
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: June 21, 2023

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Standard Plans:

Index Number: 430-001

Sheet Number (s): 2

Index Title: Miscellaneous Drainage Details

Summary of the changes:

Deleted Notes 1 and 2 on Round Concrete Pipe Joint Detail; Added new Note 1 "Allowable tolerance for the last full wrap of circumferential reinforcement shall be within 3 inches from the spigot shoulder and meet ASTM C76 for round pipe or ASTM C507 for elliptical pipe."; renumbered notes on Elliptical Concrete Pipe Joint Detail; Updated Note 3 on Elliptical Concrete Pipe Joint Detail; Updated Profile Rubber Gasket and Preformed Plastic Joint to show 3" dimension and added Note 1 reference; deleted rebar to 3" dimension on all details; deleted Note 2 reference and changed "See Note 3" callout to "See Note 2" on Round Concrete Pipe Joint Detail

Commentary / Background:

A search in ASTM archives shows that the "within 3 inches of spigot shoulder" language has existed since about 1985 in both C76 and C507. Our standard Plans were updated in 2004 which moved the last wrap from inside the joint to the shoulder, but it is unknown why the 3" guidance was omitted. This change brings the Standard Plans in line with the ASTM specifications.

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

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

Origination Package Includes: (Submit package to Rick Jenkins)

- | Yes | N/A | |
|-------------------------------------|--------------------------|---|
| ☒ | ☐ | Redline Mark-ups |
| ☐ | ☐ | Revised or Proposed Standard Plan Instruction (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

DELETED: Note 2
Reference



TABLE 1
SCHEDULE OF BELL REINFORCEMENT
Classes II,III,IV,V; Wall A,B,C

ADDED: New Note 1
Locate the last full wrap of reinforcement within 3 inches of the spigot shoulder and meet ASTM C507 for elliptical pipe.

- ~~1. Allowable Tolerance for the last full wrap of reinforcing when using single elliptical cage.~~
- ~~2. Extend the last full wrap of reinforcing to the shoulder point and meet ASTM C 76 requirements.~~
3. All circumferential steel located above this line and within the 1.75 L is defined as bell reinforcement.

ADDED: New Note 1
Locate the last full wrap of reinforcement—within 3 inches of the spigot shoulder and meet ASTM C76 for round pipe.

~~PREFORMED PLASTIC JOINT~~

3" Max (See Note 1)



UPDATED DETAILS:
To show 3" dimension;
added Note 1 reference;
deleted rebar to 3" dimension

2. ~~1. Filter Fabric Jacket is required on both type of joints.~~
3. ~~2. Details shown before pull up.~~

- UPDATED: "Joint is homed."

== ELLIPTICAL CONCRETE PIPE JOINT DETAIL ==

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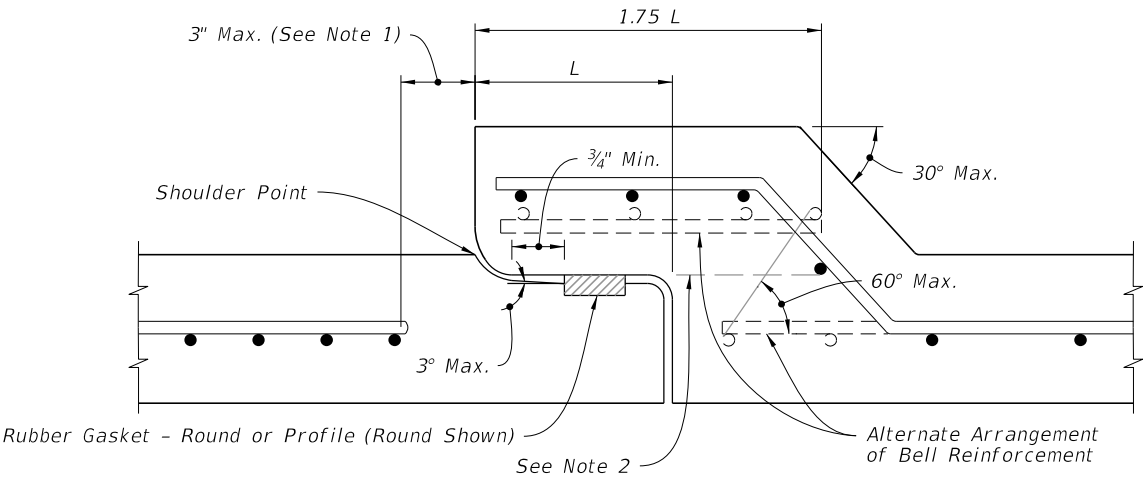
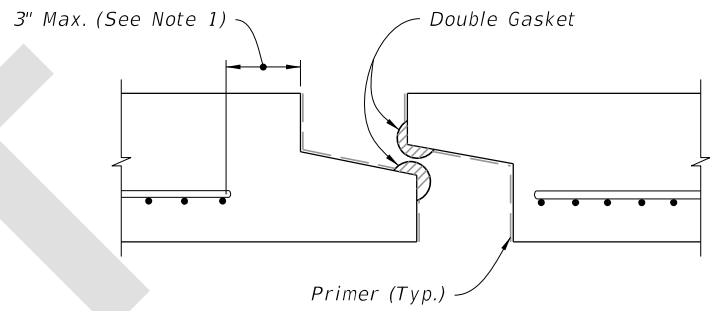


TABLE 1
SCHEDULE OF BELL REINFORCEMENT
Classes II, III, IV, AND V;
Wall A, B, AND C

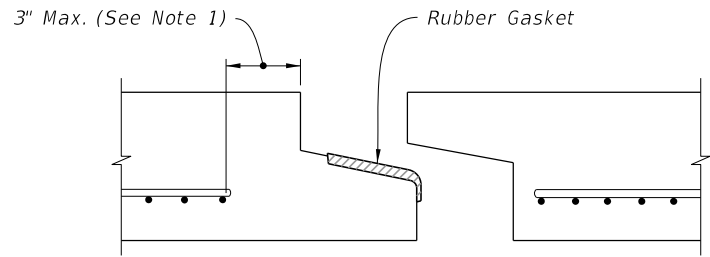
Nominal Pipe Diameter	Design Bell Reinforcement	Maximum Reinforcement Under Tolerance
	in ² per foot	in ² per foot
15"	0.07	0.010
18"	0.07	0.010
24"	0.09	0.010
30"	0.12	0.010
36"	0.14	0.010
42"	0.16	0.010
48"	0.19	0.011
54"	0.21	0.012
60"	0.23	0.0135
66"	0.26	0.015
72"	0.28	0.0165
78"	0.30	0.018
84"	0.33	0.0195
90"	0.35	0.021
96"	0.37	0.0225
102"	0.40	0.024
108"	0.42	0.0255

- NOTES:**
1. Locate the last full wrap of reinforcement within 3 inches of the spigot shoulder and meet ASTM C76 for round pipe.
 2. All circumferential steel located above this line and within the $1.75 L$ is defined as bell reinforcement.

ROUND CONCRETE PIPE JOINT DETAIL



PREFORMED PLASTIC JOINT



PROFILE RUBBER GASKET

- NOTES:**
1. Locate the last full wrap of reinforcement within 3 inches of the spigot shoulder and meet ASTM C507 for elliptical pipe.
 2. Type D-3 Geotextile Jacket is required on both type of joints.
 3. Details shown before joint is homed.

ELLIPTICAL CONCRETE PIPE JOINT DETAIL

ROUND AND ELLIPTICAL CONCRETE PIPE JOINT