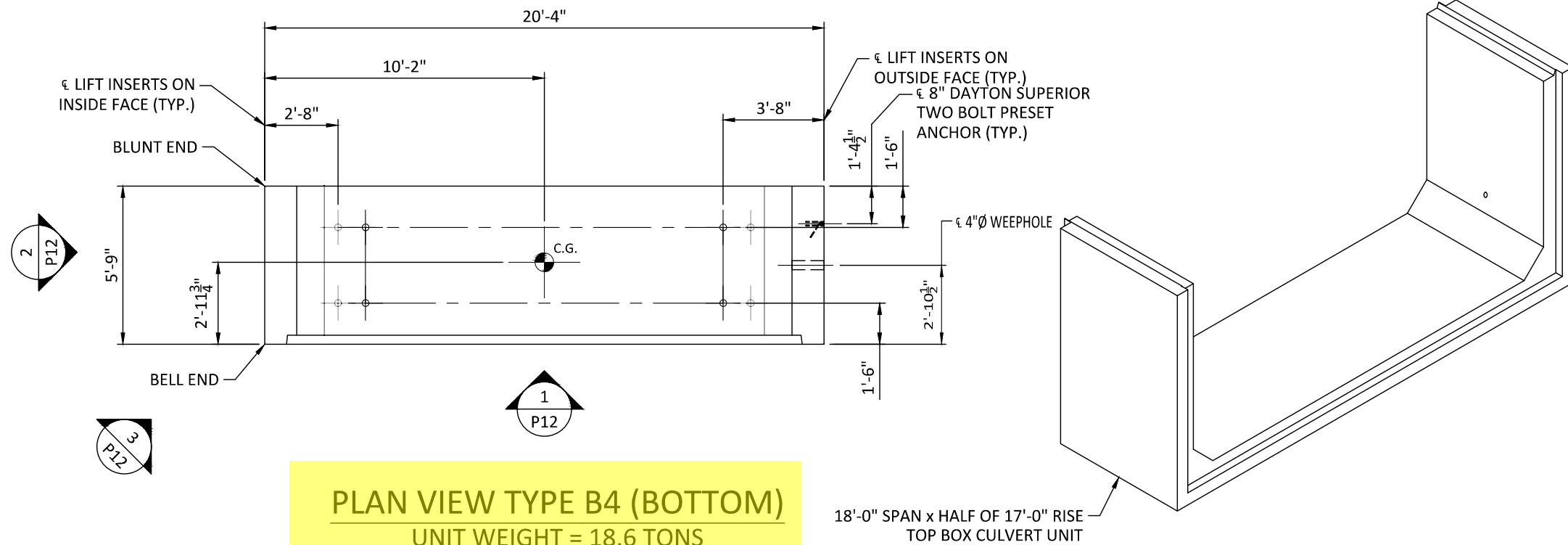


**25-3437 - TDOT Jackson CO CNZ250
SR 53 CULVERT REPLACEMENT
B4 - 1 TOTAL REQUIRED**

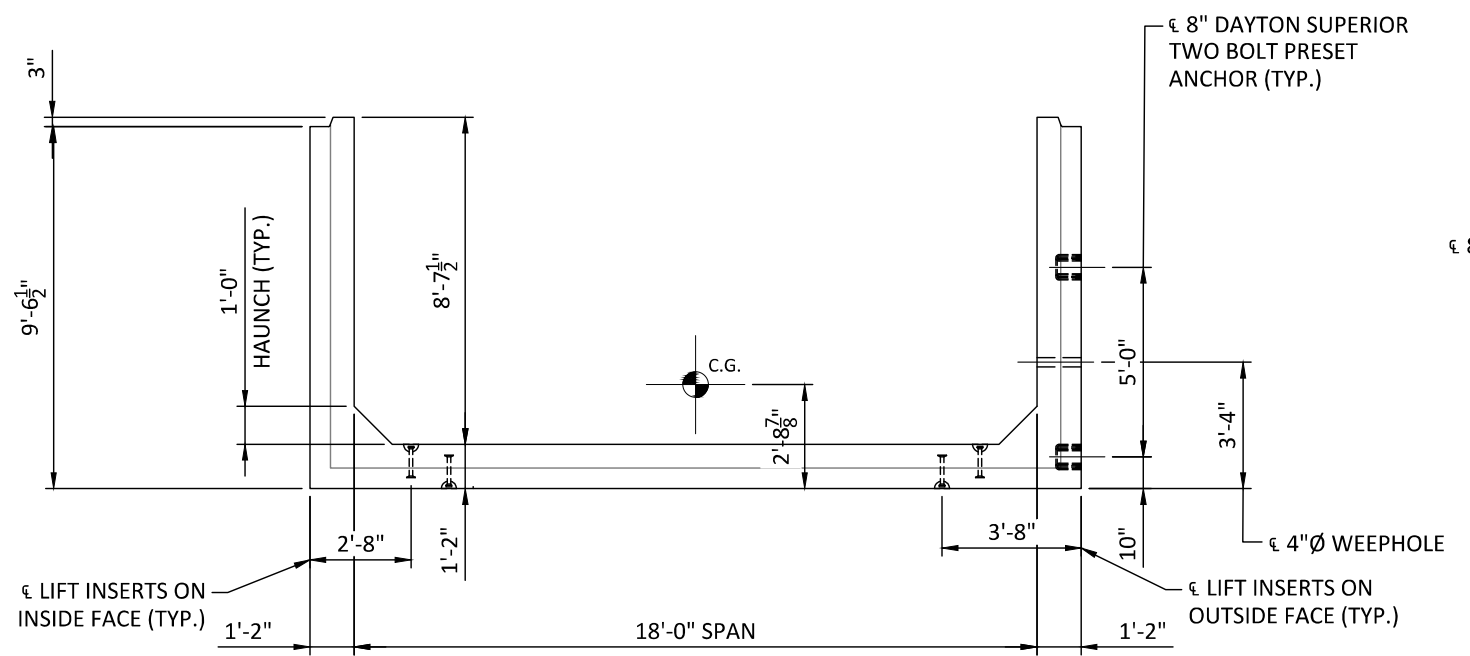


PLAN VIEW TYPE B4 (BOTTOM)
UNIT WEIGHT = 18.6 TONS
1 (B4) UNIT(S) NEEDED

18'-0" SPAN x HALF OF 17'-0" RISE
TOP BOX CULVERT UNIT

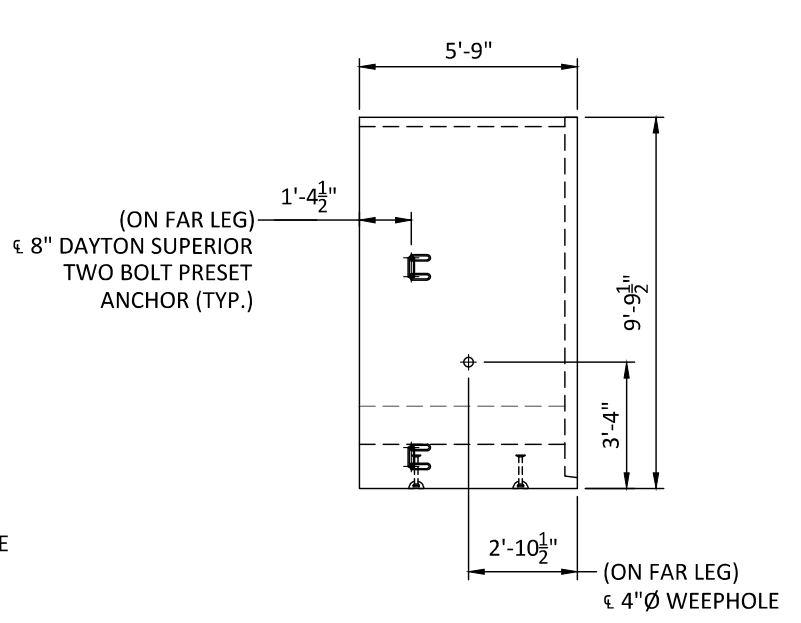
ISOMETRIC
NOT TO SCALE

3
P12



ELEVATION
END VIEW

1
P12



ELEVATION
SIDE VIEW

2
P12

DESIGN NOTES

1. F'c = 5,000 PSI.
2. SEE SHEET P4 FOR UNIT STEEL REINFORCING
3. ANY REINFORCING CUT AROUND OPENINGS OR INSERTS MUST BE REPLACED WITH EQUIVALENT
4. UNIT MAY NOT HANG LEVEL, ADJUST LIFTING CABLES AS NECESSARY

APPROVED
1/15/2026

John A. Krings
ENGR. DIRECTOR, STRUCTURES



01/14/2026

FOR APPROVAL

DATE	DESCRIPTION	ENG	STATE PROJECT # 445053-M3-005	PIN NO. 136243.00	BRIDGE ID # 445R0530017
7					
6					
5					
4					
3					
2					
1	1/14/26	JJC	NO CHANGES THIS SHEET	LOCALE: JACKSON COUNTY	STATE: TN

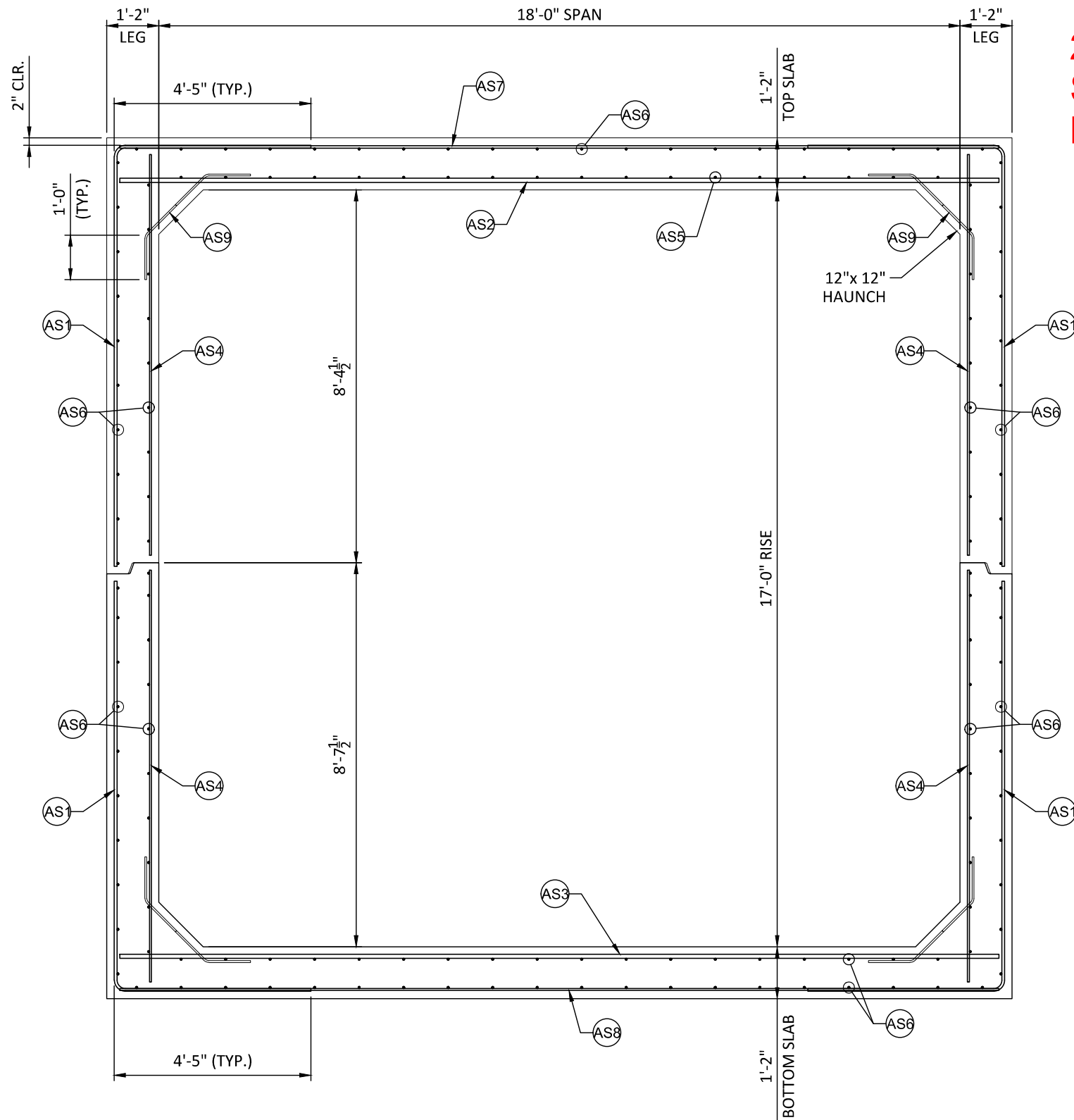
SR 53 CULVERT REPLACEMENT

PROVIDED BY:
ICAST
981 W 7TH STREET
BEAVER DAM, KY 42320
270.363.2238

DESIGNED BY:
PRETEK GROUP
P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

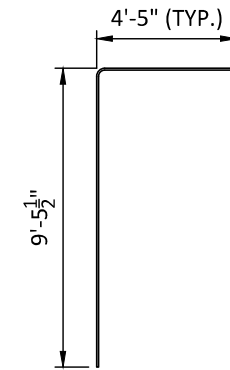
PROJECT NUMBER: 25-429
DATE: 12/17/2025
DESIGNED BY: KDK
DRAWN BY: SP
CHECKED BY: TEN

P12

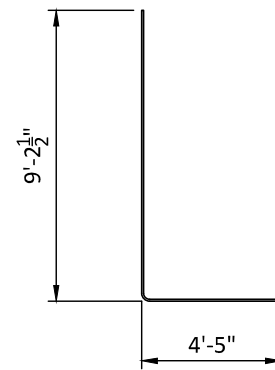


**SPLIT PRECAST (TYPE 2) CULVERT
TYPICAL REINFORCING SECTION**

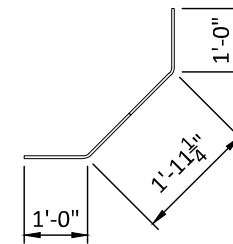
**25-3437 - TDOT Jackson CO CNZ250
SR 53 CULVERT REPLACEMENT
B4 - 1 TOTAL REQUIRED**



AS1 (TOP)



AS1 (BOTTOM)



AS9

DESIGN DATA:

1. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 5,000 PSI MINIMUM AT 28 DAYS. F'C = 3,500 PSI (MIN STRIPPING STRENGTH).
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615 OR A706 AND HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI.
3. DESIGN LOAD: HL-93
4. ROADWAY SKEW ANGLE: ≈15°
5. 2" REINFORCING CLR. ON ALL SURFACES.
6. DEPTH OF EARTH COVER = 2'-0" MIN. TO 11'-0" MAX.
7. CULVERT TO BE MANUFACTURED IN ACCORDANCE WITH ASTM C1786.

SECTION CHARACTERISTICS:

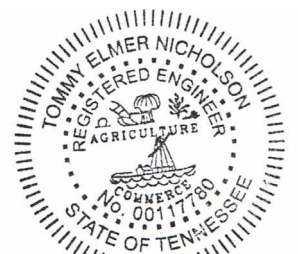
SPAN: 18'-0"
RISE: 17'-0"
WT: 14"
TS: 14" (TOP SLAB)
BS: 14" (BOTTOM SLAB)
HAUNCH: 12"

AREA OF STEEL REQUIRED (IN²/FT):

As1 = 1.32 (#6 @ 4" O.C.)
As2 = 3.00 (#9 @ 4" O.C.)
As3 = 3.43 (#9 @ 3 1/2" O.C.)
As4 = 0.34 (#4 @ 7" O.C.)
As5 = 0.20 (#4 @ 12" O.C.)
As6 = 0.20 (#4 @ 12" O.C.)
As7 = 0.62 (#5 @ 6" O.C.)
As8 = 0.34 (#4 @ 7" O.C.)
As9 = 0.34 (#4 @ 7" O.C.)

**APPROVED
1/15/2026**

Del A. Krumpal
ENGR. DIRECTOR, STRUCTURES



T. Elmer Nicholson
01/14/2026

FOR APPROVAL

DATE	DESCRIPTION	ENG	STATE PROJECT # 445053-M3-005	PIN NO. 136243.00	BRIDGE ID # 445R0530017
7					
6					
5					
4					
3					
2					
1	1/14/26 NO CHANGES THIS SHEET	JJC	LOCALE: JACKSON COUNTY		STATE: TN

SR 53 CULVERT REPLACEMENT

PROVIDED BY:



981 W 7TH STREET
BEAVER DAM, KY 42320
270.363.2238

DESIGNED BY:



P.O. BOX 351
BELLBROOK, OH 45305
800.241.0925

PROJECT NUMBER: 25-429

DATE: 12/17/2025

DESIGNED BY: KDK

DRAWN BY: SP

CHECKED BY: TEN

P4