
ORIGINATION FORM

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

Contact Information:

Date: February 14, 2020
Originator: Tim Holley
Phone: (850) 414-4117
Email: Tim.Holley@dot.state.fl.us

Standard Plans:

Index Number: 425-032
Sheet Number (s): ALL
Index Title: Curb and Gutter Barrier Inlet

Summary of the changes:

Reorganized Index, Added additional Sheet.
Sheet 1: General Notes
Sheet 2: Dimensional, Reinforcement, and Bar Bending
Sheet 3: Transitional Dimensional, Reinforcement, and Grate Details
Sheet 4: Inlet Top Dimensional and Reinforcement Details

Commentary / Background:

Reorganized Details and Sheets to declutter Index. Moved information from detail callouts to Notes in order to decrease clutter of the drawing. Moved design information to SPI. Made extended cross bar and bar stub standard for grates to reduce gaps between frame and grate.

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

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

Origination Package Includes:

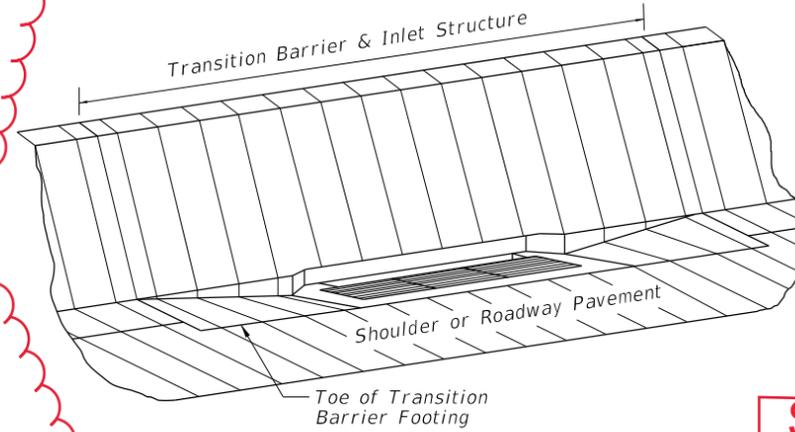
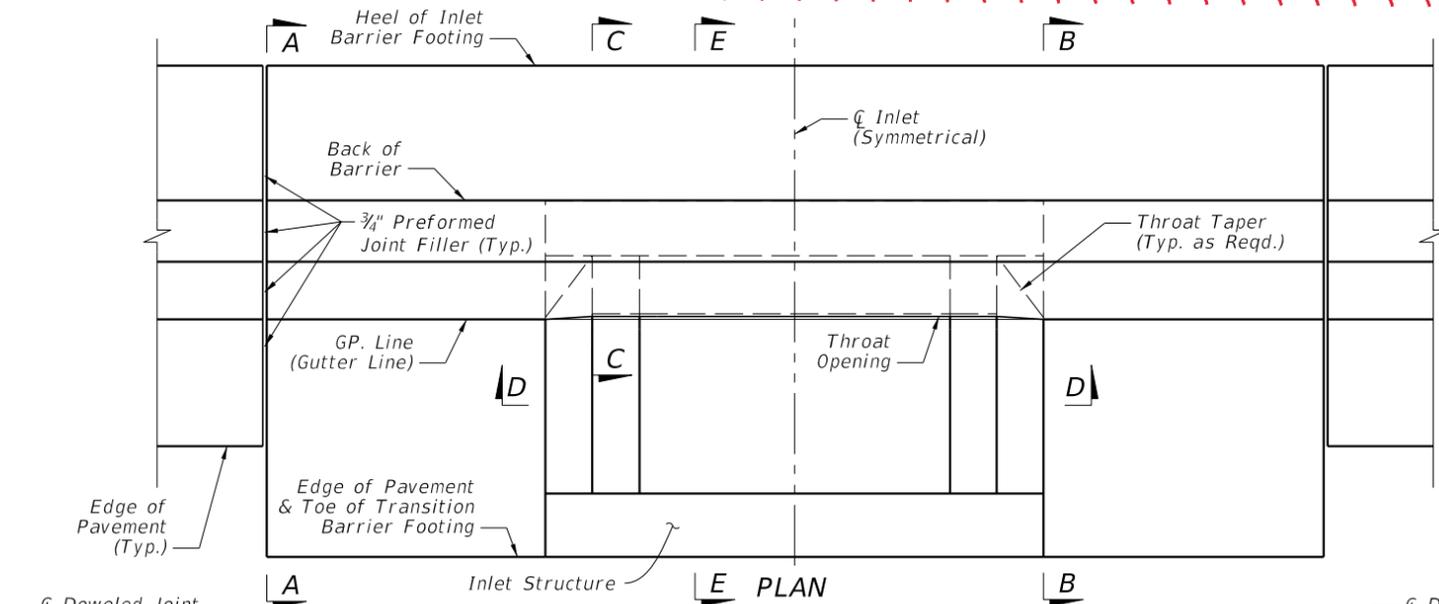
(Email or hand deliver package to Rick Jenkins)

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

Implementation:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> | Design Bulletin (Interim) |
| <input type="checkbox"/> | DCE Memo |
| <input type="checkbox"/> | Program Mgmt. Bulletin |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

Contact the Roadway Design Office for assistance in completing this form



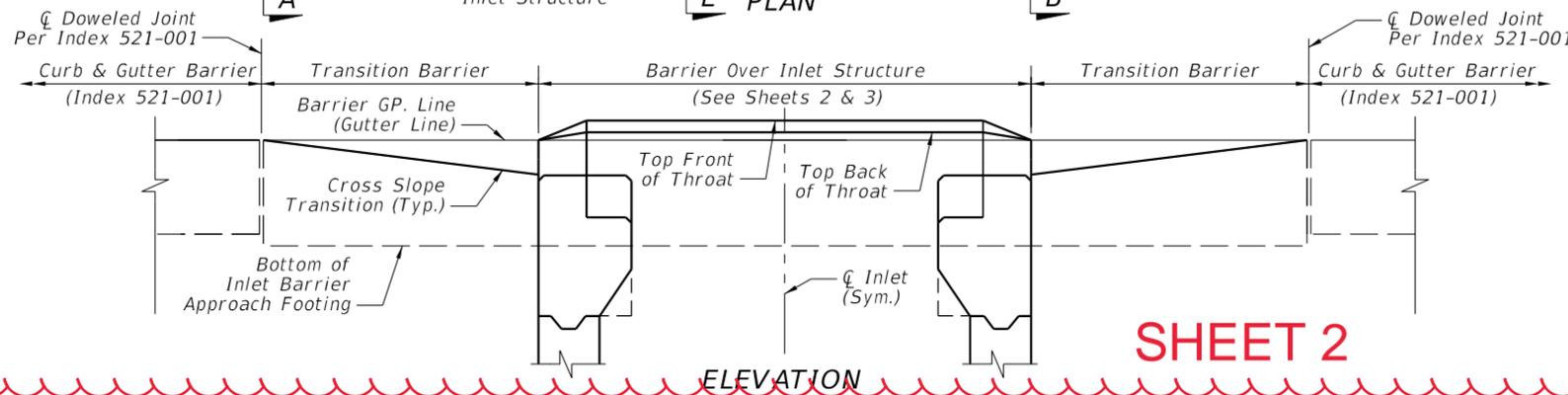
ISOMETRIC VIEW

GENERAL NOTES:

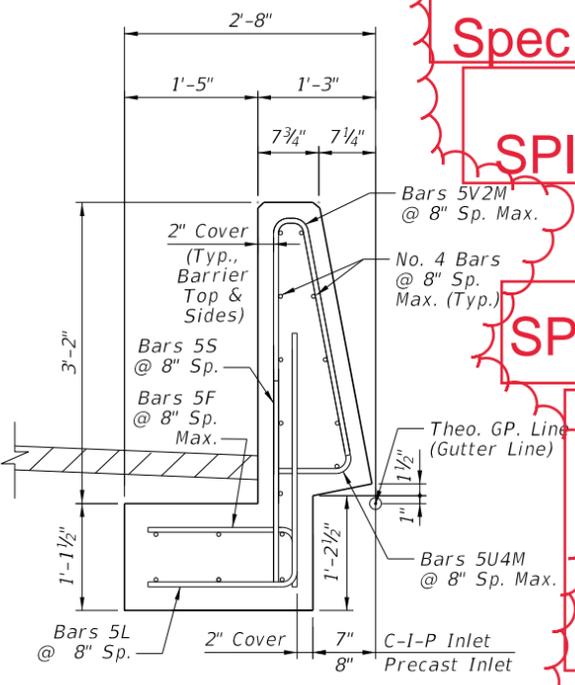
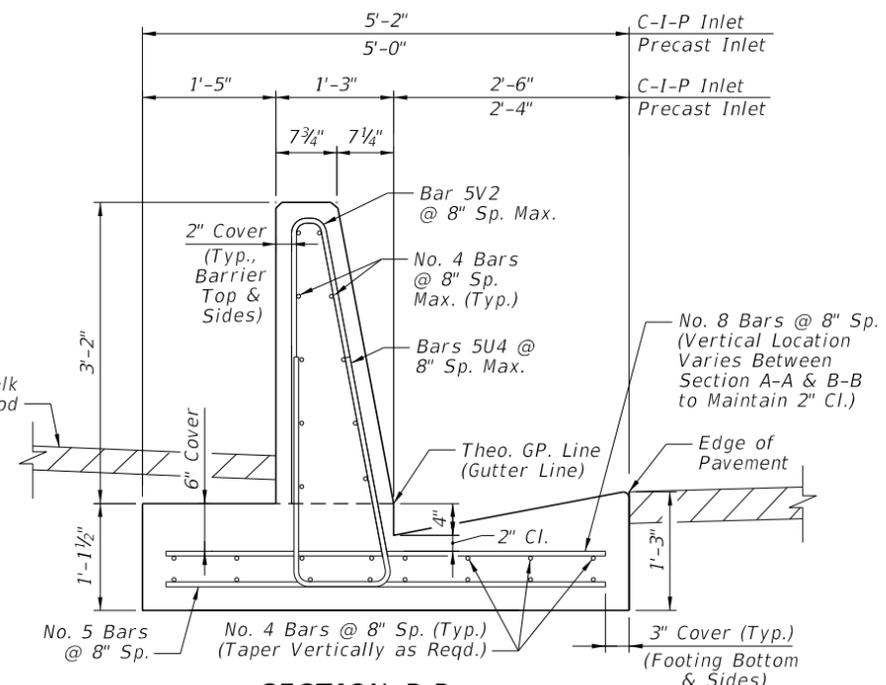
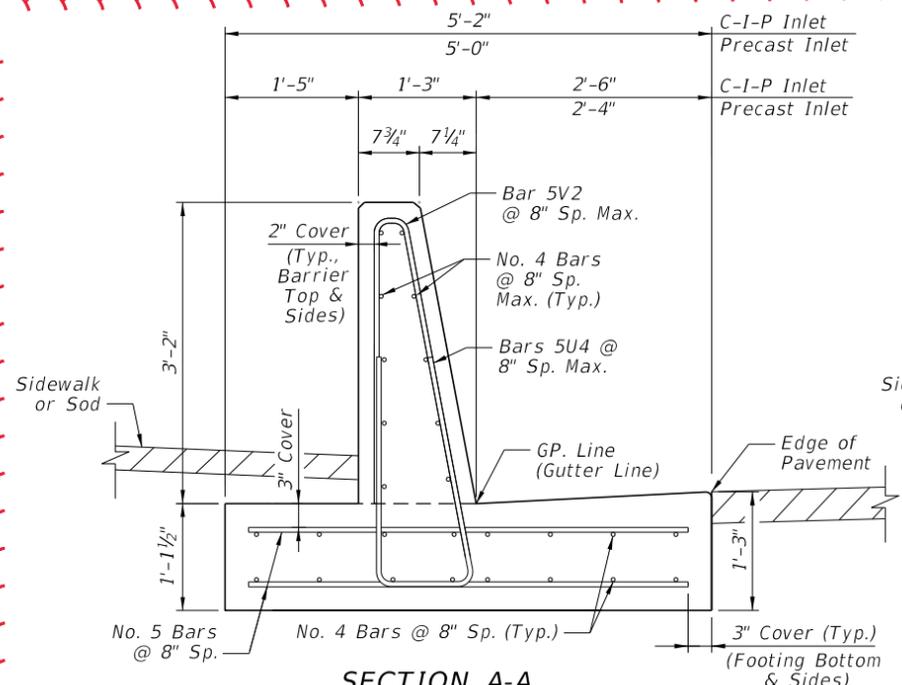
1. Where called for in the Plans, use this inlet in conjunction with Curb and Gutter Barrier per Index 521-001. Construct Barrier segments shown herein in accordance with requirements of Index 521-001, including connections to adjacent barrier segments using the Doweled Joint.
2. Reinforcing shown is grade 60 steel bars. For the equivalent area of welded wire reinforcement for the inlet, see Index 425-001. Reinforcing shall have 2" minimum cover unless otherwise shown. Trim or bend bars to provide 1 1/2" clearance around pipe openings. The cost for additional reinforcing in the barrier is included in the cost of the concrete barrier.
3. All barrier is Class II or IV concrete per Index 521-001.
4. Apply a 3/4" chamfer or 1/4" radius to all exposed concrete edges.
5. For pipe connections to inlet structure bottoms, the recommended maximum pipe sizes are 18" longitudinal and 30" transverse. For larger pipe, use Alternate B bottoms, Index 425-010.
6. Grates may be fabricated with reticulate bars or with either 1/2" dia welded or 3/8" dia electroforged cross bars and bearing bars as detailed on Sheet 3.
7. When Alternate G grate is specified in the plans, the grate is to be hot-dip galvanized after fabrication, in accordance with Specification 962-9.
8. For Pay Item purposes, the depth of the barrier inlet shall be computed using the center of box grate elevation, minus either the flow line elevation of the lowest pipe flow line or the top of the sump floor elevation.
9. All dimensions are for both precast and cast in place (C-I-P) inlets unless otherwise indicated.
10. For inlets placed in areas of bicycle traffic, provide the extended crossbar or bar stub (See Insets "B" and "B ALTERNATE").
11. Inlets to be paid for under the contract unit price for Inlets, Barrier Rigid, Curb and Gutter, Each.
12. Concrete Barrier to be paid for under the contract unit price for Shoulder Concrete Barrier, Rigid-Curb & Gutter, LF.

Spec

SPI



SHEET 2



Spec

SPI

SPI

Spec

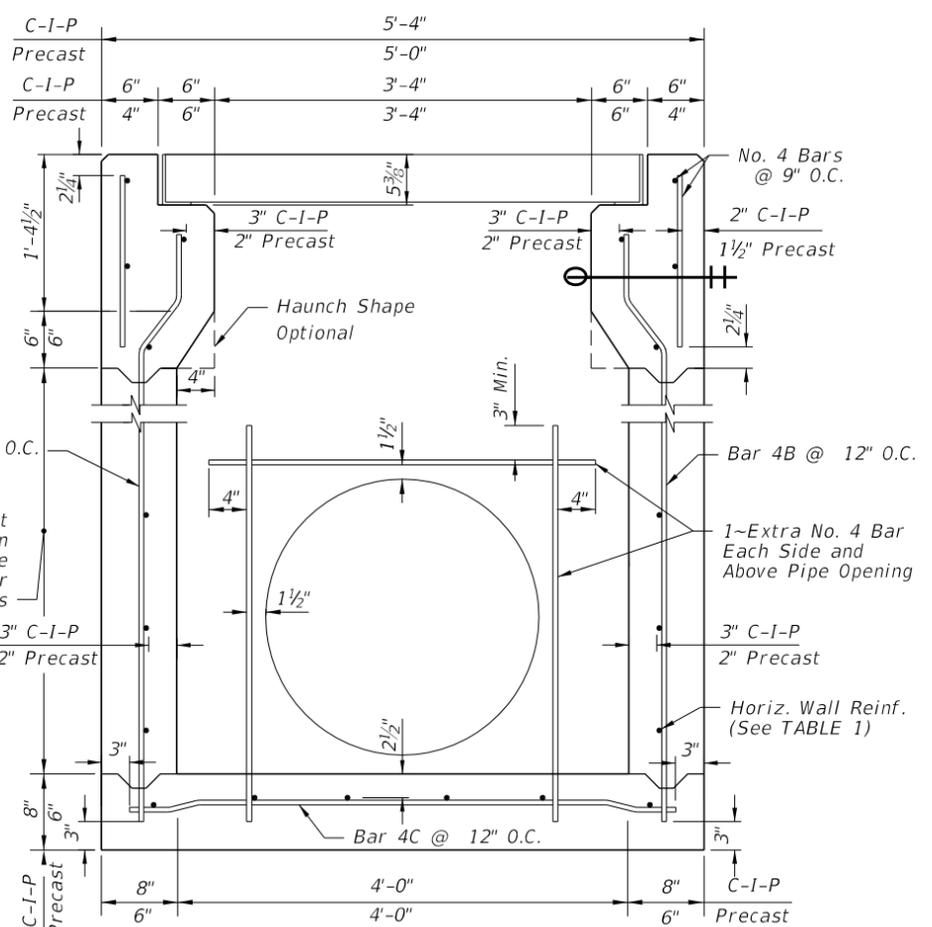
SHEET 3

BARRIER SECTIONS

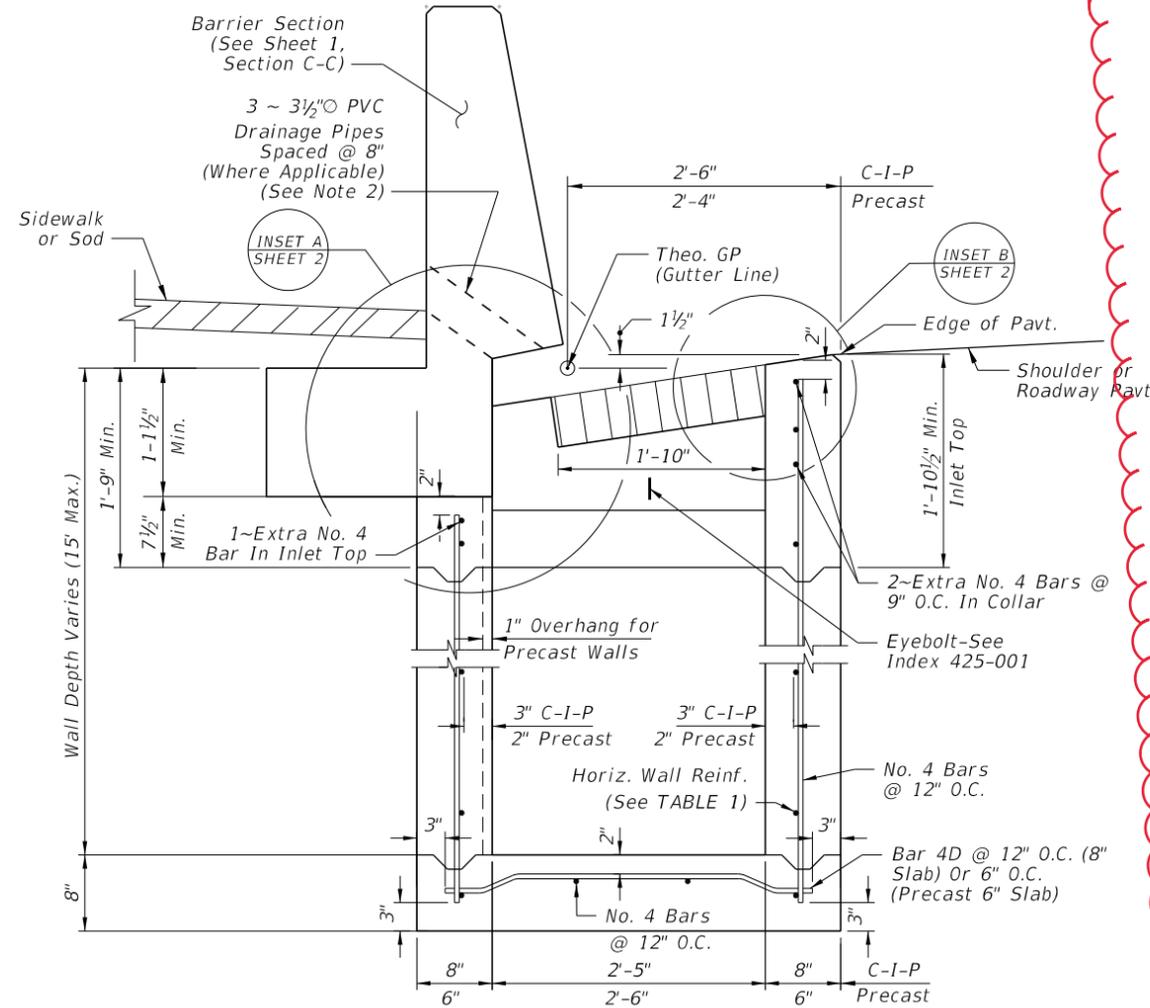
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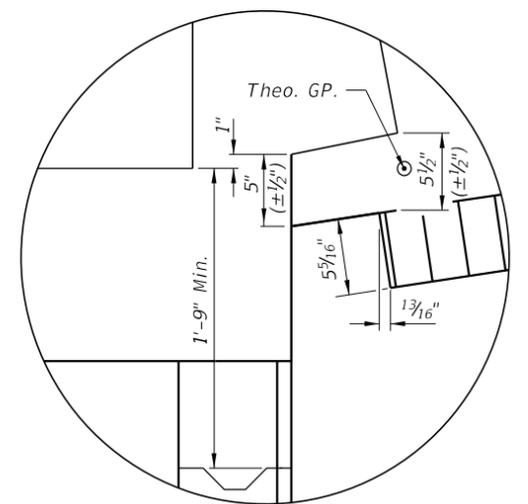
Construction Joint Permitted Between These Limits See Index 425-001 for Min. Dimensions



**SECTION D-D
INLET STRUCTURE**
(18" Dia. Pipe Opening Shown)

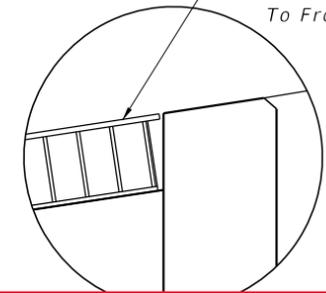


SECTION E-E
(Pipe Opening Not Shown)
(Barrier Reinforcing Steel Not Shown, See Sheet 1, Section C-C)



INSET A

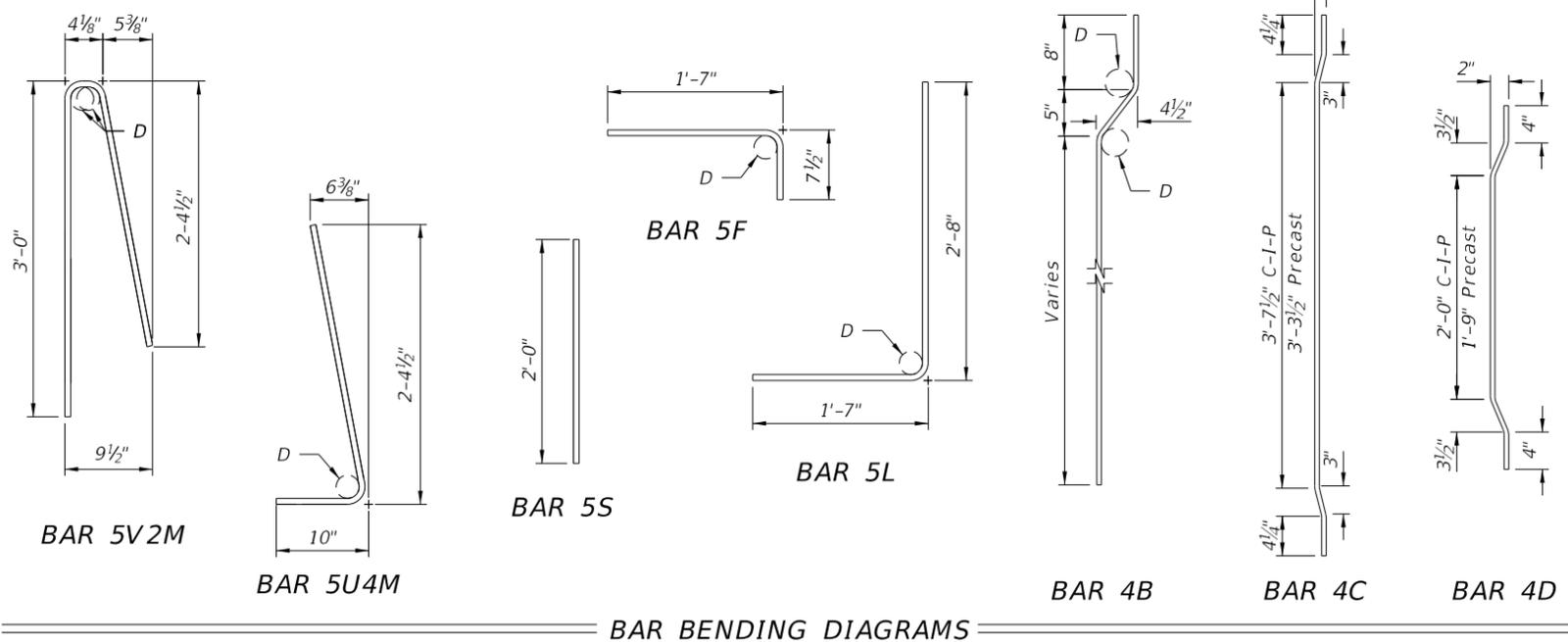
Install Grate With Extended CROSSBAR OPTIONS (Sheet 3) To Front Of Inlet



INSET B ALTERNATE
(See General Note 10)

SHEET 3

Extended cross bar and bar stub now standard.



BAR BENDING DIAGRAMS

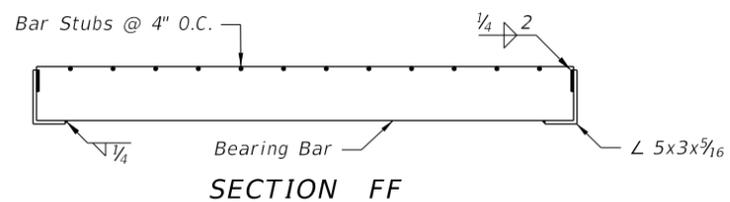
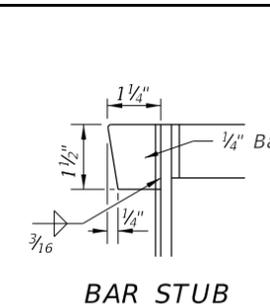
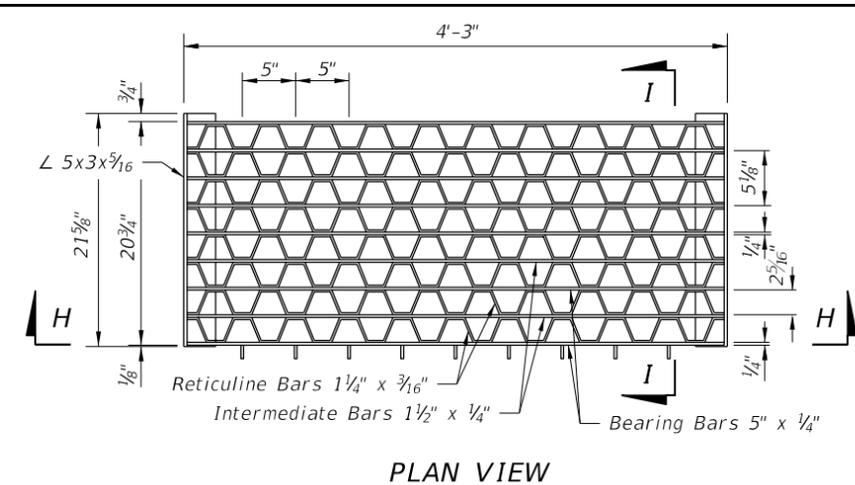
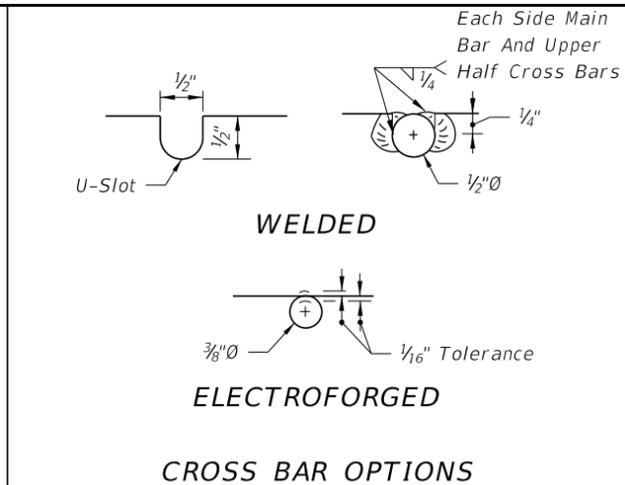
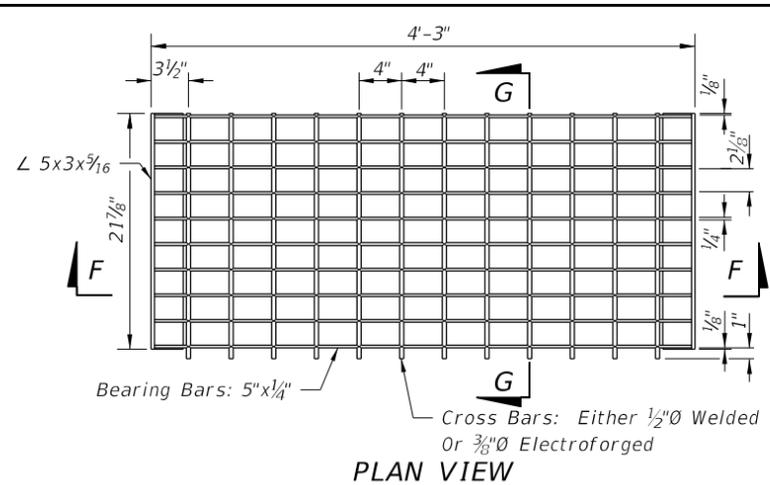
WALL DEPTH C-I-P PRECAST	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WWR
0'-4"	0'-3"	A12	12"	8"
4'-9"	3'-6"	A6	6"	5"
9'-15"	6'-10"	B5.5	5 1/2"	5"
10'-15"	C6.5	0.37	6 1/2"	6"

**TABLE 1: HORIZONTAL
WALL REINFORCING SCHEDULE**

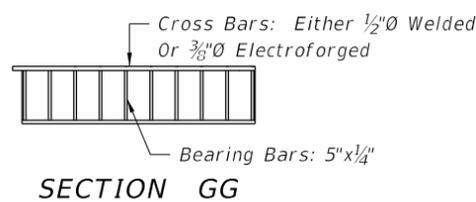
NOTES:

- For Bar Bending Diagrams of Bars 5V2 & 5U4, See Index 521-001. Bars 5V2M, 5U4M, & 5S may be field cut from Bars 5V2 & 5U4.
- Install PVC drainage pipes at the inlet centerline when the inlet is located in a sag curve or when drainage pipes are called for in the plans. Install a quantity of 3 ~ 3 1/2" (I.D.) NPS Schedule 40 Pipes longitudinally spaced at 8", with the center pipe as near to the inlet centerline as practical without conflicting with the steel reinforcing.

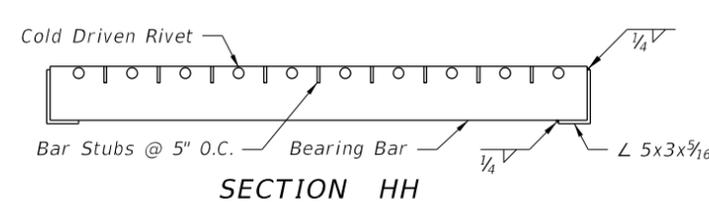
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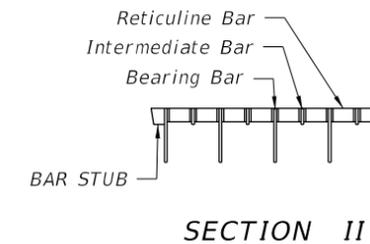
CROSS BAR GRATE



SECTION GG

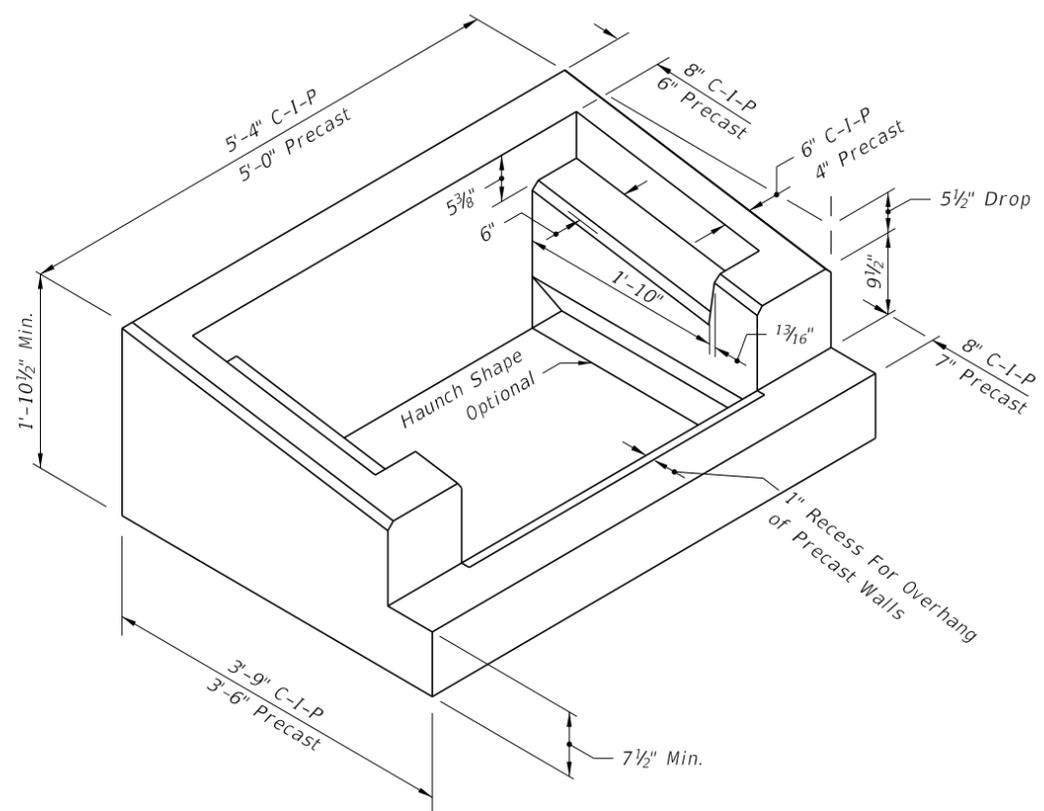


RETICULINE GRATE

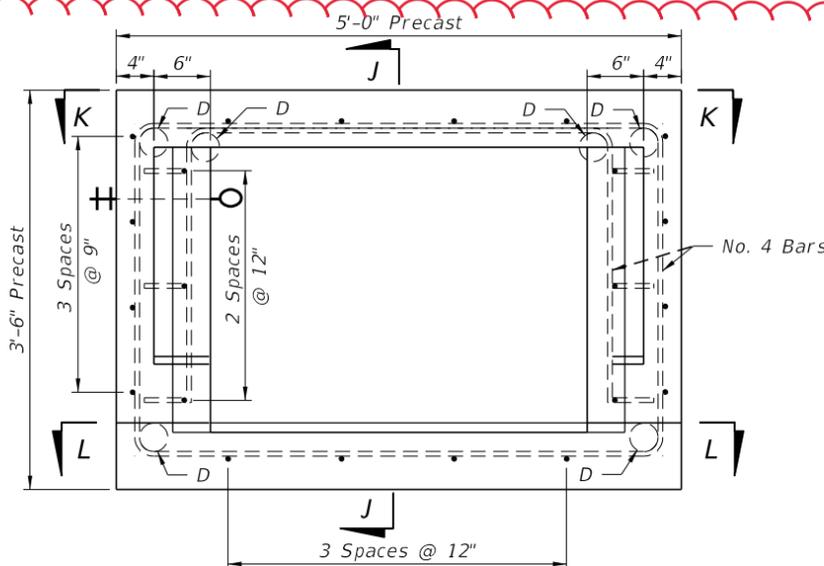


OPTIONAL STEEL GRATES

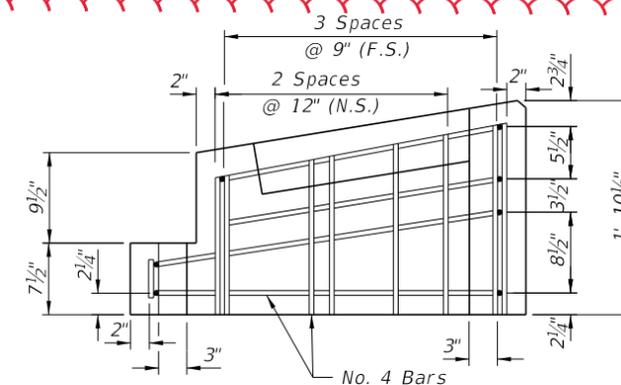
SHEET 4



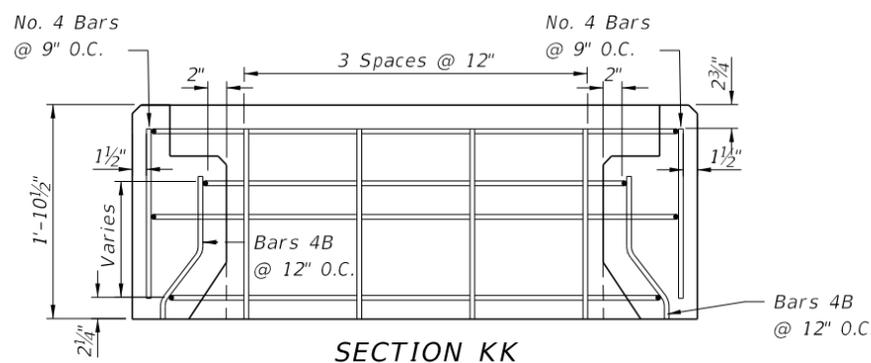
PICTORIAL VIEW OF INLET TOP



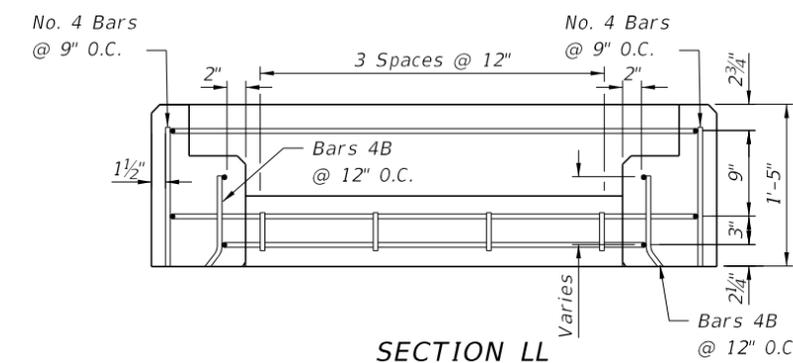
TOP VIEW OF INLET TOP WITHOUT GRATE



SECTION JJ



SECTION KK



SECTION LL

- NOTE:
- For additional information on Bar 4B, see BAR BENDING DIAGRAMS (Sheet 2).
 - C-I-P Inlet Top Reinforcing Similar

PRECAST INLET TOP REINFORCING DETAILS

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FY 2019-20
STANDARD PLANS

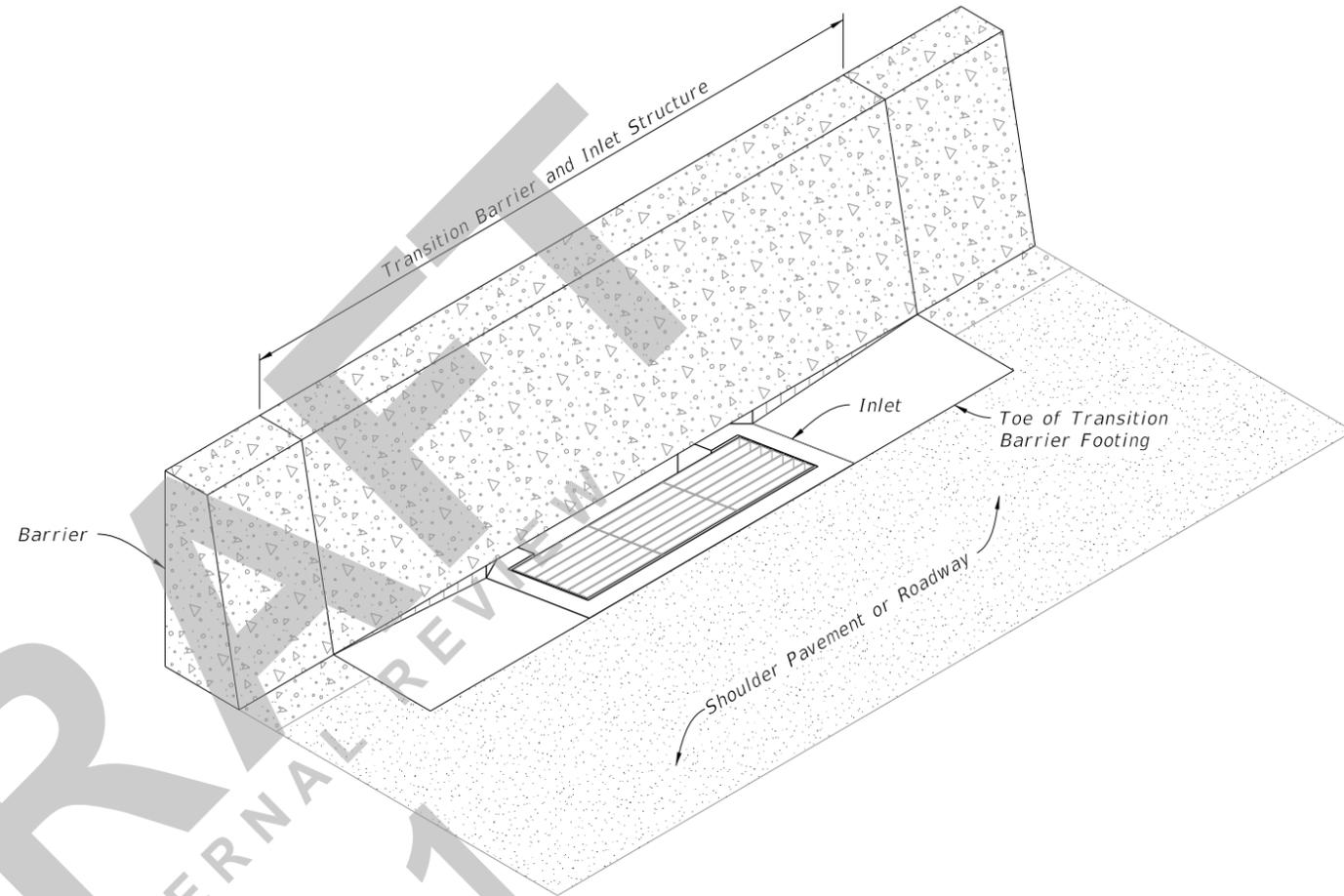
CURB AND GUTTER BARRIER INLET

INDEX
425-032

SHEET
3 of 3 **4**

GENERAL NOTES:

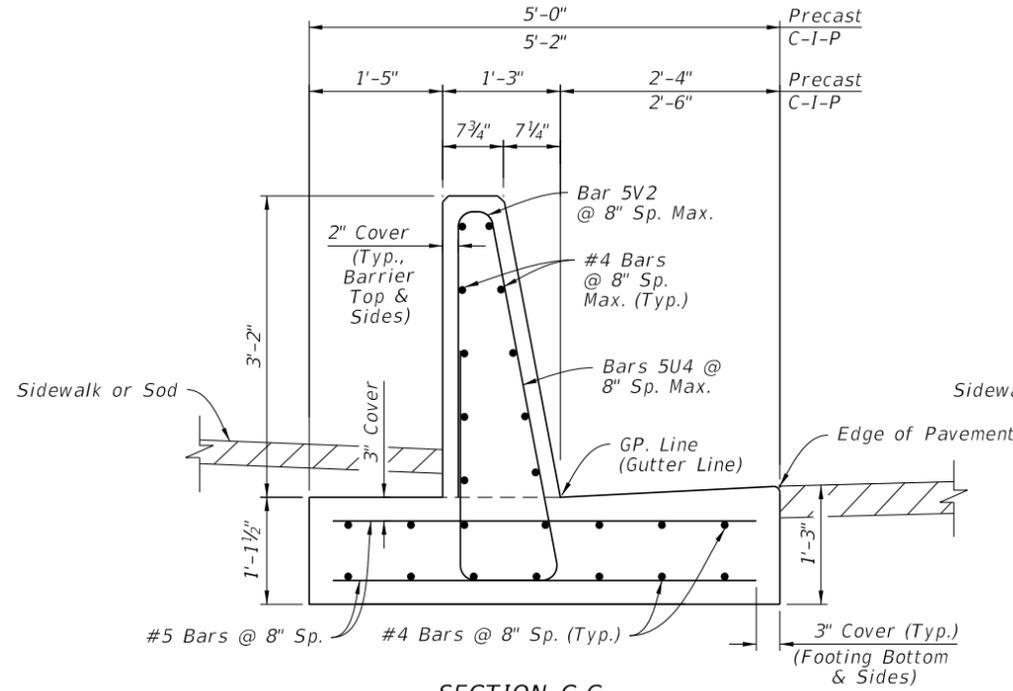
1. Work this Index with Index 425-001 and Index 425-010.
 2. Where called for in the Plans, use this inlet in conjunction with Curb and Gutter Barrier per Index 521-001. Construct Barrier segments shown herein in accordance with requirements of Index 521-001, including connections to adjacent barrier segments using the Doweled Joint.
 3. Reinforcing shown is grade 60 steel bars. For the equivalent area of welded wire reinforcement for the inlet, see Index 425-001. Reinforcing shall have 2" minimum cover unless otherwise shown. Trim or bend bars to provide 1½" clearance around pipe openings.
- For Bar Bending Details of Bars 5V2 & 5U4, see Index 521-001. For all others, see Sheet 2.
4. Apply a ¾" chamfer or ¼" radius to all exposed concrete edges.
 5. Grates may be fabricated with reticuline bars or with either ½"Ø welded or ¾"Ø electroforged cross bars and bearing bars as detailed on Sheet 3.
 6. All dimensions are for both precast and cast in place (C-I-P) inlets unless otherwise indicated.



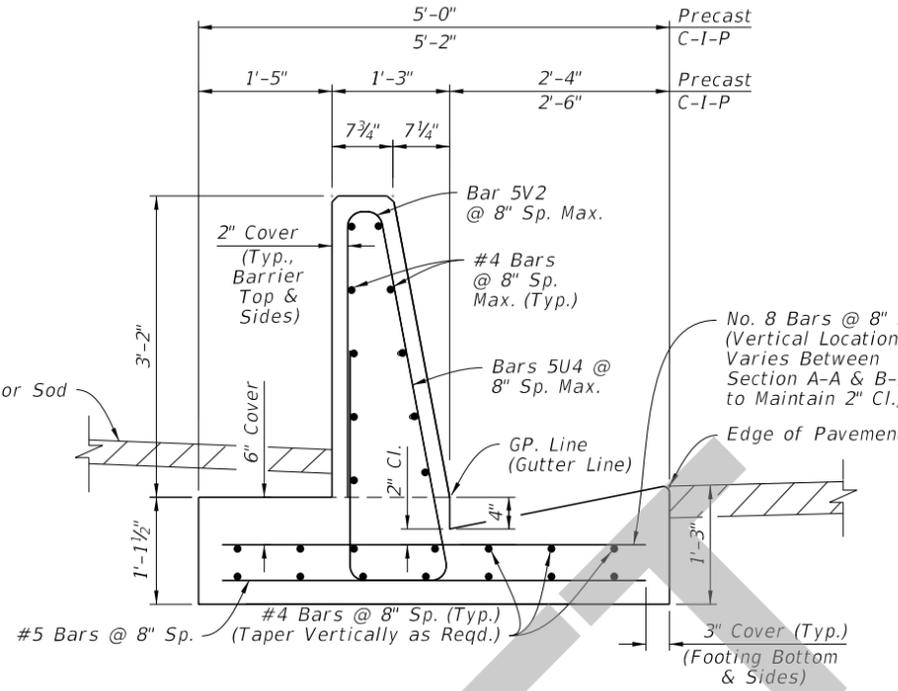
==== CURB AND GUTTER BARRIER INLET ====

TABLE OF CONTENTS:	
Sheet	Description
1	General Notes and Contents
2	Dimensional, Reinforcement, and Bar Bending
3	Transitional Dimensional, Reinforcement, and Grate Details
4	Inlet Top Dimensional and Reinforcement Details

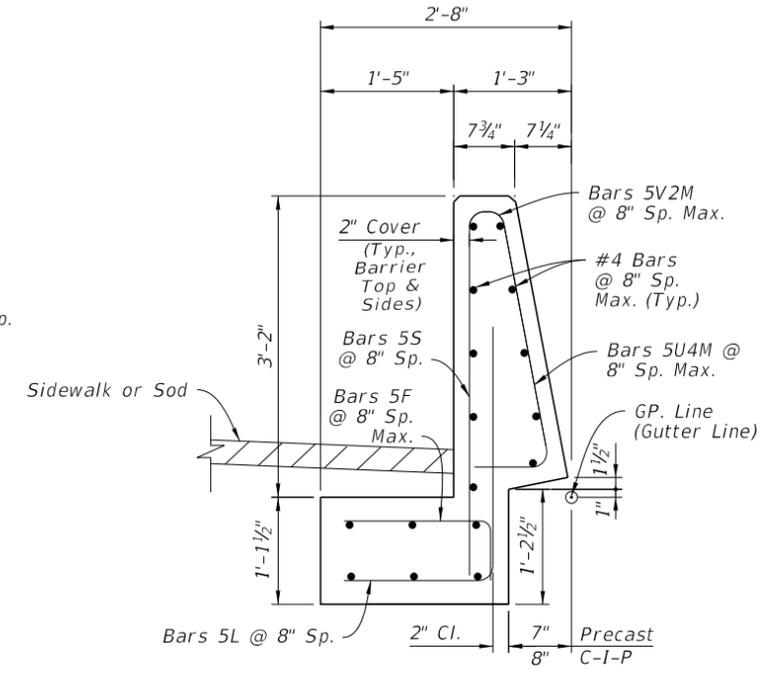
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SECTION C-C
 TRANSITION BARRIER BEGIN CROSS-SLOPE TRANSITION
 (Align With Curb And Gutter Barrier, See Index 521-001)

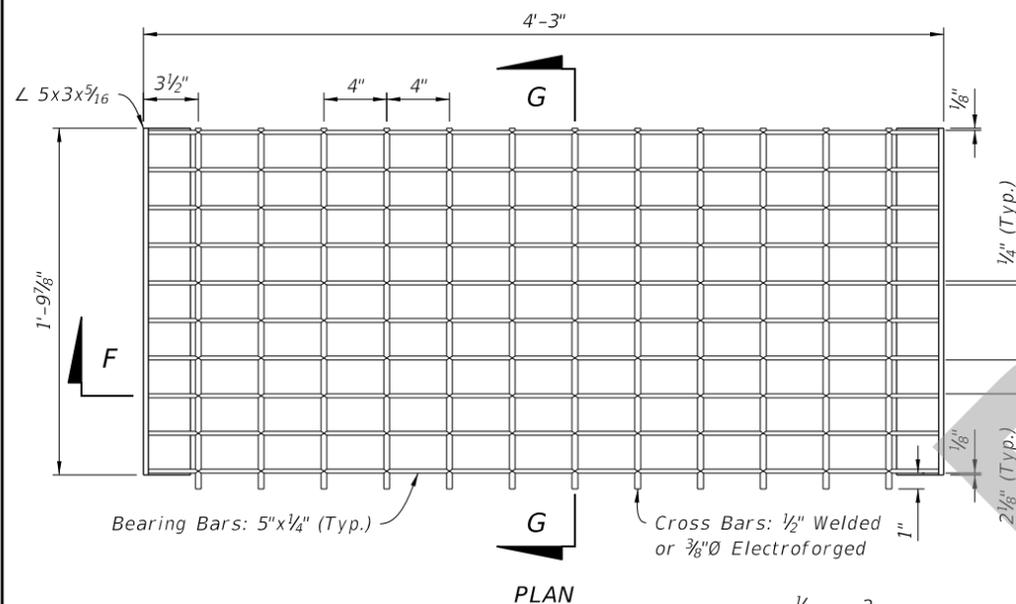


SECTION D-D
 TRANSITION BARRIER END CROSS-SLOPE TRANSITION
 (Align With Inlet Structure)

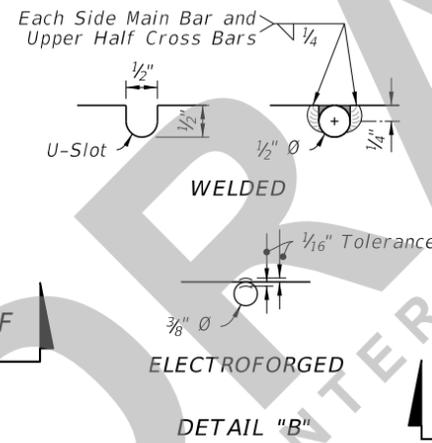


SECTION E-E
 BARRIER OVER INLET STRUCTURE
 (Throat Fully Transitioned)

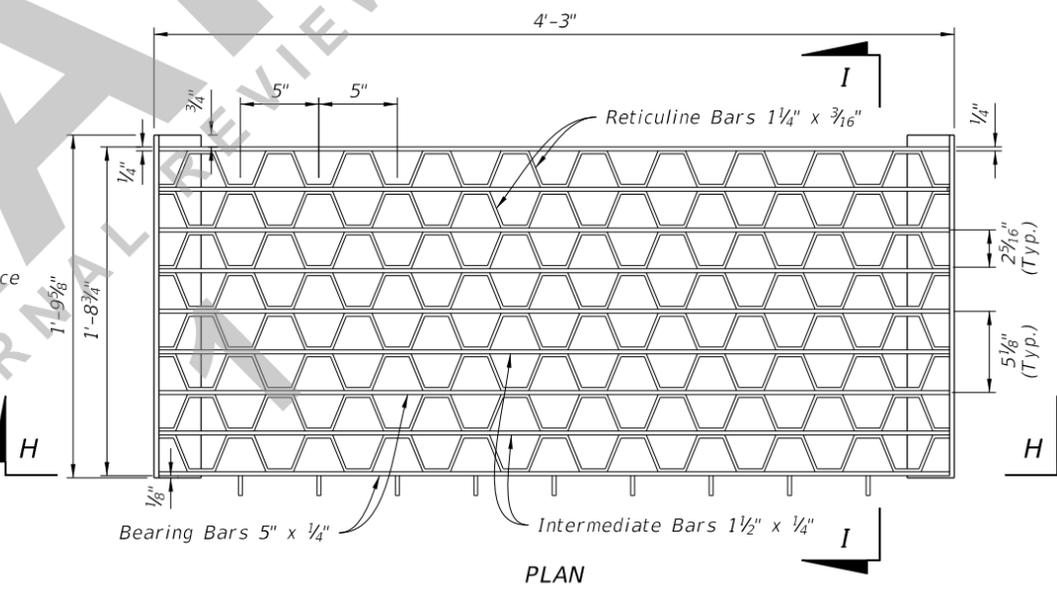
TRANSITIONAL DIMENSIONAL AND REINFORCEMENT



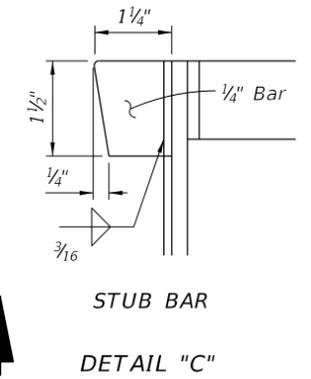
PLAN
 Bearing Bars: 5" x 1/4" (Typ.)
 Cross Bars: 1/2" Welded or 3/8" Electroforged



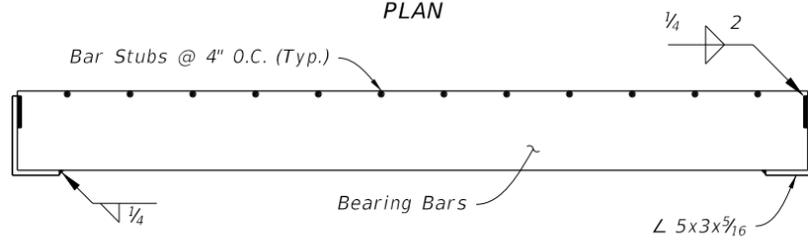
DETAIL "B"
 WELDED
 ELECTROFORGED



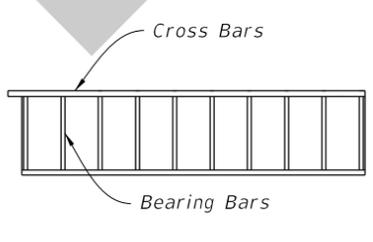
PLAN
 Bearing Bars 5" x 1/4"
 Intermediate Bars 1 1/2" x 1/4"
 Reticuline Bars 1 1/4" x 3/16"



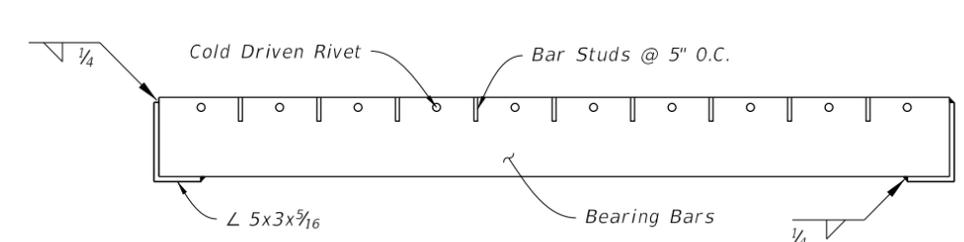
DETAIL "C"
 STUB BAR



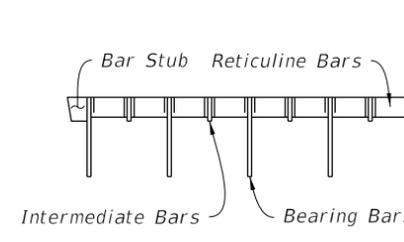
SECTION F-F



SECTION G-G



SECTION H-H



SECTION I-I

CROSS BAR GRATE

RETICULINE GRATE

TRANSITIONAL DIMENSIONAL, REINFORCEMENT AND GRATE DETAILS

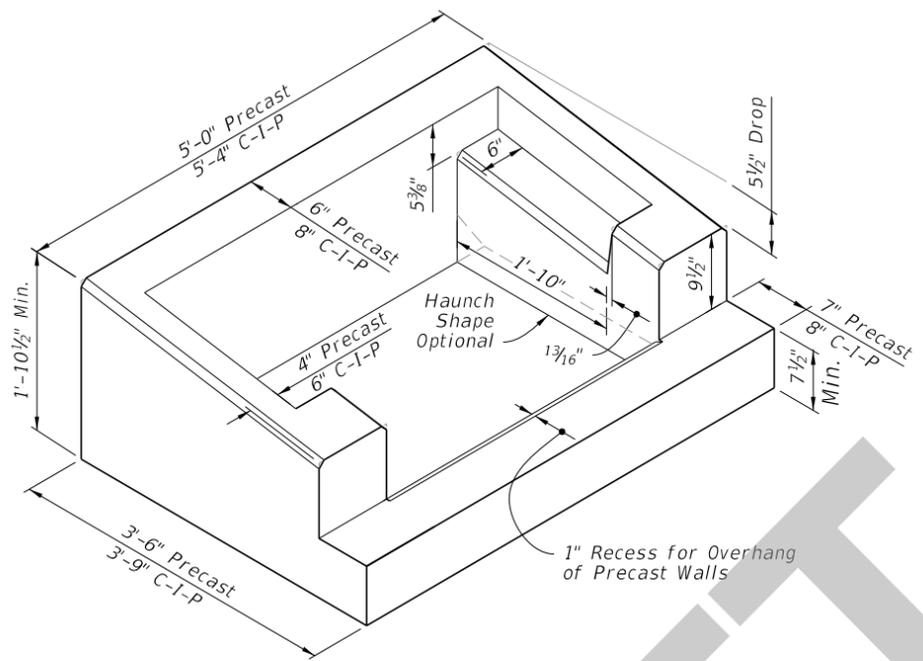
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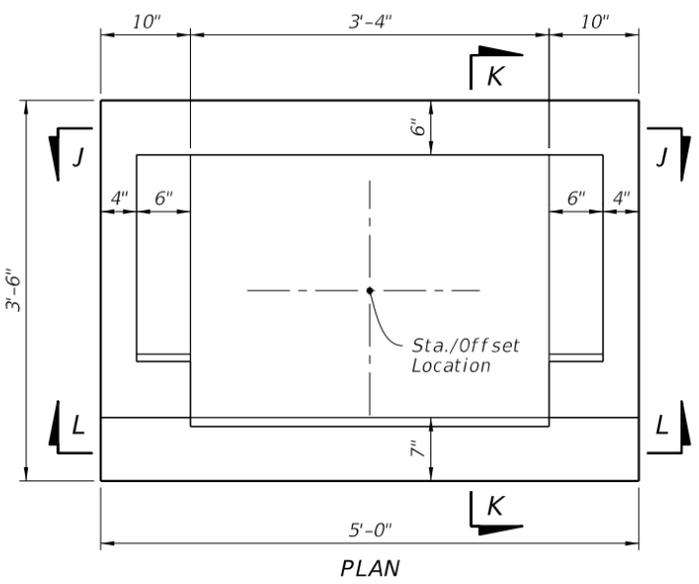

**FY 2021-22
 STANDARD PLANS**

CURB AND GUTTER BARRIER INLET

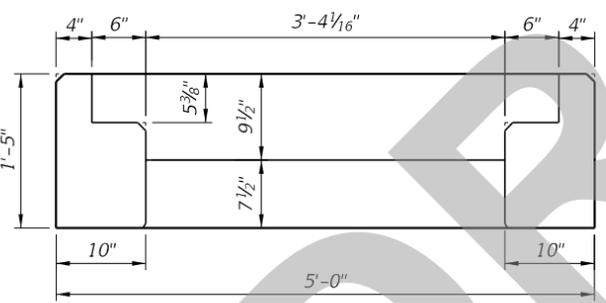
INDEX 425-032	SHEET 3 of 4
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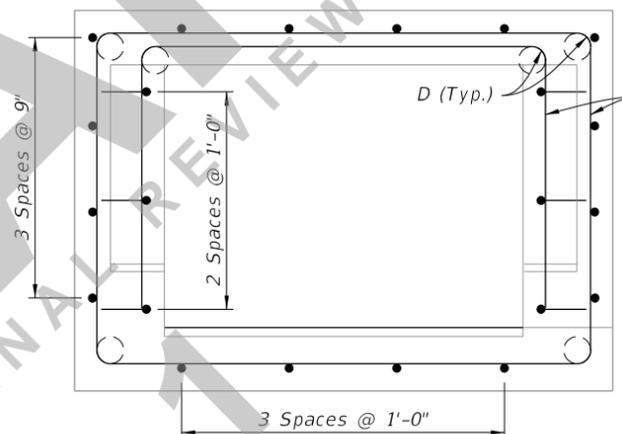
INLET COLLAR
ISOMETRIC VIEW
(Grate Not Shown)



PLAN

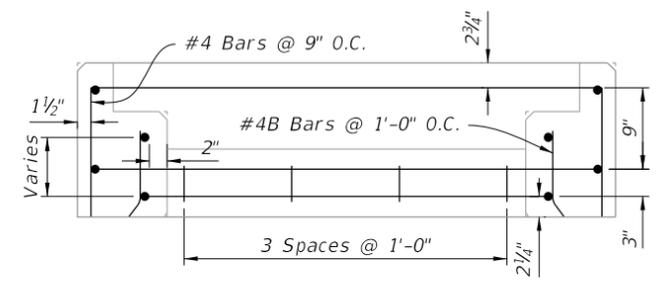


SECTION L-L

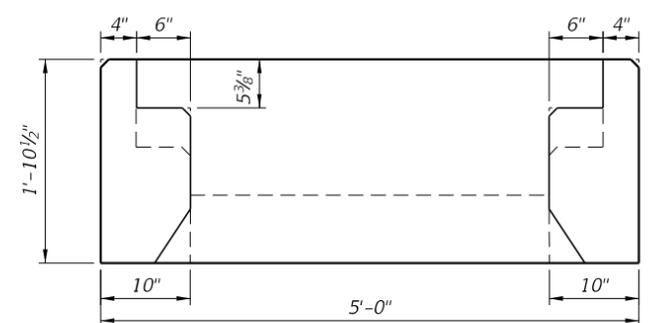


PLAN

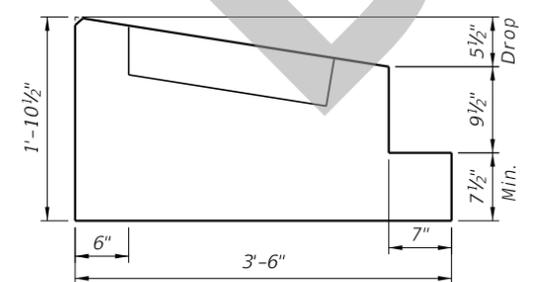
NOTE:
See BAR BENDING DIAGRAMS on Sheet 3
for additional information on Bar 4B.



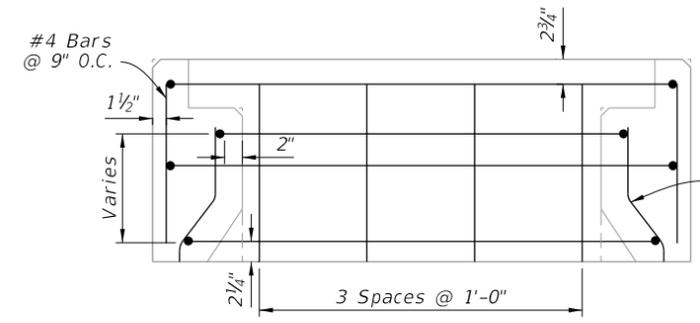
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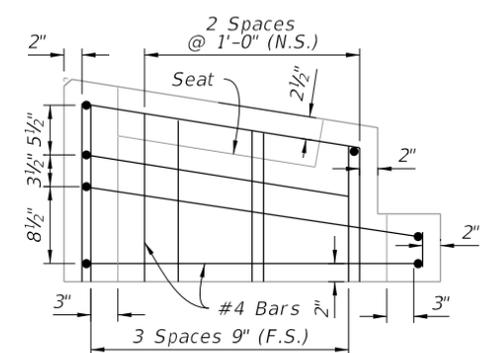
SECTION J-J



SECTION K-K



SECTION J-J



SECTION K-K

DIMENSIONAL DETAILS
(Precast Shown, C-I-P Similar)

REINFORCING DETAILS
(Precast Shown, C-I-P Similar)

INLET TOP DIMENSIONAL AND REINFORCEMENT DETAILS

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**FY 2021-22
STANDARD PLANS**

CURB AND GUTTER BARRIER INLET

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