

ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information — Incomplete forms will be returned)

Contact Information:

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Standard Plans:

Index Number: 430-012
Sheet Number (s): 1
Index Title: U-Type Concrete Endwall Energy Dissipator 30"
to 72" Pipe



Summary of the changes:

Sheet 1: Changed GENERAL NOTE 1 from "Class I" to "Class II".

Commentary / Background:

Changed to reflect Materials specification change that removes the designation for Class I Concrete.
Please see the attached Standard Specification Section 346 DRAFT for the Class I revisions proposed by the State Materials Office

Other Affected Offices / Documents: (Provide name of person contacted)

Yes	No	
☐	☒	Other Standard Plans –
☐	☒	FDOT Design Manual –
☐	☒	Basis of Estimates Manual –
☒	☐	Standard Specifications – Daniel Strickland
☐	☒	Approved Product List –
☐	☒	Construction –
☐	☒	Maintenance –

Origination Package Includes:

(Email or hand deliver package to Rick Jenkins)

Yes	N/A	
☒	☐	Redline Mark-ups
☐	☐	Proposed Standard Plan Instruction (SPI)
☐	☐	Revised SPI
☐	☐	Other Support Documents

Implementation:

☐ Design Bulletin (Interim)
☐ DCE Memo
☐ Program Mgmt. Bulletin
☒ FY-Standard Plans (Next Release)

————— Contact the Roadway Design Office for assistance in completing this form —————

Email to: Rick Jenkins rick.jenkins@dot.state.fl.us and Darren Martin darren.martin@dot.state.fl.us

STRUCTURAL PORTLAND CEMENT CONCRETE.**(REV 7-14-21)**

SUB ARTICLE 346-2.3 is deleted and the following substituted:

346-2.3 Supplementary Cementitious Materials: Supplementary cementitious materials are required to produce binary or ternary concrete mixes in all classes of concrete specified in Table 346-3, except for the following when used in slightly aggressive environments: **Class I**, Class I (Pavement), and Class II.

The quantity of portland cement replaced with supplementary cementitious materials must be on an equal weight replacement basis of the total cementitious materials in accordance with Table 346-2.

346-2.3.1 Highly Reactive Pozzolans: Materials that have a very high degree of pozzolanic reactivity due to their very fine particle sizes, including silica fume, metakaolin and ultrafine fly ash.

346-2.3.2 Binary Concrete Mixes: Concrete mixes containing portland cement and one supplementary cementitious material.

346-2.3.3 Ternary Concrete Mixes: Concrete mixes containing portland cement and any two of supplementary cementitious materials, either fly ash, slag, or highly reactive pozzolans.

ARTICLE 346-3.1 is deleted and the following substituted:

346-3.1 General: The classifications of concrete are designated as **Class I**, Class I (Pavement), Class II, Class II (Bridge Deck), Class III, Class III (Seal), Class IV, Class IV (Drilled Shaft), Class V, Class V (Special), Class VI, and Class VII. The 28-day specified minimum compressive strength, maximum water to cementitious materials ratio and target slump of each class are detailed in Table 346-3. The required air content for all classes of concrete is less than or equal to 6.0%.

For purposes of this Specification the concrete is further classified as follows:

1. Conventional Concrete: The target slump is described in Table 346-3 with a tolerance of ± 1.5 inches.
2. Increased Slump Concrete: The maximum target slump is 7 inches with a tolerance of ± 1.5 inches when a Type F, G, I or II admixture is used.
3. Slip-form Concrete: The target slump is 1.5 inches with a tolerance of ± 1.5 inches.
4. Flowing Concrete: Use flowing concrete only in the manufacturing of precast and prestressed products. Request Engineer's authorization to use flowing concrete for cast-in-place applications. The target slump is 9 inches with a tolerance of ± 1.5 inches. Meet the requirements of Section 8.6 Volume II of the Materials Manual.

5. Self-Consolidating Concrete (SCC): Use SCC only in the manufacturing of precast and prestressed products. The minimum target slump flow is 22.5 inches with a tolerance of ± 2.5 inches. Meet the requirements of Section 8.4 Volume II of the Materials Manual.

ARTICLE 346-3.3 is deleted and the following substituted:

346-3.3 Master Proportion Table: Proportion the materials to produce the classes of concrete in accordance with Table 346-3.

The calculation of the water to cementitious materials ratio (w/cm) is based on the total cementitious materials including portland cement and any supplementary cementitious materials used in the mix.

Class of Concrete	28-day Specified Minimum Compressive Strength (f'c) (psi)	Maximum Water to Cementitious Materials Ratio (pounds per pounds)	Target Slump Value (inches)
I ⁽¹⁾	3,000	0.53	3 ⁽²⁾
I (Pavement)	3,000	0.50	1.5 or 3 ⁽³⁾
II ⁽¹⁾	3,400	0.53	3 ⁽²⁾
II (Bridge Deck)	4,500	0.44	3 ⁽²⁾
III ⁽⁴⁾	5,000	0.44	3 ⁽²⁾
III (Seal)	3,000	0.53	8
IV	5,500	0.41 ⁽⁴⁾	3 ⁽²⁾
IV (Drilled Shaft)	4,000	0.41	8.5
V (Special)	6,000	0.37 ⁽⁴⁾	3 ⁽²⁾
V	6,500	0.37 ⁽⁴⁾	3 ⁽²⁾
VI	8,500	0.37 ⁽⁴⁾	3 ⁽²⁾
VII	10,000	0.37 ⁽⁴⁾	3 ⁽²⁾

Notes:

(1) For precast three-sided culverts, box culverts, endwalls, inlets, manholes and junction boxes, the target slump value and air content will not apply. The maximum allowable slump is 6 inches, except as noted in (2). The Contractor is permitted to use concrete meeting the requirements of ASTM C478 (4,000 psi) in lieu of the specified ~~Class I or~~ Class II concrete for precast endwalls, inlets, manholes and junction boxes.

(2) Increased slump and slip form concrete as defined in 346-3.1

(3) Meet the requirements of Section 350.

(4) When silica fume or metakaolin is required, the maximum water to cementitious material ratio will be 0.35. When ultrafine fly ash is used, the maximum water to cementitious material ratio will be 0.30.

GENERAL NOTES:

1. Use ~~Class I~~ concrete.

2. ~~Chamfer all exposed~~ edges $\frac{3}{4}$ ".

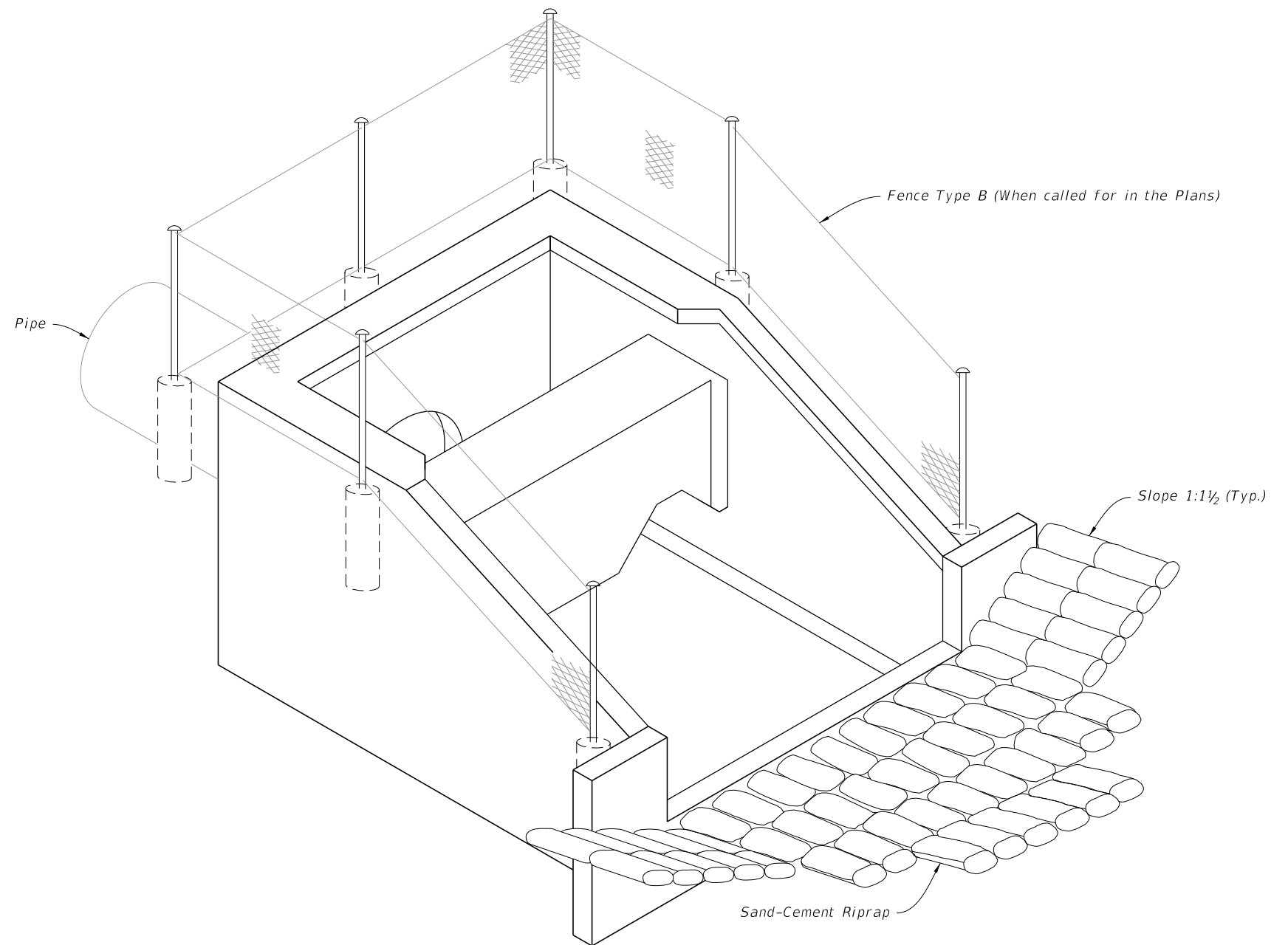
3. See Index 550-002 for details of Type B fencing.

4. Quantities shown are for estimating purposes only.

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1	General Notes and Contents
2	Dimensional Details
3	Reinforcing Details and Bending Diagram

CHANGED TO: Class II



U-TYPE CONCRETE ENDWALLS

11/01/21

LAST
REVISION
11/01/19

DESCRIPTION:



FY 2021-22
STANDARD PLANS

U-TYPE CONCRETE ENDWALL
ENERGY DISSIPATOR 30" TO 72" PIPE

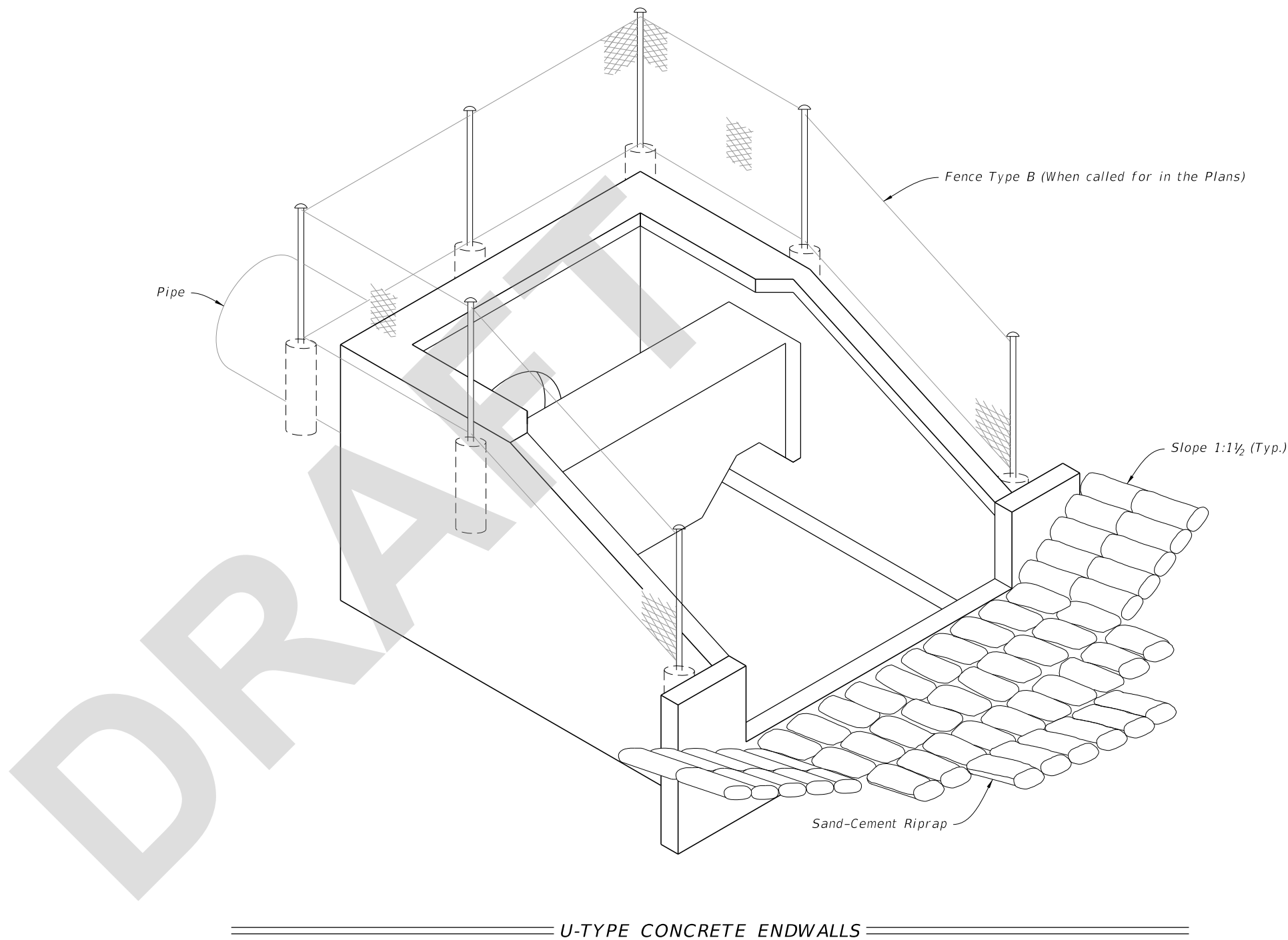
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GENERAL NOTES:

- 1. Use Class II concrete.
- 2. Chamfer all exposed edges $\frac{3}{4}$ ".
- 3. See Index 550-002 for details of Type B fencing.
- 4. Quantities shown are for estimating purposes only.

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6/14/2021 7:10:54 AM

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	 FY 2022-23 STANDARD PLANS	U-TYPE CONCRETE ENDWALL ENERGY DISSIPATOR 30" TO 72" PIPE	INDEX 430-012	SHEET 1 of 3
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