

ORIGINATION FORM

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

Contact Information:

Date: September 5, 2017
Originator: **Richard Stepp**
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Standard Plans:

Index Number: **218**
Sheet Number (s): 1,2
Index Title: Barrier Wall Inlet

Summary of the changes:

1. Update concrete sections for new Single-Slope Barrier.
2. Change Index name to "Shoulder Barrier Inlet" to more clearly describe application with regards to the new Single-Slope Concrete Barrier Index.



Commentary / Background:

This is part of the Index redevelopment project for Single-Slope Concrete Barrier and Pier Protection Barrier.

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|-------------------------------------|-------------------------------------|--------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Other Standard Plans – Richard Stepp |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – |

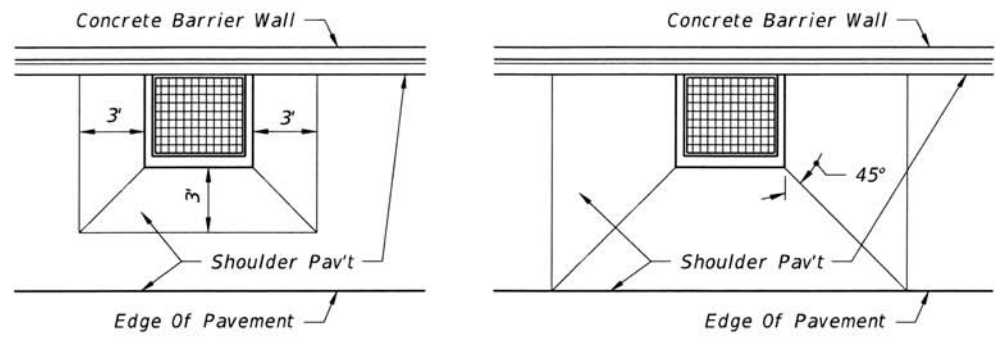
Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

- | Yes | N/A | |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Proposed Standard Plan Instructions (SPI) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Support Documents |

Implementation:

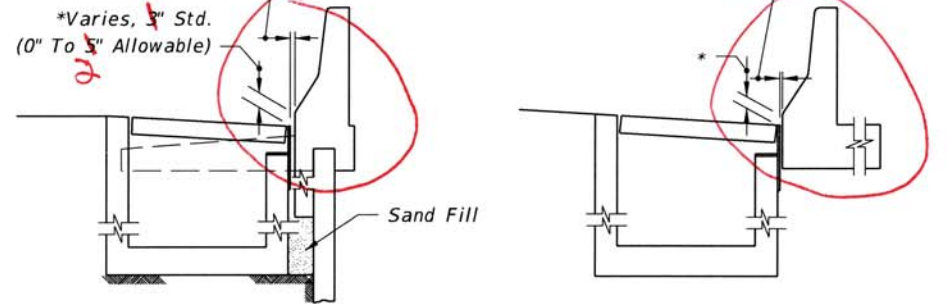
- Design Bulletin (Interim) DCE Memo Program Mgmt. Bulletin FY-Standard Plans (Next Release)

Contact the Roadway Design Office for assistance in completing this form

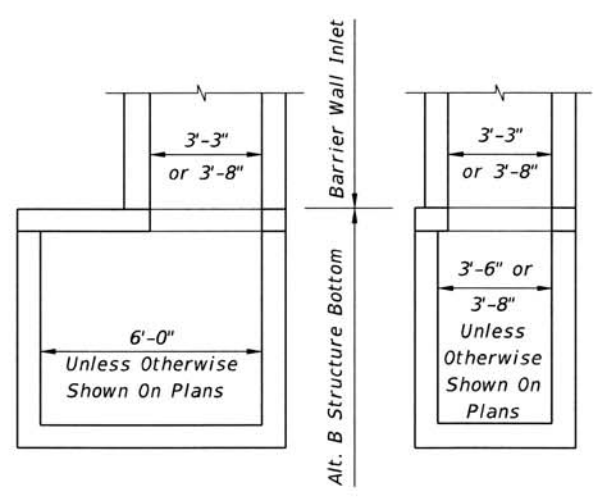


LOW SIDE SUPERELEVATION PAVEMENT WARP FOR SHOULDERS IN SUPERELEVATION
HIGH SIDE TRANSITION PAVEMENT WARP FOR SHOULDERS IN SUPERELEVATION

Joint And Bond Breaker:
Cast-In-Place Inlets:
One layer ASTM D6380 Class S, Type III Organic Felt bond breaker between inlet and barrier, including footings.
Precast Inlets:
Joint width 1" max. Seal with backer rod and Department-approved pavement joint sealant. See Section BB For Other Barrier Shape.

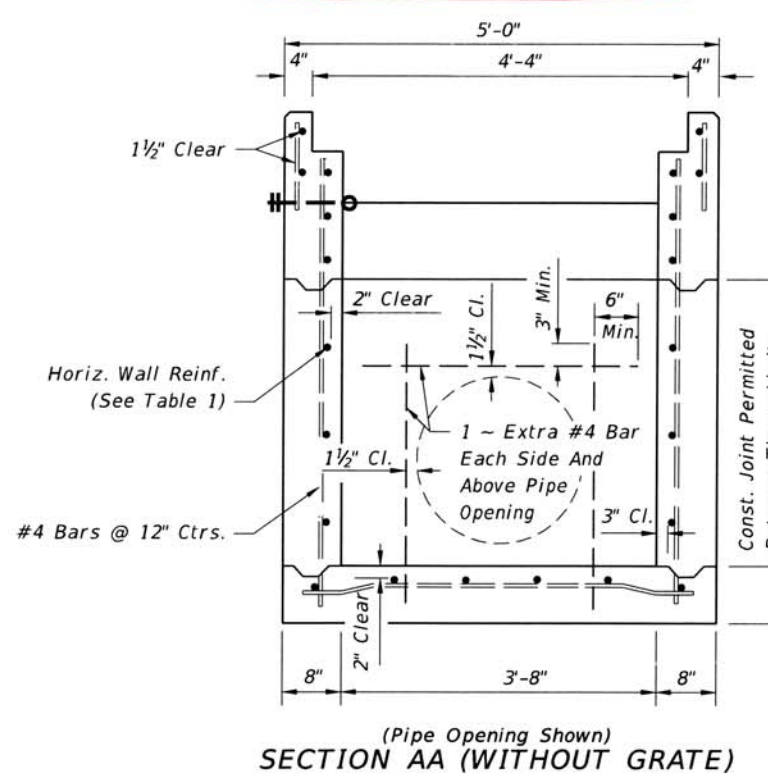


BARRIER WALL / RETAINING WALL INLET SECTION AT WALLS
SINGLE FACE ROADWAY BARRIER

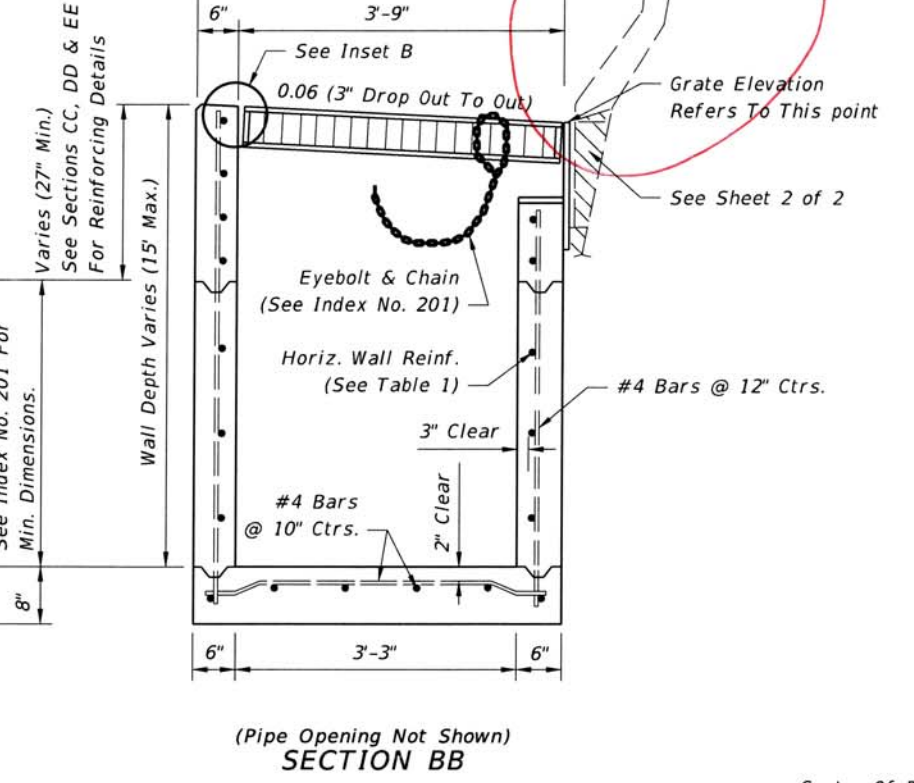


Note: Alt. B Structure Bottom Only. See Index No. 200.
INLET WITH STRUCTURE BOTTOM

** Updated for single-slope*



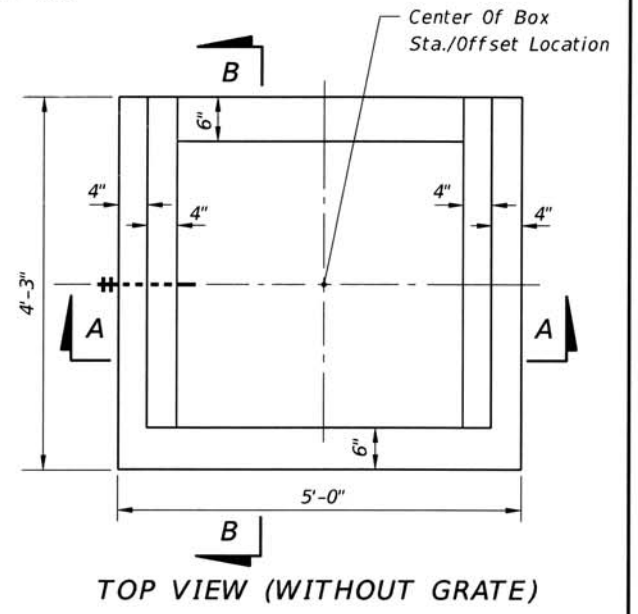
(Pipe Opening Shown)
SECTION AA (WITHOUT GRATE)



(Pipe Opening Not Shown)
SECTION BB

GENERAL NOTES

1. This inlet is primarily intended for use adjacent to concrete barrier walls on paved shoulders. Use of the inlet adjacent to other wall types shall be approved by the Drainage Engineer. The inlet is suitable for bicycle and occasional pedestrian traffic, with roller bar installation (see inset B) but should not be placed in a designated pedestrian travel way. It is not intended for use in curb and gutter or other areas where throated inlets are required, nor areas subject to high debris.
2. Inlets located in embankments constructed with earth anchored retaining wall shall be designed with minimum depths to reduce adverse impact on the anchorage system. Runs of pipe parallel to and near anchored wall shall be avoided wherever practical. Special coordination must be exercised during the design and construction of storm water systems within anchored wall systems.
3. Inlet bottoms and/or tops may be either precast or cast-in-place. Whether cast as a single unit or as multiple segments, and whether precast or cast-in-place, the upper 2'-3" of the inlet shall be reinforced in accordance with sections CC, DD and EE.
4. All exposed edges and corners shall be 3/4" chamfer or tooled to 1/4" radius.
5. When Alternate G grate is specified in the plans, the grate is to be hot-dip galvanized after fabrication. Field installation of the filler bar called for in Inset B will not be permitted, thereby requiring tolerance adjustment during fabrication and/or casting, or, matching grate to structure prior to galvanizing.
6. All reinforcing is Grade 60 bars. See Index No. 201 for equivalent area of welded wire fabric.
7. All dimensions are for both precast and cast-in-place inlets unless otherwise noted.
8. For supplemental details see Index Nos. 200 and 201.
9. Inlets to be paid for under the contract unit for Inlets (Barrier Wall), Each.

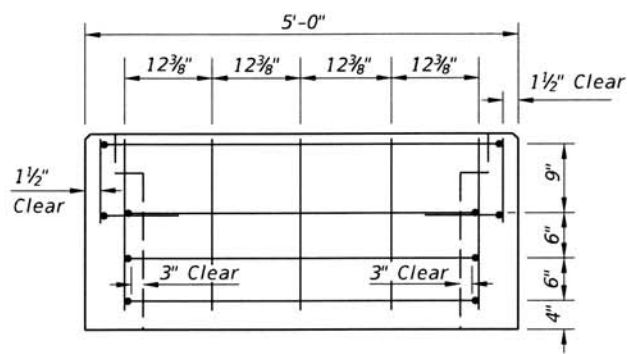


TOP VIEW (WITHOUT GRATE)

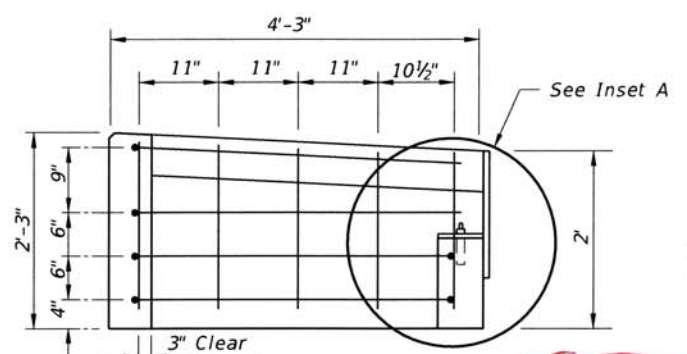
HORIZONTAL WALL REINFORCING SCHEDULE (TABLE 1)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING	
			BARS	WWF
0'-5'	A12	0.20	12"	8"
5'-10'	A6	0.20	6"	5"
10'-15'	A4	0.20	4"	3"
10'-15'	B5.5	0.24	5 1/2"	5"

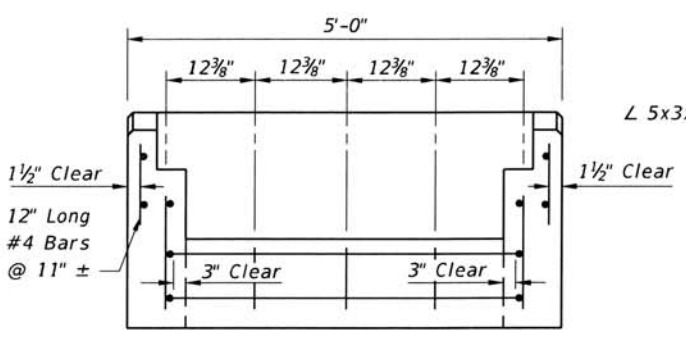
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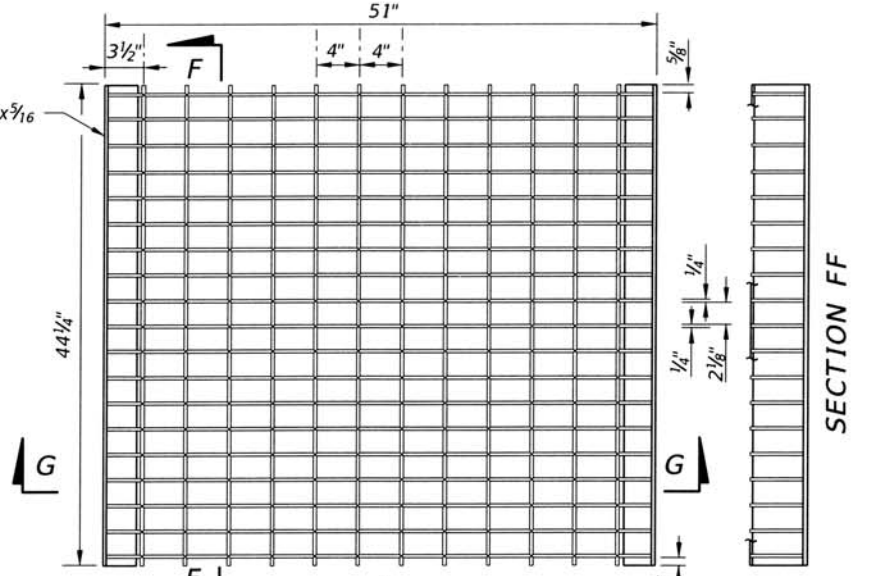
SECTION CC



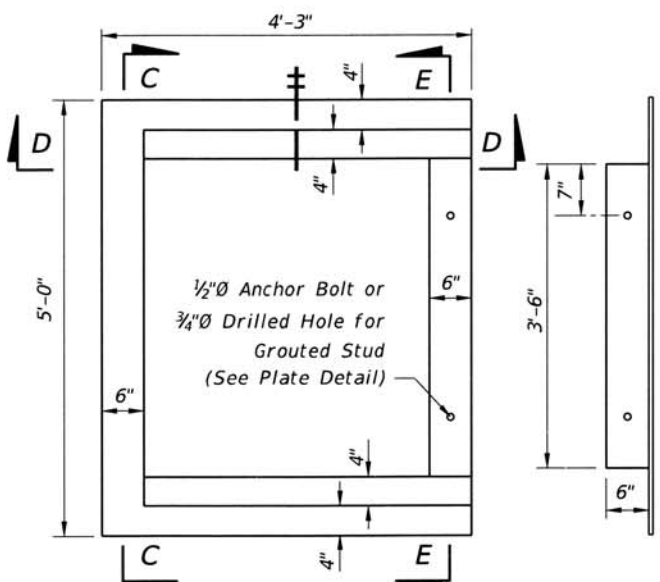
SECTION DD



SECTION EE

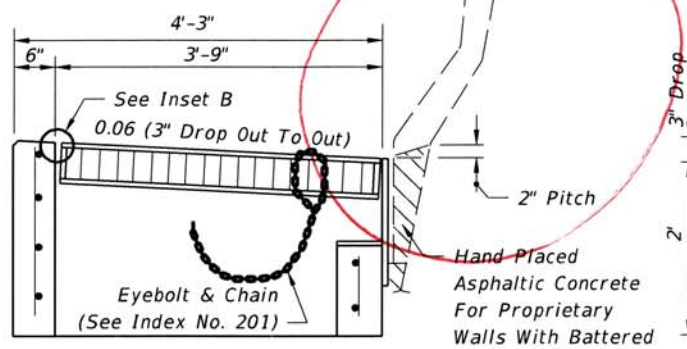


TOP VIEW
Main Bars: 5"x1/4"
Cross Bars: Either 3/8"Ø Electroformed or 1/2"Ø Welded



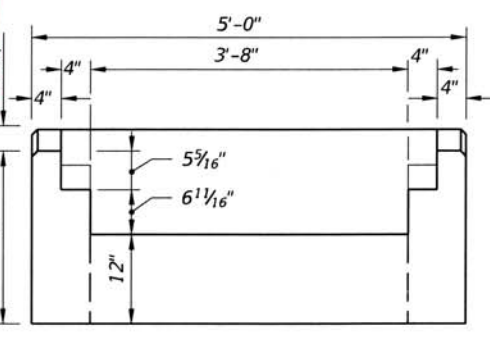
TOP VIEW OF INLET WITHOUT GRATE

TOP VIEW OF METAL PLATE

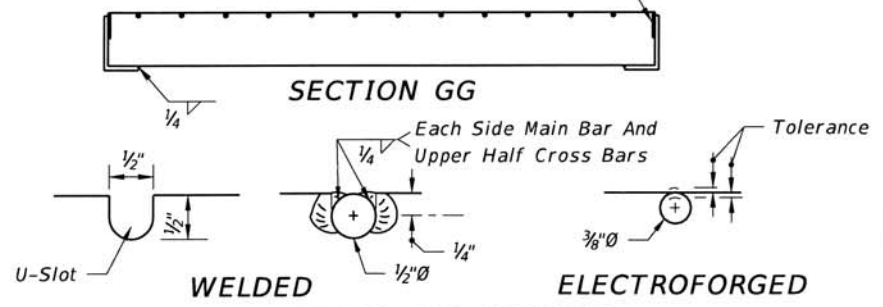


TRANSVERSE SECTION WITH GRATE & PLATE

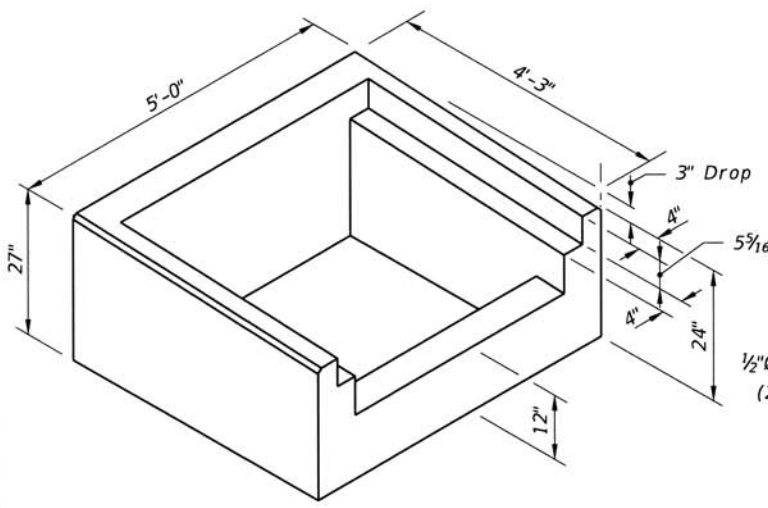
updated for single-slope



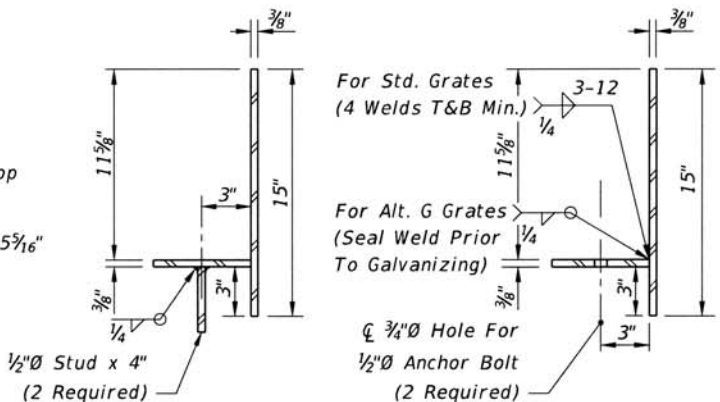
BACK VIEW WITHOUT BACK PLATE



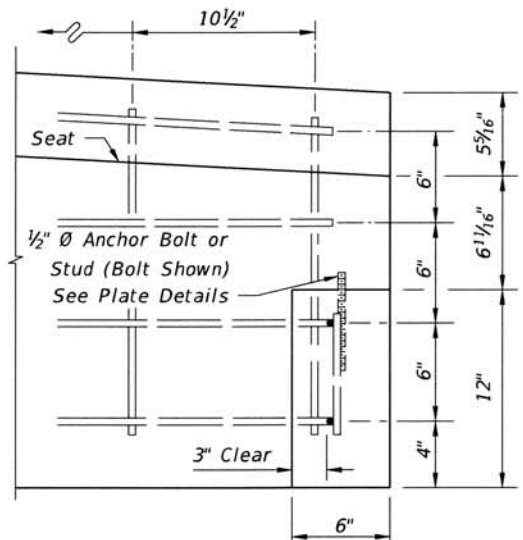
CROSS BAR OPTIONS STEEL GRATE



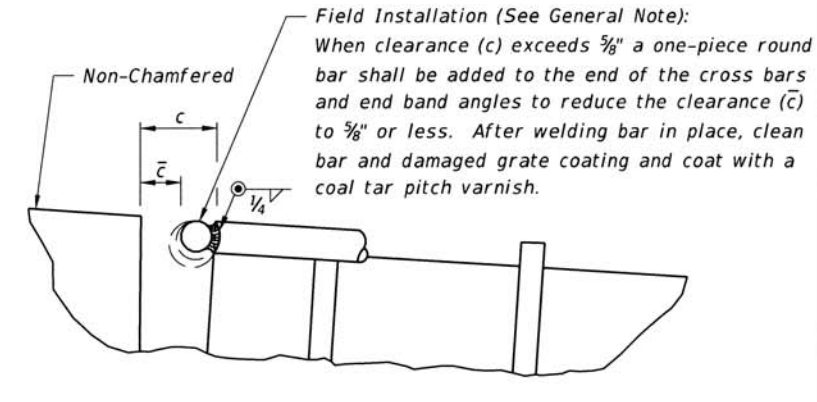
PICTORIAL VIEW OF INLET COLLAR



TRANSVERSE SECTIONS THRU BACKWALL PLATE



INSET A



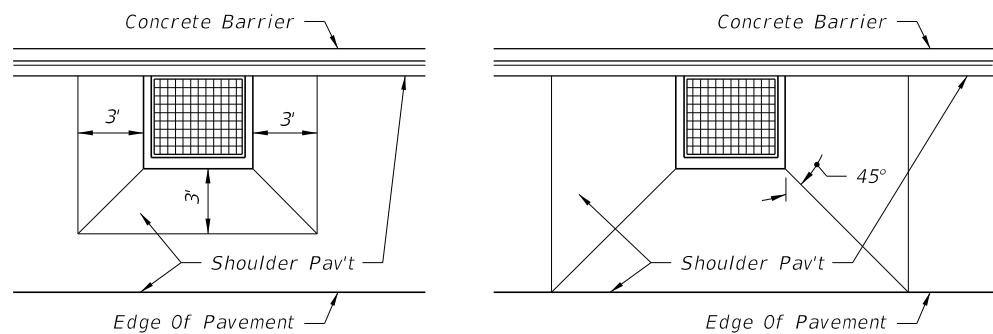
INSET B

NOTES

- All bars #4.
- Anchor bolts shall be either ASTM A307 hex head bolts cast-in-place, or ASTM A36 or F1554 (Grade 36) galvanized fully threaded rod, adhesive bonded anchors installed in accordance with Specification Section 416. Bolts or rods shall be 6" long (4" min. embedment) with one heavy hex head nut (ASTM 194 or A563) and one flat washer (ASTM F436) each. All anchor bolts, nuts and washers shall be hot-dip galvanized.

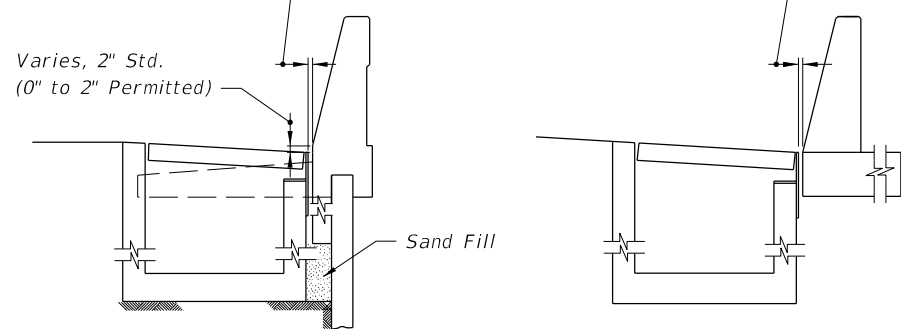
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LAST REVISION 07/07/07	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	SHOULDER BARRIER WALL INLET	INDEX NO. 218	SHEET NO. 2 of 2
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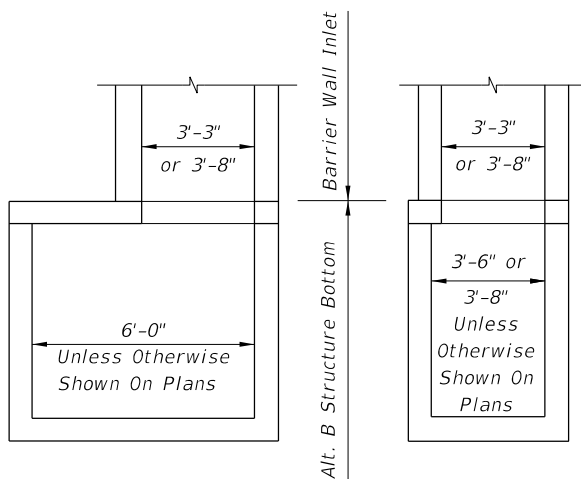
LOW SIDE SUPERELEVATION PAVEMENT WARP FOR SHOULDERS IN SUPERELEVATION
HIGH SIDE TRANSITION PAVEMENT WARP FOR SHOULDERS IN SUPERELEVATION

Joint And Bond Breaker:
Cast-In-Place Inlets:
One layer ASTM D6380 Class S, Type III
Organic Felt bond breaker between inlet and barrier, including footings.
Precast Inlets:
Joint width 1" max. Seal with backer rod and Department-approved pavement joint sealant. See Section BB For Other Barrier Shape.



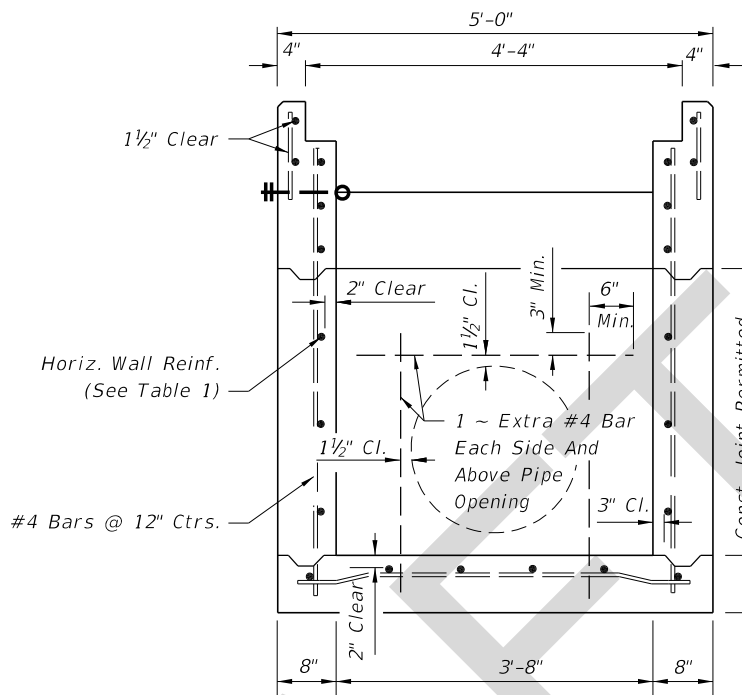
TRAFFIC RAILING / RETAINING WALL
ROADWAY BARRIER

INLET SECTION AT WALLS



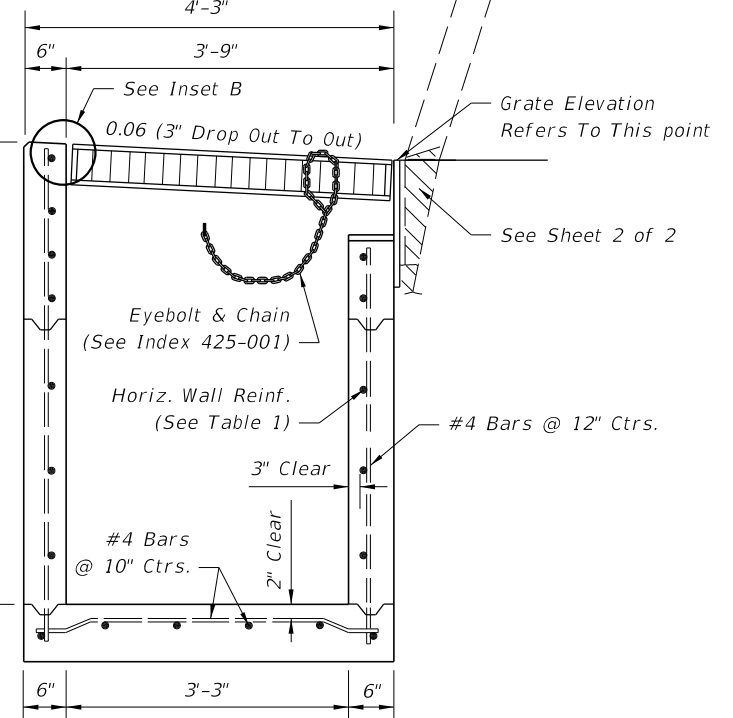
Note: Alt. B Structure Bottom Only. See Index 425-010

INLET WITH STRUCTURE BOTTOM



SECTION A-A (WITHOUT GRATE)
(Pipe Opening Shown)

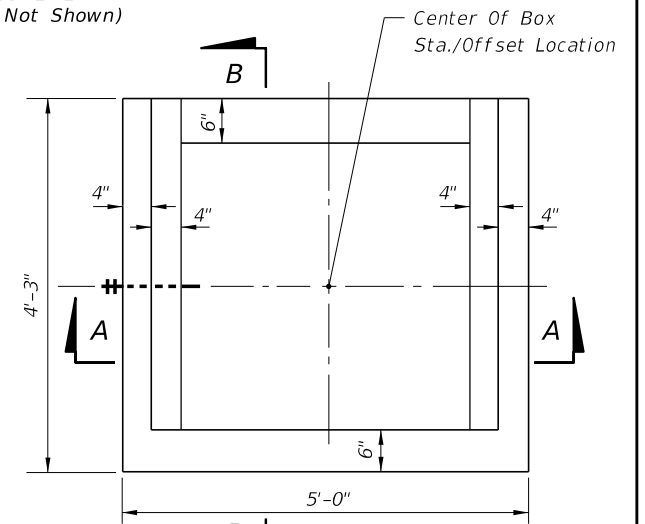
Varies (27" Min.)
See Sections CC, DD & EE
For Reinforcing Details



SECTION B-B
(Pipe Opening Not Shown)

GENERAL NOTES:

1. This inlet is primarily intended for use adjacent to concrete barriers on paved shoulders. Use of the inlet adjacent to other wall types shall be approved by the Drainage Engineer. The inlet is suitable for bicycle and occasional pedestrian traffic, with roller bar installation (see inset B) but should not be placed in a designated pedestrian travel way. It is not intended for use in curb and gutter or other areas where throated inlets are required, nor areas subject to high debris.
2. Inlets located in embankments constructed with earth anchored retaining wall shall be designed with minimum depths to reduce adverse impact on the anchorage system. Runs of pipe parallel to and near anchored wall shall be avoided wherever practical. Special coordination must be exercised during the design and construction of storm water systems within anchored wall systems.
3. Inlet bottoms and/or tops may be either precast or cast-in-place. Whether cast as a single unit or as multiple segments, and whether precast or cast-in-place, the upper 2'-3" of the inlet shall be reinforced in accordance with sections CC, DD and EE.
4. All exposed edges and corners shall be 3/4" chamfer or tooled to 1/4" radius.
5. When Alternate G grate is specified in the plans, the grate is to be hot-dip galvanized after fabrication. Field installation of the filler bar called for in Inset B will not be permitted, thereby requiring tolerance adjustment during fabrication and/or casting, or, matching grate to structure prior to galvanizing.
6. All reinforcing is Grade 60 bars. See Index 425-001 for equivalent area of welded wire fabric.
7. All dimensions are for both precast and cast-in-place inlets unless otherwise noted.
8. For supplemental details see Indexes 425-001 and 425-010.
9. Inlets to be paid for under the contract unit for Inlets (Barrier Wall), Ea.



TOP VIEW (WITHOUT GRATE)

TABLE 1: HORIZONTAL WALL REINFORCING SCHEDULE

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING	
			BARS	WWF
0'-5'	A12	0.20	12"	8"
5'-10'	A6	0.20	6"	5"
10'-15'	A4	0.20	4"	3"
10'-15'	B5.5	0.24	5 1/2"	5"

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LAST REVISION 11/01/17	DESCRIPTION:
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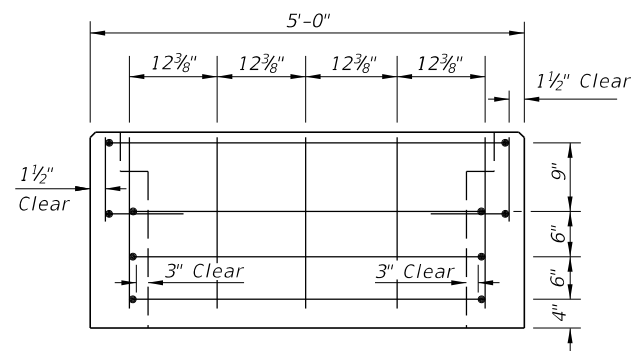


FY 2018-19
STANDARD PLANS

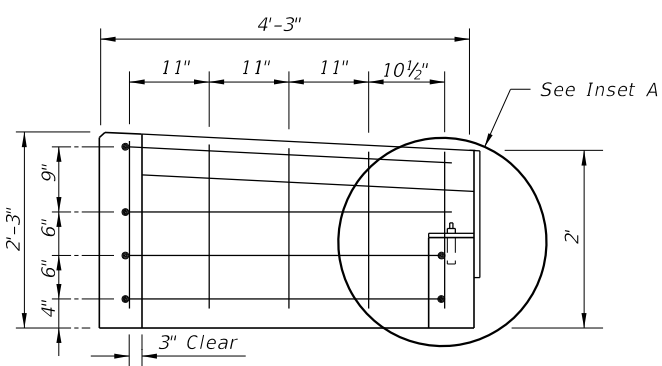
SHOULDER BARRIER INLET

INDEX
425-031

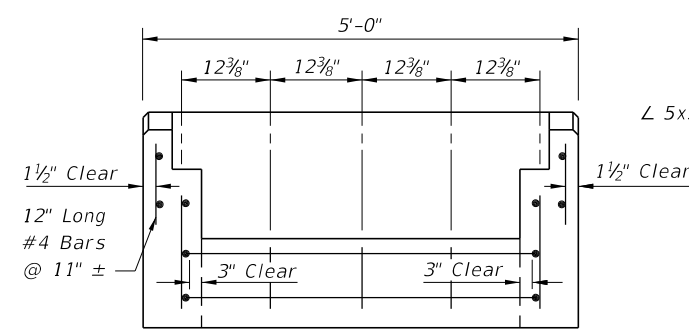
SHEET
1 of 2



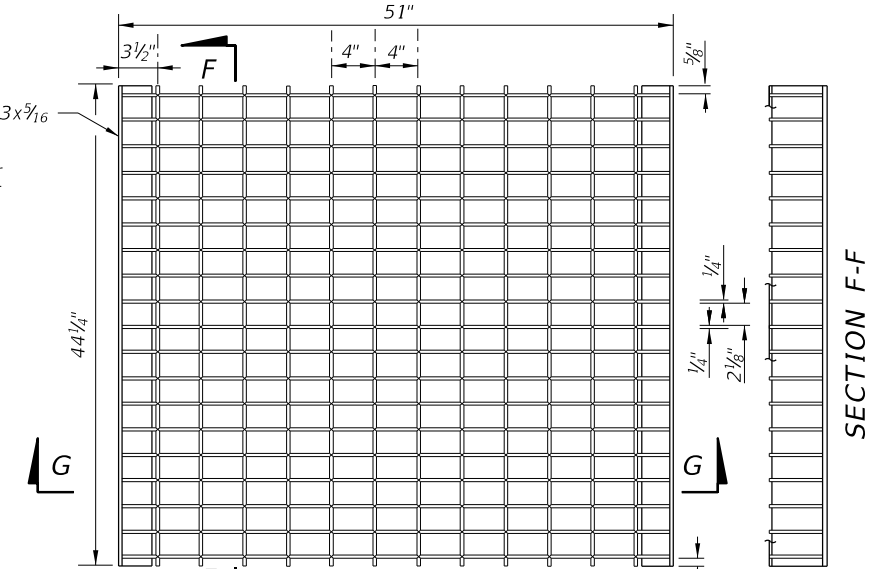
SECTION C-C



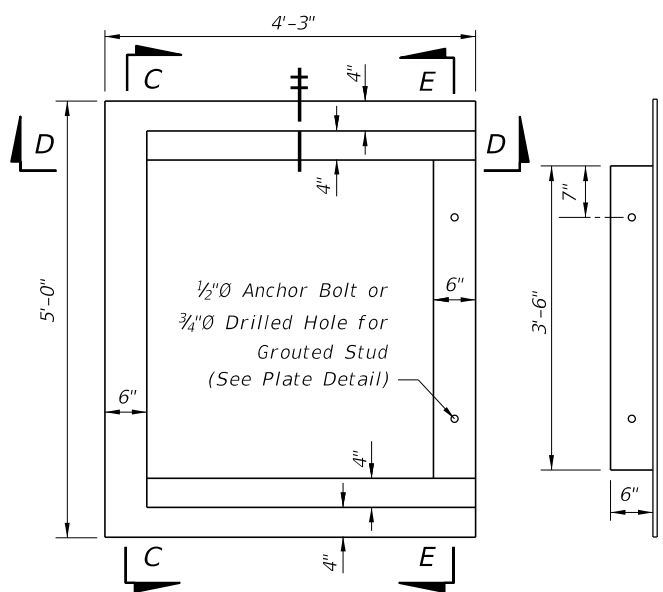
SECTION D-D



SECTION E-E

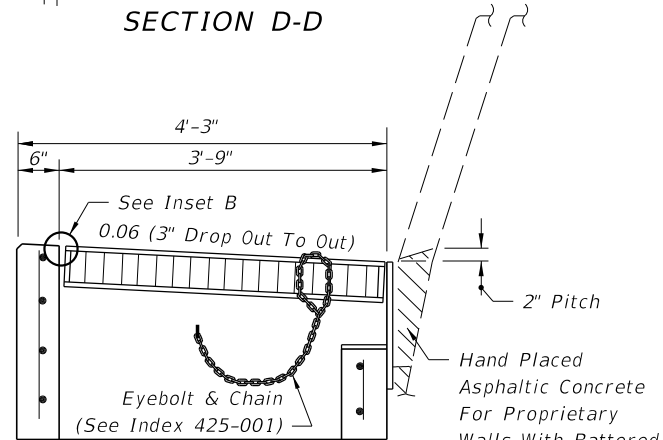


Main Bars: 5"x1/4"
Cross Bars: Either 3/8"Ø Electroforged or 1/2"Ø Welded
TOP VIEW

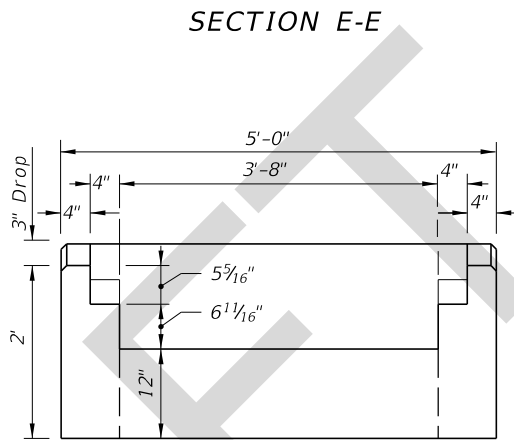


TOP VIEW OF INLET WITHOUT GRATE

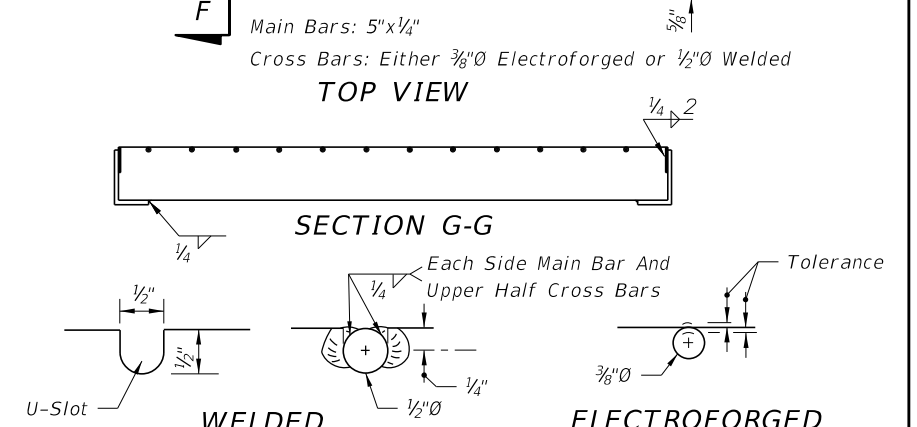
TOP VIEW OF METAL PLATE



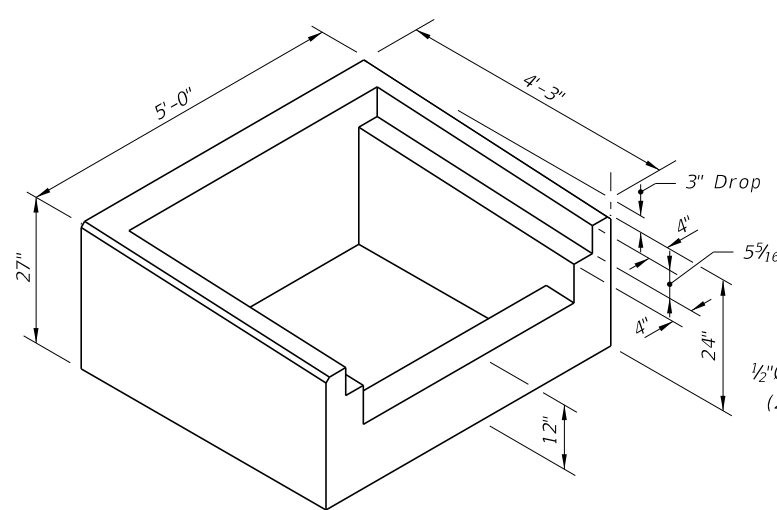
TRANSVERSE SECTION WITH GRATE & PLATE



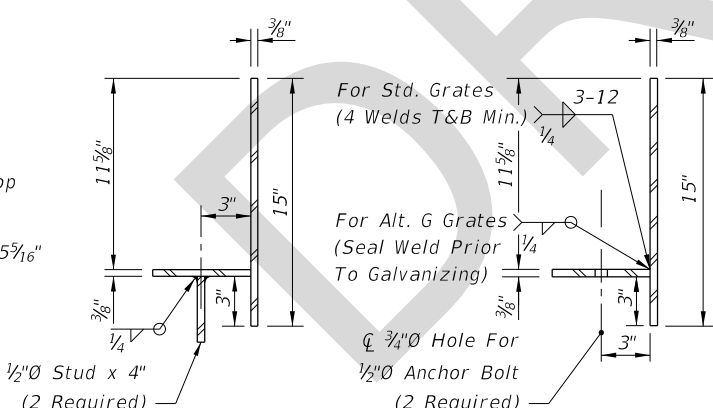
BACK VIEW WITHOUT BACK PLATE



CROSS BAR OPTIONS
STEEL GRATE

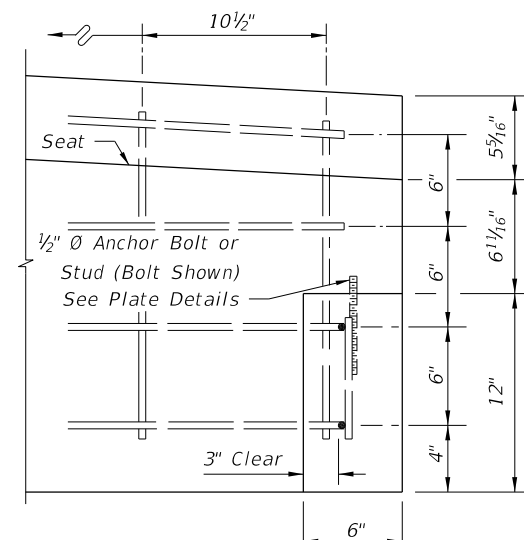


PICTORIAL VIEW OF INLET COLLAR

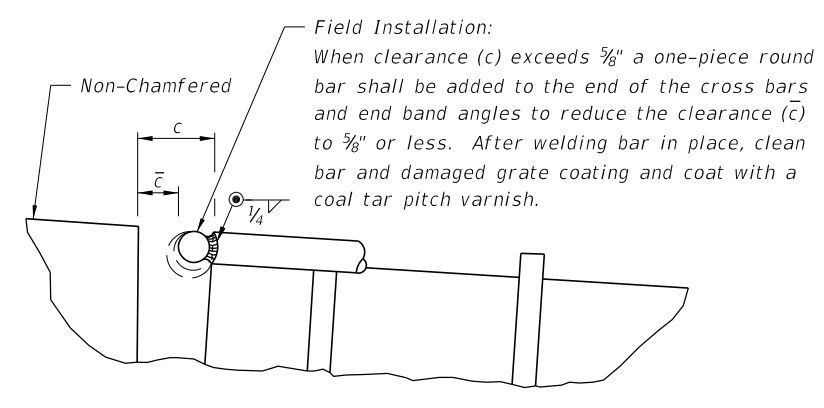


OPTION FOR GROUT STUD
OPTION FOR ANCHOR BOLT

TRANSVERSE SECTIONS THRU BACKWALL PLATE



INSET A



INSET B

NOTES

- All reinforcing steel bars shown are #4 bars.
- Anchor bolts shall be either ASTM A307 hex head bolts cast-in-place, or ASTM A36 or F1554 (Grade 36) galvanized fully threaded rod, adhesive bonded anchors installed in accordance with Specification Section 416. Bolts or rods shall be 6" long (4" min. embedment) with one heavy hex head nut (ASTM 194 or A563) and one flat washer (ASTM F436) each. All anchor bolts, nuts and washers shall be hot-dip galvanized.

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LAST REVISION 11/01/17	DESCRIPTION:	 FY 2018-19 STANDARD PLANS	SHOULDER BARRIER INLET	INDEX 425-031	SHEET 2 of 2
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