

Job Name: 26-1185 - Wells Fargo Smyrna
Job Location: Smyrna, TN 37167
Contractor: Hayes Pipe Supply

Plant: 100

Tech: Jared - F

7/21/2026 3:55:59 PM

PC: E. Bradley



Structure ID: A3-5 ST-MH

P1 MH048BA36

MH BASE T/n

P4) 24" - CASTING HEIGHT - 7"
P3) 24" - GRADE RING F/F - 3"
P2) 48" - ECC CONE w/ 24" HOLE F/G - 30"
P1) 48" - MH BASE T/n - 36"
1) 48" - Conseal CS-102 1.00"
1) 24" - Conseal CS-102 1.00"
2) Hole - 22"
6) MH Step ML-10-TDS-NCR - 10"

0 lb
202 lb
2050 lb
3516 lb
0 lb
0 lb
0 lb
0 lb

Structure Total: 5768 lb

Structure Notes:

1. PER ASTM C478 SPECIFICATIONS.
2. CONCRETE = 4,000 PSI AT 28 DAYS.
3. NO INVERT CHANNEL.
4. CASTING SUPPLIED BY OTHERS.

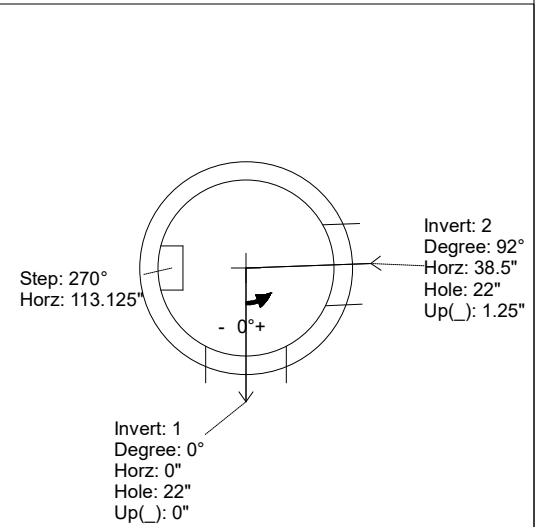
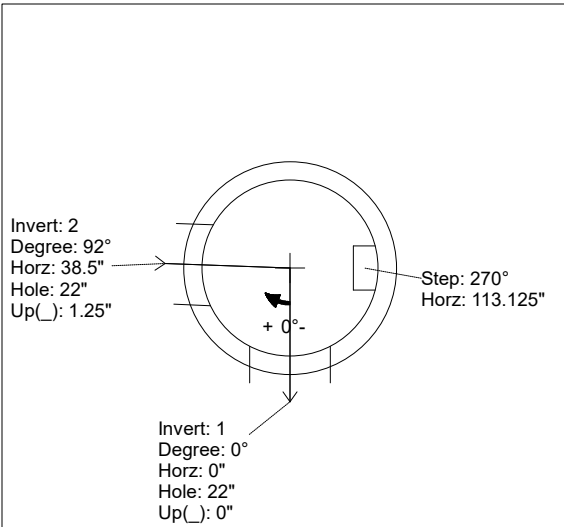
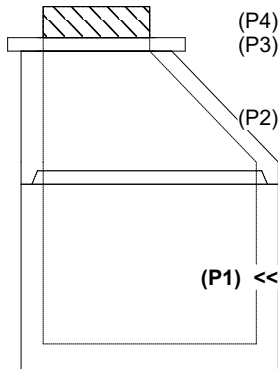
REINFORCING PER ASTM A615 (GRADE 60).
- CONE (As .12)
- RISER/WALLS (As .12)
- FLOOR (As .31) #5 BARS AT 12" C.C.E.W.

Rim: 589.02' Rim to Invert: 6.22' Slack: 0.89' Sump: 2.25' Step Position: 270

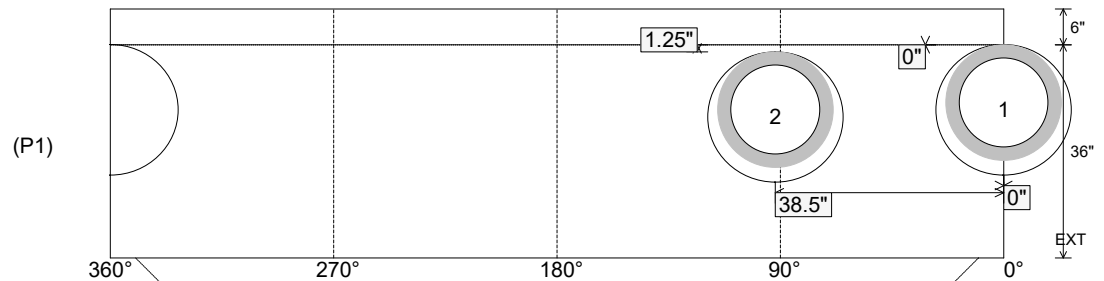
Position	Elev	Angle	Ext. (cw)	Pipe	Pipe OD	Connector	Hole	Horz Size	Up ()	Offset
Invert 1	582.8'	0°	0"	15" RCP B WALL	19.5"	Hole 22	22"	22.854"	0"	0"
Invert 2	582.9'	92°	46.625"	15" RCP B WALL	19.5"	Hole 22	22"	22.854"	1.25"	0"
Invert 3										
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

RIGHT-SIDE UP VIEW (int. dimensions)

UPSIDE-DOWN VIEW (int. dimensions)



INSIDE WALL DIMENSIONS



Coating (Int):
Coating (Ext):

Seam Up: Tongue
Seam Dn: n/a

Wall Thickness: 5"
Floor Height: 6"

Height (Int): 36"
Height (Ext): 42"

Weight (Net): 3516 lb
Volume (Net): 0.9cu.yd

Job Name: 26-1185 - Wells Fargo Smyrna
Job Location: Smyrna, TN 37167
Contractor: Hayes Pipe Supply

Plant: 100

Tech: Jared - F

7/21/2026 3:56:28 PM

PC: E. Bradley



Structure ID: A3-5 ST-MH

P2 MH048CN30

ECC CONE w/ 24" HOLE F/G

- P4) 24" - CASTING HEIGHT - 7"
P3) 24" - GRADE RING F/F - 3"
P2) 48" - ECC CONE w/ 24" HOLE F/G - 30"
P1) 48" - MH BASE T/n - 36"
1) 48" - Conseal CS-102 1.00"
1) 24" - Conseal CS-102 1.00"
2) Hole - 22
6) MH Step ML-10-TDS-NCR - 10"

0 lb
202 lb
2050 lb
3516 lb
0 lb
0 lb
0 lb
0 lb

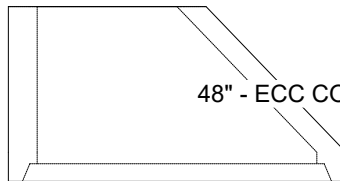
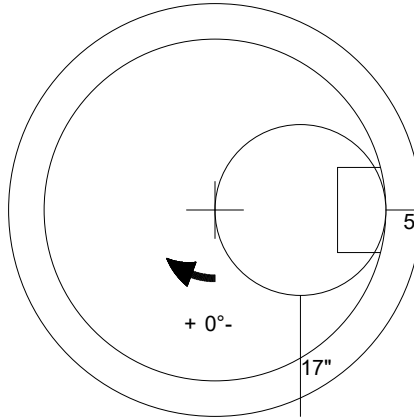
5768 lb

Structure Total:

Structure Notes:

1. PER ASTM C478 SPECIFICATIONS.
2. CONCRETE = 4,000 PSI AT 28 DAYS.
3. NO INVERT CHANNEL.
4. CASTING SUPPLIED BY OTHERS.

REINFORCING PER ASTM A615 (GRADE 60).
- CONE (As .12)
- RISER/WALLS (As .12)
- FLOOR (As .31) #5 BARS AT 12" C.C.E.W.



48" - ECC CONE w/ 24" HOLE F/G - 30" - (P2)

Coating (Int):
Coating (Ext):

Seam Up: Flat
Seam Dn: Groove

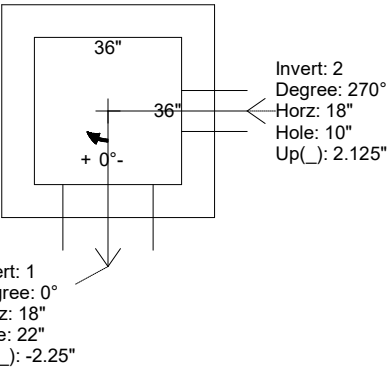
Wall Thickness: 5"

Height (Ext): 30"

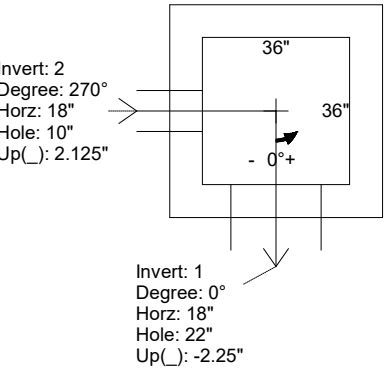
Weight (Net): 2050 lb
Volume (Net): 0.41cu.yd

Job Name: 26-1185 - Wells Fargo Smyrna Job Location: Smyrna, TN 37167 Contractor: Hayes Pipe Supply					Plant: 100 7/21/2026 3:56:00 PM		Tech: Jared - F PC: E. Bradley				
Structure ID: A11-6 ST-OCS											
P1 BX3636-08BAVF		BOX BASE 8inW, 8inF, Variable Ht F/n									
P2) 36" x 36" - CASTING HEIGHT - 0" P1) 36" x 36" - BOX BASE 8inW, 8inF, Variable Ht F/n - 51" 1) 36" x 36" - Conseal CS-102 1.00" 1) Hole - 22" 1) Hole - 10"					0 lb 7533 lb 0 lb 0 lb 0 lb ----- Structure Total: 7533 lb		Structure Notes: 1. PER ASTM C913 SPECIFICATIONS. 2. CONCRETE = 4,500 PSI AT 28 DAYS. 3. NO STEPS AND NO INVERT CHANNEL. 4. CASTING SUPPLIED BY OTHERS. REINFORCING PER ASTM A615 (GRADE 60). - WALLS (As .12) #5 BARS AT 12" C.C.E.W. - FLOOR (As .12) #5 BARS AT 12" C.C.E.W.				
Rim: 588.5' Rim to Invert: 4.25' Slack: -0.002" Sump: 0" Step Position:											
Position	Elev	Angle	Ext. (cw)	Pipe	Pipe OD	Connector	Hole	Horz Size	Up ()	Offset	
Invert 1	584.25'	0°	26"	15" RCP B WALL	19.5"	Hole 22	22"	22"	-2.25"	0"	
Invert 2	584.45'	270°	26"	6" PVC SCH40	6.625"	Hole 10	10"	10"	2.125"	0"	
Invert 3											
Invert 4											
Invert 5											
Invert 6											
Invert 7											
Invert 8											

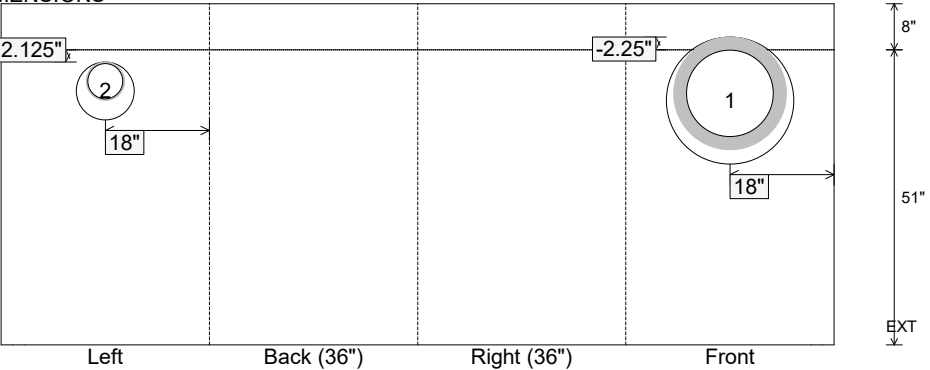
RIGHT-SIDE UP VIEW (int. dimensions)



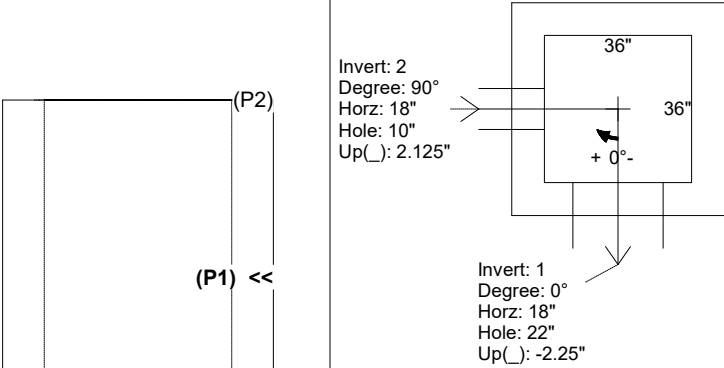
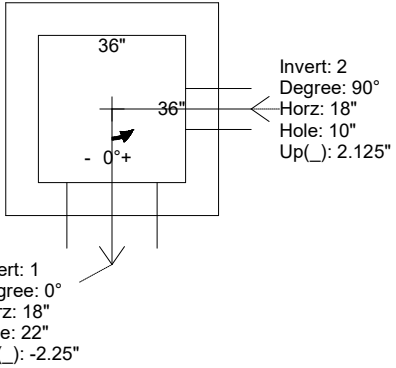
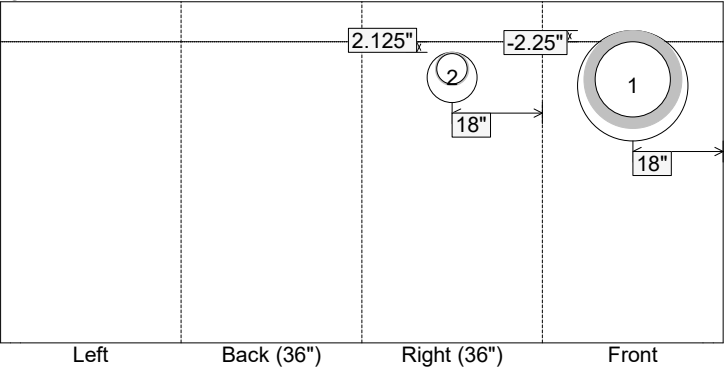
UPSIDE-DOWN VIEW (int. dimensions)



INSIDE WALL DIMENSIONS



Coating (Int): Coating (Ext):	Seam Up: Flat Seam Dn: n/a	Wall Thickness: 8" Floor Height: 8"	Height (Int): 51" Height (Ext): 59"	Weight (Net): 7533 lb Volume (Net): 1.92cu.yd
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Job Name: 26-1185 - Wells Fargo Smyrna Job Location: Smyrna, TN 37167 Contractor: Hayes Pipe Supply					Plant: 100 7/21/2026 3:56:01 PM		Tech: Jared - F PC: E. Bradley					
Structure ID: A13-7 ST-OCS												
P1		BX3636-08BA60		BOX BASE 8inW, 8inF F/n								
P2) 36" x 36" - CASTING HEIGHT - 0" P1) 36" x 36" - BOX BASE 8inW, 8inF F/n - 60" 1) 36" x 36" - Conseal CS-102 1.00" 1) Hole - 22" 1) Hole - 10"					0 lb 8596 lb 0 lb 0 lb 0 lb ----- Structure Total: 8596 lb		Structure Notes: 1. PER ASTM C913 SPECIFICATIONS. 2. CONCRETE = 4,500 PSI AT 28 DAYS. 3. NO STEPS AND NO INVERT CHANNEL. 4. CASTING SUPPLIED BY OTHERS. REINFORCING PER ASTM A615 (GRADE 60). - WALLS (As .12) #5 BARS AT 12" C.C.E.W. - FLOOR (As .12) #5 BARS AT 12" C.C.E.W.					
Rim: 588.15'					Rim to Invert: 5.05'		Slack: 0.598"		Sump: 0"		Step Position:	
Position	Elev	Angle	Ext. (cw)	Pipe	Pipe OD	Connector	Hole	Horz Size	Up ()	Offset		
Invert 1	583.1'	0°	26"	15" RCP B WALL	19.5"	Hole 22	22"	22"	-2.25"	0"		
Invert 2	583.3'	90°	26"	6" PVC SCH40	6.625"	Hole 10	10"	10"	2.125"	0"		
Invert 3												
Invert 4												
Invert 5												
Invert 6												
Invert 7												
Invert 8												
RIGHT-SIDE UP VIEW (int. dimensions)  UPSIDE-DOWN VIEW (int. dimensions) 												
INSIDE WALL DIMENSIONS 												
Coating (Int): Coating (Ext):			Seam Up: Flat Seam Dn: n/a		Wall Thickness: 8" Floor Height: 8"		Height (Int): 60" Height (Ext): 68"		Weight (Net): 8596 lb Volume (Net): 2.2cu.yd			

Job Name: 26-1185 - Wells Fargo Smyrna
Job Location: Smyrna, TN 37167
Contractor: Hayes Pipe Supply

Plant: 100

Tech: Jared - F

7/21/2026 3:56:02 PM

PC: E. Bradley



Structure ID: D3-8 ST-OCS

P1 BX3636-08BA48

BOX BASE 8inW, 8inF F/n

P2) 36" x 36" - CASTING HEIGHT - 0"
P1) 36" x 36" - BOX BASE 8inW, 8inF F/n - 48"
1) 36" x 36" - Conseal CS-102 1.00"
1) Hole - 22
2) Hole - 10

0 lb
7092 lb
0 lb
0 lb
0 lb

7092 lb

Structure Total: 7092 lb

Structure Notes:

1. PER ASTM C913 SPECIFICATIONS.
2. CONCRETE = 4,500 PSI AT 28 DAYS.
3. NO STEPS AND NO INVERT CHANNEL.
4. CASTING SUPPLIED BY OTHERS.

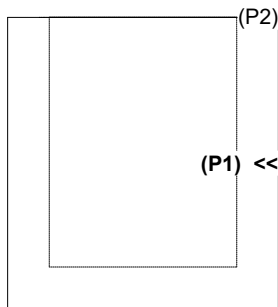
REINFORCING PER ASTM A615 (GRADE 60).
- WALLS (As .12) #5 BARS AT 12" C.C.E.W.
- FLOOR (As .12) #5 BARS AT 12" C.C.E.W.

Rim: 588.21' Rim to Invert: 4' Slack: -0.002" Sump: 0" Step Position:

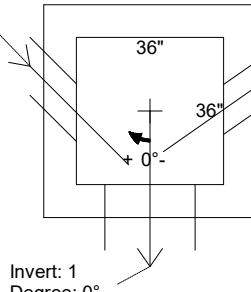
Position	Elev	Angle	Ext. (cw)	Pipe	Pipe OD	Connector	Hole	Horz Size	Up ()	Offset
Invert 1	584.21'	0°	26"	15" RCP B WALL	19.5"	Hole 22	22"	22"	-2.25"	0"
Invert 2	584.41'	135°	33.625"	6" PVC SCH40	6.625"	Hole 10	10"	14.142"	2.125"	-13"
Invert 3	584.41'	235°	20"	6" PVC SCH40	6.625"	Hole 10	10"	12.208"	2.125"	10"
Invert 4										
Invert 5										
Invert 6										
Invert 7										
Invert 8										

RIGHT-SIDE UP VIEW (int. dimensions)

UPSIDE-DOWN VIEW (int. dimensions)



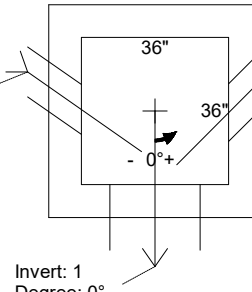
Invert: 2
Degree: 135°
Horz: 17.625"
Hole: 10"
Up(): 2.125"



Invert: 3
Degree: 235°
Horz: 17.625"
Hole: 10"
Up(): 2.125"

Invert: 3
Degree: 235°
Horz: 17.625"
Hole: 10"
Up(): 2.125"

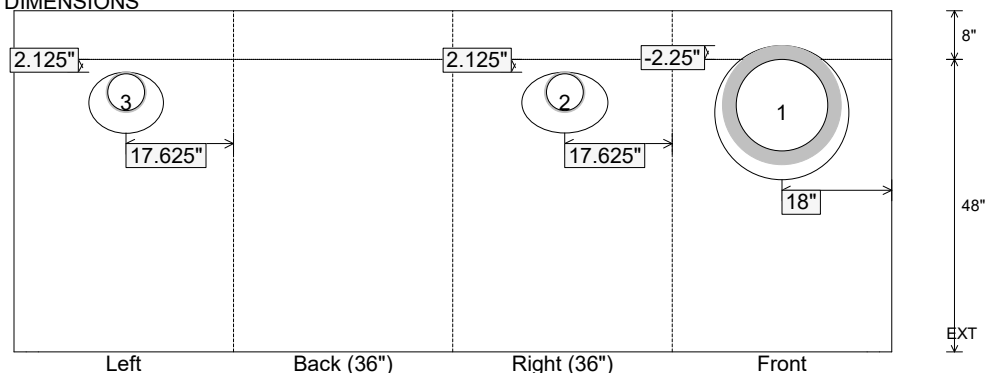
Invert: 2
Degree: 135°
Horz: 17.625"
Hole: 10"
Up(): 2.125"



Invert: 1
Degree: 0°
Horz: 18"
Hole: 22"
Up(): -2.25"

INSIDE WALL DIMENSIONS

(P1)



Coating (Int):
Coating (Ext):

Seam Up: Flat
Seam Dn: n/a

Wall Thickness: 8"
Floor Height: 8"

Height (Int): 48"
Height (Ext): 56"

Weight (Net): 7092 lb
Volume (Net): 1.81cu.yd



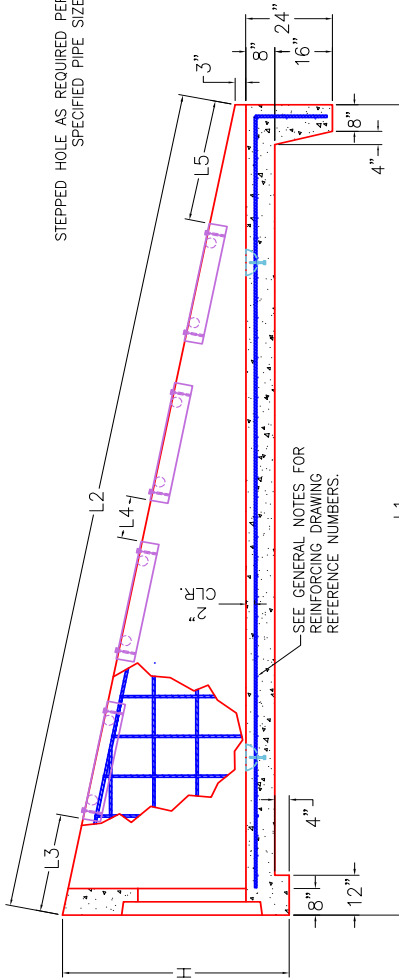
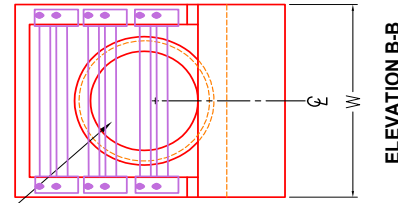
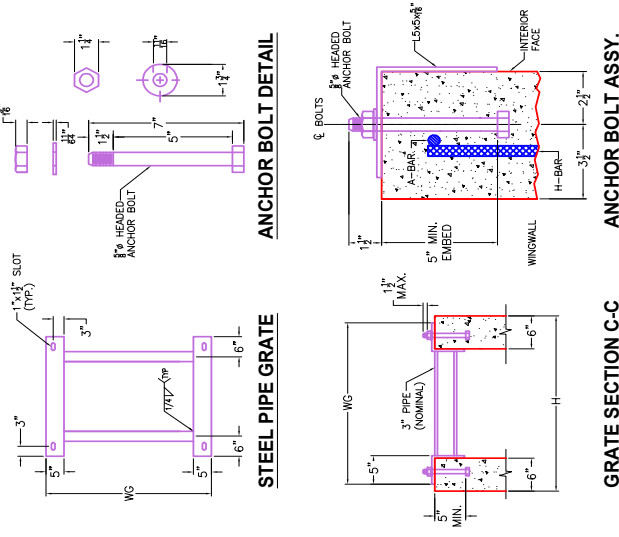
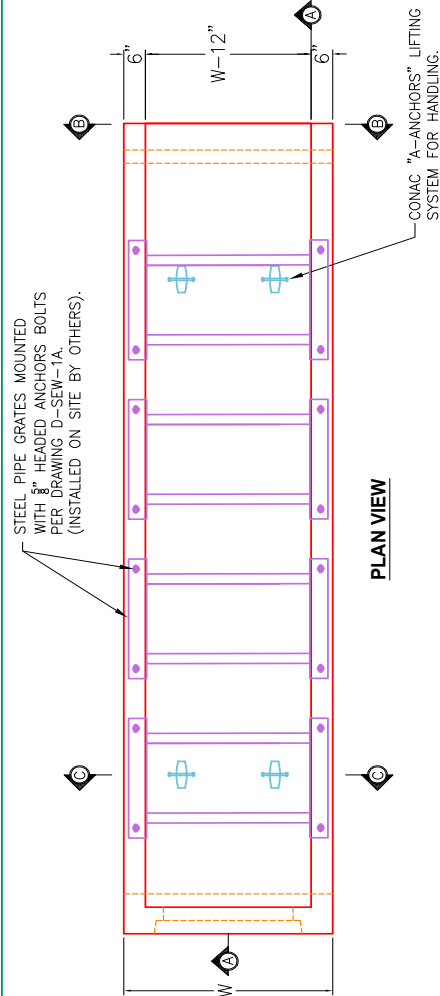
Structure ID: D1-3 HW

P1 HWT DOT6-1SA15C

15" - HW TDOT 6:1 Type Safety Side Drain Endwall Custom F/F

GENERAL NOTES

1. DRAWING TO BE USED FOR ALL 15" THROUGH 48" SIDE DRAIN CONCRETE ENDWALLS.
2. MANUFACTURING, FOR CROSS DRAINS ONLY.
3. CONCRETE: $f_c = 4,500$ PSI @ 28 DAYS.
4. REINFORCING STEEL: ASTM A615, $F_y = 60,000$ PSI.
5. SEE STD. DWGS: D-PE-15A, D-PE-18, D-PE-24A, D-PE-30A, D-PE-36A, D-PE-42A & D-PE-48A FOR BILL OF STEEL.
6. SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
7. APPROPRIATE SIZING AND LOCATIONS OF THE LIFTING INSERTS WILL BE THE RESPONSIBILITY OF INFRASTRUCTURE PRECAST, INC.
8. LIFTING INSERT POCKETS SHALL BE GROUTED ON SITE BY THE CONTRACTOR AFTER THE ENDWALL IS SET AS PER TDOT REQUIREMENTS.
9. DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 3-3.
10. PIPE OPENINGS FOR HEADWALLS ARE BASED ON REINFORCED CONCRETE PIPE WITH TYPE "B" WALL AS PER AMERICAN CONCRETE PIPE ASSOCIATION (ACPA). OUTSIDE DIAMETER + 3"-4".
11. TOE WALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.



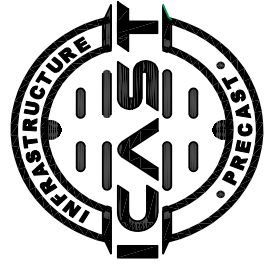
SECTION A-A

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 6:1

SIDE DRAIN DIA. (D)	CONCRETE ENDWALL DIMENSIONS				GRATE DISPLACEMENT DIMENSIONS				STRUCTURAL STEEL GRATE DIMENSIONS AND QUANTITY		STRUCT. STEEL		WEIGHT	
	H	W	L1	L2	L3	L4	L5	WG	NO.	REQ'D.	LBS.	LBS.	LBS.	LBS.
15"	2'-11"	2'-8"	11'-2"	11'-3"	2'-2"	1'-0"	2'-1"	2'-5"	2	172	4,737			
18"	3'-2"	2'-11"	12'-8"	12'-10"	10"	1'-0"	1'-0"	2'-8"	3	269	5,833			
24"	3'-9"	3'-6"	16'-2"	16'-4"	2'-2"	1'-0"	3'-2"	3'-3"	3	296	8,848			
30"	4'-5"	4'-1"	20'-2"	20'-5"	2'-2"	1'-0"	3'-3"	3'-10"	4	694	12,880			
36"	5'-0"	4'-8"	23'-8"	23'-11"	2'-2"	1'-0"	2'-9"	4'-5"	5	975	17,186			
42"	5'-6"	5'-3"	26'-8"	27'-0"	2'-2"	1'-0"	1'-10"	5'-0"	6	1,300	21,532			
48"	6'-1"	5'-10"	30'-2"	30'-7"	2'-2"	1'-0"	1'-5"	5'-7"	7	1,669	27,092			

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 12:1

PIPE CULV. DIA.	CONCRETE ENDWALL DIMENSIONS				STRUCTURAL STEEL GRATE DIMENSIONS AND QUANTITY				STRUCT. STEEL		STEEL BAR REINFORC.		WEIGHT	
	H	W	L1	L2	L3	L4	WG	NO.	REQ'D.	LBS.	LBS.	LBS.	LBS.	LBS.
18"	3'-14"	3'-1"	26'-0"	24'-1"	2'-1"	3'-0"	2'-10"	5	480	256	11,119			



INFRASTRUCTURE PRECAST, INC.
981 WEST 7TH ST., BEAVER DAM, KY. 42320
PHONE: (270) 363-2238, FAX: (270) 298-7424

TDOT TYPE "SAFETY" SIDE DRAIN ENDWALL WITH STEEL PIPE GRATES FOR 15" THROUGH 48" PIPES (6:1 & 12:1 SLOPES)

DRAWING NO.: ET-TDOT-200
DATE: 10-02-25
REVIEWED BY: J.H. ROSS, PE
DRAWN BY: N. RICHARDS
WEB: WWW.ICASTINC.COM
SCALE: NTS

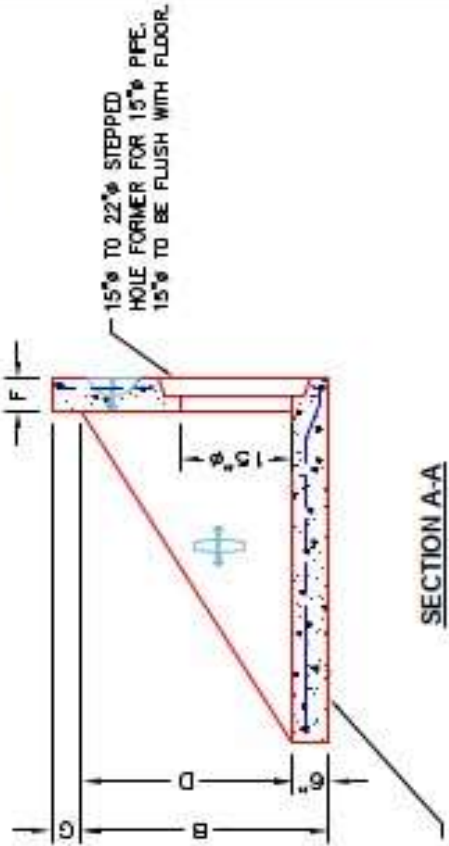
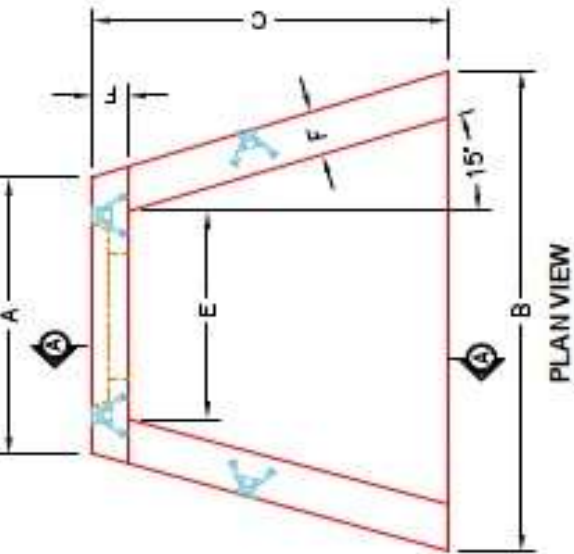


Structure ID: B1-9 HW

P1 HWA15F

15" - HW AW w/FLAT BOTTOM F/F

DIMENSIONS & QUANTITIES									
TYPE	PIPE Ø	A	B	C	D	E	F	G	WEIGHT
AW	15"	2'-8"	4'-0"	2'-6"	2'-2"	2'-0"	6"	0"	1,380 LBS.



NOTES:

1. CONCRETE: 4500 PSI AT 28 DAYS MIN. STRENGTH.
2. REINFORCING: #4 BAR @ 12" C/C E.W. - GRADE 60, (WITH 2" CONCRETE COVER MINIMUM)
3. REINFORCING BARS TO BE TACK WELDED OR TIED.

PRODUCTION WORK ORDER

	QUALITY CONTROL CHECKLIST
	☐ ALL DIMENSIONS CORRECT. ☐ LIFTERS INSTALLED. ☐ STEPPED IF CORRECT SIZE. ☐ REINFORCING CORRECT. ☐ CLEARANCE ON REINFORCING CORRECT. ☐ EDGES CHAMFERED. ☐ ALL PATCHWORK ACCEPTABLE.

DESCRIPTION: AW WINGED HEADWALL FOR 15" Ø PIPE
CUSTOMER: STOCK
PROJECT: STOCK
STRUCTURE ID: STOCK
SALES ORDER NO: T.B.D.
CHECK: A. WELLS
DRAWING: J. HORSLEY
DATE: 09/25/24
SCALE: NTS
PG. 1 of 1



Structure ID: C1-11 HW

P1 HWA8F

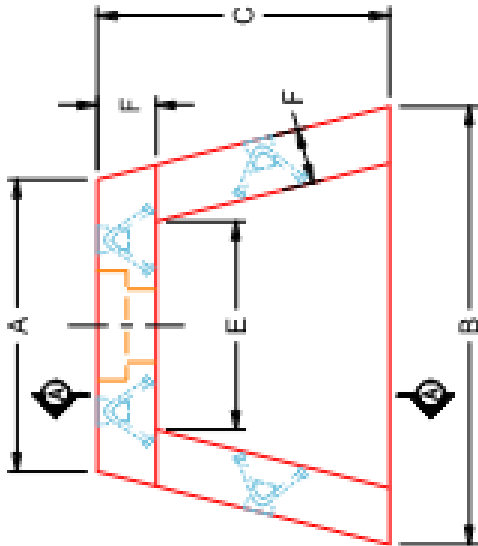
8" - HW AW w/FLAT BOTTOM F/F

DIMENSIONS & QUANTITIES

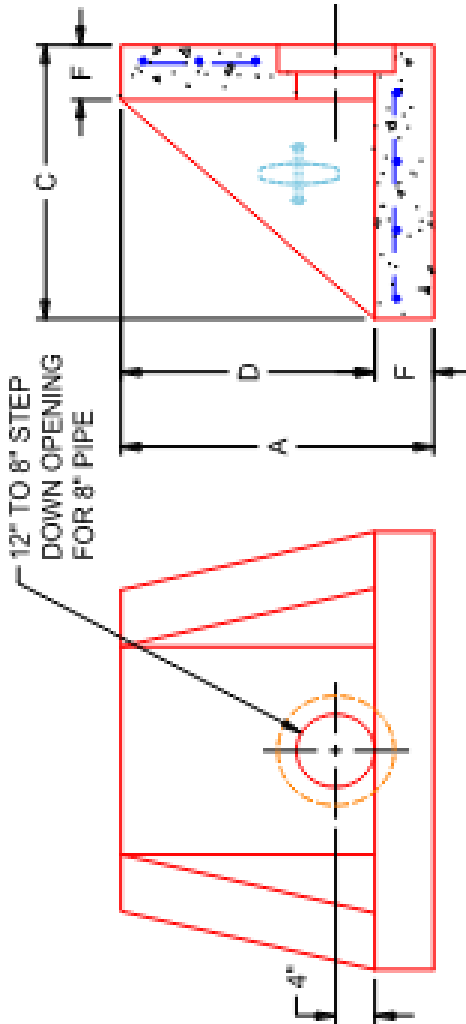
TYPE	PIPE Ø	A	B	C	D	E	F	OPENING SIZE	WEIGHT
AW	8"	2'-0"	4'-0"	2'-6"	2'-2"	2'-0"	6"	12" TO 8" STEP	1,380 LBS

NOTES:

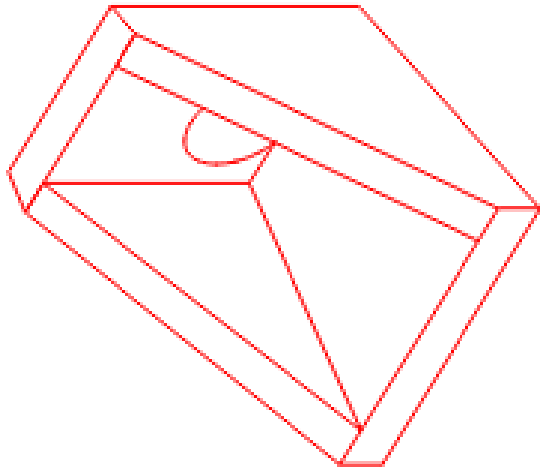
1. CONCRETE: 4500 PSI AT 28 DAYS MINIMUM COMPRESSIVE STRENGTH.
2. REINFORCING: #4 BAR @ 12" C/C E.W. - GRADE 60, (WITH 2" CONCRETE COVER MINIMUM)
3. REINFORCING BARS TO BE TACK WELDED OR TIED.
4. PIPE AND LIFTING ANCHOR POCKETS TO BE GROUTED WITH NON-SHRINK GROUT AFTER SETTING.



PLAN VIEW



FRONT ELEVATION



ISOMETRIC VIEW

SECTION A-A

REVISION INFORMATION

REV. DATE: NO REVISIONS TO DATE



SUBMITTAL DRAWING: 8" AW HW
CUSTOMER: HAYES PIPE SUPPLY
PROJECT: WELLS FARGO SMYRNA
STRUCTURE: C1-11 HW
QUOTE/SALES ORDER NO: 26-1185
PC: E. BRADLEY
DATE: 04/29/26
SCALE: NTS
PG. 1 of 1