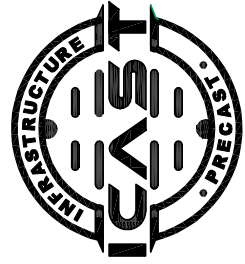




**Structure ID: HW 3 (4)**

**P1 HWTDOT3-1TU18**

**18" - HW TDOT 3:1 Type U Cross Drain Endwall F/F**



**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)

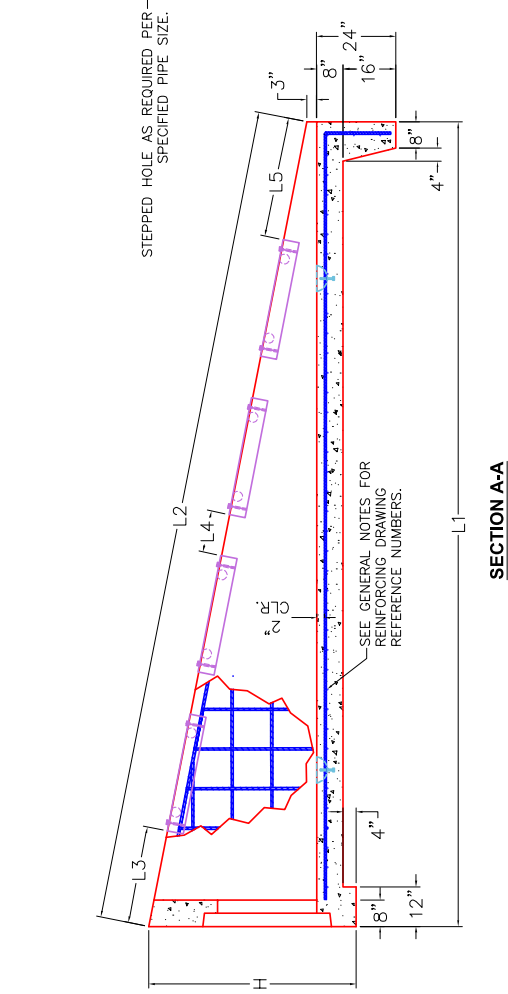
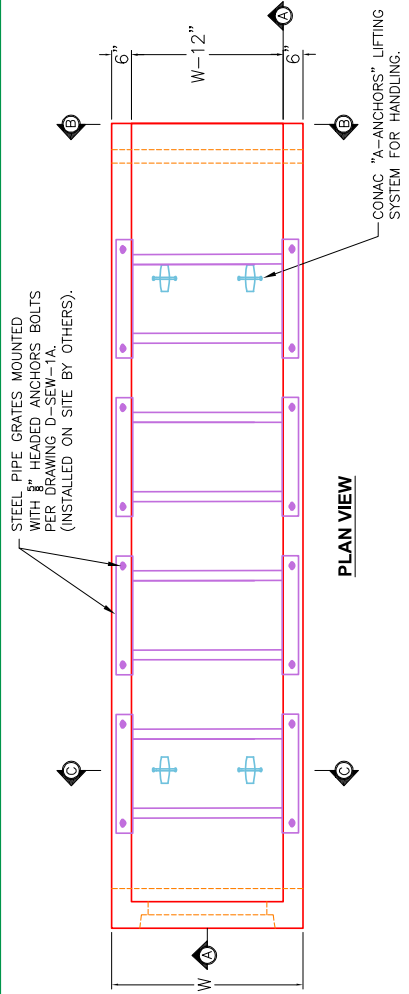
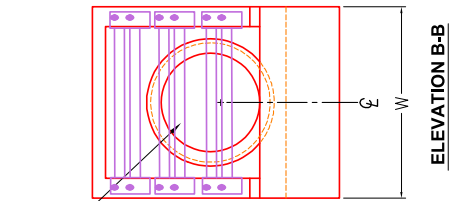
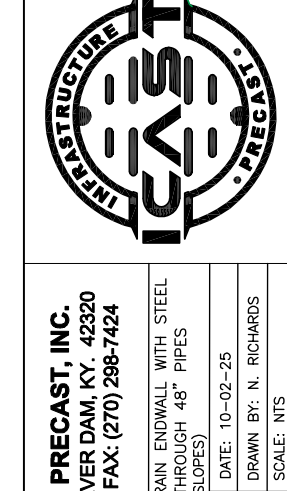
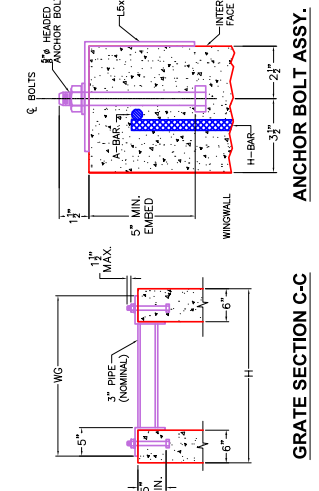
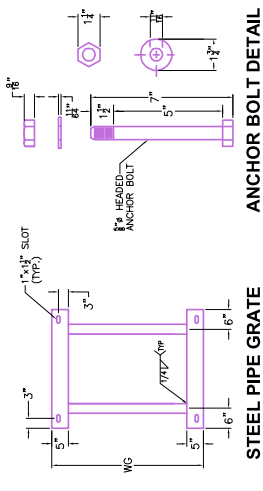
DRAWING NO.: ET-TDOT-200 DATE: 10-02-25

REVIEWED BY: J.H. ROSS, PE DRAWN BY: N. RICHARDS

WEB: WWW.ICASTING.COM SCALE: NTS

THIS DRAWING IS THE PROPERTY OF INFRASTRUCTURE PRECAST, INC. ANY USE OR DUPLICATION OF THIS DRAWING WITHOUT PRIOR AUTHORIZATION IS STRICTLY PROHIBITED.

- GENERAL NOTES**
- DRAWING TO BE USED FOR ALL 15" THROUGH 48" SIDE DRAIN CONCRETE ENDWALLS. MANUFACTURING, FOR CROSS DRAINS ONLY. CONCRETE:  $F_c = 4,500$  PSI @ 28 DAYS.
  - REINFORCING STEEL: ASTM A615,  $F_y = 60,000$  PSI. 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.
  - SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPlice LENGTH IS USED. APPROPRIATE SIZING AND LOCATIONS OF THE LIFTING INSERTS WILL BE THE RESPONSIBILITY OF INFRASTRUCTURE PRECAST, INC.
  - LIFTING INSERTS SHALL BE BROUGHT OUT TO THE TOP OF THE CONCRETE. THE ENDWALL IS SET AS PER TDOT REQUIREMENT.
  - DIMENSIONS AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5.3.
  - 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". TOE WALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15'.



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.	WG	NO. REQ'D.	LBS.	LBS.
15"	2'-11"	2'-8"	11'-2"	11'-3 1/2"	2'-2"	1'-0"	2'-1 1/2"	2'-5"	2	172	4,737	2	172	4,737
18"	3'-2"	2'-11"	12'-8"	12'-10 1/2"	10 1/2"	1'-0"	1'-0"	2'-8"	3	269	5,833	3	269	5,833
24"	3'-9"	3'-6"	16'-2"	16'-4 1/2"	2'-2"	1'-0"	3'-2 1/2"	3'-3"	3	296	8,848	3	296	8,848
30"	4'-5"	4'-1"	20'-2"	20'-5 1/2"	2'-2"	1'-0"	3'-3 1/2"	3'-10"	4	694	12,880	4	694	12,880
36"	5'-0"	4'-8"	23'-8"	23'-11 1/2"	2'-2"	1'-0"	2'-9 1/2"	4'-5"	5	975	17,186	5	975	17,186
42"	5'-6"	5'-3"	26'-8"	27'-0 1/2"	2'-2"	1'-0"	1'-10 1/2"	5'-0"	6	1,300	21,532	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	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 WEIGHT		
	H	W	L1	L2	L3	L4	WG	NO. REQ'D.	LBS.	WG	NO. REQ'D.	LBS.	LBS.
18"	3'-1 1/4"	3'-1"	26'-0"	24'-1"	2'-1"	3'-0"	2'-10"	5	480	256	5	480	11,119

SEE GENERAL NOTES FOR REINFORCING DRAWING REFERENCE NUMBERS.

STEPPED HOLE AS REQUIRED PER SPECIFIED PIPE SIZE.

CONAC "A-ANCHORS" LIFTING SYSTEM FOR HANDLING.

SEE GENERAL NOTES FOR REINFORCING DRAWING REFERENCE NUMBERS.