



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD
SECRETARY

MEMORANDUM

DATE: January 2, 2013
TO: Holders of the FDOT Drainage Manual
FROM: Jennifer Green, P.E.
COPY:
SUBJECT: FDOT Drainage Manual – 2013

The Drainage Manual has been revised for 2013 and has been posted on the FDOT web site. A list of revisions and details of the revisions follow. These revisions should be implemented on all design projects when possible without impacting production schedules.

Table of Contents – Updated to reflect the revisions shown below.

Chapter 1 – Introduction

Section 1.4 – Request for deviations shall include an engineering justification for change.

Section 1.7 – Procedure for revisions has been revised. State Hydraulics Engineer was revised to State Drainage Engineer.

Chapter 2 – Open Channel

Section 2.1 – Item “outfall” in list of open channels was revised to “outfall ditches”

Section 2.4.1 – Noted added regarding ditches designed at or near seasonal high ground water.

Section 2.4.3 – Added requirement to check shear stress on steep slopes.

Section 2.4.4 – New section added “Channel Bottom”

Section 2.4.5 – New section added “Channel Freeboard”

Section 2.5 – V bottom ditch guidance moved to section 2.4.4. Double ditch maintenance considerations added.

Section 2.7 Table 2.2 added Mannings “n” value for riprap ditch lining.

Chapter 3 – “Storm Drain Hydrology and Hydraulics”

Section 3.3 – Added requirement for mixed, closed and open, drainage systems

Section 3.4 – Added note to stormwater pond tailwater determination.

Section 3.6.1 – deleted preferred, and added provision for stormsewer systems in flat terrain.

Section 3.6.2 – Added requirement for minor loss calculation when velocity approaches 8 ft/s

Section 3.6.3 – Revised maximum velocity criteria for sod at outfalls
Section 3.6.4 – Added roughness coefficients for polypropylene pipe
Section 3.7.1.1 – Revised inlet location and spacing considerations and added guidance for parking lot drainage for FDOT rest area facilities.
Section 3.7.2 – New section added “Manholes”
Section 3.7.3 – New section added “Shoulder Gutter”
Section 3.9 – Revised to distinguish between permanent and temporary spread conditions
Section 3.10 – Added additional construction and maintenance considerations
Section 3.10.1 – Added minimum size for French drain pipe.
Section 3.10.2 – Added minimum clearance criteria
Section 3.11.1 – New section “MSE walls”
Section 3.11.2 – New section “French Drains”
Section 3.11.3 – New section “Resilient Connectors”
Section 3.13.1 – Added requirement for routing for stormwater system with French drains

Chapter 4 – “Cross Drain Hydraulics”

Section 4.2.2 – New section “LRFD Design Code Bridge Design Specifications”
Section 4.3.1 – Deleted “or required for emergency access or evacuation”
Section 4.9.3.1 – Added revetment selection guidance
Section 4.9.3.2 – Revised SG to be consistent with Specifications
Section 4.10.2 – Added Polypropylene
Section 4.10.3 – Deleted word “facilities”
Section 4.10.4.1 – Added note for material selection for pipe extensions
Section 4.11.2.1 – New section for bridges on controlled canals, Sections 4.11.2.1-4 renumbered accordingly.

Chapter 5 – Storm Water Management

Section 5.2.1 – Added statement “in closed basins or areas subject to historical flooding”
Section 5.3.1.2 – Revised to require 14-86 compliance only in areas of historical flooding
Section 5.3.4.2 – Added additional guidance for maintenance berms and freeboard for treatment swales

Chapter 6 – “Optional Culvert Materials”

Section 6.5 – Added Polypropylene
Section 6.7 – Table 6.1 Deleted notes 2-6 under item number 8