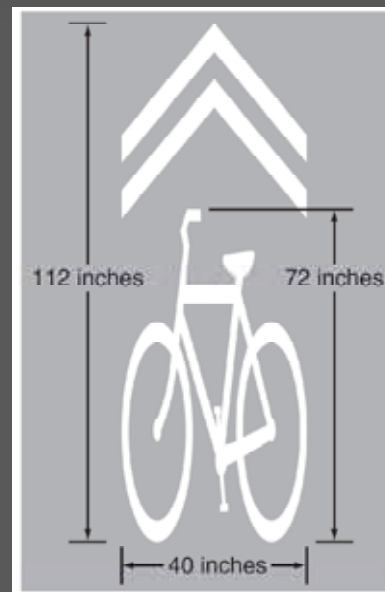


Part 9 (Bikes) Revisions

Signs no longer required in addition to markings for bike lanes

New and revised guide signs

New sign and pavement marking for shared lanes



Rest of Session

Traffic signals - Ronnie Bell

Work zones and the Texas MUTCD - Mike Chacon