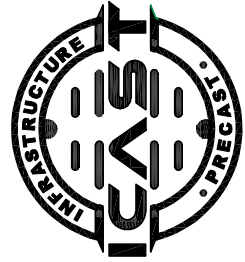




Structure ID: HW 10 (8)

P1 HWTDOT3-1TU24

24" - 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

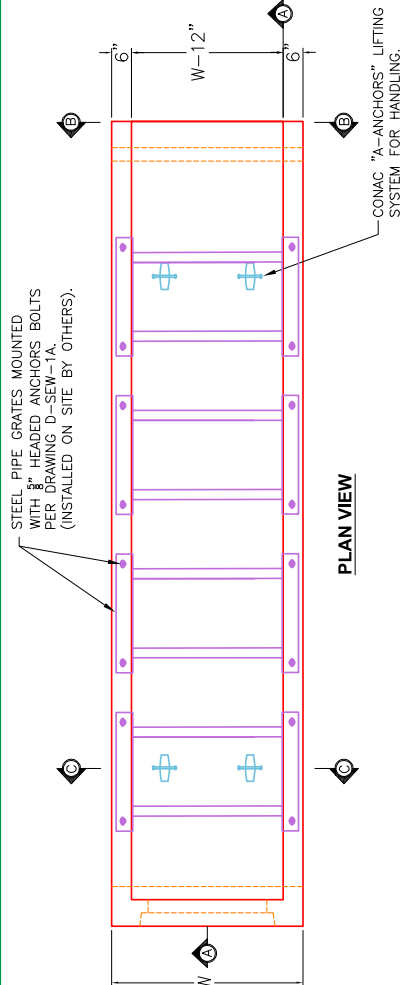
REVIEWED BY: J.H. ROSS, PE DRAWN BY: N. RICHARDS

WEB: WWW.ICASTING.COM SCALE: NTS

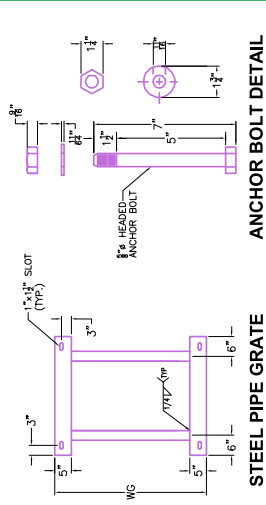
THIS DRAWING IS THE PROPERTY OF INFRASTRUCTURE PRECAST, INC. ANY USE OR DUPLICATION OF THIS DRAWING WITHOUT PRIOR AUTHORIZATION IS STRICTLY PROHIBITED.

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 CONTRACTOR TO BE BROUGHT OUT PER TO THE REQUIREMENT BEING SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5.3.
- DIMENSIONAL 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'.

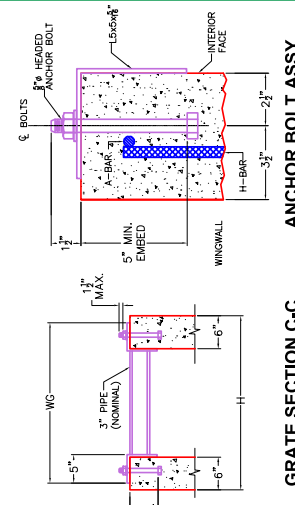


PLAN VIEW



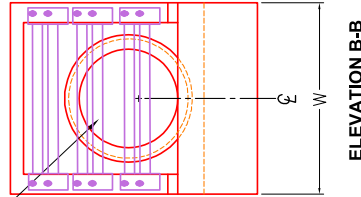
STEEL PIPE GRATE

ANCHOR BOLT DETAIL

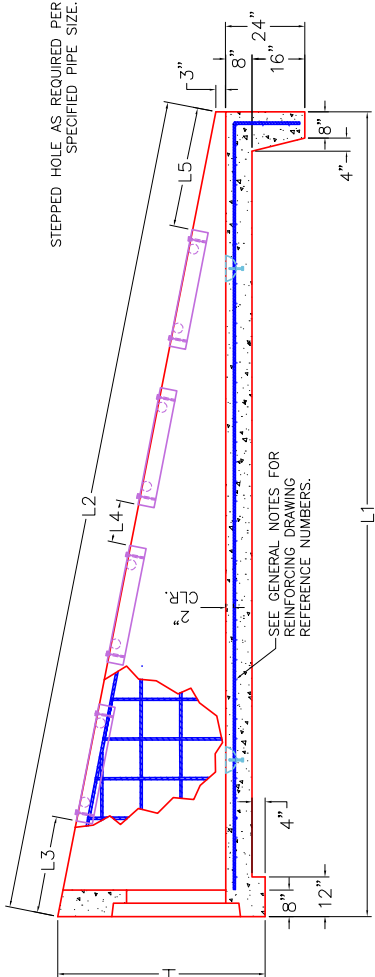


GRATE SECTION C-C

ANCHOR BOLT ASSY.



ELEVATION B-B



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 LBS. |
|---------------------|-----------------------------|--------|--------|-------------|---------|-------------------------------|------------|--------|--------|------------|--|--------|---------------|--|-------------|
| | H | W | L1 | L2 | L3 | L4 | L5 | L6 | WG | NO. REQ'D. | LBS. | LBS. | LBS. | | |
| 15" | 2'-11" | 2'-8" | 11'-2" | 11'-3 3/8" | 2'-2" | 1'-0" | 2'-1 1/8" | 2'-5" | 2'-5" | 2 | 172 | 4,737 | | | |
| 18" | 3'-2" | 2'-11" | 12'-8" | 12'-10 1/8" | 10 1/8" | 1'-0" | 1'-0" | 2'-8" | 2'-8" | 3 | 269 | 5,833 | | | |
| 24" | 3'-9" | 3'-6" | 16'-2" | 16'-4 1/8" | 2'-2" | 1'-0" | 3'-2 1/8" | 3'-3" | 3'-3" | 3 | 296 | 8,848 | | | |
| 30" | 4'-5" | 4'-1" | 20'-2" | 20'-5 3/8" | 2'-2" | 1'-0" | 3'-3 3/8" | 3'-10" | 3'-10" | 4 | 694 | 12,880 | | | |
| 36" | 5'-0" | 4'-8" | 23'-8" | 23'-11 1/8" | 2'-2" | 1'-0" | 2'-9 1/8" | 4'-5" | 4'-5" | 5 | 975 | 17,186 | | | |
| 42" | 5'-6" | 5'-3" | 26'-8" | 27'-0 3/8" | 2'-2" | 1'-0" | 1'-10 3/8" | 5'-0" | 5'-0" | 6 | 1,300 | 21,532 | | | |
| 48" | 6'-1" | 5'-10" | 30'-2" | 30'-7" | 2'-2" | 1'-0" | 1'-5" | 5'-7" | 5'-7" | 7 | 1,669 | 27,092 | | | |

DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 12:1

| PIPE DIA. | CONCRETE ENDWALL DIMENSIONS | | | | | STRUCTURAL STEEL GRATE DIMENSIONS AND QUANTITY | | STRUCT. STEEL | | STEEL BAR WEIGHT | |
|-----------|-----------------------------|-------|--------|--------|-------|--|------------|---------------|------|------------------|------|
| | H | W | L1 | L2 | L3 | WG | NO. REQ'D. | LBS. | LBS. | LBS. | LBS. |
| 18" | 3'-1 1/4" | 3'-1" | 26'-0" | 24'-1" | 2'-1" | 3'-0" | 5 | 480 | 256 | 11,119 | |