



## Florida Department of Transportation

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### Mail Station 32

### ROADWAY DESIGN BULLETIN 10-05

**DATE:** April 15, 2010

**TO:** District Traffic Operations Engineer, District Design Engineers, District Construction Engineers, District Maintenance Engineers, Plans Preparation Manual Holders

**FROM:**  Mark Wilson, PE, State Traffic Operations Engineer  
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**COPIES:** Brian Blanchard, David Sadler, Paul Steinman, Lora Hollingsworth, Robert Robertson, Gary Fitzpatrick, Duane Brautigam, Bruce Dana, Chris Richter, FHWA

**SUBJECT:** 2009 Manual on Uniform Traffic Control Devices (MUTCD)  
Implementation in Florida

On December 16, 2009 a final rule adopting the 2009 Edition of the MUTCD was published in the Federal Register. States must adopt the 2009 National MUTCD within two years and FDOT is currently taking steps to proceed with rulemaking and adoption in Florida. The official effective date of the 2009 MUTCD in Florida will be January 1, 2011. This effective date should provide adequate time for FDOT and local governments to prepare and begin incorporating new 2009 MUTCD requirements in design, construction, operations and maintenance. This does not preclude use of the 2009 MUTCD prior to January 1, 2011.

The 2009 MUTCD and other related information can be accessed at the following link:

[http://mutcd.fhwa.dot.gov/kno\\_2009.htm](http://mutcd.fhwa.dot.gov/kno_2009.htm)

The Federal Register notice, which provides detailed discussion of the FHWA's decisions on major changes from the 2003 edition, can be viewed at the following link:

<http://edocket.access.gpo.gov/2009/pdf/E9-28322.pdf>

Significant changes in the 2009 MUTCD affecting FDOT requiring immediate action include:

- New minimum sign sizes for many single column signs.
- New pavement marking requirements for dropped lanes and for acceleration, deceleration and auxiliary lanes.

Implementation of the above new requirements on FDOT projects shall be as follows:

**Sign Sizes (2009 MUTCD Tables 2B-1 and 2C-2)**

The 2009 MUTCD minimum sign sizes shall be incorporated into contract plans, permit projects and maintenance as follows:

**Design:**

New construction/reconstruction projects	July 2010 letting
All other projects including RRR	January 2011 letting

**Maintenance:**

Permit projects	Permits approved on July 1, 2010 and thereafter
Maintenance projects	July 1, 2010 except old sign sizes in existing inventory are to be used until depleted.

Only new signs and those signs being replaced are required to meet the new sign size requirements.

Signs with new minimum size requirements are summarized in the tables attached to this bulletin.

**Pavement Markings – Requirement for dotted lane lines (FDOT 3’-9’ skip) for dropped lanes and for acceleration, deceleration, and auxiliary lanes (2009 MUTCD Section 3B.04 and 3B.05)**

New requirements in the 2009 MUTCD for dotted lane lines for dropped lanes and for acceleration, deceleration and auxiliary lanes are currently under review by the State Roadway Design Office and the State Traffic Engineering Office. Specific direction for compliance with these new requirements will be issued later. Until further notice, Districts are advised to continue with current pavement marking standards and practices and not make any changes to comply with the new dotted lane line requirements in 2009 MUTCD Section 3B.04 and 3B.05.

### **Other Changes**

In addition to the above, there are numerous other changes in the 2009 MUTCD. Some are new requirements that FDOT previously implemented as standard requirements. Others involve changes that do not require immediate implementation and/or are not mandatory. These are currently being reviewed and may result in other changes and improvements to FDOT standards and practice. The Districts will be notified of any such changes in accordance with normal update schedules.

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Regulatory Signs with New Minimum Size Requirements								
Excerpt From 2009 MUTCD Table 2B-1								
(New Signs and/or New Minimum Sizes indicated in Bold Text)								
Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Stop	R1-1	2B.05	30 x 30*	<b>36 x 36</b>	36 x 36	—	<b>30 x 30*</b>	48 x 48
To Oncoming Traffic (plaque)	R1-2aP	2B.10	<b>24 x 18</b>	<b>24 x 18</b>	<b>36 x 30</b>	<b>48 x 36</b>	<b>24 x 18</b>	—
All Way (plaque) <b>(NEW)</b>	<b>R1-3P</b>	2B.05	<b>18 x 6</b>	<b>18 x 6</b>	—	—	—	30 x 12
Speed Limit	R2-1	2B.13	24 x 30*	<b>30 x 36</b>	36 x 48	48 x 60	<b>18 x 24*</b>	<b>30 x 36</b>
Movement Prohibition	R3-1,2,3,4,18,27	2B.18	24 x 24*	<b>36 x 36</b>	<b>36 x 36</b>	—	—	48 x 48
Right (Left) Lane Must Turn Right (Left)	R3-7	2B.20	30 x 30*	<b>36 x 36</b>	—	—	—	—
Reversible Lane Control (post-mounted)	R3-9f	2B.26	30 x 42*	<b>36 x 54</b>	—	—	—	—
Do Not Enter	R5-1	2B.37	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	—	<b>36 x 36</b>
Wrong Way	R5-1a	2B.38	36 x 24*	<b>42 x 30</b>	36 x 24*	42 x 30	30 x 18*	<b>42 x 30</b>
One Way	R6-1	2B.40	36 x 12*	<b>54 x 18</b>	54 x 18	54 x 18	—	<b>54 x 18</b>
One Way	R6-2	2B.40	24 x 30*	<b>30 x 36</b>	36 x 48	<b>48 x 60</b>	18 x 24*	<b>36 x 48</b>
Left on Green Arrow Only	R10-5	2B.53	<b>30 x 36</b>	<b>30 x 36</b>	<b>48 x 60</b>	—	<b>24 x 30</b>	48 x 60
Use Lane with Green Arrow	R10-8	2B.53	<b>36 x 42</b>	<b>36 x 42</b>	36 x 42	—	—	60 x 72
Left (Right) Turn Signal	R10-10	2B.53	<b>30 x 36</b>	<b>30 x 36</b>	—	—	—	—
No Turn on Red	R10-11	2B.54	24 x 30*	<b>36 x 48</b>	—	—	—	<b>36 x 48</b>
No Turn on Red	R10-11a	2B.54	<b>30 x 36*</b>	<b>36 x 48</b>	—	—	—	—
No Turn on Red	R10-11b	2B.54	<b>36 x 36</b>	<b>36 x 36</b>	—	—	—	—
Left Turn Yield on Green	R10-12	2B.53	<b>30 x 36</b>	<b>30 x 36</b>	—	—	—	—
Emergency Signal	R10-13	2B.53	<b>42 x 30</b>	<b>42 x 30</b>	—	—	—	—
Right on Red Arrow After Stop	R10-17a	2B.54	<b>36 x 48</b>	<b>36 x 48</b>	—	—	—	—
Traffic Laws Photo Enforced	R10-18	2B.55	<b>36 x 24</b>	<b>36 x 24</b>	48 x 30	<b>54 x 36</b>	—	<b>54 x 36</b>
Weigh Station	R13-1	2B.60	<b>72 x 54</b>	<b>72 x 54</b>	<b>96 x 72</b>	<b>120 x 90</b>	—	—
National Network	R14-4,5	2B.63	<b>30 x 30</b>	<b>30 x 30</b>	<b>36 x 36</b>	36 x 36	—	42 x 42

\* See Table 9B-1 for minimum size required for signs on bicycle facilities

**Standard:** (From 2009 MUTCD Section 2B.03 Size of Regulatory Signs)

03 Except as provided in Paragraphs 4 and 5, the minimum sizes for regulatory signs facing traffic on multi-lane conventional roads shall be as shown in the Multi-lane column of Table 2B-1.

Option:

04 Where the posted speed limit is 35 mph or less on a multi-lane highway or street, other than for a STOP sign, the minimum size shown in the Single Lane column in Table 2B-1 may be used.

05 Where a regulatory sign, other than a STOP sign, is placed on the left-hand side of a multi-lane roadway in addition to the installation of the same regulatory sign on the right-hand side or the roadway, the size shown in the Single Lane column in Table 2B-1 may be used for both the sign on the right-hand side and the sign on the left-hand side of the roadway.

**Standard:**

06 A minimum size of 36 x 36 inches shall be used for STOP signs that face multi-lane approaches.

07 Where side roads intersect a multi-lane street or highway that has a speed limit of 45 mph or higher, the minimum size of the STOP signs facing the side road approaches, even if the side road only has one approach lane, shall be 36 x 36 inches.

08 Where side roads intersect a multi-lane street or highway that has a speed limit of 40 MPH or lower, the minimum size of the STOP signs facing the side road approaches shall be as shown in the Single Lane or Multi-lane columns of Table 2B-1 based on the number of approach lanes on the side street approach.

Guidance:

09 The minimum sizes for regulatory signs facing traffic on exit and entrance ramps should be as shown in the column of Table 2B-1 that corresponds to the mainline roadway classification (Expressway or Freeway). If a minimum size is not provided in the Freeway column, the minimum size in the Expressway column should be used. If a minimum size is not provided in the Freeway or Expressway Column, the size in the Oversized column should be used.

**Standard:** (From 2009 MUTCD Section 2B.05 STOP Sign (R1-1) and ALL WAY Plaque (R1-3P))

05 The ALL WAY plaque shall only be used if all intersection approaches are controlled by STOP signs.

06 Supplemental plaques with legends such as 2-WAY, 3-WAY, 4-WAY, or other numbers of ways shall not be used with STOP signs.

<b>Warning Signs with New Minimum Size Requirements</b> Excerpt From 2009 MUTCD Table 2C-2 (New Signs and/or New Minimum Sizes indicated in Bold Text)								
Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Horizontal Alignment	W1-1,2,3,4,5	2C.07	30 x 30*	<b>36 x 36</b>	36 x 36	36 x 36	—	<b>48 x 48</b>
Hill Blocks View	W7-6	2C.18	30 x 30*	<b>36 x 36</b>	36 x 36	—	—	<b>48 x 48</b>
Bump or Dip	W8-1,2	2C.28	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	24 x 24*	<b>48 x 48</b>
Slippery When Wet <b>(NEW)</b>	<b>W8-5</b>	2C.32	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	24 x 24*	<b>48 x 48</b>
Grooved Pavement <b>(NEW)</b>	<b>W8-15</b>	2C.33	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	24 x 24*	<b>48 x 48</b>
Metal Bridge Deck <b>(NEW)</b>	<b>W8-16</b>	2C.33	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	24 x 24*	<b>48 x 48</b>
Shoulder Drop Off (symbol) <b>(NEW)</b>	<b>W8-17</b>	2C.31	30 x 30*	<b>36 x 36</b>	36 x 36	48 x 48	24 x 24*	<b>48 x 48</b>
Bicycle	W11-1	2C.49	30 x 30	30 x 30	36 x 36	—	24 x 24*	<b>48 x 48</b>
Pedestrian	W11-2	2C.50	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Large Animals	W11- 3, 4, 16, 17, 18, 19, 20, 21, 22	2C.50	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Farm Vehicle	W11-5,5a	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Equestrian	W11-7	2C.50	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Emergency Vehicle	W11-8	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Handicapped	W11-9	2C.50	30 x 30*	<b>36 x 36</b>	36 x 36	—	—	<b>48 x 48</b>
Truck	W11-10	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Golf Cart	W11-11	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Emergency Signal Ahead (plaque)	W11-12P	2C.49	<b>36 x 30</b>	<b>36 x 30</b>	<b>36 x 30</b>	—	—	—
Horse-Drawn Vehicle	W11-14	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Bicycle / Pedestrian	W11-15	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Trail Crossing	W11-15a	2C.49	30 x 30*	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Playground	W15-1	2C.51	30 x 30	<b>36 x 36</b>	36 x 36	—	24 x 24*	<b>48 x 48</b>
Speed Hump	W17-1	2C.29	30 x 30*	<b>36 x 36</b>	—	—	24 x 24*	<b>48 x 48</b>

\* The minimum size required for diamond-shaped warning signs facing traffic on multi-lane conventional roads shall be 36 x 36 per Section 2C.04

**Standard:** (From 2009 MUTCD Section 2C.04 Size of Warning Signs)

03 **Except as provided in Paragraph 5, the minimum size for all diamond-shaped warning signs facing traffic on a multi-lane conventional road where the posted speed limit is higher than 35 mph shall be 36 x 36 inches.**

04 **The minimum size for supplemental warning plaques that are not included in Table 2C-2 shall be as shown in Table 2C-3.**

Option:

05 If a diamond-shaped warning sign is placed on the left-hand side of a multi-lane roadway to supplement the installation of the same warning sign on the right-hand side of the roadway, the minimum size identified in the Single Lane column in Table 2C-2 may be used.

06 Signs and plaques larger than those shown in Tables 2C-2 and 2C-3 may be used (see Section 2A.11).

Guidance:

07 *The minimum size for all diamond-shaped warning signs facing traffic on exit and entrance ramps should be the size identified in Table 2C-2 for the mainline roadway classification (Expressway or Freeway). If a minimum size is not provided in the Freeway Column, the Expressway size should be used. If a minimum size is not provided in the Freeway or the Expressway Column, the Oversized size should be used.*