Job Name: 26-1511 - Ragsdale Road End Walls
Job Location: Brentwood, TN 37027
Contractor: Cleary Construction, Inc.

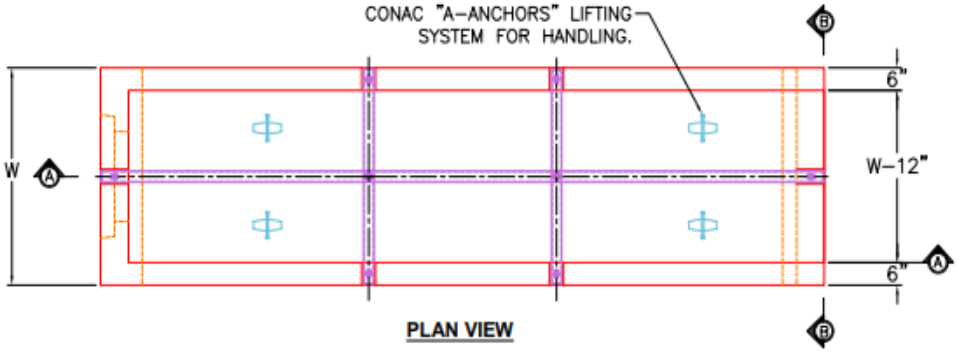
Plant: 100
3/11/2026 7:46:37 PM

Tech: Jared - F
PC: T. Lewis

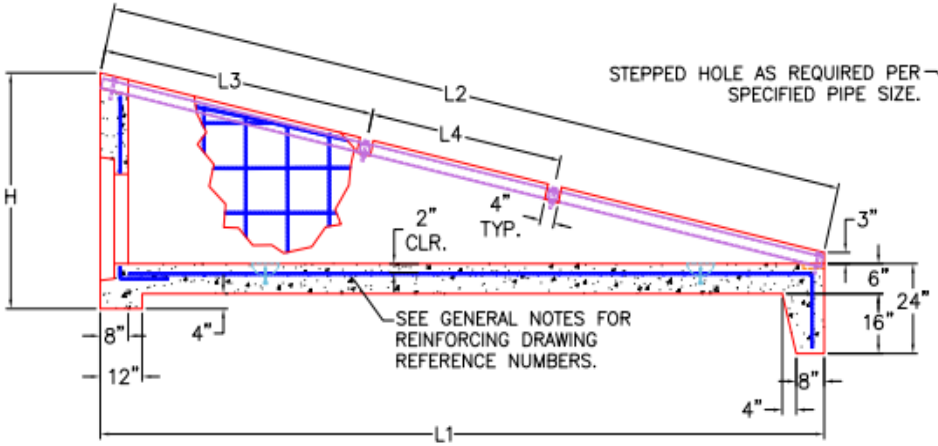
**Structure ID: 131-4 HW**

**P1 HWTDOT3-1TU36**

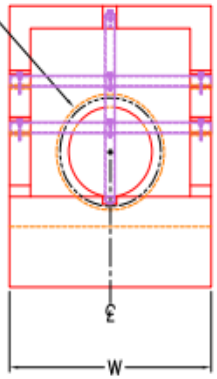
**36" - HW TDOT 3:1 Type U Cross Drain Endwall F/F**




**PLAN VIEW**



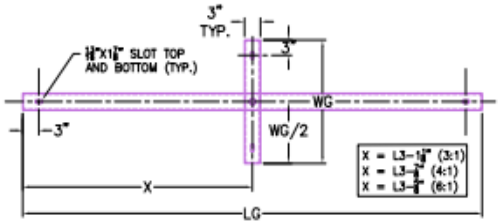

**SECTION A-A**



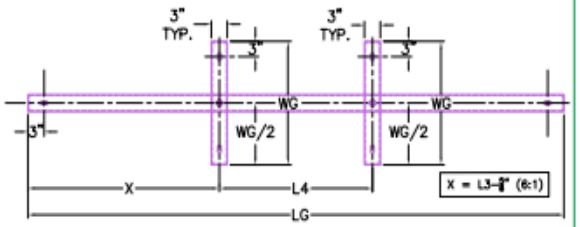

**ELEVATION B-B**

## GENERAL NOTES

1. DRAWING TO BE USED FOR ALL 12" THROUGH 48" SIDE DRAIN CONCRETE ENDWALLS. MANUFACTURING, FOR CROSS DRAINS ONLY.
2. CONCRETE: Fc' = 4,500 PSI @ 28 DAYS.
3. REINFORCING STEEL: ASTM A615, Fy=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.
4. SPLICING OF REINFORMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21" SPLICE LENGTH IS USED.
5. APPROPRIATE SIZING AND LOCATIONS OF THE LIFTING INSERTS WILL BE THE RESPONSIBILITY OF INFRASTRUCTURE PRECAST, INC.
6. LIFTING INSERT POCKETS SHALL BE GROUTED ON SITE BY THE CONTRACTOR AFTER THE ENDWALL IS SET AS PER TDOT REQUIREMENTS.
7. DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.
8. 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".
9. TOE WALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.




-30"ø & 36"ø PIPE (3:1, 4:1 & 6:1 SLOPES)
-42"ø & 48" PIPE (3:1 & 4:1 SLOPES)




-42"ø & 48" PIPE (6:1 SLOPE)

**STEEL PIPE GRATE PLAN VIEWS**
(SEE D-PE-99 FOR MOUNTING STEEL GRATES)
(PROVIDED BY OTHERS)

**DIMENSIONS & QUANTITIES FOR ONE ENDWALL 3:1**

| PIPE DIA. (D) | CONCRETE ENDWALL DIMENSIONS | | | | GRATE DISPLACEMENT DIMENSIONS | | STRUCT. STEEL | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| | H | W | L1 | L2 | L3 | L4 | LBS. | LBS. |
| 15" | 2'-11" | 2'-8" | 6'-0" | 6'-3⅞" | N/A | N/A | N/A | 2,819 |
| 18" | 3'-2" | 2'-11" | 6'-8" | 7'-0⅞" | N/A | N/A | N/A | 3,406 |
| 24" | 3'-9" | 3'-6" | 8'-5" | 8'-10⅞" | N/A | N/A | N/A | 5,011 |
| 30" | 4'-5" | 4'-1" | 10'-5" | 10'-11⅞" | 5'-2" | N/A | 114 | 7,204 |
| 36" | 5'-0" | 4'-8" | 12'-2" | 12'-9⅞" | 6'-4⅞" | N/A | 132 | 9,513 |
| 42" | 5'-6" | 5'-3" | 13'-8" | 14'-4⅞" | 7'-4⅞" | N/A | 148 | 11,862 |
| 48" | 6'-1" | 5'-10" | 15'-5" | 16'-3" | 7'-4⅞" | N/A | 167 | 14,838 |

**DIMENSIONS & QUANTITIES FOR ONE ENDWALL 4:1**

| PIPE DIA. (D) | CONCRETE ENDWALL DIMENSIONS | | | | GRATE DISPLACEMENT DIMENSIONS | | STRUCT. STEEL | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| | H | W | L1 | L2 | L3 | L4 | LBS. | LBS. |
| 15" | 2'-11" | 2'-8" | 8'-0" | 8'-3" | N/A | N/A | N/A | 3,484 |
| 18" | 3'-2" | 2'-11" | 8'-8" | 8'-11½" | N/A | N/A | N/A | 4,228 |
| 24" | 3'-9" | 3'-6" | 11'-0" | 11'-4" | N/A | N/A | N/A | 6,303 |
| 30" | 4'-5" | 4'-1" | 13'-8" | 14'-1" | 6'-1" | N/A | 137 | 9,083 |
| 36" | 5'-0" | 4'-8" | 16'-0" | 16'-5⅞" | 8'-2⅞" | N/A | 160 | 12,058 |
| 42" | 5'-6" | 5'-3" | 18'-0" | 18'-6⅞" | 9'-2⅞" | N/A | 180 | 15,073 |
| 48" | 6'-1" | 5'-10" | 20'-4" | 20'-11½" | 10'-3½" | N/A | 203 | 18,910 |

**DIMENSIONS & QUANTITIES FOR ONE ENDWALL 6:1**

| PIPE DIA. (D) | CONCRETE ENDWALL DIMENSIONS | | | | GRATE DISPLACEMENT DIMENSIONS | | STRUCT. STEEL | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| | H | W | L1 | L2 | L3 | L4 | LBS. | LBS. |
| 15" | 2'-11" | 2'-8" | 11'-2" | 11'-3⅞" | N/A | N/A | N/A | 4,737 |
| 18" | 3'-2" | 2'-11" | 12'-8" | 12'-10⅞" | N/A | N/A | N/A | 5,833 |
| 24" | 3'-9" | 3'-6" | 16'-2" | 16'-4⅞" | N/A | N/A | N/A | 8,848 |
| 30" | 4'-5" | 4'-1" | 20'-2" | 20'-5⅞" | 10'-1" | N/A | 186 | 12,880 |
| 36" | 5'-0" | 4'-8" | 23'-8" | 23'-11⅞" | 12'-0⅞" | N/A | 217 | 17,186 |
| 42" | 5'-6" | 5'-3" | 26'-8" | 27'-0⅞" | 9'-1" | 9'-1" | 284 | 21,532 |
| 48" | 6'-1" | 5'-10" | 30'-2" | 30'-7" | 10'-0⅞" | 10'-0⅞" | 320 | 27,092 |

**STEEL PIPE GRATE DIMENSIONS**

| PIPE DIA. | ALL SLOPES | 3:1 | 4:1 | 6:1 |
|---|---|---|---|---|
| | WG | LG | LG | LG |
| 30" | 4'-1" | 10'-10⅞" | 14'-0⅞" | 20'-4⅞" |
| 36" | 4'-8" | 12'-8⅞" | 16'-5" | 23'-11⅞" |
| 42" | 5'-3" | 14'-3⅞" | 18'-5⅞" | 26'-11⅞" |
| 48" | 5'-10" | 16'-1⅞" | 20'-10⅞" | 30'-6⅞" |


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


TDOT TYPE "U" CROSS DRAIN ENDWALL WITH STEEL PIPE GRATE FOR 15" THROUGH 48" PIPES

| | |
|---|---|
| DRAWING NO.: ET-TDOT-202 | DATE: 11-24-25 |
| REVIEWED BY: J.H. ROSS, PE | DRAWN BY: N. RICHARDS |
| WEB: WWW.ICASTINC.COM | SCALE: NTS |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