Index 425-051
Ditch Bottom Inlet Type B

ORIGINATION

Date: 11-1-19
Name: Tim Holley
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COMMENTARY

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.
Grate change consistent with 425-040. Removed reference to 425-051 for Grate and included detail of the grate specific to this Index. Changing the Grate to all Bearing Bars provides a grate that can handle HL-93 loading.

COMMENTS AND RESPONSES

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

Name: Missy Hollis
Date: 8-10-20
COMMENT: The term used in the Ditch Bottom Inlet indexes referring to either ditch pavement or inlet pavement around the inlet could be confusing, since Specification 524 pertains to ditch pavement.
As the concrete surrounding the inlet is to be included in the cost of the inlet, it is recommended to change the term to “concrete apron” in order to differentiate that concrete from the pavement outlined in Specification 524.

RESPONSE: Agreed
Change made to Index: The index was revised to include concrete apron in the place of concrete ditch pavement.
Date: 8-24-2020

Name: Jeffrey Cicerello
Date: 8-21-20
COMMENT: Sheet 3, Section G-G: Detail incomplete; Sloped portion of ditch pavement not given or necessary widths. Is this to match the side slope?
RESPONSE: It looks like the 1’6” dimension has been the only one shown since the detail(s) were added to the indexes. The detail implies that the contractor would create a slope to tie into the inlet and the slope at the 1’6” distance. This will be further investigated for the next cycle of Standard Plans updates.
No change to Index at this time
Date: 8-28-20

GENERAL NOTES:

1. Work this Index with Index 425-001 and Index 425-010.

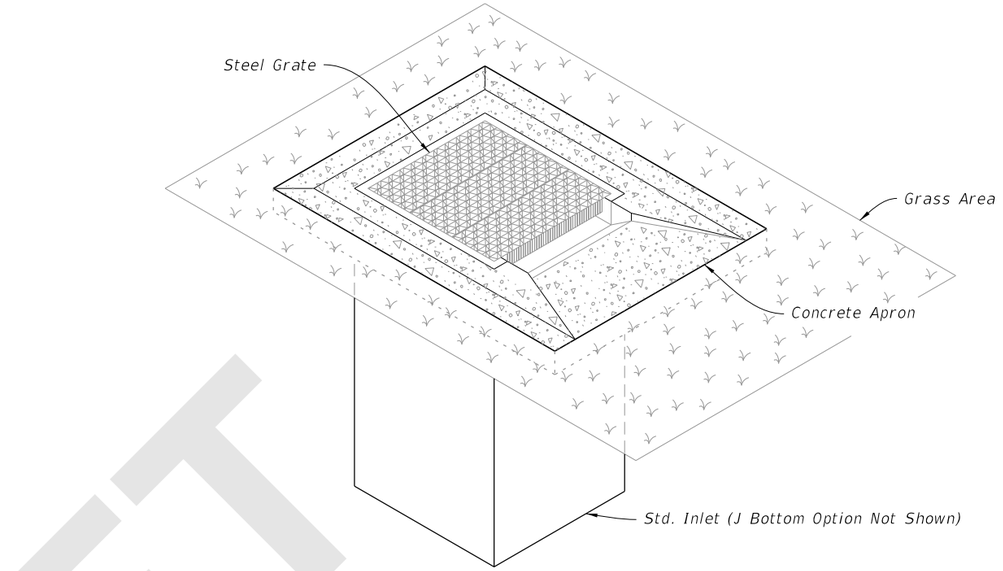
2. All reinforcing is Grade 60 bars with 2" minimum cover unless otherwise noted. See Index 425-001 for equivalent area of welded wire fabric. Bars to be cut or bent for min. 1½" clearance around pipe.

3. Chamfer all exposed edges and corners ¾" or tooled to ¼" radius.

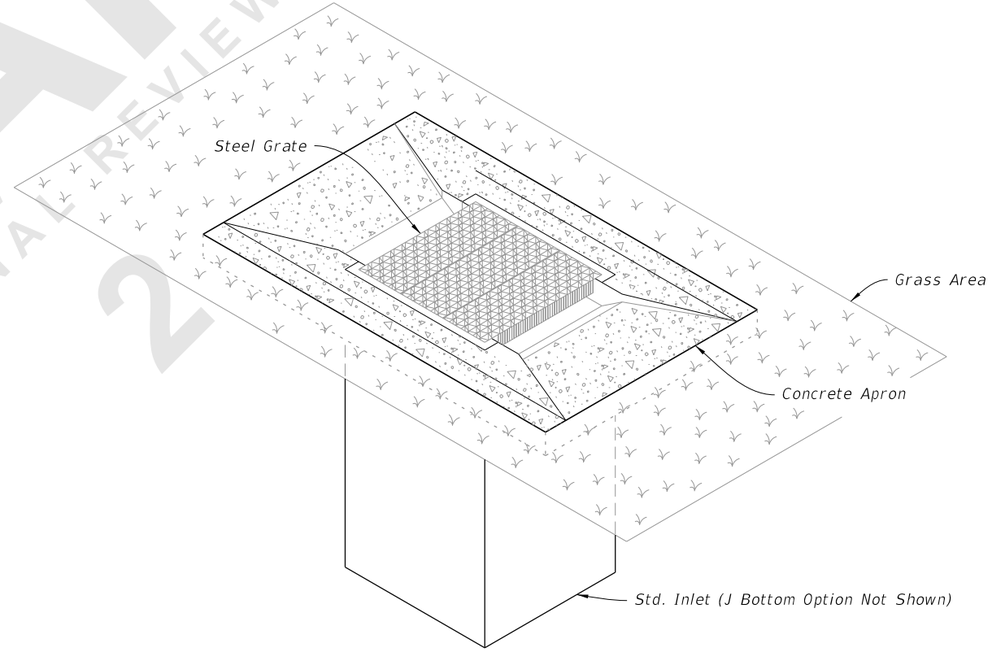
4. Dimensions are for both precast and cast-in-place inlets unless otherwise noted.

5. Quantities are for informational and estimating purposes only.

TABLE OF CONTENTS:



SINGLE SLOT INLET
(Pipe Connection Not Shown)



DOUBLE SLOT INLET
(Pipe Connection Not Shown)

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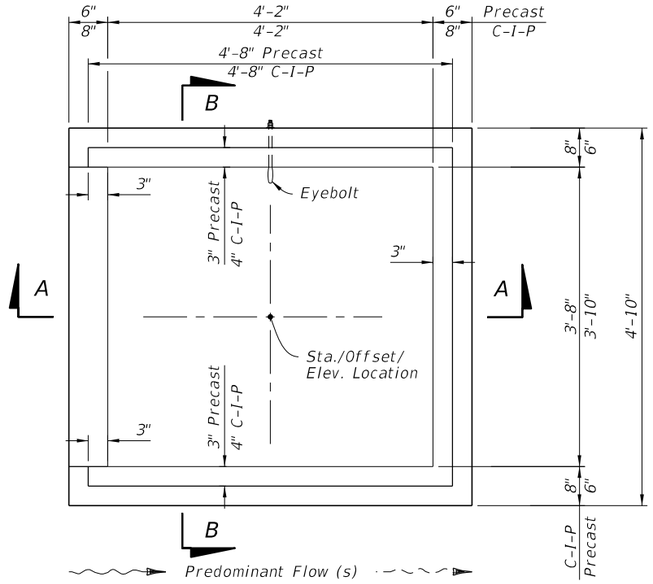
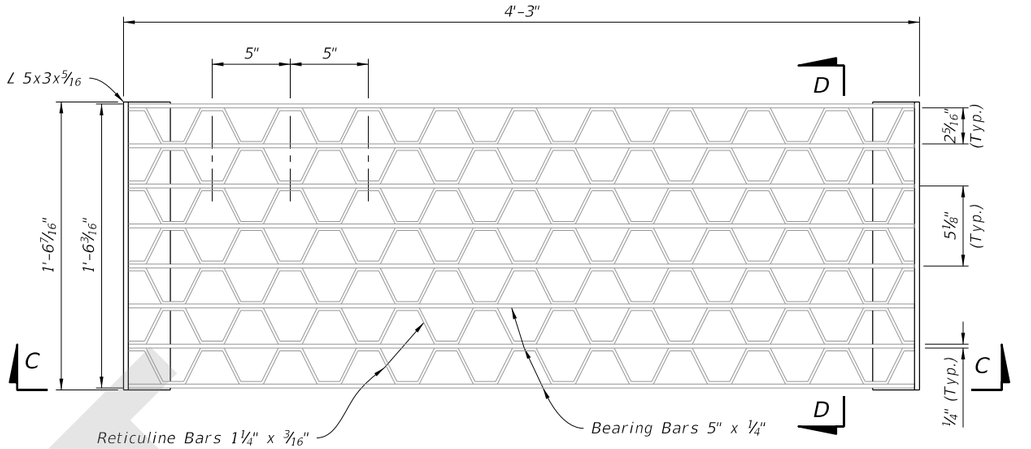
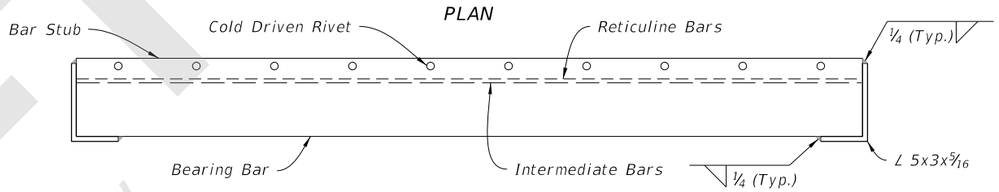
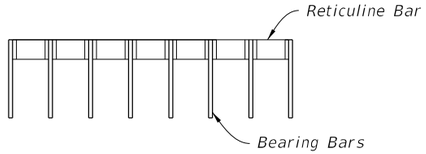


PLAN

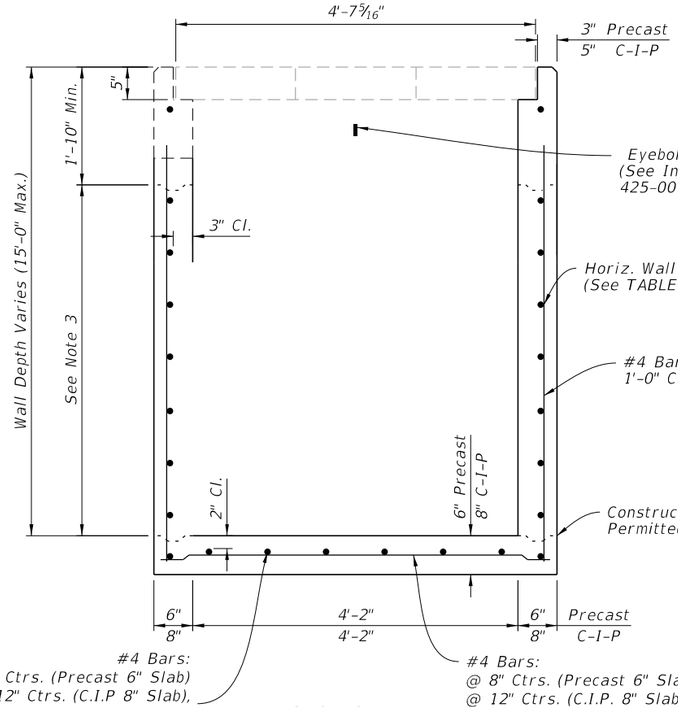




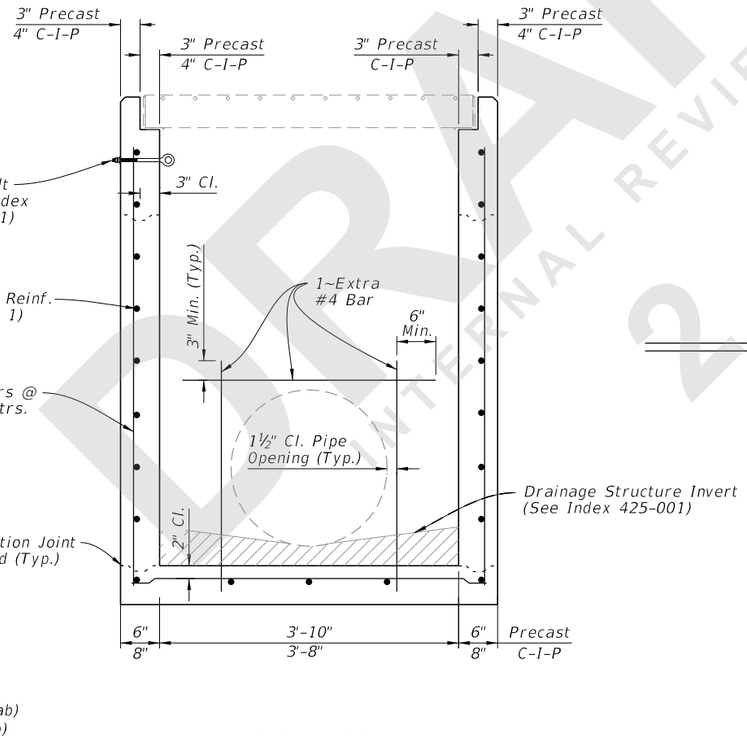
SECTION C-C



SECTION D-D



SECTION A-A
(Pipe Opening Not Shown)



SECTION B-B
(Pipe Opening Shown)

STEEL GRATE DETAILS

TABLE 1
HORIZONTAL WALL REINFORCING SCHEDULE

WALL DEPTH	SCHEDULE	AREA ($in.^2/ft.$)	MAX. SPACING	
			BARS	WWR
0' – 5'	A12	0.200	12"	8"
5' – 9'	A6	0.200	6"	5"
9' – 13'	B5.5	0.240	5½"	5"
13'-15'	Special	0.267	5"	4"

NOTES:

1. Plan View; grate, apron, slots and sod not shown.
2. See Sheet 3 for apron and traversable slot details.
3. Construction joints permitted between these limits. See Index 425-001 for minimum dimensions.

DIMENSIONAL AND REINFORCEMENT DETAILS

DIMENSIONAL, REINFORCEMENT, AND GRATE DETAILS

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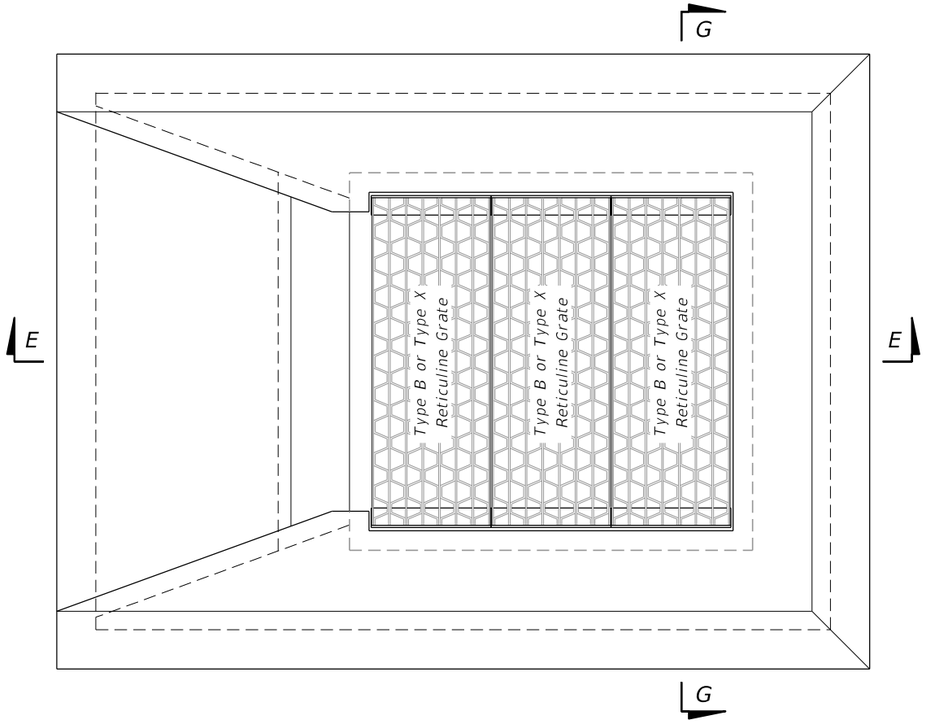

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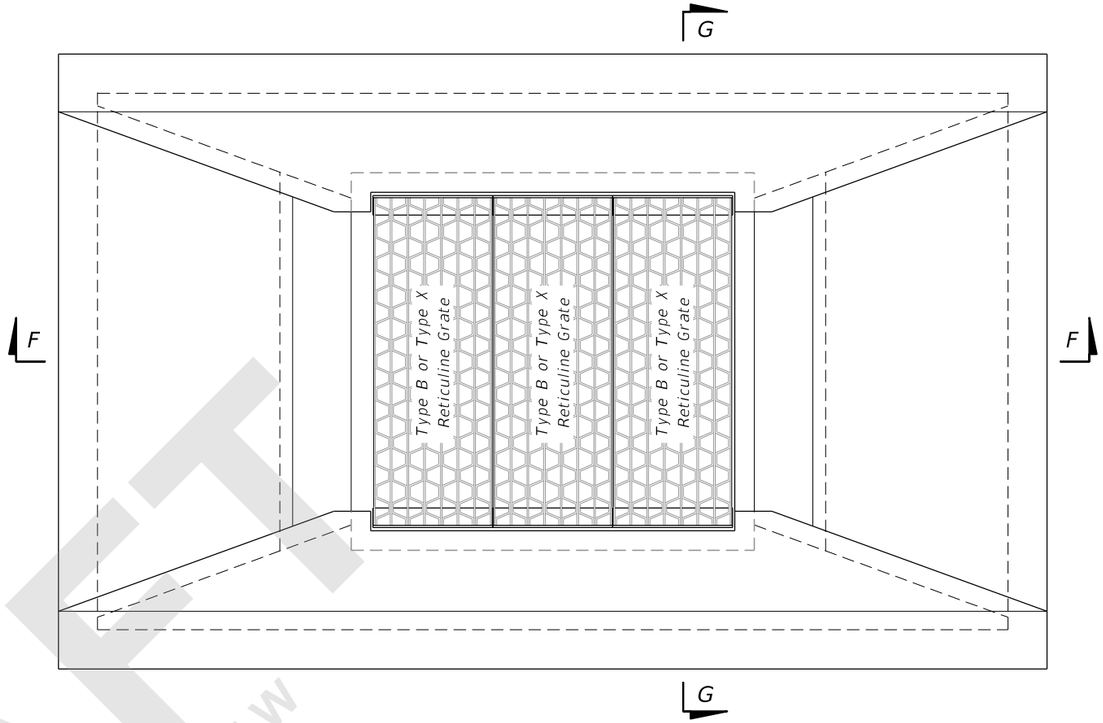

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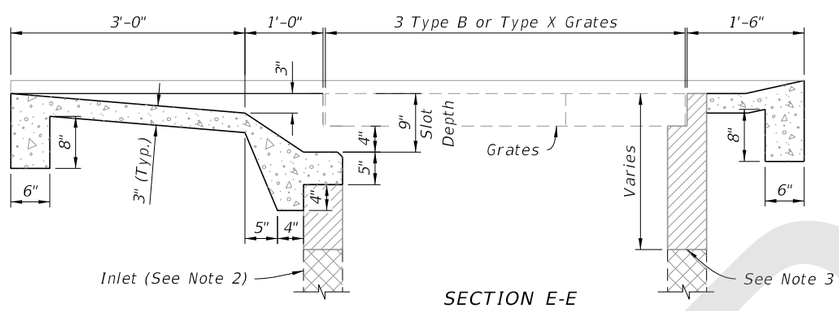
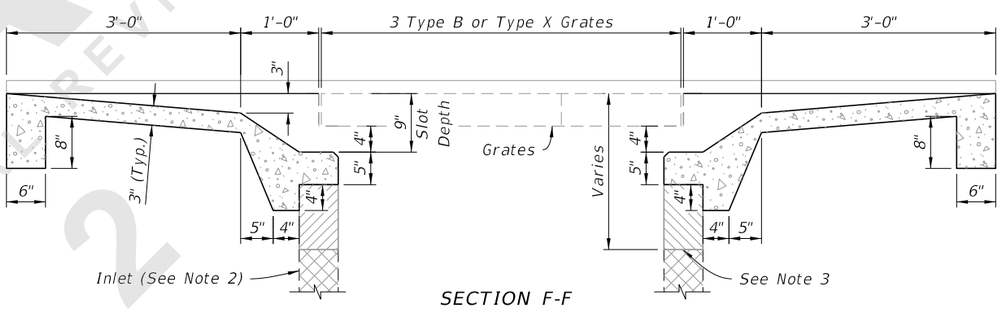


SECTION E-E

SINGLE SLOT



SECTION F-F

DOUBLE SLOT

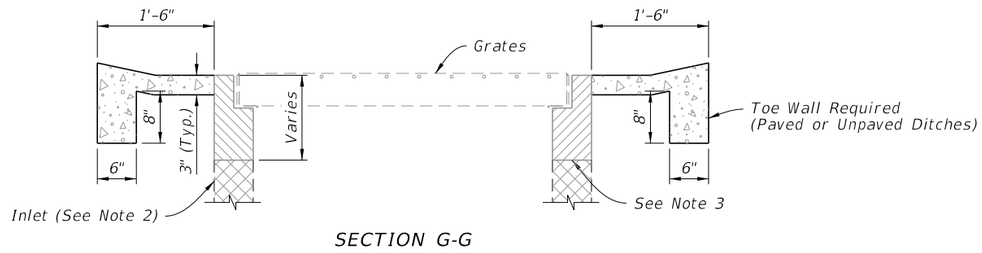
NOTES:

1. These traversable tops are for new or existing Type B Inlets and for conversion of existing Type X Inlets.

2. Inlet box (line type indicates existing box to facilitate depiction of partial construction on existing inlets)

3. On new boxes the traversable top may be cast as a monolithic unit or cast in segments, and the location of this line may be lower to facilitate handling and placement; however, the slot depth is to remain at 9 inches. See Index 425-001 for top to wall connection. For converting to traversable tops on existing inlets remove concrete to this line and expose the existing reinforcement. Reshape or splice in reinforcement to penetrate the rim and returns of the grate seat, and bend the reinforcement into the slot shelf to extend into the abutting throat pavement.

4. See Sheet 2 for Precast and C-I-P dimensions.



SECTION G-G

TRAVERSABLE TOP DETAILS

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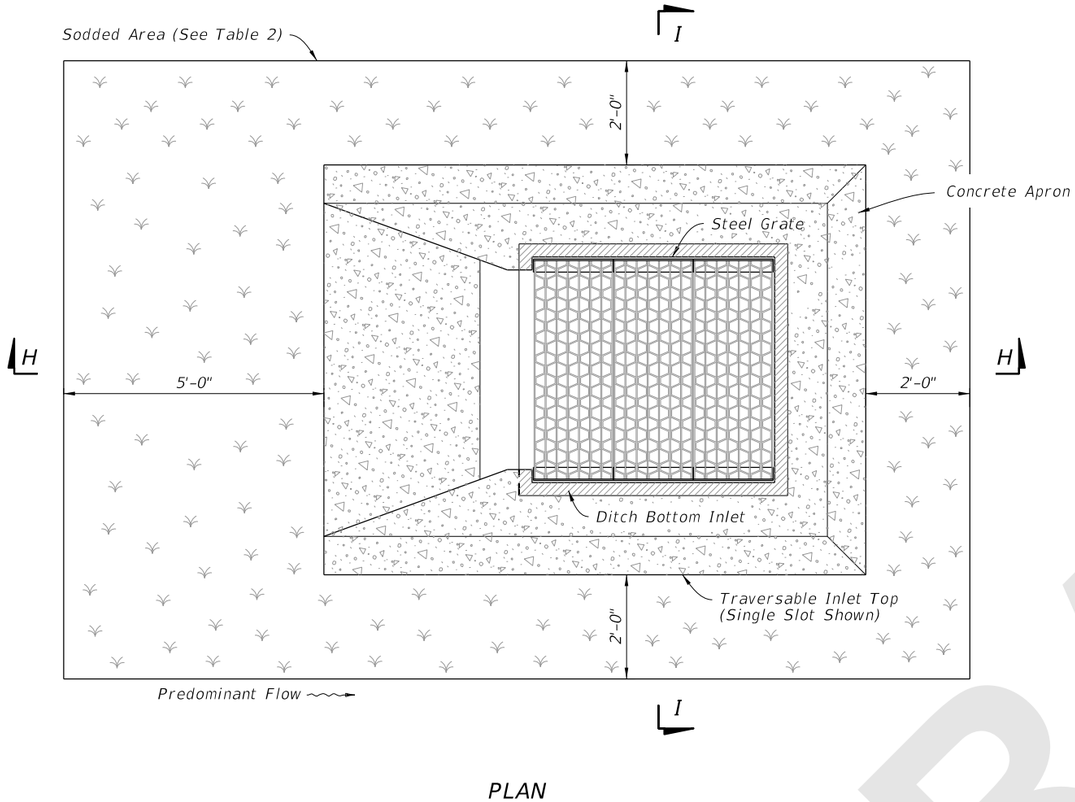
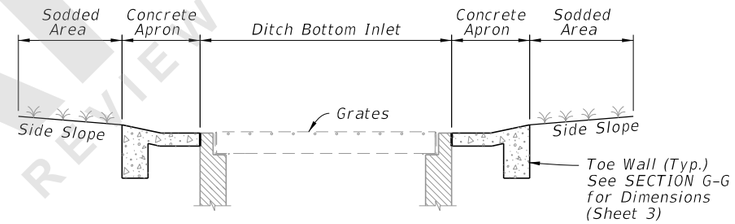
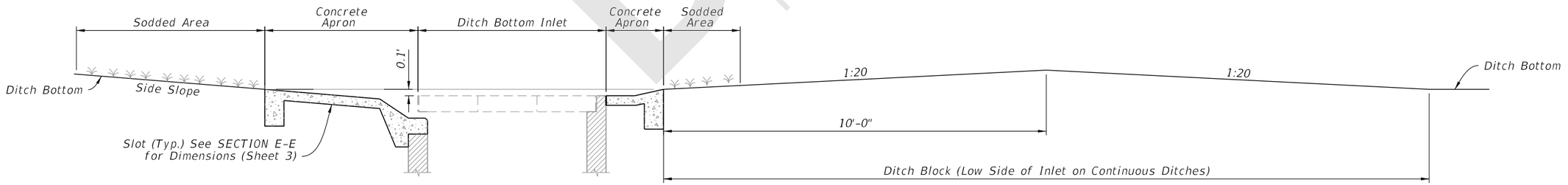


PLAN

TABLE 2 ESTIMATED QUANTITIES			
SLOT TYPE	Concrete Apron		SOD
	SY	CY	SY
Single	6.2	0.9	14
Double	8.1	1.1	19



SECTION I-I



SECTION H-H AND DITCH BLOCK

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CONCRETE APRON PAVEMENT AND SODDED AREA DETAILS

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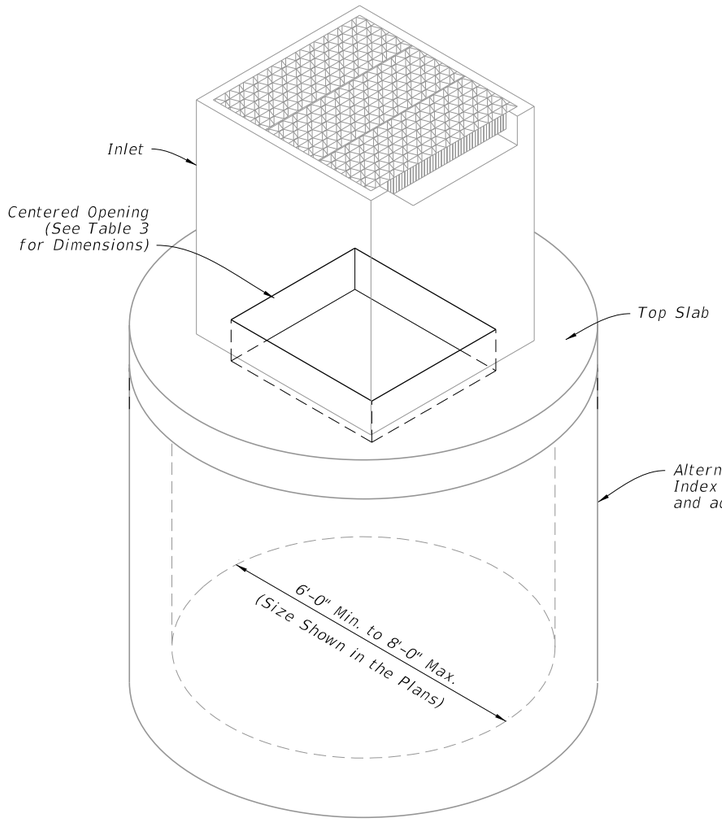
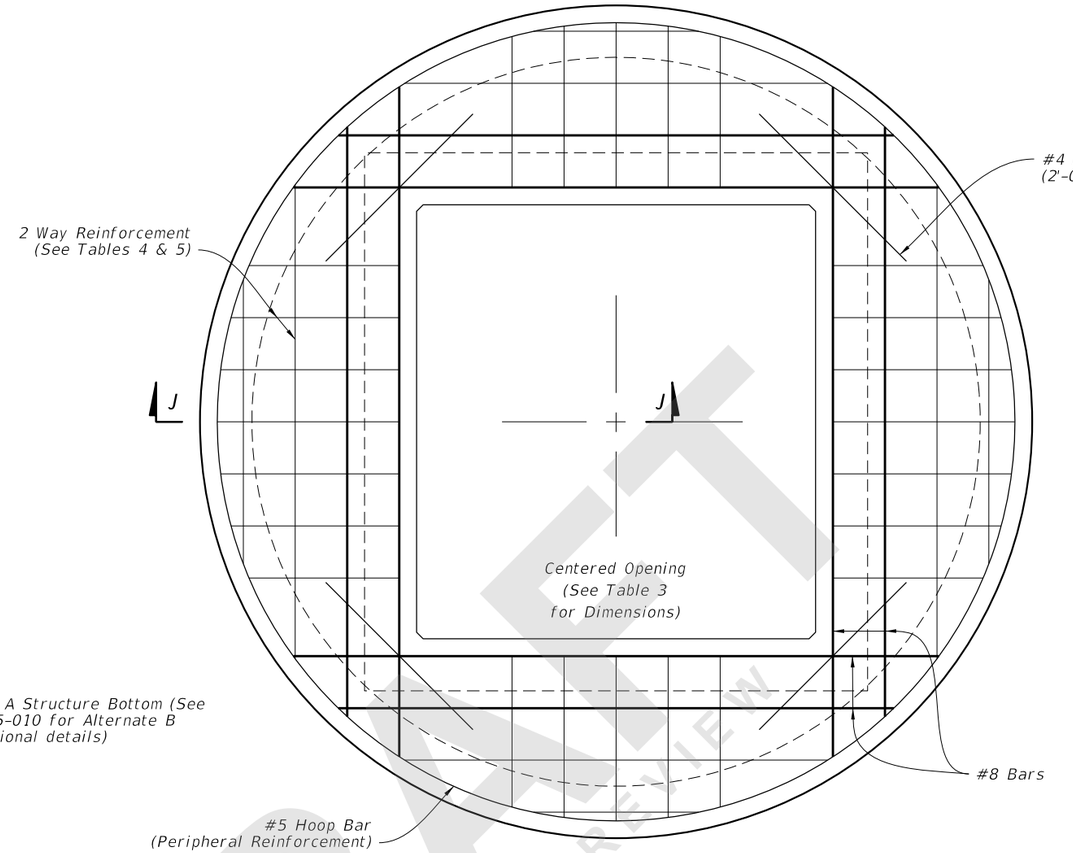
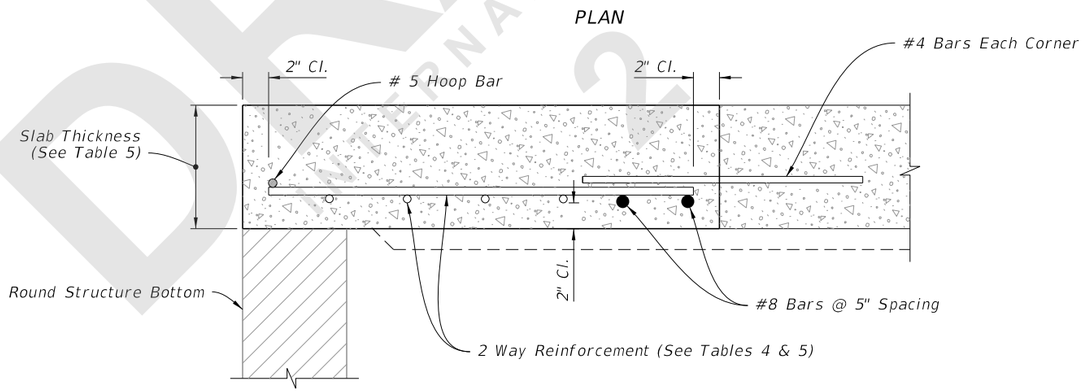


ISOMETRIC VIEW

TABLE 3 TOP SLAB OPENING		
DIAMETER	OPENING SIZE	
	Min.	Max.
6'-0" to 8'-0"	3'-8" x 4'-2"	3'-10" x 4'-2"





SECTION J-J

TOP SLAB REINFORCMENT DETAILS

TABLE 4 TOP SLAB REINFORCING SCHEDULE	
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

TABLE 5 TOP SLAB WITH CENTERED OPENING		
STRUCTURE DEPTH	SLAB THICKNESS	REINFORCING (2 WAY) SCHEDULE
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

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ALTERNATE A STRUCTURE BOTTOM - TOP SLAB DETAILS

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