
Index 425-040 Gutter Inlet Type S

ORIGINATION

Date: 11-1-2019

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COMMENTARY

Reorganized Details and Sheets to de-clutter Index. Moved information from detail callouts to Notes in order to decrease clutter of the drawing. Moved specifications and payment information to Specifications and SPI. Reticuline grate changed to all bearing bars to support heavy traffic loads (i.e. HL-93 loadings). With possibility for full roadway width travel in emergencies, these grates could see repeated traffic loading.

COMMENTS AND RESPONSES

BLACK = Internal Review Comments **RED** = Standard Plans Response

Name: Nathan Pulido

Date: 8-27-2020

COMMENT: 425-040 type-S section B-B refers to "grate elevation" and 425-041 and 425-054 refers to "Inlet elevation". Should be consistent throughout.

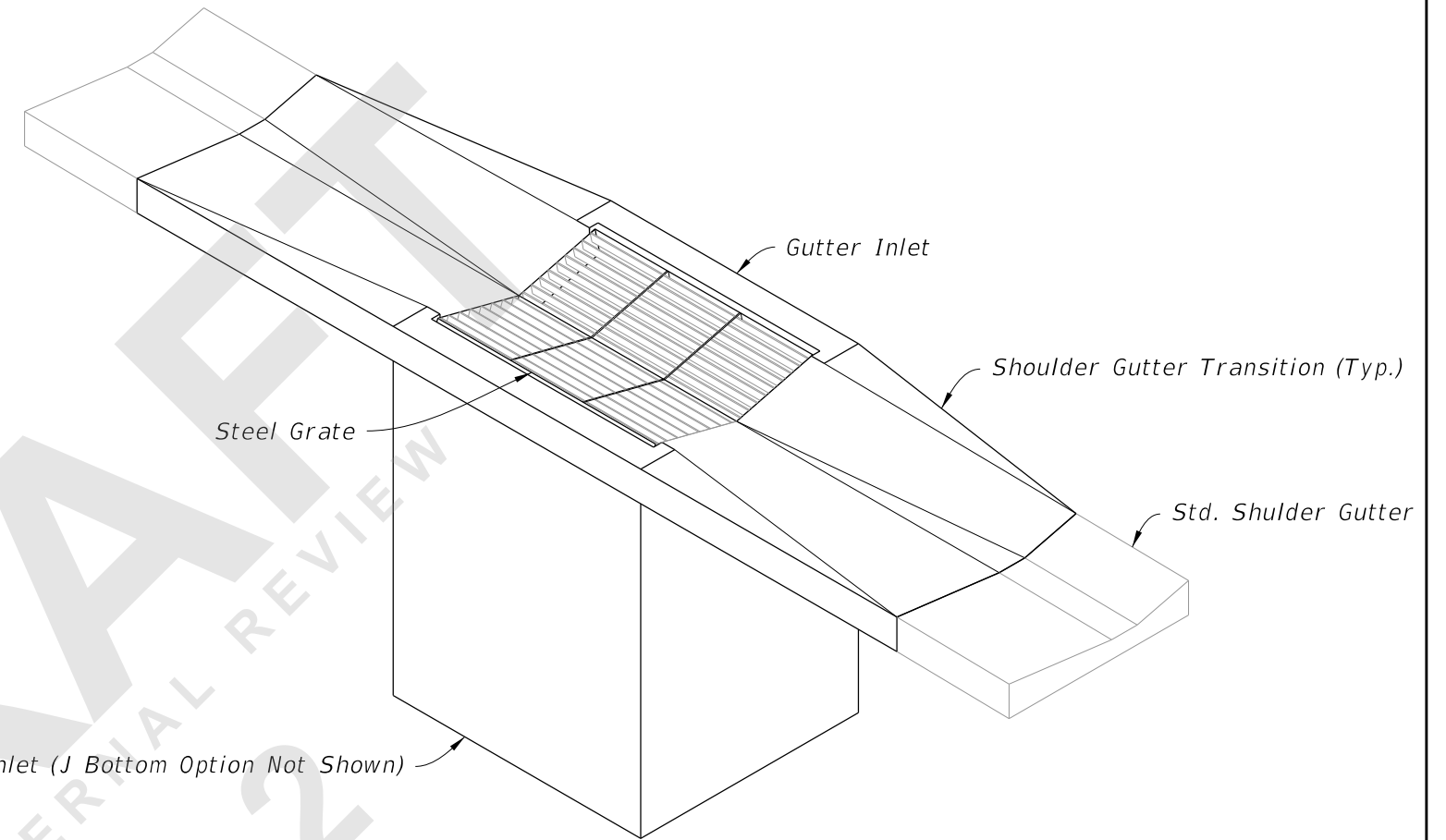
RESPONSE: Agreed

Change made to Index: Changed callouts in each index to "Sta./Offset Elev." for uniformity.

Date: 8-28-2020

GENERAL NOTES:

1. Work this Index with Index 425-001 and Index 425-010.
2. Use Grade 60 reinforcing bars with 2" minimum cover unless otherwise noted. See Index 425-001 for equivalent area of welded wire fabric. Cut or bend bars to provide 1½" minimum clearance around pipe.
3. Chamfer all exposed edges and corners ¾" or tool to ¼" radius.
4. Dimensions are for both precast and cast-in-place inlets unless otherwise noted.



| TABLE OF CONTENTS: | |
|--------------------|---|
| Sheet | Description |
| 1 | General Notes and Contents |
| 2 | Dimensional and Reinforcement Details |
| 3 | Transition and Apron Details |
| 4 | Steel Grate Details |
| 5 | Alternate A Structure Bottom - Top Slab Details |

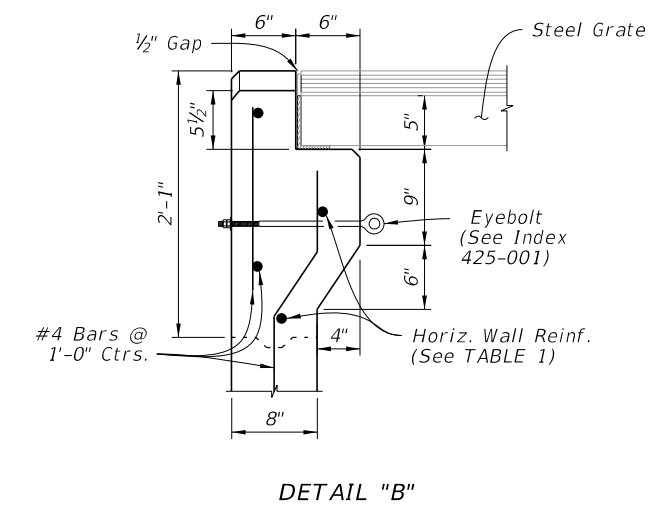
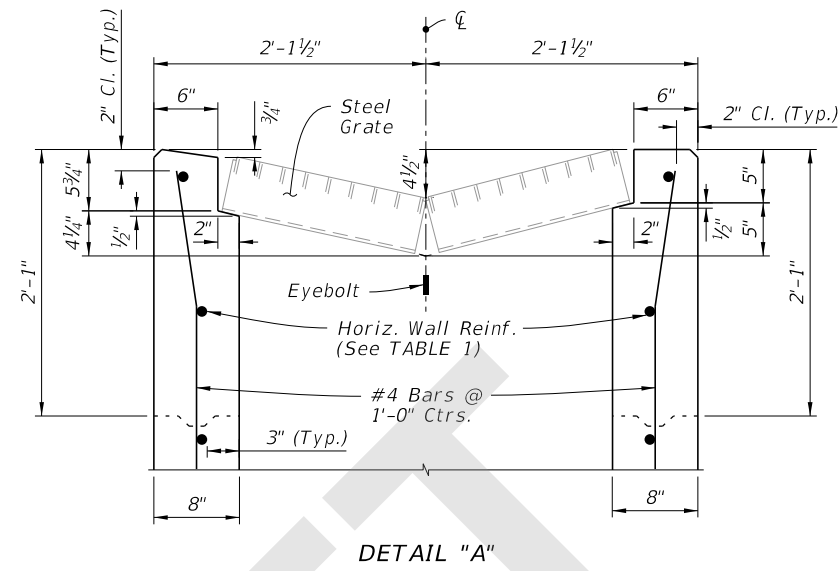
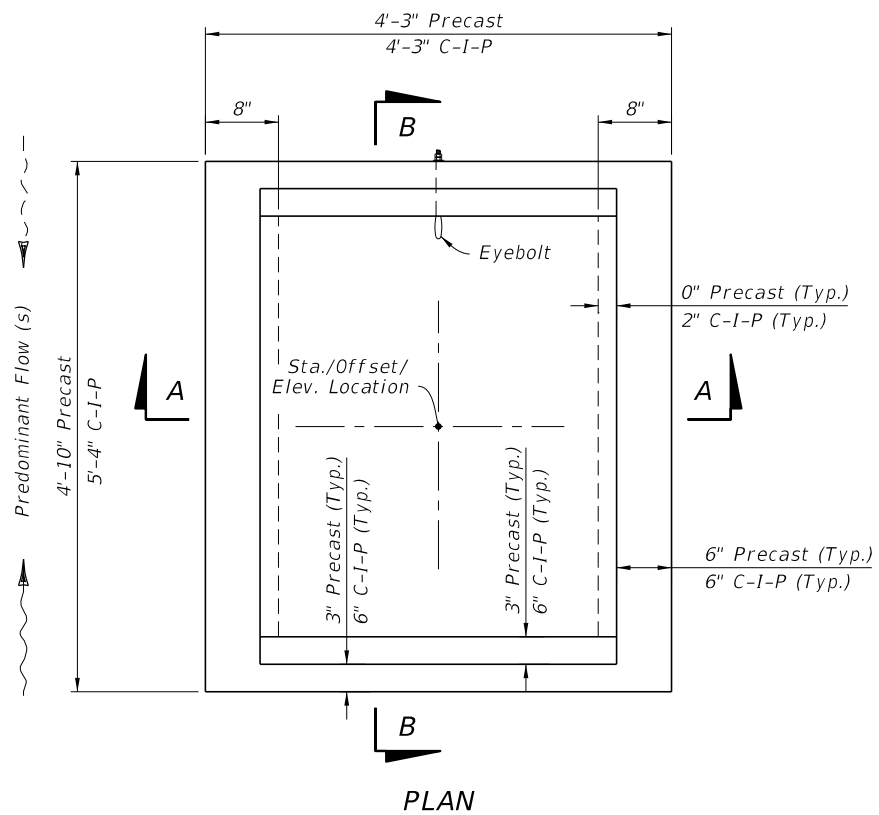
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INTERNAL REVIEW

2

GUTTER INLET TYPE S
(Pipe Opening Not Shown)

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CAST-IN-PLACE OPTION

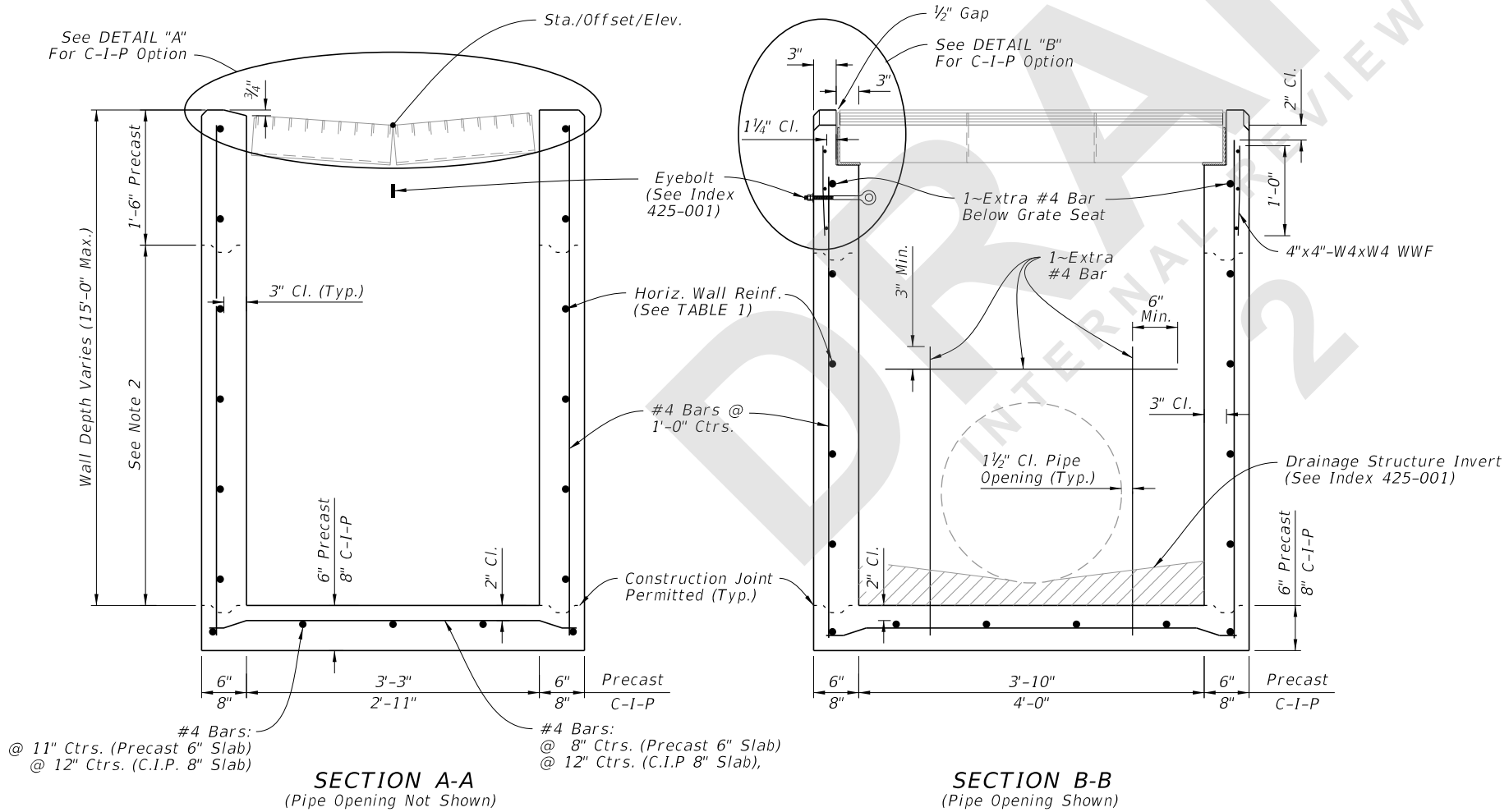
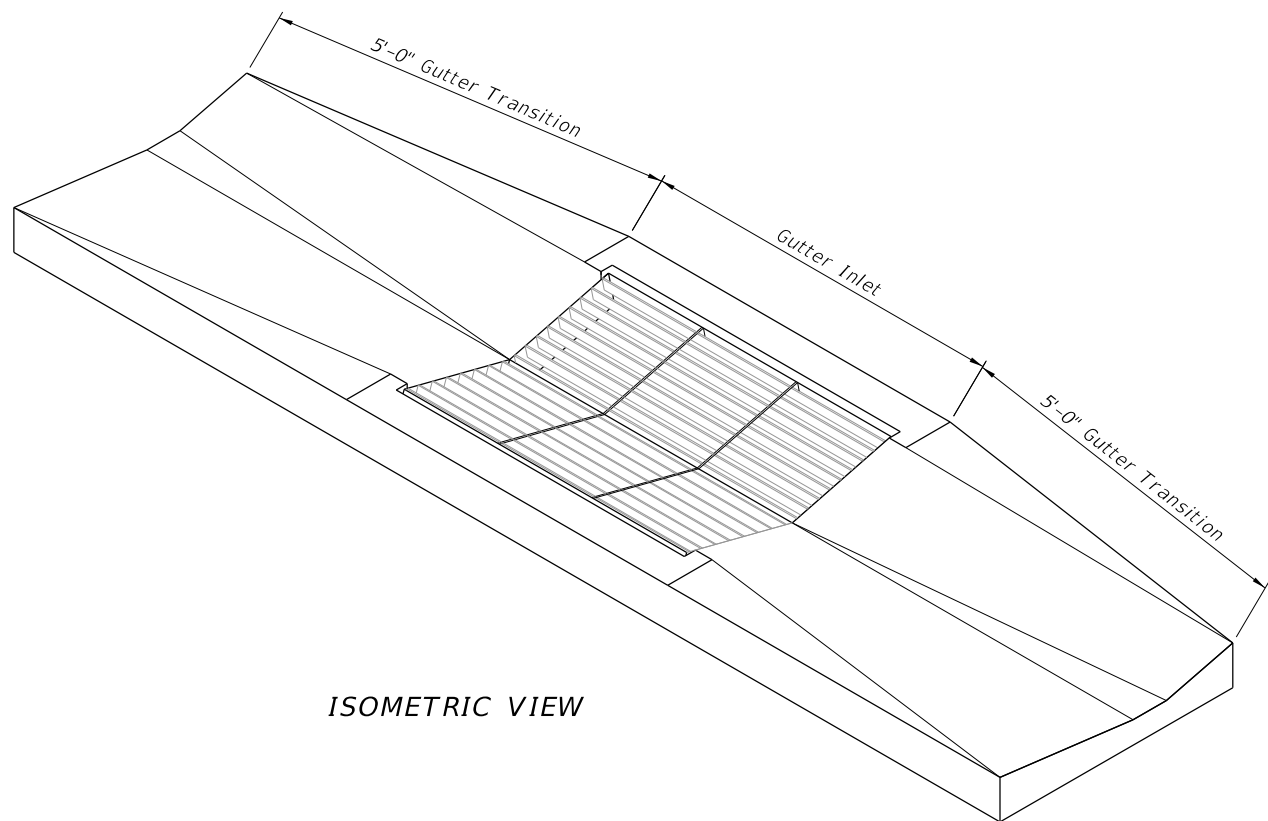


TABLE 1
HORIZONTAL WALL REINFORCING SCHEDULE

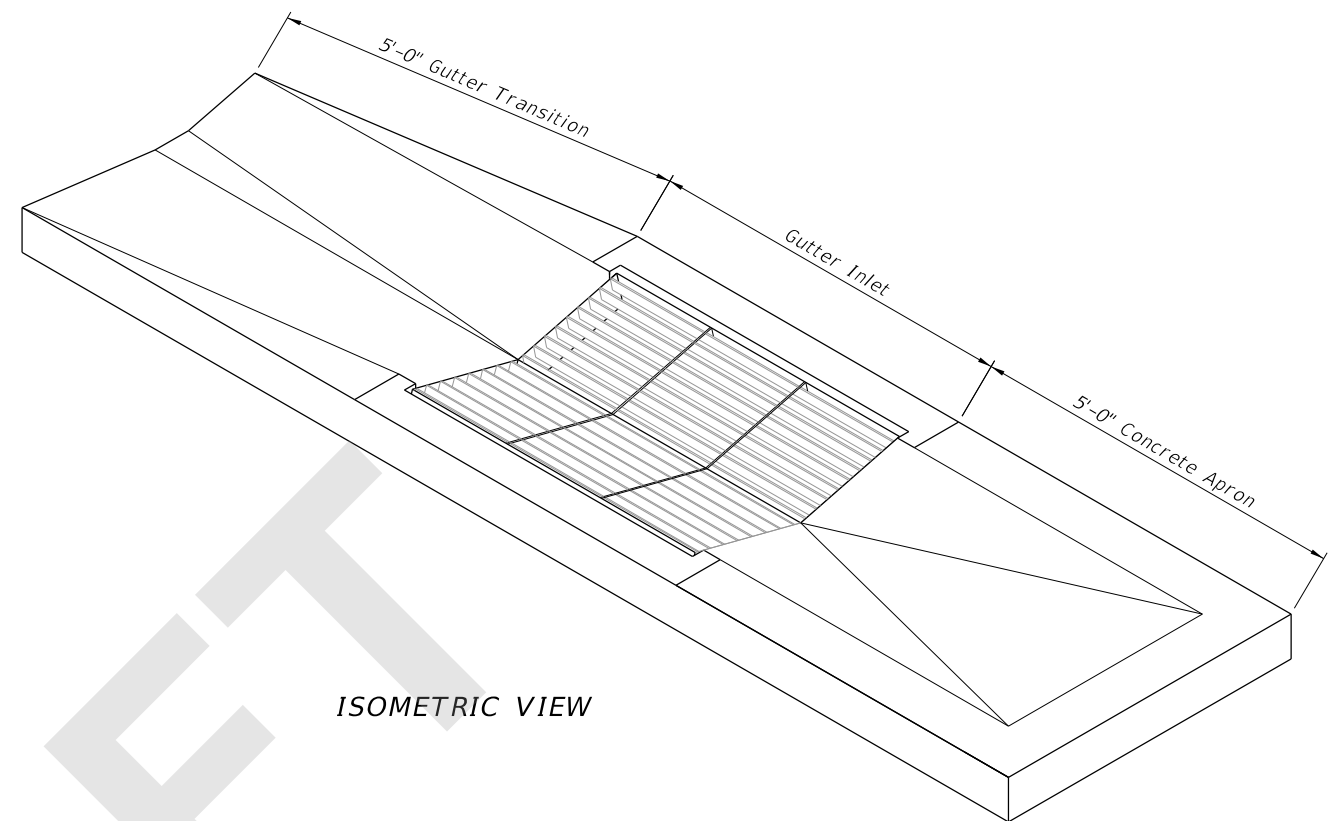
| WALL DEPTH | SCHEDULE | AREA (in. ² /ft.) | MAX. SPACING | |
|------------|----------|------------------------------|--------------|-----|
| | | | BARS | WWR |
| 0' - 5' | A12 | 0.20 | 12" | 8" |
| 5' - 9' | A6 | 0.20 | 6" | 5" |
| 9' - 12' | A4 | 0.24 | 4" | 3" |
| 9' - 15' | B5.5 | 0.24 | 5 1/2" | 5" |

- NOTES:**
- Concrete Apron/Transition not shown.
 - Construction joints permitted between these limits. See Index 425-001 for minimum dimensions.

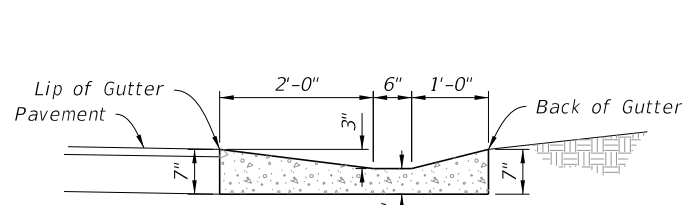
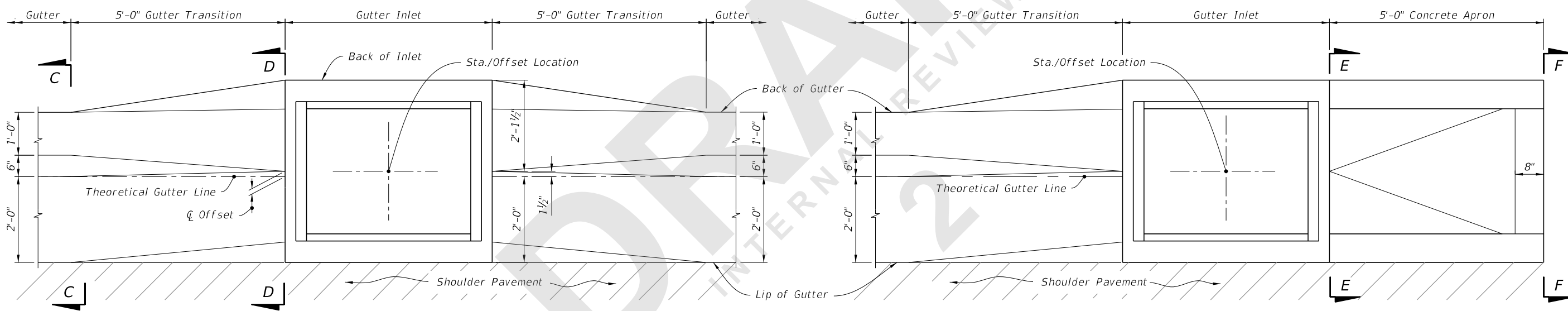
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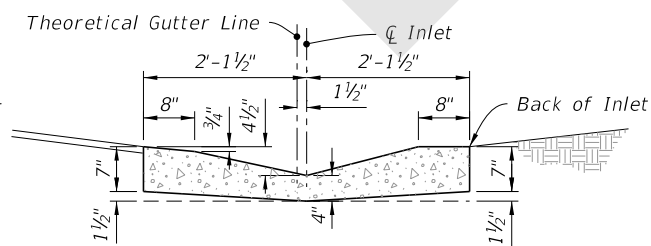
ISOMETRIC VIEW



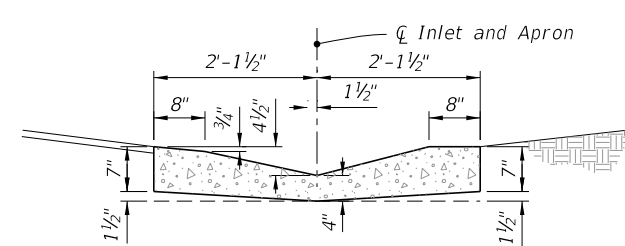
ISOMETRIC VIEW



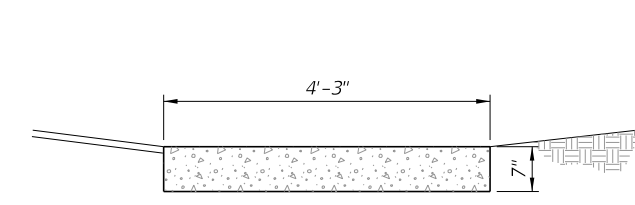
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

SHOULDER GUTTER TRANSITION

APRON AT TERMINAL INLETS

TRANSITION AND APRON DETAILS

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| | |
|---------------------------|--------------|
| LAST REVISION 11/01/20 | DESCRIPTION: |
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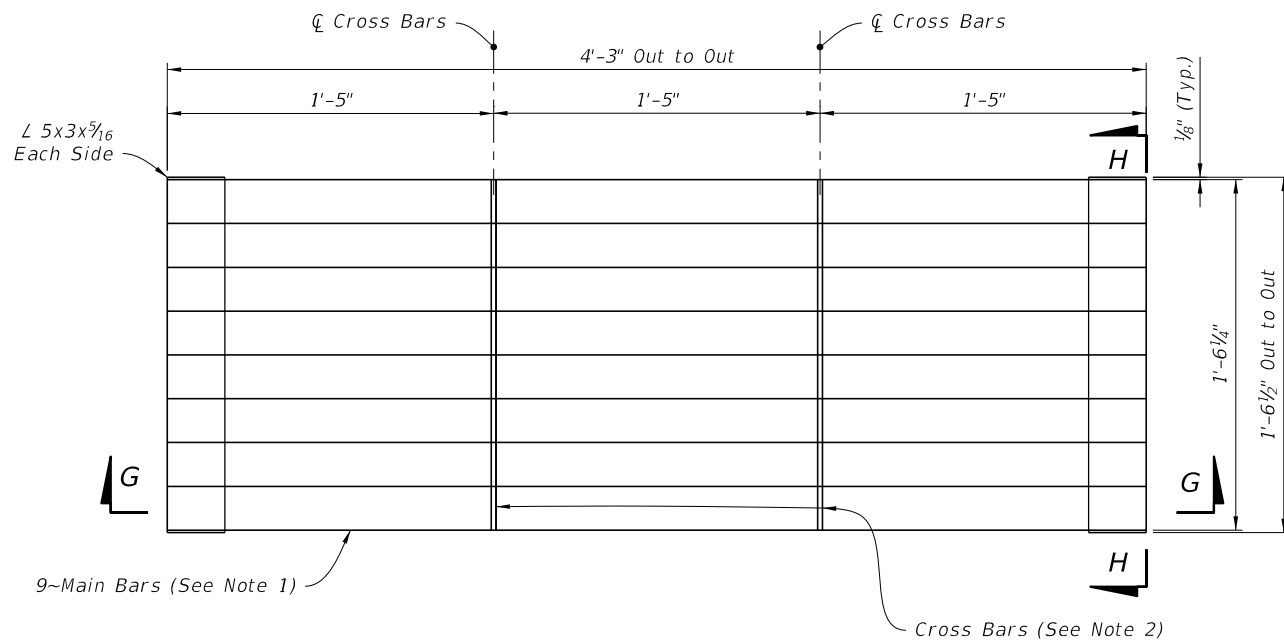


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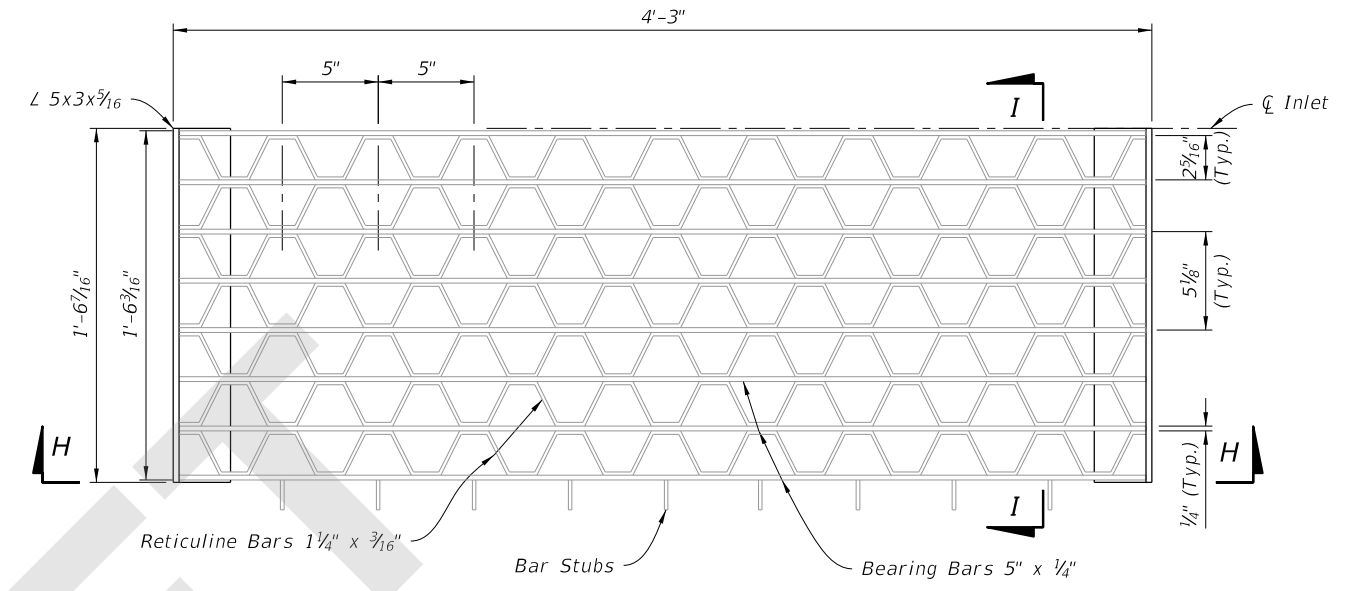
GUTTER INLET TYPE S

INDEX
425-040

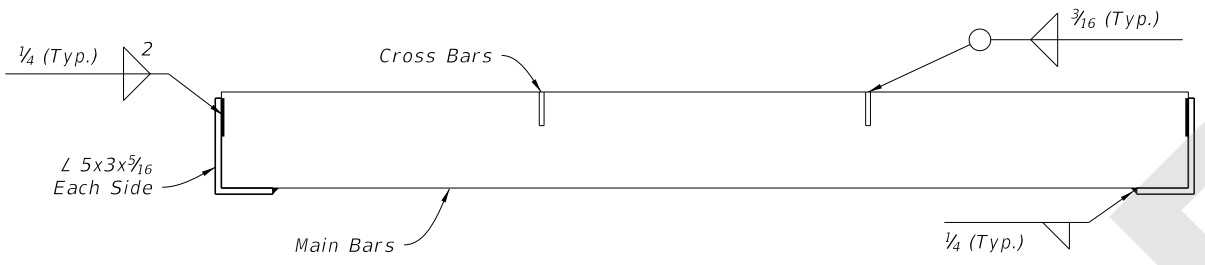
SHEET
3 of 5



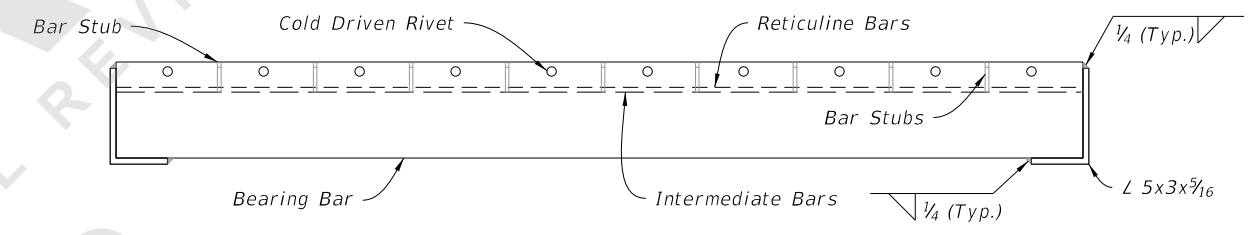
PLAN



PLAN

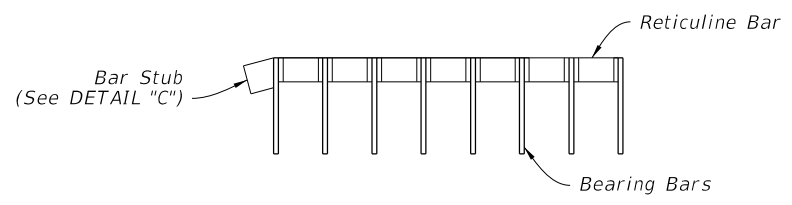


SECTION G-G

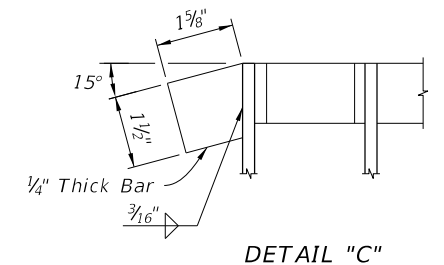


SECTION H-H

- NOTES:**
1. Main Bars are 5"x1/4", notched for Cross Bars, and spaced equally apart.
 2. Cross Bars are 1 3/4"x1/4" and continuously welded at Main Bar Notches.
 3. Main Bars and Cross Bars are flush on top.



SECTION I-I



DETAIL "C"

PARALLEL BARS

RETICULINE BARS

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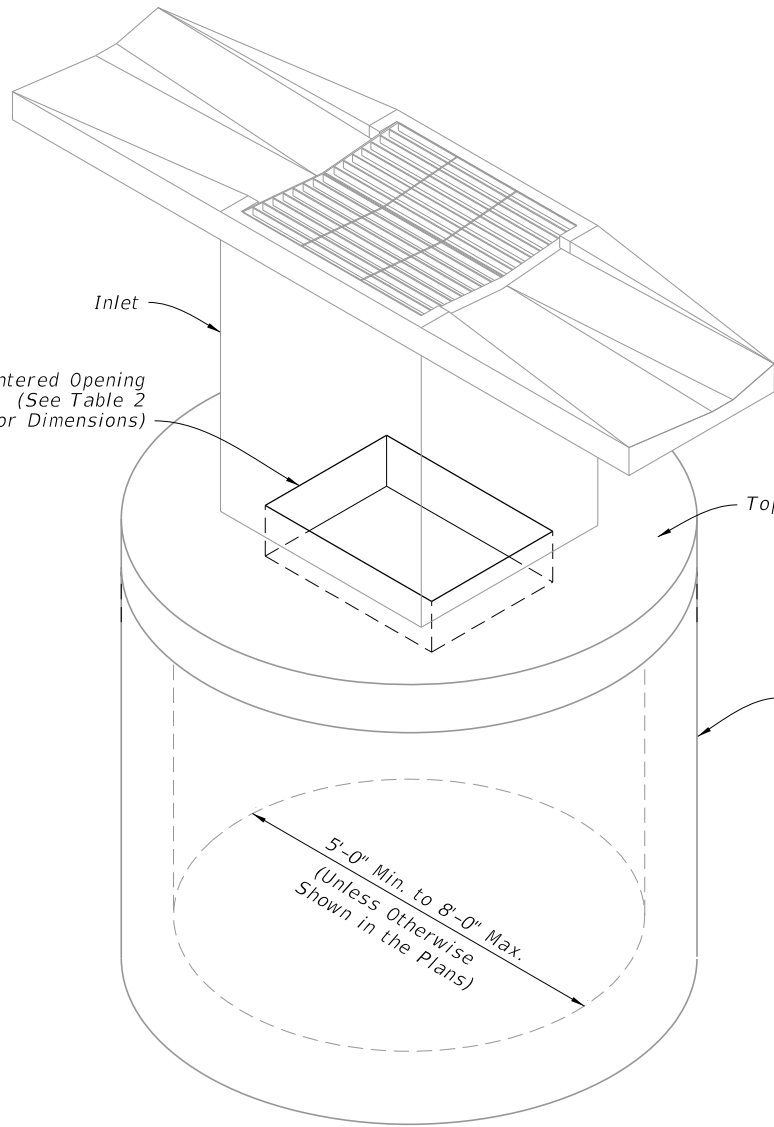
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GUTTER INLET TYPE S

| | |
|------------------|-----------------|
| INDEX 425-040 | SHEET 4 of 5 |
|------------------|-----------------|

STEEL GRATE DETAILS



| DIAMETER | OPENING SIZE | |
|----------------|----------------|----------------|
| | Min. | Max. |
| 5'-0" to 8'-0" | 2'-11" x 4'-0" | 3'-3" x 3'-10" |

2 Way Reinforcement
(See Tables 3 & 4)

K

K

Centered Opening
(See Table 2
for Dimensions)

#4 Bar Each Corner
(2'-0" Min. Length)

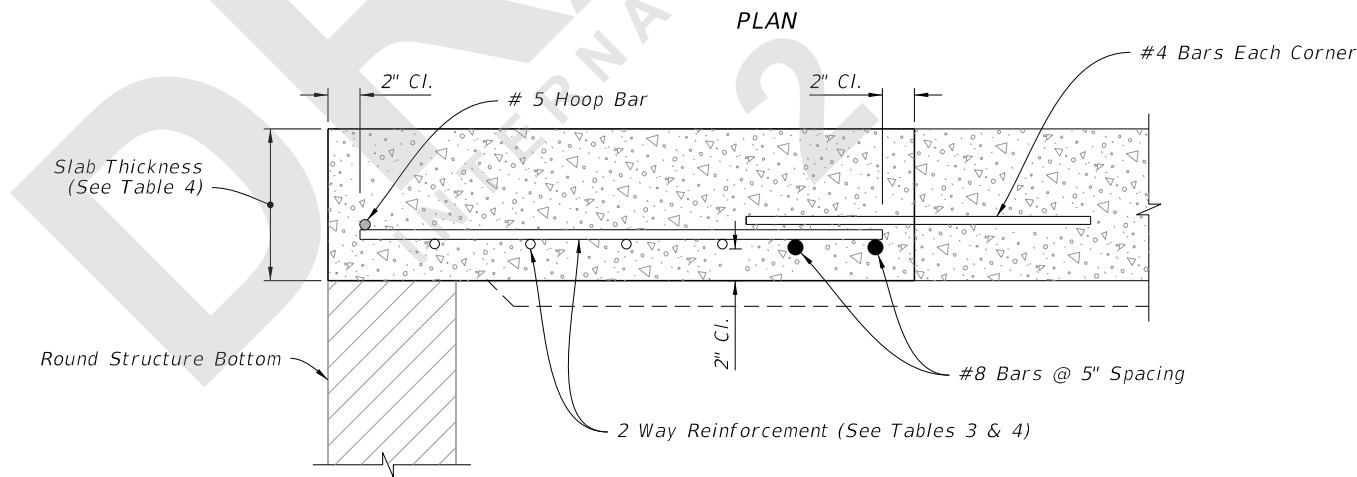
| SCHEDULE | GRADE 60 (BAR) OR 65 KSI & 70 KSI (WIRE FABRIC) In. ² /ft. |
|----------|--|
| A | 0.20 |
| B | 0.24 |
| C | 0.37 |
| D | 0.53 |
| E | 0.73 |
| F | 1.06 |
| G | 1.45 |

Alternate A Structure Bottom (See
Index 425-010 for Alternate B
and additional details)

#5 Hoop Bar
(Peripheral Reinforcement)

#8 Bars

| STRUCTURE DEPTH | SLAB THICKNESS | REINFORCING (2 WAY) SCHEDULE |
|--------------------|-------------------|------------------------------------|
| SIZE: 5'-0" | | |
| ≥0.5' < 30' | 9½" | C |
| 30' < 40' | 9½" | D |
| SIZE: 6'-0" | | |
| ≥0.5' < 8' | 9½" | B |
| 8' < 18' | 9½" | C |
| 18' < 30' | 9½" | D |
| 30' < 37' | 9½" | E |
| 37' - 40' | 9½" | G |
| SIZE: 8'-0" | | |
| ≥0.5' < 9' | 11½" | C |
| 9' < 15' | 11½" | D |
| 15' < 23' | 11½" | E |
| 23' < 33' | 11½" | E |
| 33' - 40' | 11½" | G |



SECTION K-K

ISOMETRIC VIEW

TOP SLAB REINFORCEMENT DETAILS

ALTERNATE A STRUCTURE BOTTOM - TOP SLAB DETAILS

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| 11/01/20 | |



FY 2021-22
STANDARD PLANS

GUTTER INLET TYPE S

INDEX
425-040

SHEET
5 of 5