



Florida Department of Transportation

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SECRETARY

February 2, 2004

MEMORANDUM

TO: All Users of the Florida Department of Transportation **Structures Design Guidelines, Structures Detailing Manual, and Structures Standard Drawings.**

FROM: William N. Nickas, State Structures Design Engineer

COPIES: State Highway Engineer, Freddie Simmons, Director Office of Design, Bob Greer, FHWA, Doug Edwards Structures Design Engineers (Robert Robertson, Jack Evans, Larry Sessions, and Marcus Ansley) State Geotechnical Engineer, Larry Jones, District Structures Design Engineers (Gerard Moliere, Rod Nelson, Keith Shores, John Danielsen, Neil Kenis, Kim Saing, Jose Rodriguez, and Agnes Spielmann) District Structures and Facilities Engineers (Pepe Garcia, Keith Campbell, John Locke, Jorge Martos, Ron Meade, Frank Guyamier, and Michael Werner)

SUBJECT: **Structures Manual including the *Structures Design Guidelines*** (Topic No. 625-020-154-b), ***Structures Detailing Manual*** (Topic No. 625-020-200-e), and ***Structures Standard Drawings*** (Topic No. 625-020-300-g).

The Florida Department of Transportation Structures Design Office has officially released the Jan 2004 ***Structures Design Guidelines, Structures Detailing Manual, and Structures Standard Drawings.*** Copies of the Design Guidelines, Detailing Manual, and Standard Drawings are now part of the Structures Manual, and can be downloaded from the Structures Office website at www.dot.state.fl.us/structures.

The Structures Manual is now in a web based html format including hyperlinks, easy navigation, indexes, and advanced search capabilities. This is a change in viewing format, but Adobe Acrobat files for the Guidelines and Detailing Manual are included for printing purposes. Standard Drawings and Drawing Examples are available in both MicroStation format (dgn files) and Adobe Acrobat format (pdf files).

The Structures Manual will be updated every six months (January and July) and serve as the single source for FDOT design criteria for structural designs prepared by the Department and consultant designers. All users of the Manual are encouraged to submit suggestions to improve and further develop the contents thereby providing maximum assistance to the structural engineering community. Submit any suggestions to Andre Pavlov, Florida Department of Transportation, 605 Suwannee Street, MS 33, Tallahassee, Florida 32399-0450, or e-mailed to andre.pavlov@dot.state.fl.us.

The design criteria shall be incorporated on all future projects and on those projects currently being developed (i.e., when design and detailing has not already reached final stages). Where incorporation is not feasible, a request for a variance shall be submitted. For specific questions about the Manual, or its application to a particular project, contact the appropriate District Structures Design Office.

WNN:ps

SDG Revisions January 2004

1.4.2	Table 1.3- Structural Concrete Class	Added Class VI to Piling in all environments
1.6	Adhesive Anchors	Revised notation, formula and drawings
1.6.3	Design Requirements for Tensile Loading	Required edge distance to meet min cover.
1.6.5	Interaction of Tensile & Shear Loadings	Revised Design Example 3
2.6	Vehicular Collision Force	Required LRFD design.
2.1.1	Load Factors and Load Combinations	Moved from 2.11.11 to 2.1
2.11	Vessel Collision	Revised wording, removed pile bents
3.11	Pier, Column, and Footing Design	Revised wording
3.13	Retaining Wall Design	Revised wording
3.5	Piles	Revised wording
3.5	Table 3.3 Pile Data Table	Deleted and moved to SDME
3.5	Piles	Revised Table 3.1, 3.5.7 Min Pile Tip
3.6	Drilled Shafts	Revised Table 3.5
4.2.13	Stay-in-Place Forms	Revised to permit precast, reinforced forms
4.3.1	Pretensioned Beams-General (paragraph D3)	Strengthened language to use $f'_{ci} = 0.6 * f'_c$
4.5	Post-Tensioning, General	Moved specific info to 4.6 and 4.7
4.6	Box Girders	Revised access & screening requirements
4.6	Box Girders	Revised ventilation and drain holes
4.7	Post-Tensioned Girders	Created from 4.5
4.8	Table 4.4 Min. Tendons	Revised wording.
5.1	General	Clarified HS-25 & LRFD Req's for curved structures.
5.3.2	Structural Steel	Double Steel Boxes now Fracture Critical.
5.6	Box Sections	Revised 5.6.5 Ventilation and drain holes
5.6	Box Sections	Revised access & screening requirements
6.5	Bearings	Deleted LRFD Combined Compression & Rotation Check
6.7	Traffic Railings	Revised Min Steel Area for Std 775
7.1	Widening and Rehabilitation - General	Clarified load rating criteria. Added Deck, Joint & Railings.
7.3.7	Other Special Considerations	Clarified LRFD requirement for widenings
8.1.5	Horizontal Bridge Clearance	Requires approval for spans over 110 between fenders.
9.1	BDR Cost Estimating	Revised wording for syntax and grammar