



# Florida Department of Transportation

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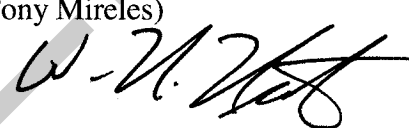
605 Suwannee Street  
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THOMAS F. BARRY, JR.  
SECRETARY

October 26, 2001

## MEMORANDUM

TO: District Structures Design Engineers  
(Gerard Moliere, Rod Nelson, John Golden, John Danielsen,  
Neil Kenis, Kim Saing, Jose Rodriguez, Agnes Spielmann)  
Area Structures Engineers  
(Robert Robertson, Don Keenan, Tom Andres, Tony Mireles)

FROM: William N. Nickas, State Structures Design Engineer 

COPIES: William D. Domico, R.E. Nichols, Jack Evans  
Charles Boyd, Jeff Pouliotte, Andre Pavlov

SUBJECT: Temporary Design Bulletin C01-3  
Effective October 26, 2001

Replace paragraph "B" of Section 10.20.1 of the (LFD) Structures Design Guidelines (previously replaced by Temporary Design Bulletin C00-3) with the following:

- B. Compliance with the strength requirements of Article 2.7 of the Standard Specifications for Highway Bridges with the exception that the Highway Design Loading, "P", in Figure 2.7.4B shall be increased to 54 kN (12 kips) distributed over a longitudinal distance of 1.5 meters (5 ft). This load and distribution length apply only to 815-mm (32") high, solid face FDOT barriers (Index Nos. 700 & 730) and the 2.44-m (8 ft) high barrier/soundwall (Index No. 1550). The supporting slab shall be designed for this distributed load using a moment arm of 815-mm (32") for the 815-mm (32") high barriers and 1065-mm (42") for the 2.44-m (8 ft) high barrier/soundwall. Additionally, for the barrier/soundwall only, the area of top slab reinforcing 1.8 meters (6 ft) each side of a bridge deck expansion joint shall be increased by 30%. The appropriate highway design loading and distribution length for any other traffic barrier must be approved by the DSDE or SSDE as appropriate.

*Commentary: The intent is to provide a deck overhang design, when using the AASHTO Load Factor Design (LFD) specification, that is equivalent to the AASHTO-LRFD Specification requirements. The load should be considered a live load and multiplied by the 1.67 load factor plus the 1.3  $\gamma$  factor. The factored dead loads for the barrier and slab should also be included for the moment calculation.  $\phi = 0.9$  should be used when computing the strength of the slab. The slab design shall satisfy the following relationship:*

$$\frac{M_u}{\phi M_N} + \frac{F_u}{\phi P_N} \leq 1.0$$

NOTE: The top slab reinforcing at the barrier shall not be less than:

- 1660 mm<sup>2</sup>/m (0.78 in<sup>2</sup>/ft) for the 815-mm (32") high barriers.
- 1970 mm<sup>2</sup>/m (0.93 in<sup>2</sup>/ft) for the 2.44-m (8 ft) high barrier/soundwall on a 200-mm (8") thick slab, and 1400 mm<sup>2</sup>/m (0.66 in<sup>2</sup>/ft) on a 250-mm (10") thick slab.

WNN/sjn

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