
ORIGINATION FORM

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

Contact Information:

Date: June 3, 2021
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Standard Plans:

Index Number: 425-060
Sheet Number (s): 3 and 4 of 4
Index Title: Back of Sidewalk Drainage

Summary of the changes:

Sheet 3: Changed "Class I" to "Class II" in Table 1.

Sheet 4: : Changed "Class I" to "Class II" in the SHALLOW DITCHES - INLET VIEW detail.

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⁾

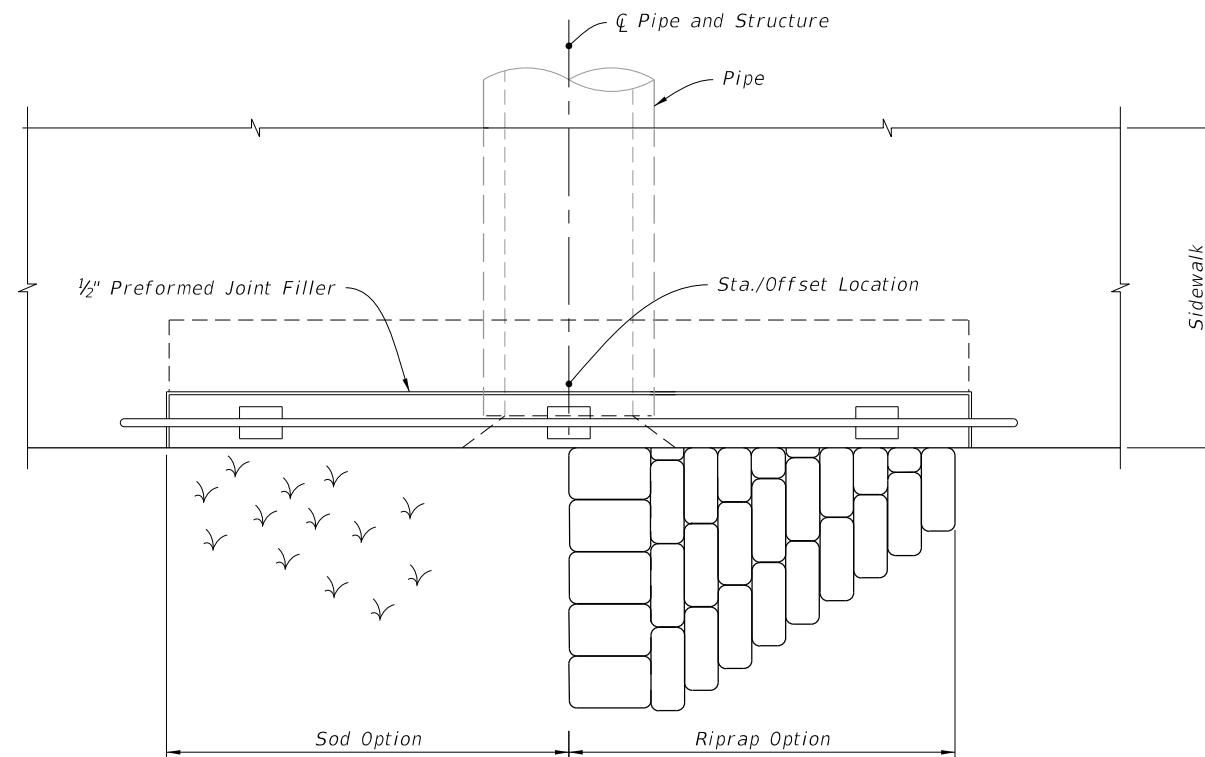
Notes:

(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.

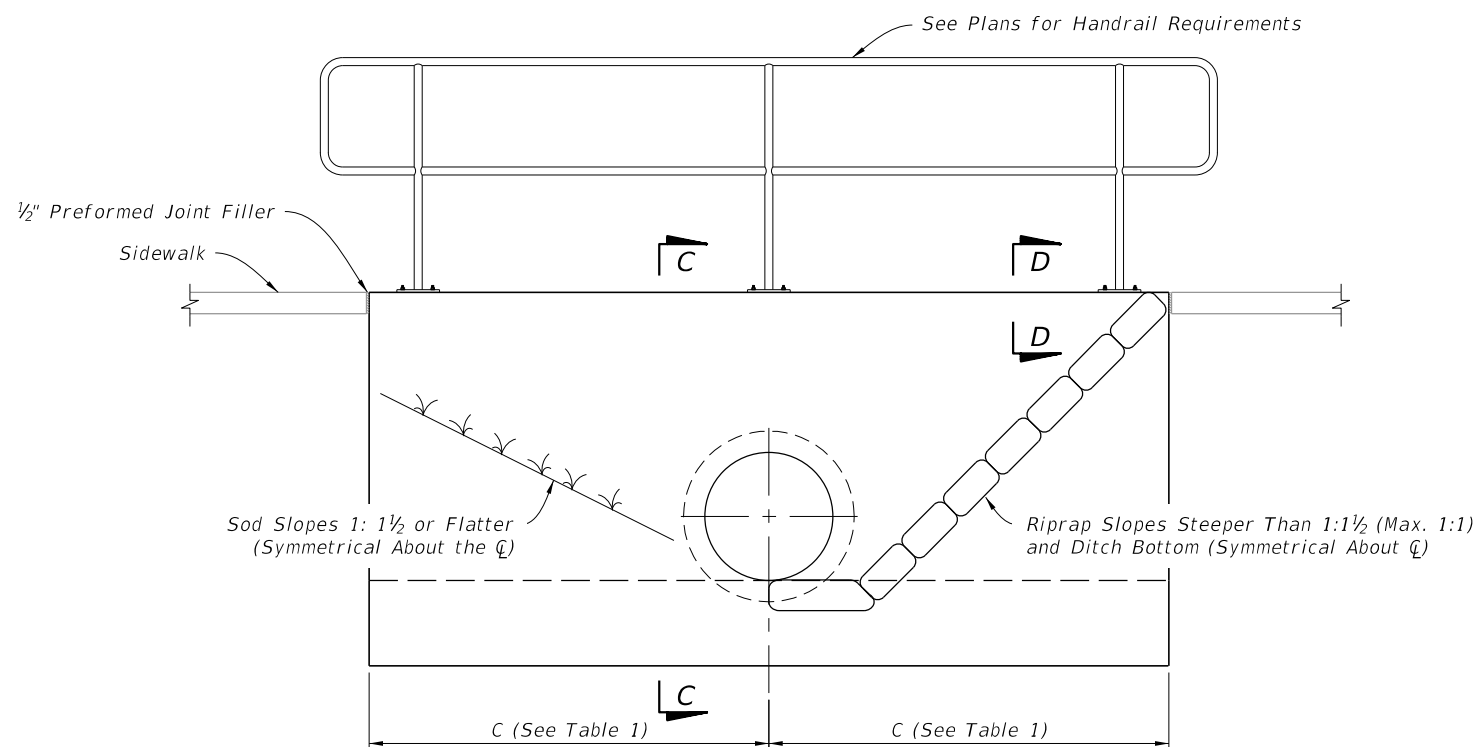
(2) Increased slump and slip form concrete as defined in 346-3.1

(3) Meet the requirements of Section 350.

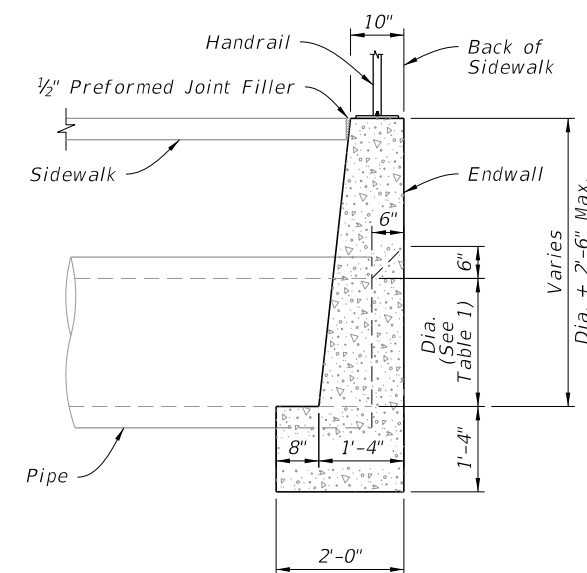
(4) When silica fume or metakaolin is required, the maximum water to cementitious material ratio will be 0.35. When ultrafine fly ash is used, the maximum water to cementitious material ratio will be 0.30.



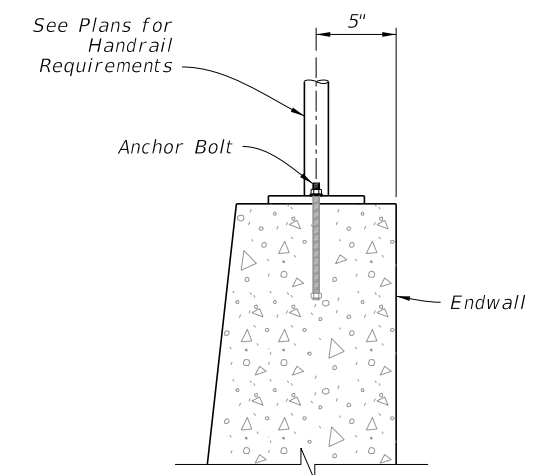
PLAN



ELEVATION



SECTION C-C



SECTION D-D

NOTES:

1. Grading back of sidewalk as directed in the Plans.
2. Concrete quantities shown are for maximum wall heights and for information only.
3. Riprap quantities are for informational and estimating purposes only.

CHANGED TO: Class II

TABLE 1			
Pipe Size Dia. (in)	C	Concrete Class I (CY)	Sand-Cement Riprap (CY)
15	4'-9"	2.5	1.1
18	5'-3"	2.6	1.3
24	6'-3"	3.3	1.8

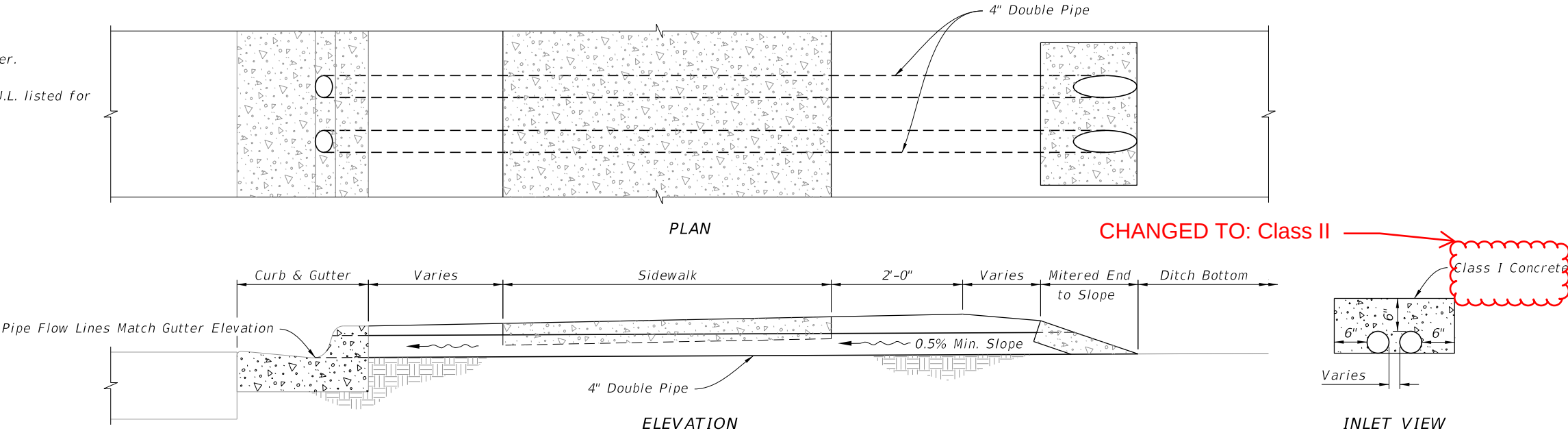
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LAST REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARD PLANS	BACK OF SIDEWALK DRAINAGE	INDEX	SHEET
11/01/20					425-060	3 of 4

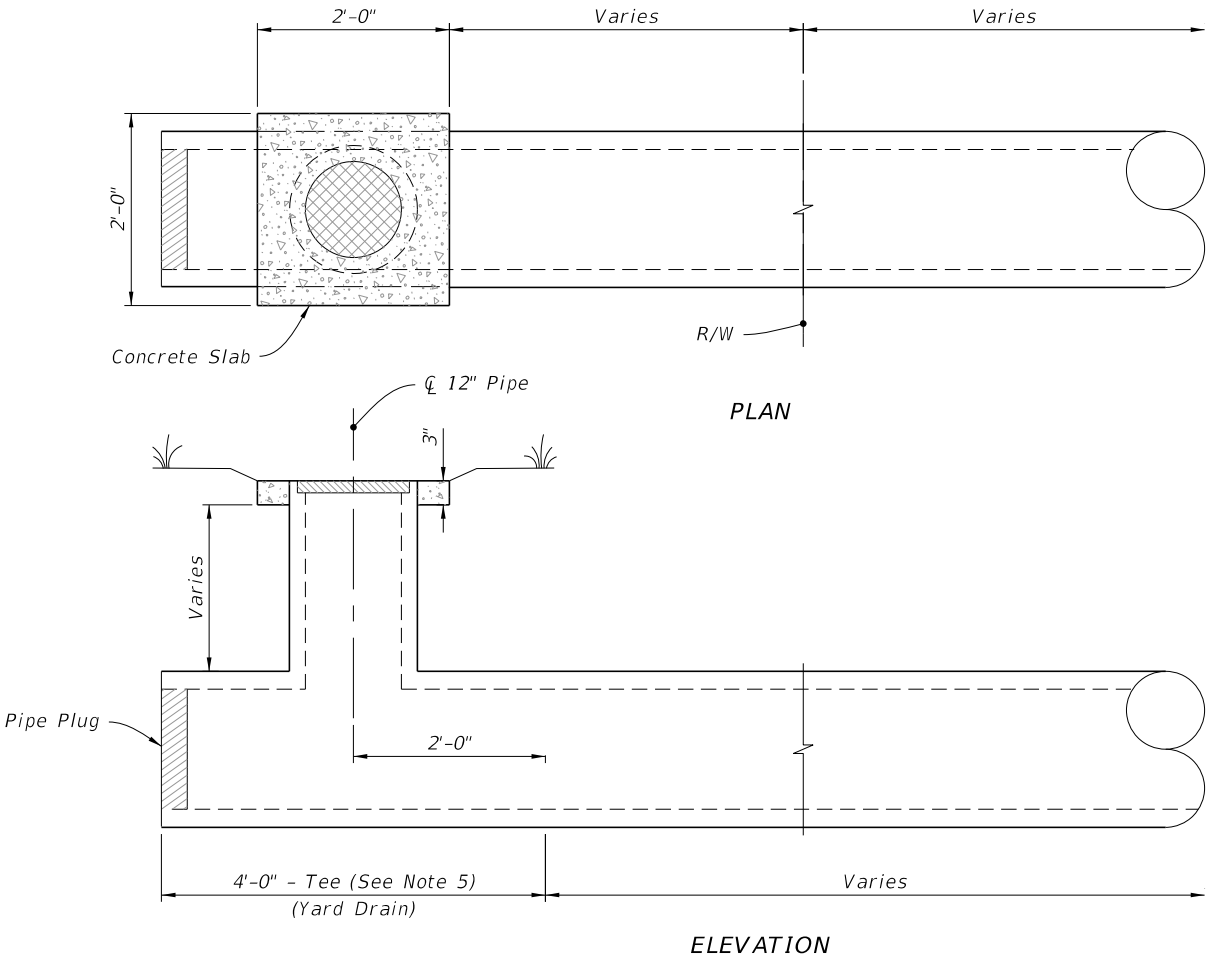
SPECIAL CONCRETE ENDWALL

- NOTES:
- 1. Construct at locations as directed by the Engineer.
 - 2. Use either cast iron pipe or PVC rigid conduit, U.L. listed for direct sunlight exposure, Schedule 40.



SHALLOW DITCHES

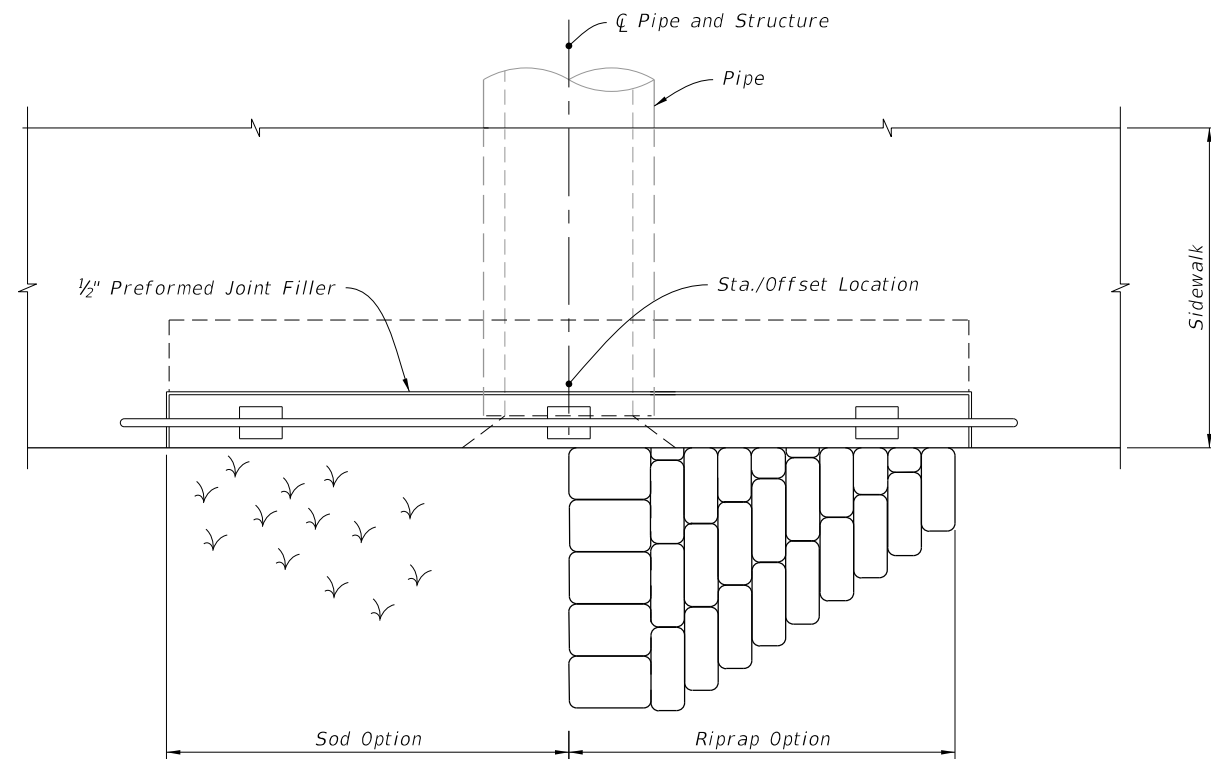
- NOTES:
- 1. Tee will be either concrete or PVC, 15"x15"x12".
 - 2. Grate will have diameter of 14¼", 2½" thick, minimum 45 square inches flow area, and be light duty cast iron in accordance Specification 962.



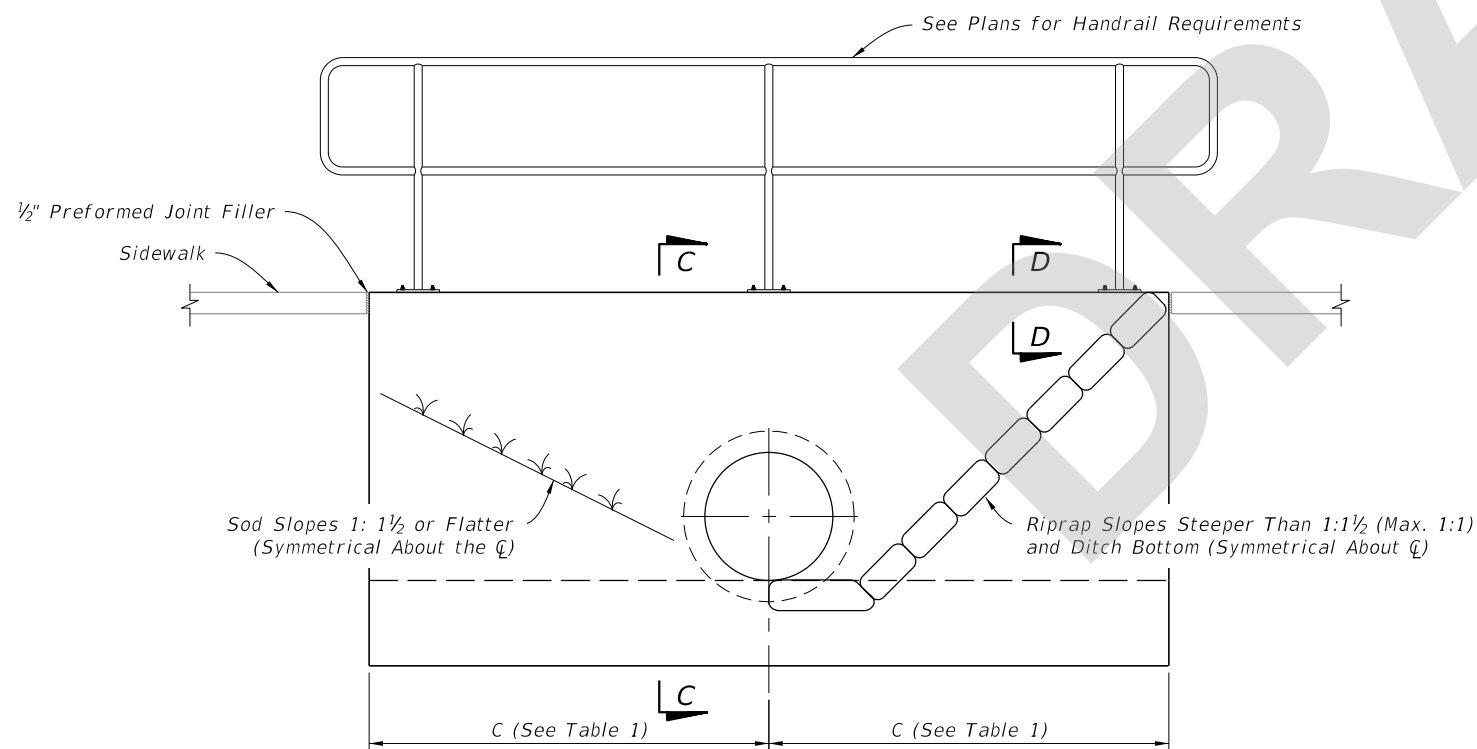
YARD DRAINS

SHALLOW DITCHES AND YARD DRAINS

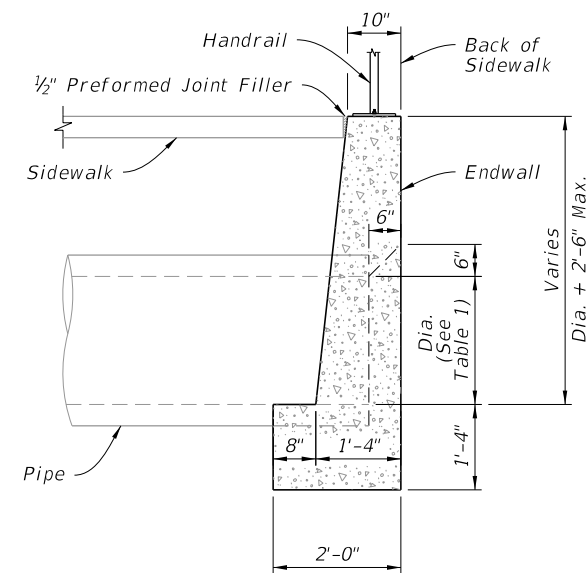
LAST REVISION 11/01/20	REVISION DESCRIPTION:	FDOT FY 2021-22 STANDARD PLANS	BACK OF SIDEWALK DRAINAGE	INDEX 425-060	SHEET 4 of 4
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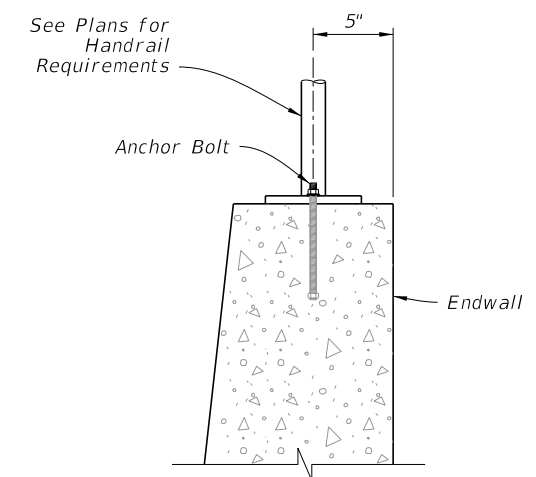
PLAN



ELEVATION



SECTION C-C



SECTION D-D

NOTES:

1. Grading back of sidewalk as directed in the Plans.
2. Concrete quantities shown are for maximum wall heights and for information only.
3. Riprap quantities are for informational and estimating purposes only.

TABLE - 1

Pipe Size Dia. (in)	C	Concrete Class II (CY)	Sand-Cement Riprap (CY)
15	4'-9"	2.3	1.1
18	5'-3"	2.6	1.3
24	6'-3"	3.3	1.8

SPECIAL CONCRETE ENDWALL



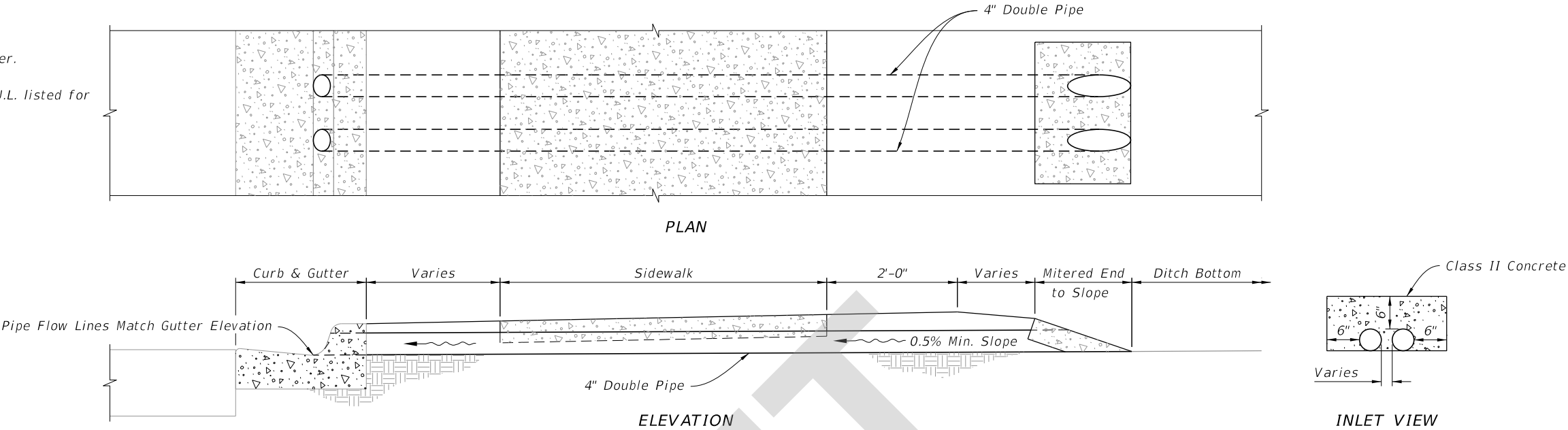
FY 2022-23
STANDARD PLANS

BACK OF SIDEWALK DRAINAGE

INDEX
425-060

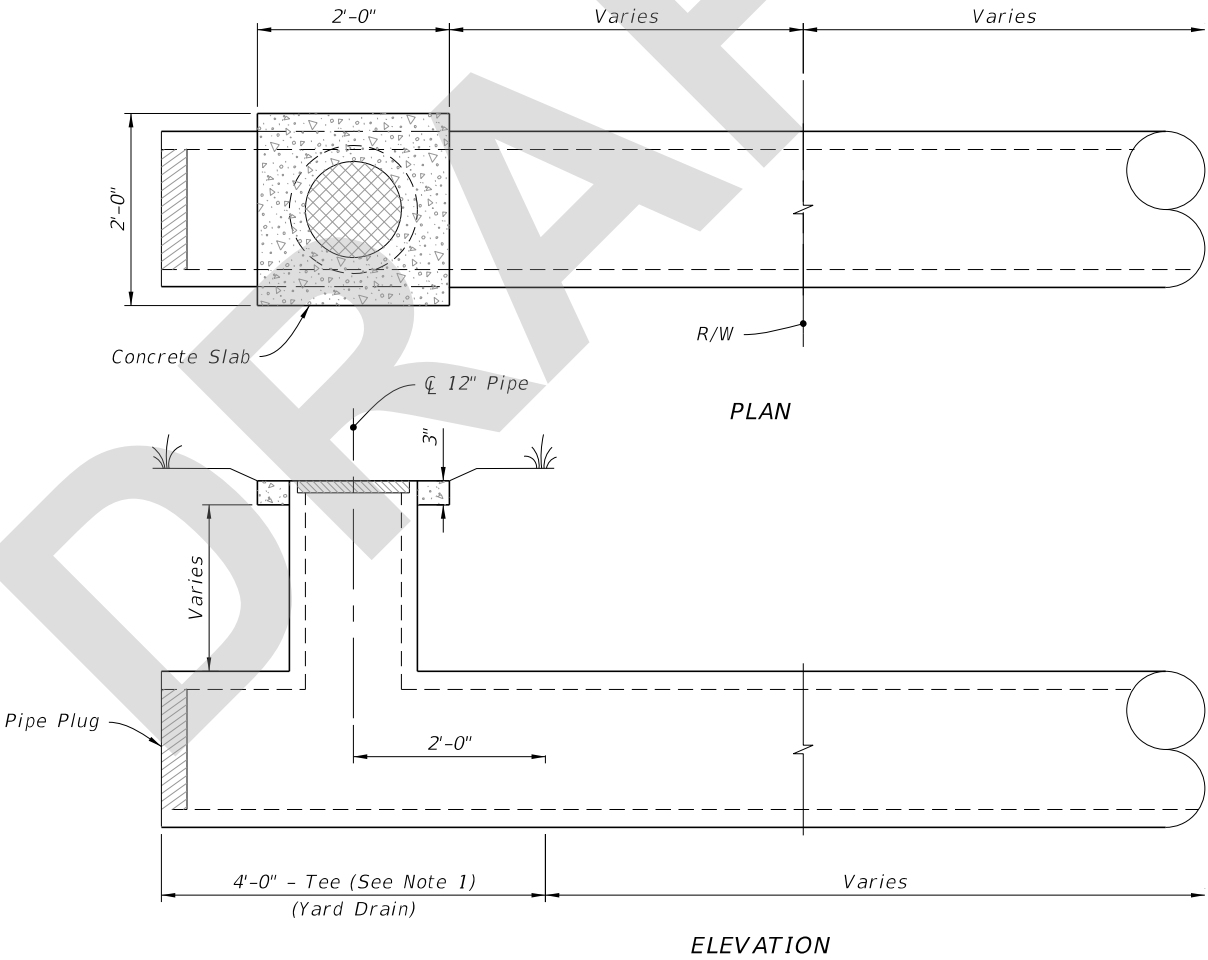
SHEET
3 of 4

- NOTES:
- 1. Construct at locations as directed by the Engineer.
 - 2. Use either cast iron pipe or PVC rigid conduit, U.L. listed for direct sunlight exposure, Schedule 40.



SHALLOW DITCHES

- NOTES:
- 1. Tee will be either concrete or PVC, 15"x15"x12".
 - 2. Grate will have diameter of 14 1/4", 2 1/2" thick, minimum 45 square inches flow area, and be light duty cast iron in accordance Specification 962.



YARD DRAINS

SHALLOW DITCHES AND YARD DRAINS

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	 FY 2022-23 STANDARD PLANS	BACK OF SIDEWALK DRAINAGE	INDEX 425-060	SHEET 4 of 4
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