



## Florida Department of Transportation

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### ROADWAY DESIGN BULLETIN 14-01

DATE: January 8, 2014

TO: All Users of the Florida Department of Transportation Plans Preparation Manual

FROM: Michael Shepard, P. E., State Roadway Design Engineer 

COPIES: Brian Blanchard, Tom Byron, Duane Brautigam, David Sadler, Tim Lattner, Mark Wilson, Bruce Dana, John Krause, Robert Robertson, Gregory Schiess, Nick Finch (FHWA), Tana Ashbaker, District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Roadway Design Engineers, District Construction Engineers, District Geotechnical Engineers, District Structures Design Engineers

SUBJECT: Implementation – Plans Preparation Manual January 1, 2014 Update

### REQUIREMENTS

The January 1, 2014 Update includes:

1. The January 2014 Revisions to the Plans Preparation Manual (PPM), Volume 1, January 2013 (Topic No. 625-000-007).
2. The January 2014 Revisions to the PPM, Volume 2, January 2013 (Topic No. 625-000-008).

The major changes in design requirements are to be implemented as follows:

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#### Volume 1, Chapter 2, Section 2.3 Shoulders

This section was revised to improve the constructability of shoulders with 5 feet of pavement in superelevated sections. Figure 2.3.1.B was added to provide shoulder figures for travel ways superelevated 6% or greater. Full shoulder widths (S) with paved shoulder widths less than or equal to  $S/2$  will slope upward to  $S/2$  then slope downward for the remaining shoulder width. Shoulders with paved shoulder widths greater than  $S/2$  will slope upward to the edge of paved shoulder, then slope downward. Shoulders 6 feet in width, with paved shoulder widths 5 feet or less, will now maintain an upward slope for the entire 6 feet of shoulder.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 2, Figure 2.4 Roadside Slopes**

This section was revised to provide a 10 foot flat area from the face of an adjacent retaining wall allowing clear access for maintenance. This may impact right of way needs for roadways with retaining walls near the right of way line.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 2, Section 2.10 Vertical Clearance**

This section was modified to provide more specific requirements and guidance for vertical clearance. Requirements for construction affecting existing bridge, sign, Dynamic Message Sign and traffic signal vertical clearances have been added. Tables in this section were also modified. The title of Table 2.10.1 was changed to Minimum Vertical Clearance for New Bridges and supporting notes were removed or modified. The title of Table 2.10.2 was changed to Minimum Vertical Clearances for New Signs and Signal Structures. Tables 2.10.3 and 2.10.4 were removed.

Related changes were made to PPM Volume 1, Table 23.9.6, Section 25.4.13 and PPM Volume 2, Section 10.2.6.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 4, Section 4.3.7 Surface Finishes and Section 4.4.4 Median Barrier Surface Finishes**

These sections are new and were added to provide requirements for the use of concrete surface finishes on roadway barriers. Class 5 coatings are used on concrete barrier walls as an aesthetic treatment. Requirements for approval and payment are included.

Related updates are included in Volume 1, Section 30.2 and Section 32.1.

IMPLEMENTATION:

These changes supersede [Roadway Design Bulletin 13-04](#) and are currently in effect. Therefore, Roadway Design Bulletin 13-04 is void as of January 1, 2014.

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**Volume 1, Chapter 7, Section 7.2.5 External Lighting of Overhead Signs**

This section was added based on FDOT research project (BDK82 977-07). The research developed a luminance computational model to calculate sign legend luminance under various conditions. The research concluded that the newer and more efficient retro-reflective sign sheeting could be used in most locations without sign lighting. The only locations that would require sign lighting involved horizontal curves and sag vertical curves.

IMPLEMENTATION:

These changes supersede [Roadway Design Bulletin 13-12](#) and are currently in effect. Therefore, Roadway Design Bulletin 13-12 is void as of January 1, 2014.

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**Volume 1, Chapter 7, Section 7.2.10 Internally Illuminated Street Name Signs**

This section was added to restrict the internally illuminated street name signs to a maximum width of nine feet. It also established a descending order of letter heights and fonts that should be used to insure the most legible text with the width restriction.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014.

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**Volume 1, Chapter 7, Section 7.3.4 Lighting Justification**

This section was added to explain the lighting justification requirements for roadways and interchanges. This section also implements the Department's policy to light all interchanges on the interstate system. This policy was approved by the Executive Team with funding to light all unlit interchanges by FY 2019. To insure that all new interchanges on the interstate highway system are lighted, this section requires that all interchanges be lighted whether they meet the justification or not.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014.

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**Volume 1, Chapter 7, Section 7.4.11 Mast Arm Supports**

This section was modified to include the requirement for mast arm signal structures to be approximately 90 degrees to the approaching traffic. Mast arm signal structures are not allowed to be diagonally placed at intersections. This will reduce the loads applied to mast arms and minimize red light confusion at intersections.

**IMPLEMENTATION:**

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 10, Section 10.3.1.1.1 TTC Plan Development**

This section was modified to provide additional information for the use of temporary ACROW Series 300 panel bridges in TTC Plans and special coordination requirements for the use of temporary ACROW Series 700 panel bridges.

**IMPLEMENTATION:**

These changes are effective on all applicable projects beginning design on or after January 1, 2014.

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**Volume 1, Chapter 17, Sections 17.4.2 Breakdown of Quantities**

This section was modified to update the requirements for loading pay item quantities into the Transport system by category to reflect the work shown in each design group.

**IMPLEMENTATION:**

These changes supersede [Estimates Bulletin 13-05](#) and are effective on January 1, 2014.

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**Volume 1, Chapter 20, Sections 20.2, 20.4, Figure 20.2 and Exhibit 20-C**

These sections were modified to update the requirements for Mandatory Specification Revisions.

**IMPLEMENTATION:**

These changes supersede [Roadway Design Bulletin 13-07](#) and are currently in effect. Therefore, Roadway Design Bulletin 13-07 is void as of January 1, 2014.

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**Volume 1, Chapter 23, Section 23.8 Design Variation Approval**

This section was revised to update the Design Variation Approval requirements. The changes allow additional flexibility in the Design Variation process.

IMPLEMENTATION:

These changes supersede [Roadway Design Bulletin 13-08](#) and are currently in effect. Therefore, Roadway Design Bulletin 13-08 is void as of January 1, 2014.

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**Volume 1, Chapter 25, Section 25.4.13 Vertical Clearance**

This section was modified to reduce oversized tractor-trailer collisions with existing bridges. The minimum vertical clearance for existing bridges has been increased from 14 feet to 14 feet 6 inches on milling and resurfacing projects.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 1, Chapter 32, Section 32.6, Contract Plans Preparation**

This section was renamed to *Contract Plans Preparation* and the subsequent sections were rearranged and included under Section 32.6. Section 32.6.4 was updated to instruct the Designer how to document the noise wall project requirements.

IMPLEMENTATION:

These changes supersede [Roadway Design Bulletin 13-04](#) and are currently in effect. Therefore, Roadway Design Bulletin 13-04 is void as of January 1, 2014.

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**Volume 2, Chapter 3, Section 3.6 Index of Sheets**

This section was modified to include the prefix “SQ-#”, to identify the Summary of Quantity Sheets.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**Volume 2, Chapter 7, Exhibit 7-1 Standard Notes for Summary of Quantities Sheet**

*Exhibit 7-1* was modified to delete Standard Note No. 3 regarding Pay Item 334-1.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014.

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**Volume 2, Chapter 10, Exhibit 10-1 General Notes for Roadway Plan and Roadway Plan-Profile Sheets**

*Exhibit 10-1* was modified to update Note No. 1 of the General Notes. The first General Note shall note the datum used for the project, whether benchmark or assumed.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014.

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**Volume 2, Chapter 30 Signature Sheet**

This chapter was added to provide guidance on the use of digital signatures by Professional(s) of Record. This chapter only applies to digitally delivered plans or documents.

IMPLEMENTATION:

These changes are effective on all applicable projects beginning design on or after January 1, 2014 and on all projects still in the design phase where implementation will not adversely impact production schedules.

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**GENERAL**

All other changes in the January 1, 2014 *Plans Preparation Manual* update package primarily consist of minor edits or updates, updated references, clarification and/or error corrections and are effective immediately.

Should you have any questions, please contact Frank Sullivan at (850) 414-4324.

MS/fs