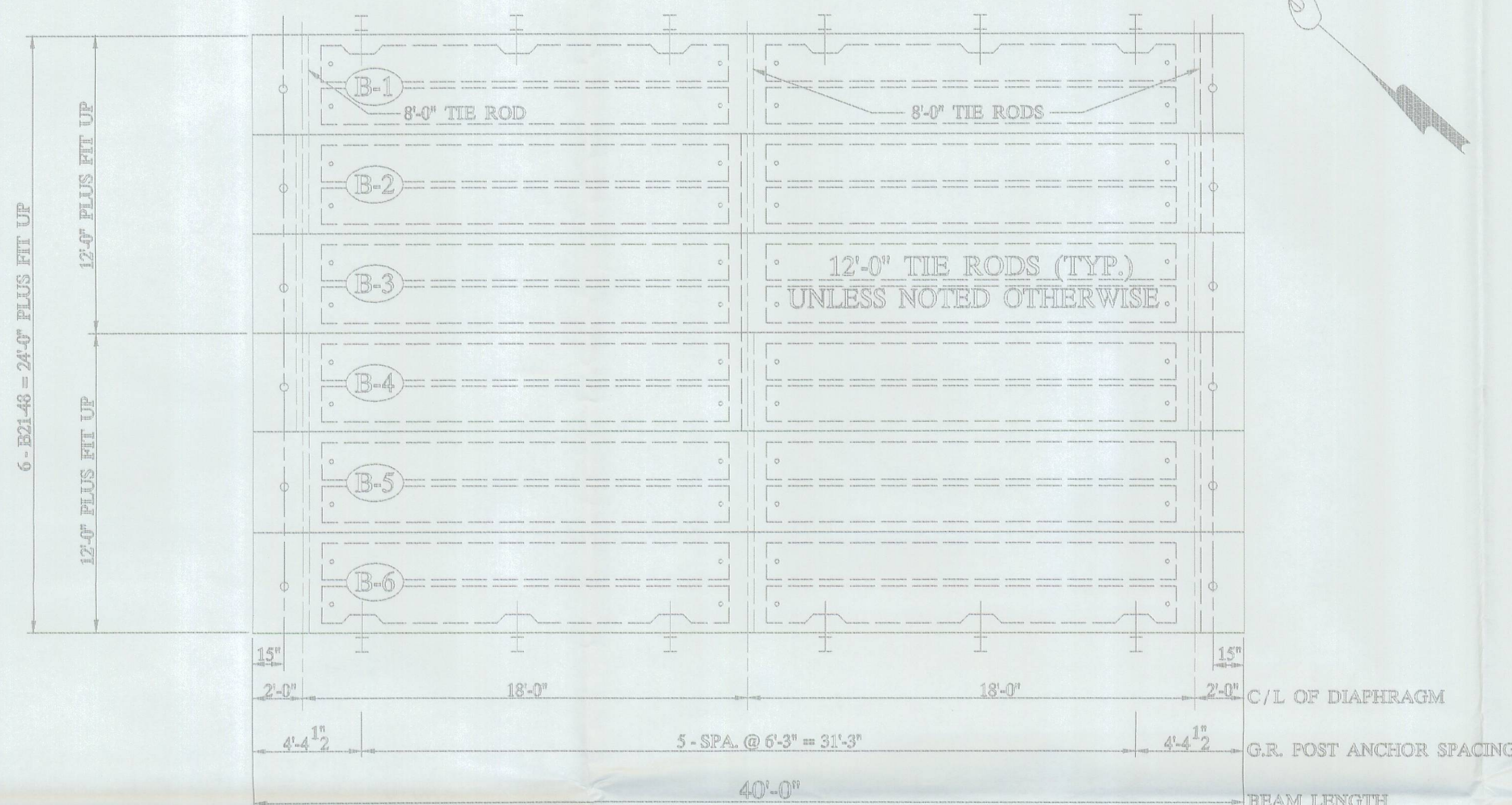
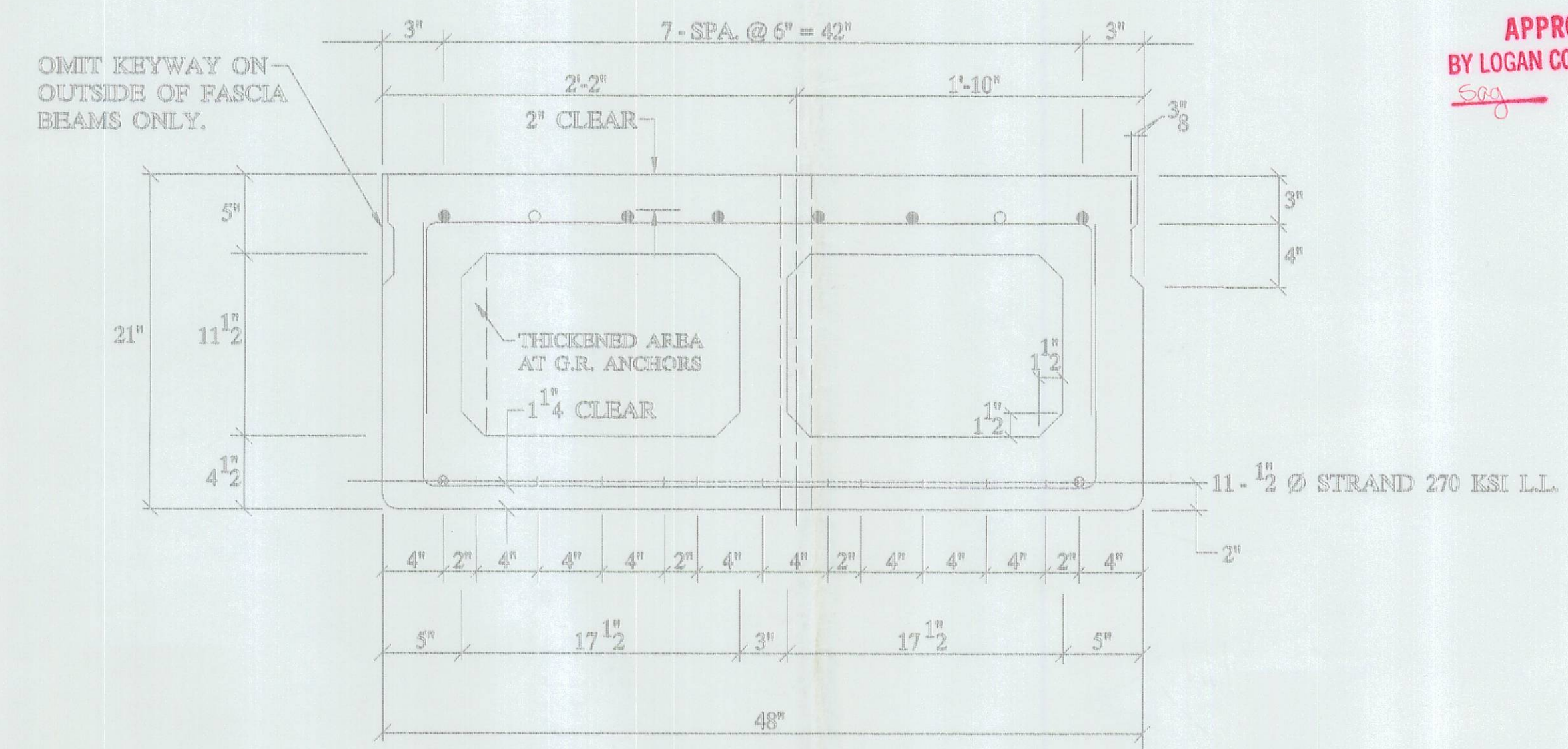


APPROVED
BY LOGAN CO. ENGINEER
Sag *Valer*



DECK PLAN



B21-48

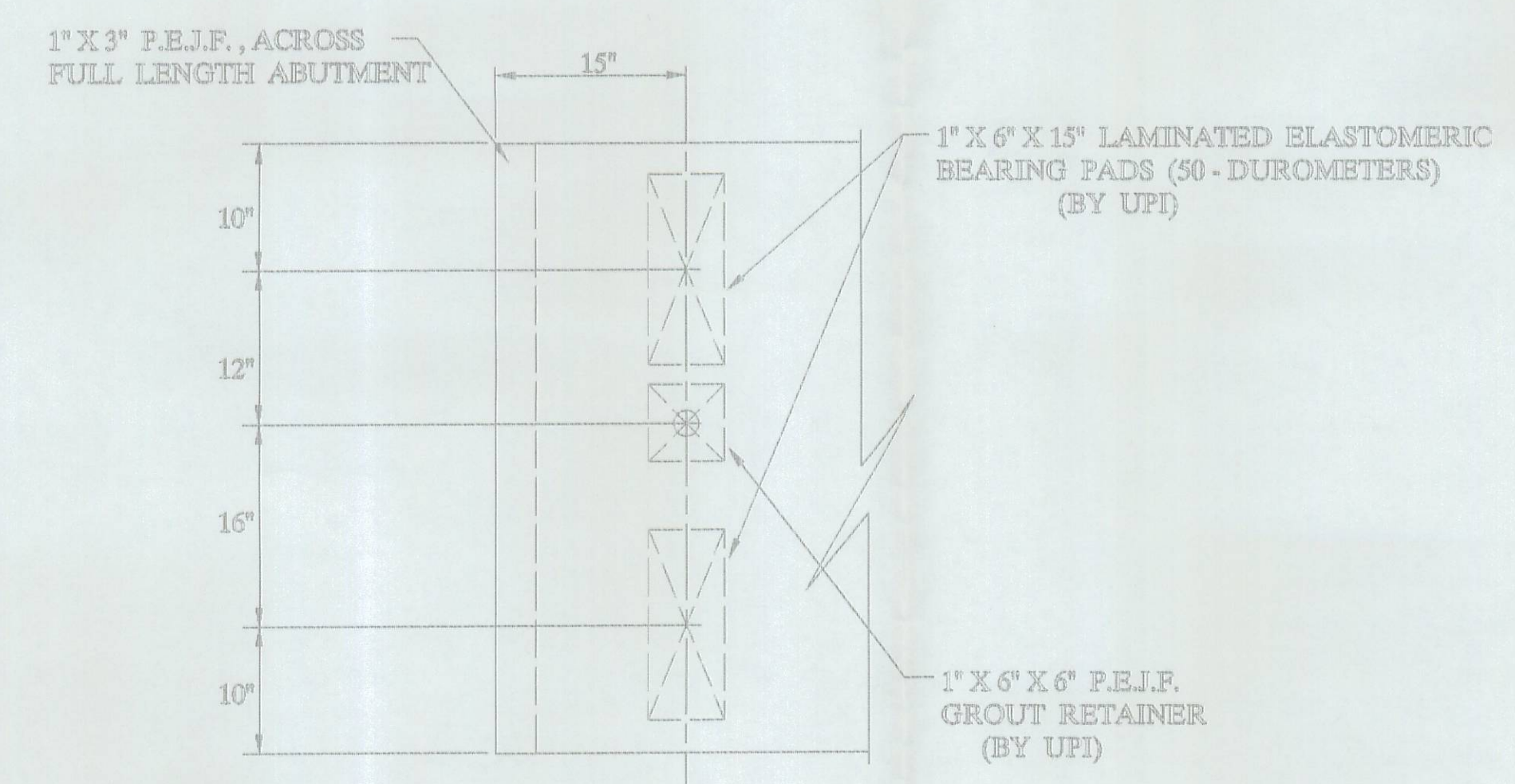
- 6 - #4 BARS FULL LENGTH RUN (TOP) MKB401 MKB402 (BUTT SPLICE BAR)
- 2 - #4 ADDITIONAL BARS 7'-0" LONG AT EACH END OF BEAM (TOP) MKB403.
- ⊗ 2 - #5 BARS FULL LENGTH RUN (BOTTOM) MKB501 MKB502 (BUTT SPLICE BAR)

QUALITY CONTROL NOTE :

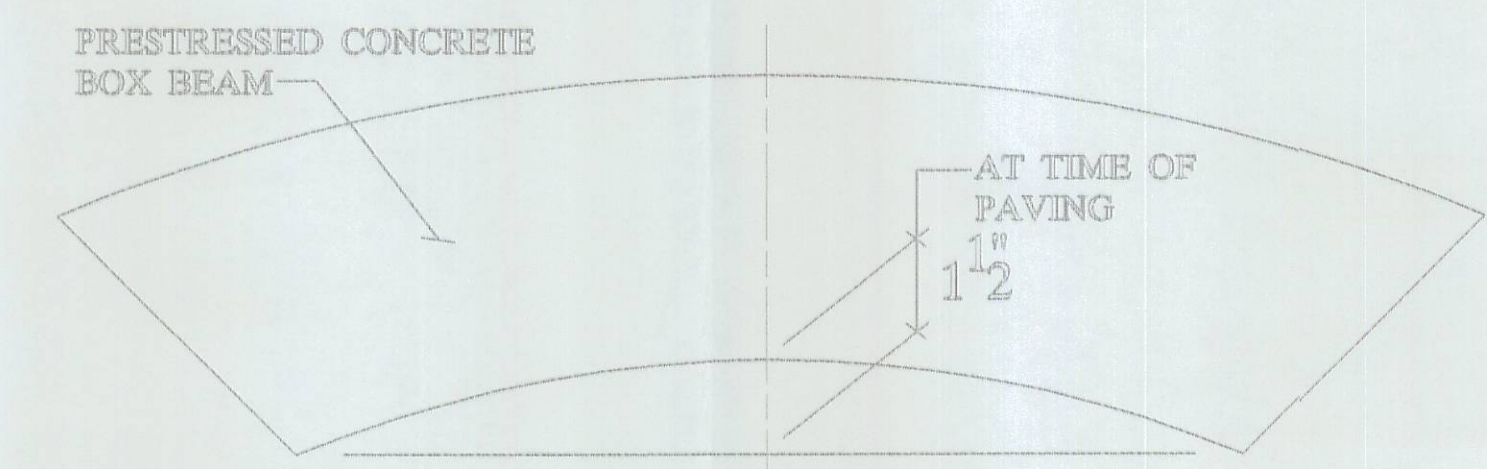
- STRAND IS LOW LAX.
- INITIAL LOAD IS 30,982 # / STRAND.
- REBAR IS ALL GRADE - 60.
- STIRRUPS UNDER STRAND.

BILL OF MATERIALS

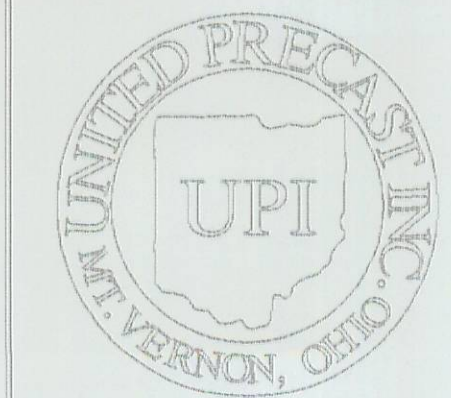
NO	ITEM	QTY / BRAM	NOTES	TOTAL
1	BEAM WEIGHT		29,100 #	
2	CONCRETE	7 CY.		42 CY.
3	CALCIUM NITRITE	23 GAL.		168 GAL.
4	STRAND		1 1/2" (D.C.I.) 4 - GAL / CY.	3,600 L.F.
5	RE - STEEL		GRADE - 60	4,171 #
6	VOID		11-1/2 X 17-1/2	396 L.F.
7	VOID DRAINS		3" 4 Ø NON FERROUS	48 EA.
8	TIE RODS	12'-0" 8'-0"	1" Ø STEEL ROD	6 EA. 3 EA.
9	TIE ROD SLEEVES			96 L.F.
10	TYPE - B - ANCHORS			24 EA.
11	TYPE - C - ANCHORS			12 EA.
12	DOWELS & SLEEVES			12 EA.
13	INTERTUF - 132			0.5 GAL
14	SILANE			2 GAL
15	JUTE			200 L.F.
16	BEARING PADS		1" X 6" X 15" LAMINATED	24 EA.
17	GUARDRAIL POSTS		TYPE - 2 (W6 X 25 X)	12 EA.
18	GUARDRAIL POSTS (OFF DECK)		TYPE - 2 (W6 X 25 X 6'-0")	6 EA.
19	GUARDRAIL ELEMENT			100 L.F.
20	TUBULAR BACK - UP			100 L.F.
21	P.B.L.R.		1" X 3" X 48 L.F.	12 S.F.
22	NON-SHRINK GROUT ADDITIVE			



BEARING PAD LAYOUT

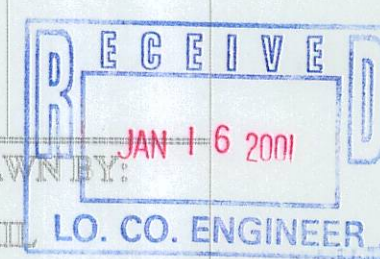


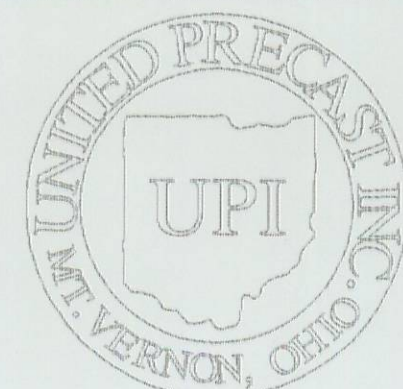
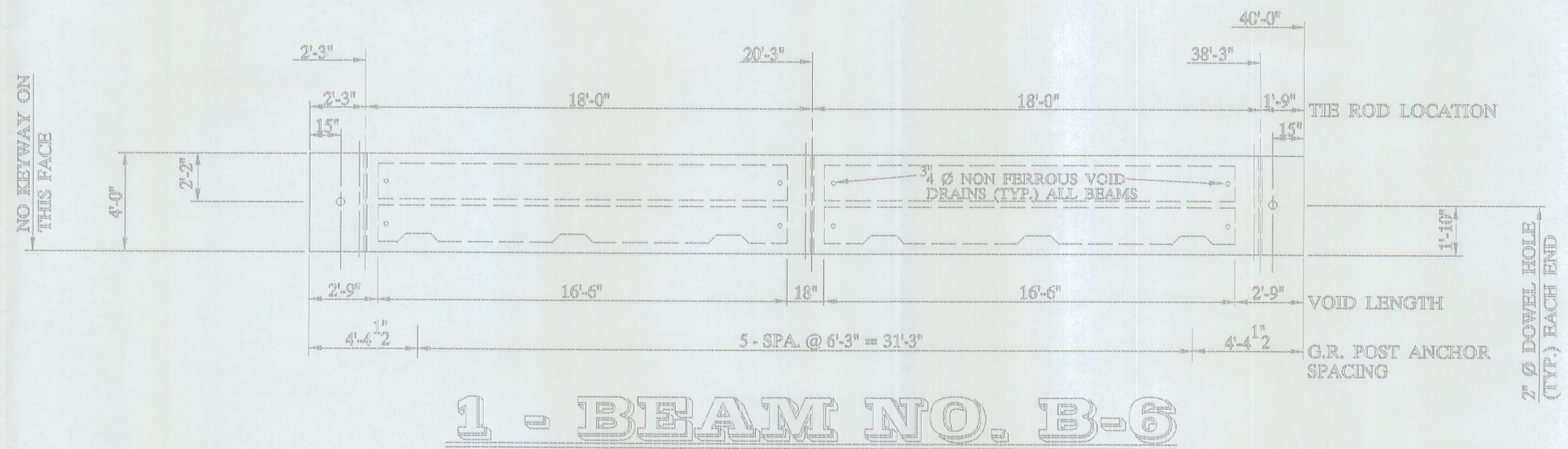
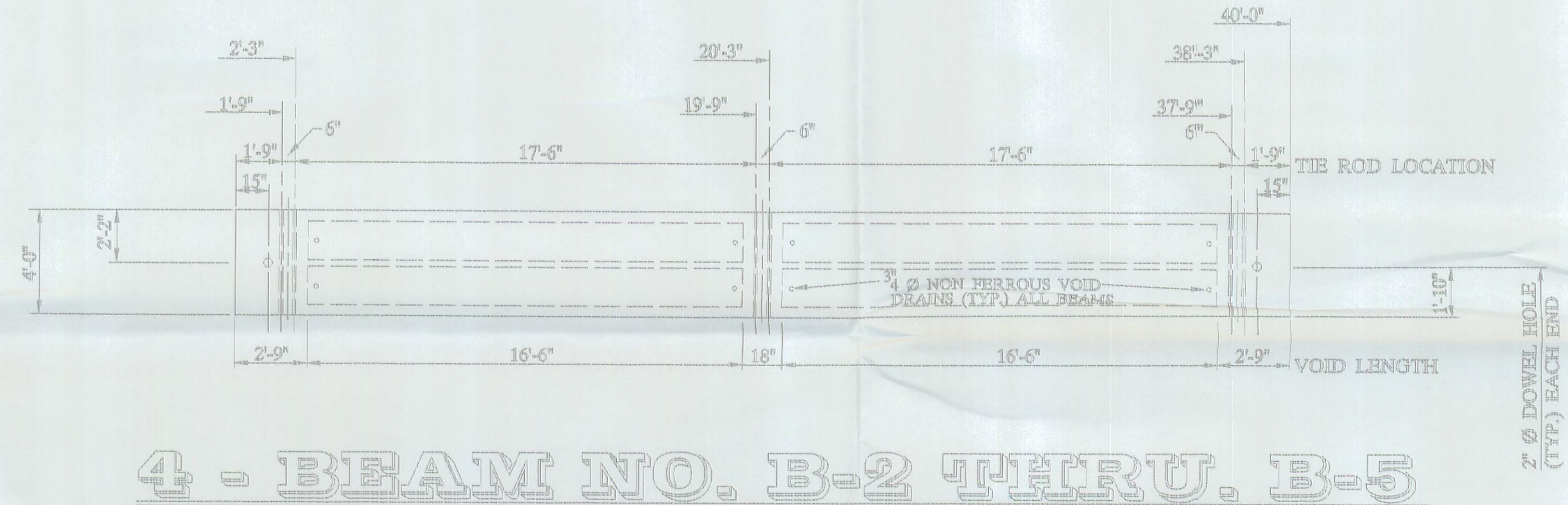
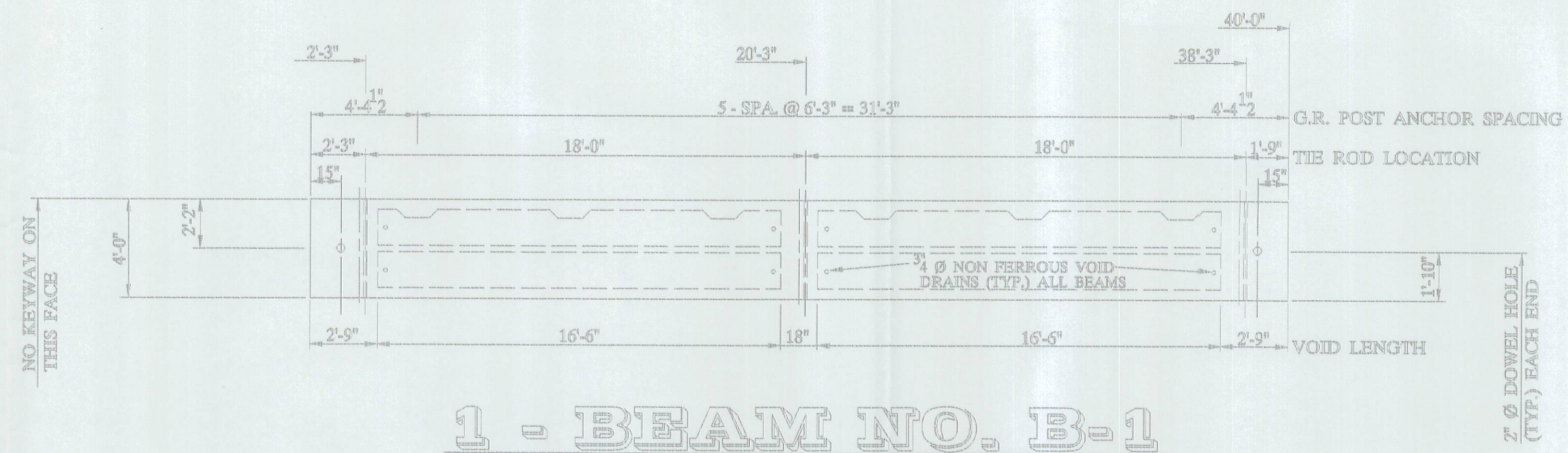
CAMBER DETAIL



UNITED PRECAST INC.
ROUNDHOUSE LANE
MOUNT VERNON, OHIO 43050
PHONE : (740) 393-1121
FAX : (740) 392-9703

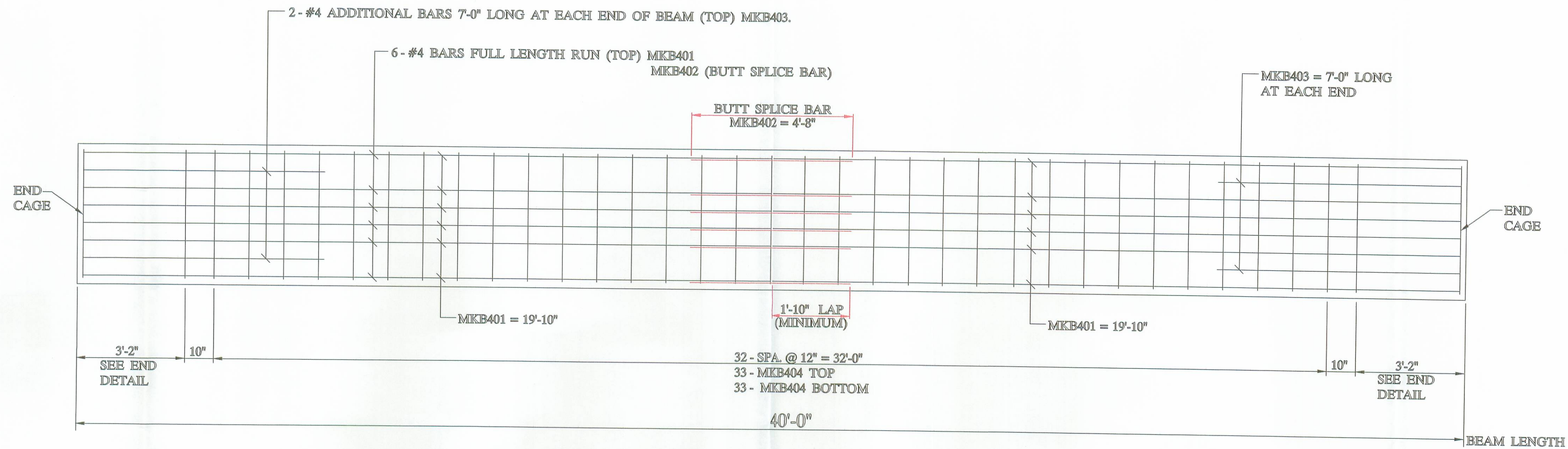
DESCRIPTION: BOX BEAM DETAILS	SCALE: ---	DRAWN BY: PHIL LO. CO. ENGINEER
JOB NAME: ITEM 515 BRIDGE NO. LOG - C.R. 74 - 0.84 LOGAN COUNTY	PROJECT NO. C.R. 74	REVISED:
DATE: JANUARY '01	APPROVED BY: E.O.C.	DATE: 1 / 15 / 01
		1 OF 4



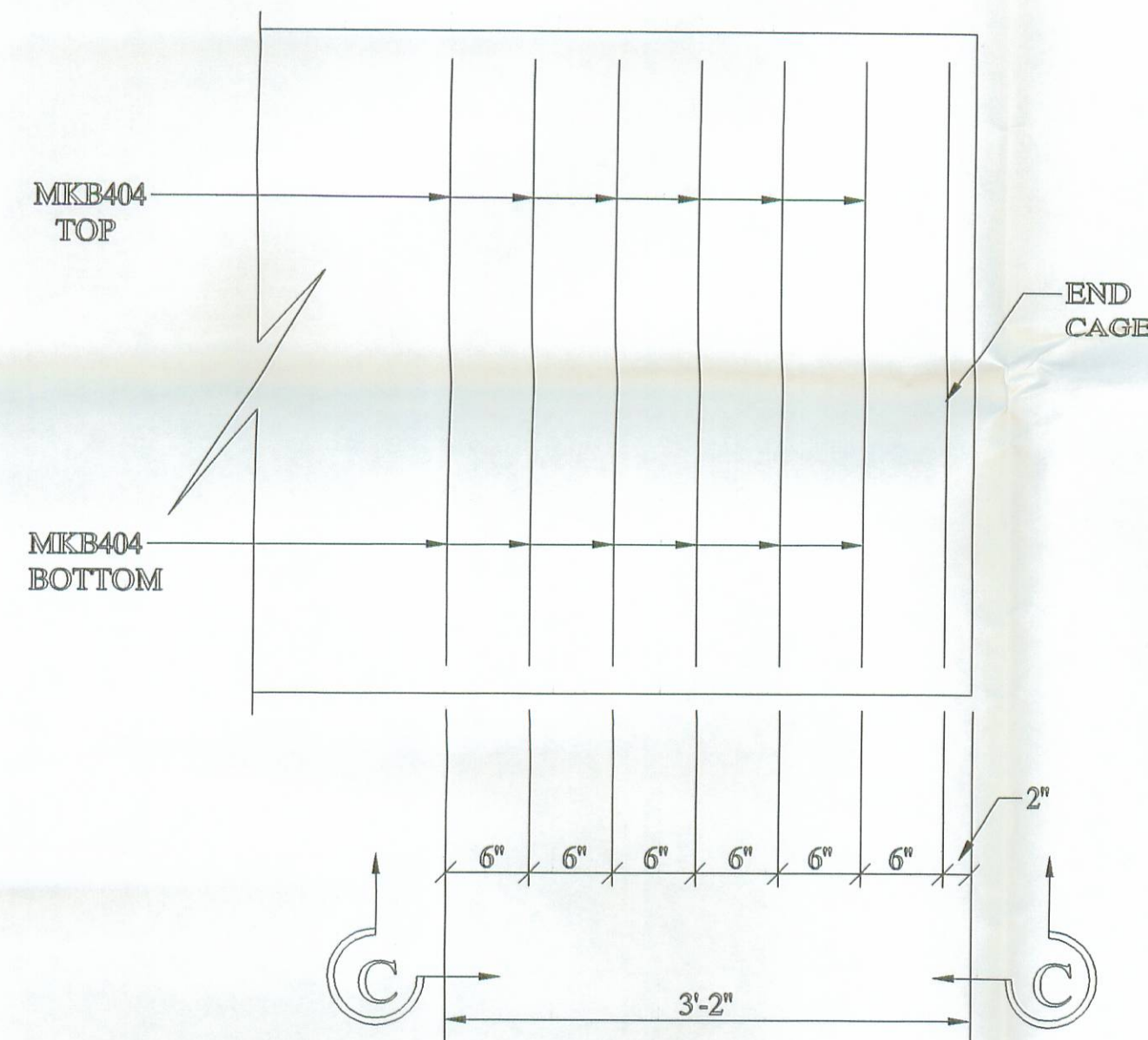


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 ROUNDHOUSE LANE
 MOUNT VERNON, OHIO 43050
 PHONE : (740) 393-1121
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DESCRIPTION: BOX BEAM DETAILS		SCALE: -----	DRAWN BY: PHIL
JOB NAME: ITEM 515 BRIDGE NO. LOG - C.R. 74 - 0.84 LOGAN COUNTY		PROJECT NO. C.R. 74	REVISED:
DATE: JANUARY '01	APPROVED BY: E.O.C.	1/15/01	DRAWING NO. 2 OF 4



REINFORCING LAYOUT

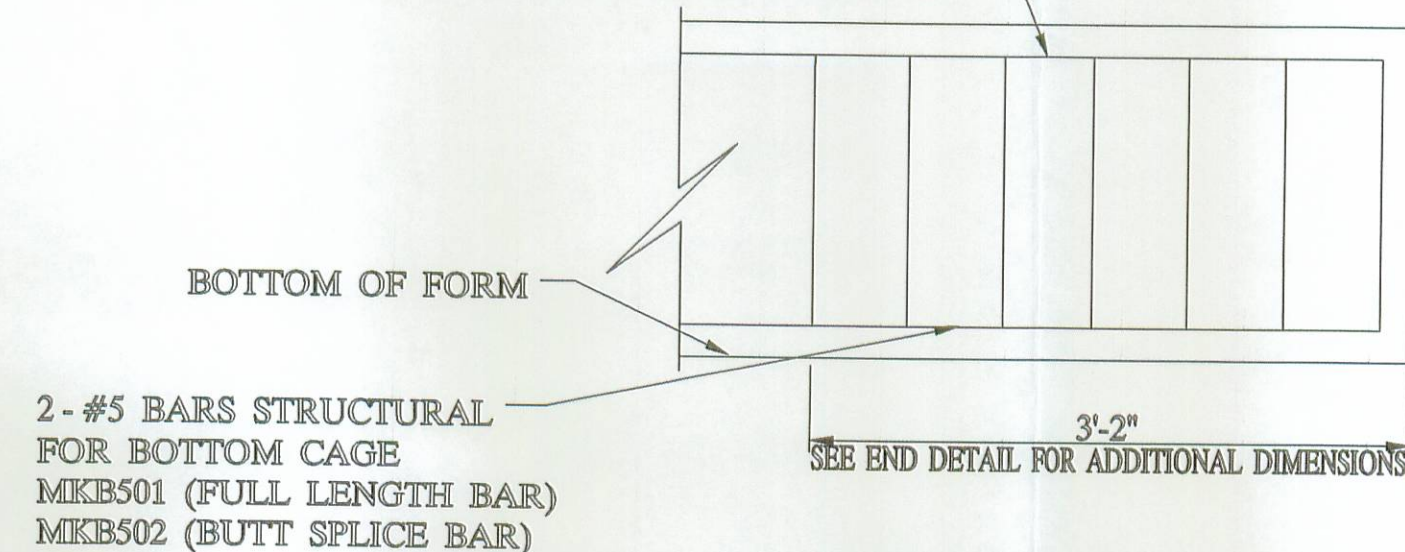


(TYP.) END DETAIL

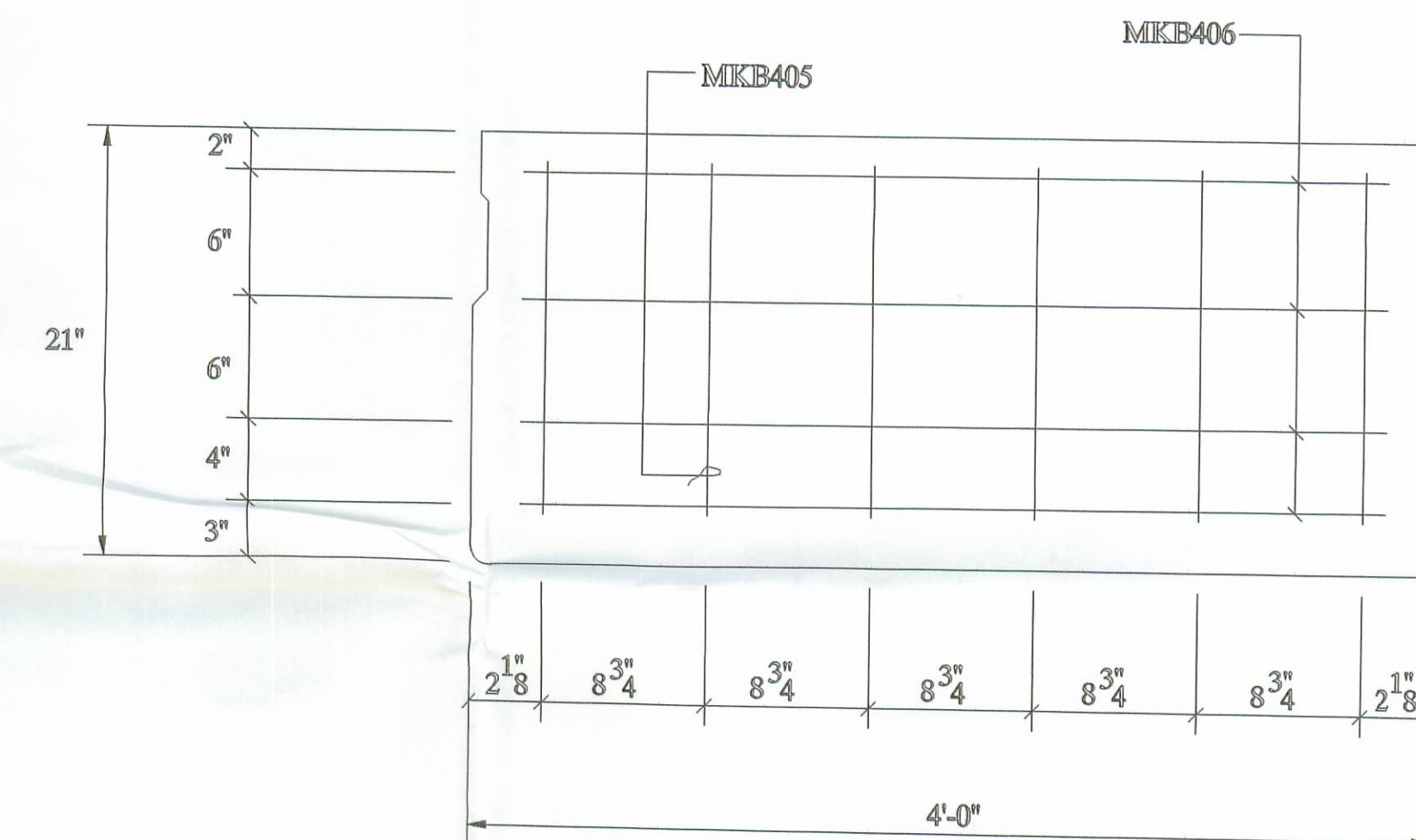
NOTE :

MINIMUM BUTT SPLICE LENGTH REQUIRED IF CAGE FIT UP IS PERFECT IS AS FOLLOWS:
 #4, UNCOATED 44" (22" EACH SIDE)
 #5, UNCOATED 58" (29" EACH SIDE)

TOP LONGITUDINAL BARS & TOP STIRRUPS ASSEMBLED IN TOP CAGE & PLACED IN BED IN UNITS OF VARIOUS LENGTH WITH TOP BARS BUTT SPLICED AT INTERSECTIONS.



SECTION C-C

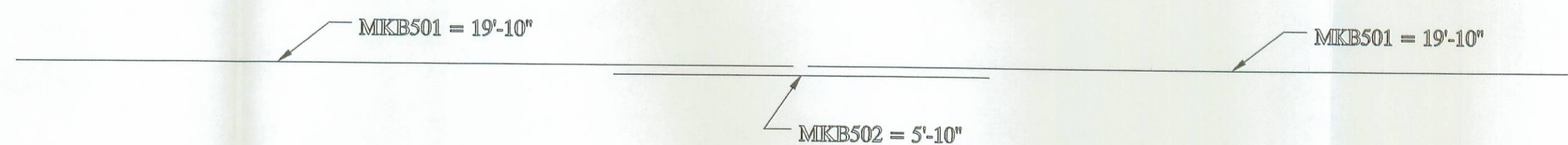
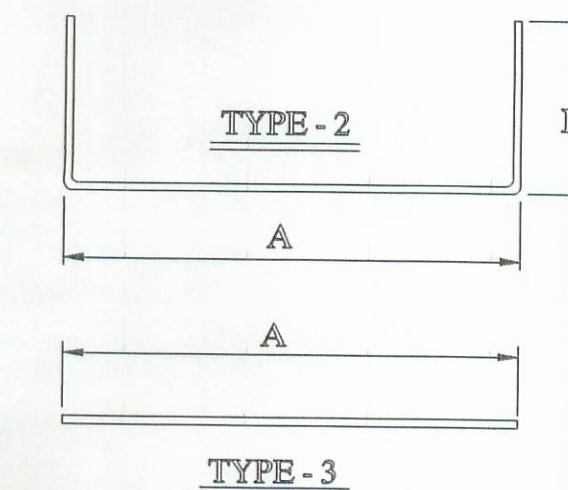


BEAM END CAGE

6 - B21-48 X 40'-0" WITH NO SKEW

BAR LIST

MARK	SIZE	LENGTH	QUANTITY	SHAPE	A	B	C	D	E
B401	4	19'-10"	72	TYPE - 3	19'-10"				
B402	4	4'-8"	36	TYPE - 3	4'-8"				
B403	4	7'-0"	24	TYPE - 3	7'-0"				
B404	4	6'-2 1/2"	540	TYPE - 2	43"	17"			
B405	4	1'-5"	72	TYPE - 3	17"				
B406	4	3'-8 3/4"	48	TYPE - 3	44 3/4"				
B501	5	19'-10"	24	TYPE - 3	19'-10"				
B502	5	5'-10"	12	TYPE - 3	5'-10"				

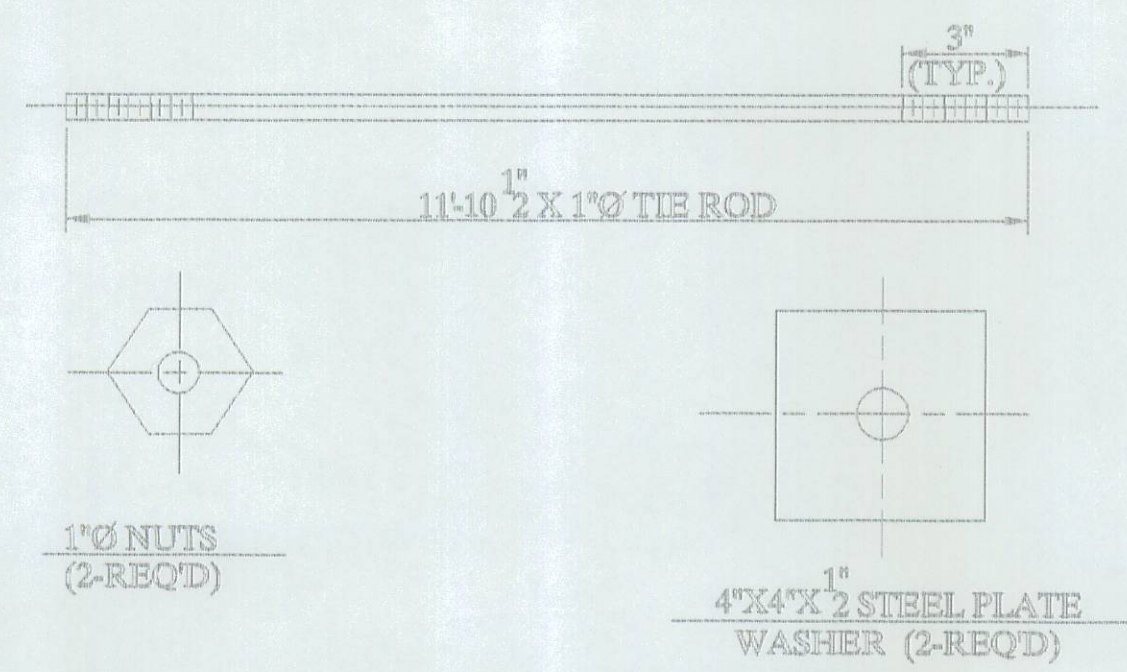


UNITED PRECAST INC.

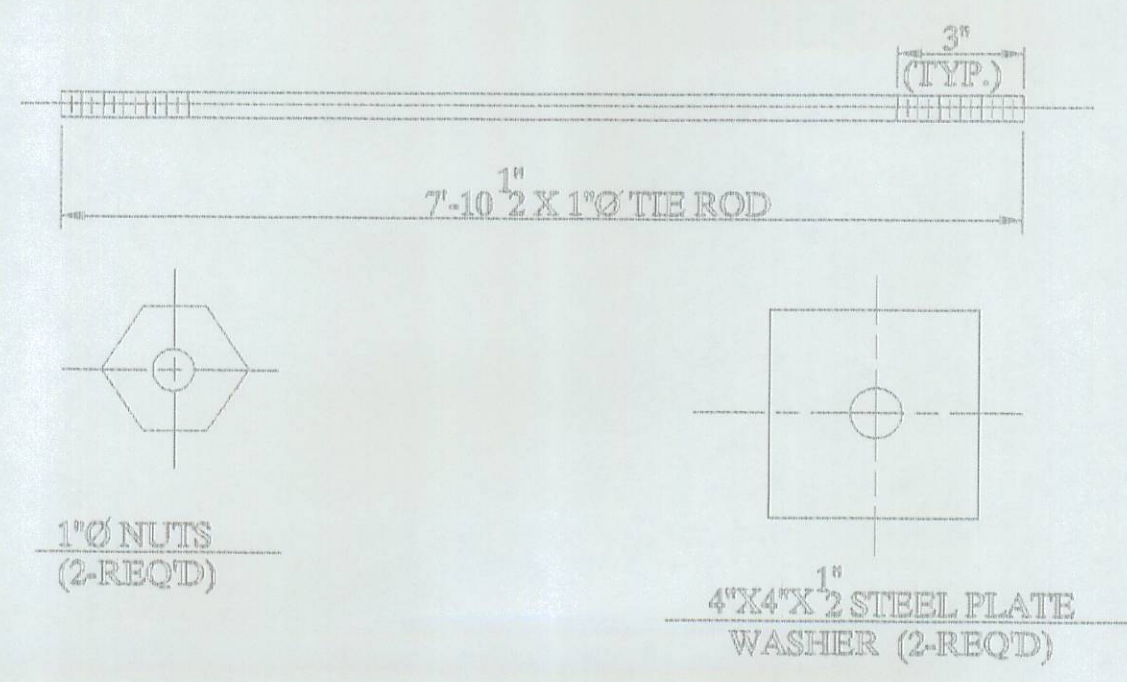
ROUNDHOUSE LANE
 MOUNT VERNON, OHIO 43050
 PHONE : (740) 393-1121
 FAX : (740) 392-9708

DESCRIPTION: BOX BEAM DETAILS		SCALE: ---	DRAWN BY: PHIL
JOB NAME: ITEM 515 BRIDGE NO. LOG - C.R. 74 - 0.84 LOGAN COUNTY		PROJECT NO. C.R. 74	REVISED:
DATE: JANUARY '01	APPROVED BY: E.O.C.	1/15/01	DRAWING NO. 3 OF 4

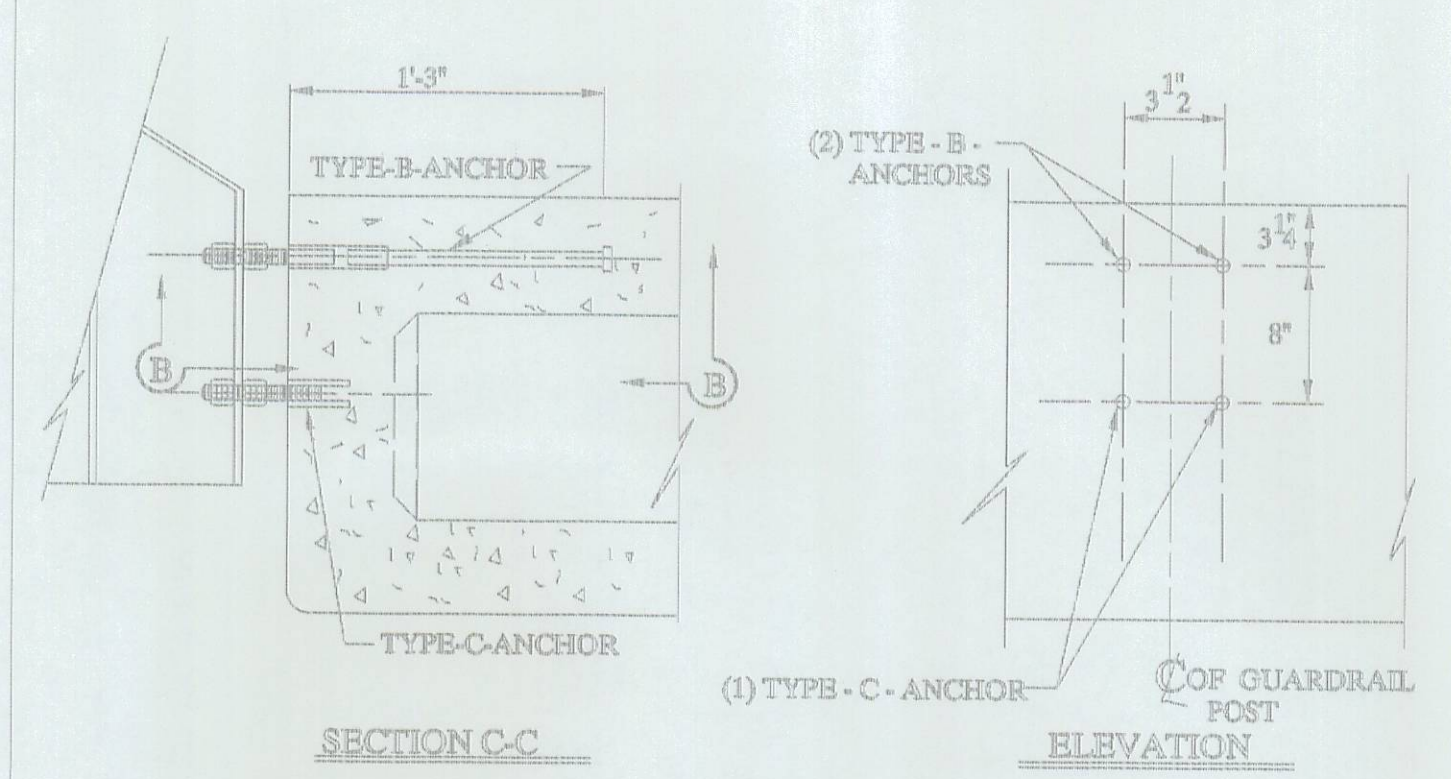
12'-0" TIE ROD ASS'Y



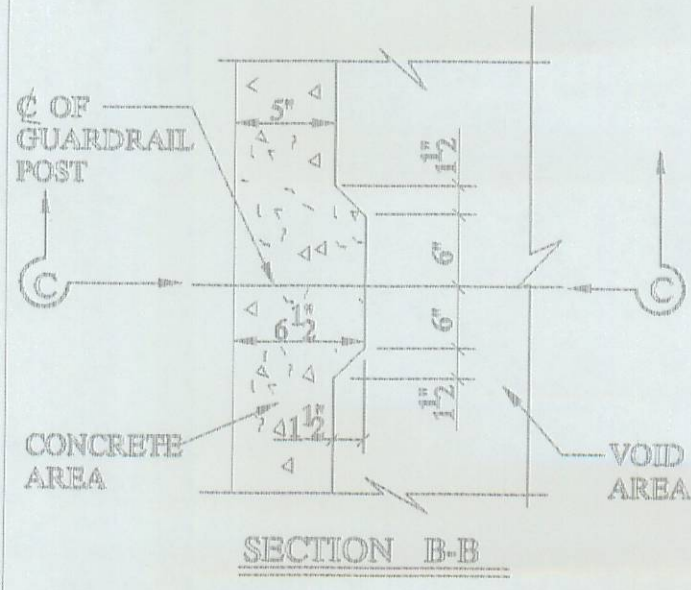
8'-0" TIE ROD ASS'Y



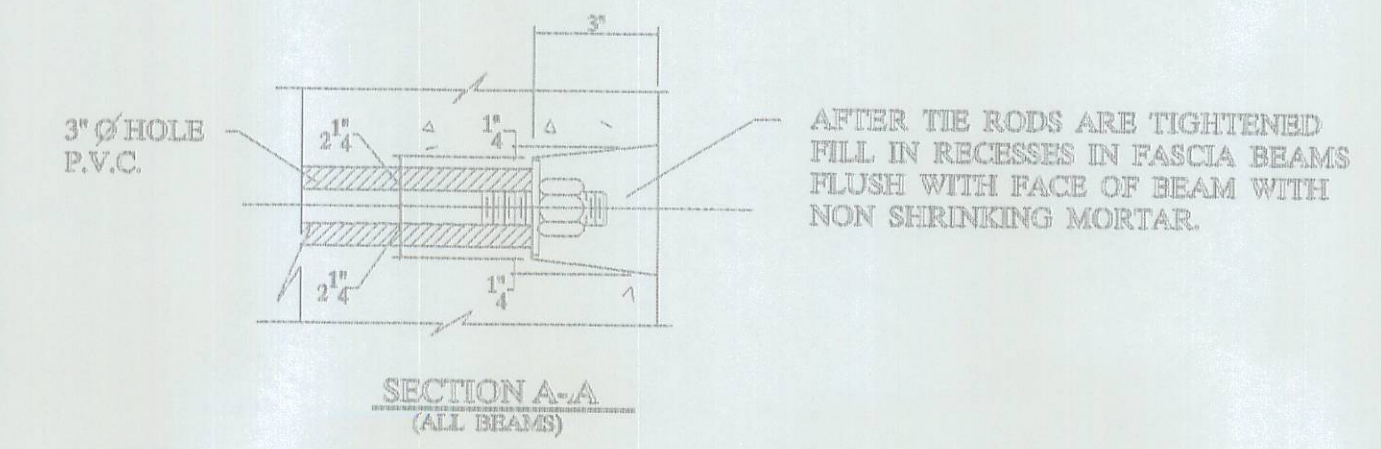
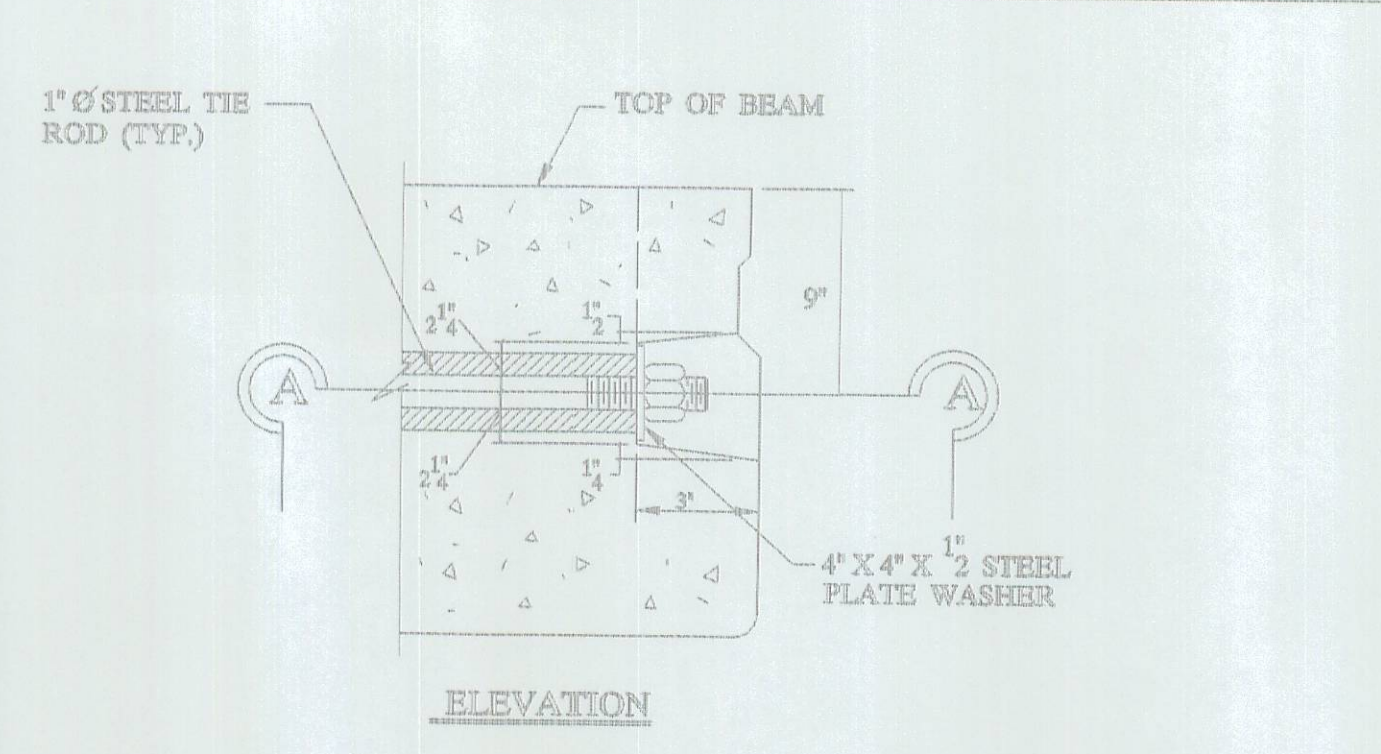
NOTE:
ALL ITEMS INCLUDING TIE RODS ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM-123 OR 153. PER CMS 711.02, UNLESS OTHERWISE NOTED.



NOTE:
ONE TYPE 'C' ANCHOR PROVIDES FOR (2) STUDS (SEE BELOW).

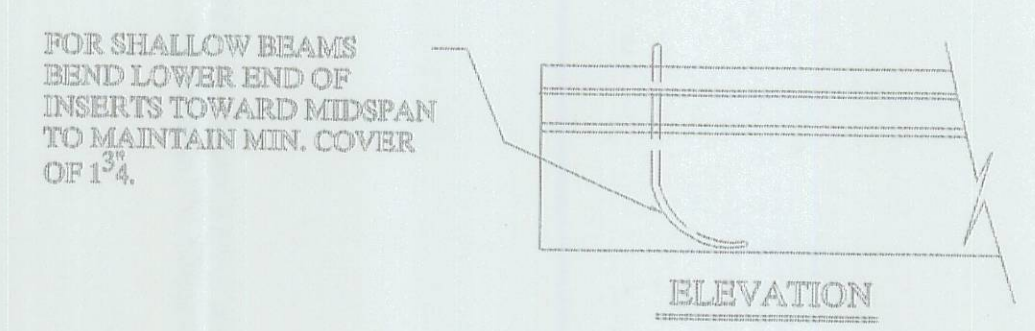
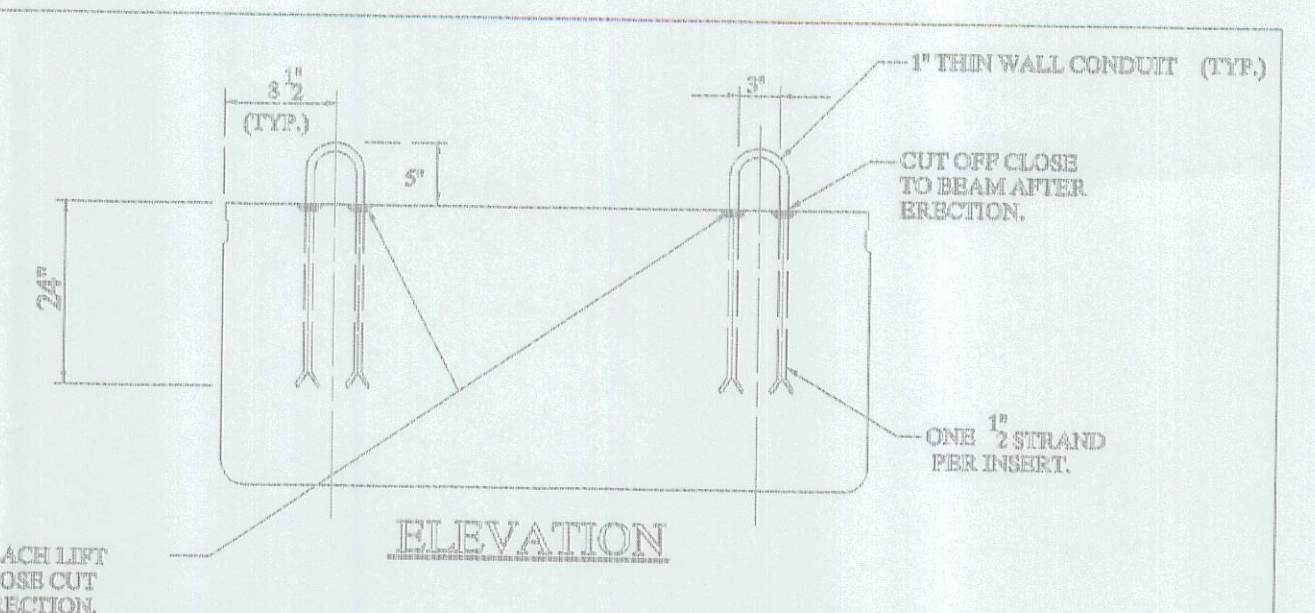


NOTE:
TYPE B&C ANCHOR ASSEMBLIES SHALL CONFORM TO PHYSICAL PROPERTIES OF ASTM-A-325. EXCEPT MIN. ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.

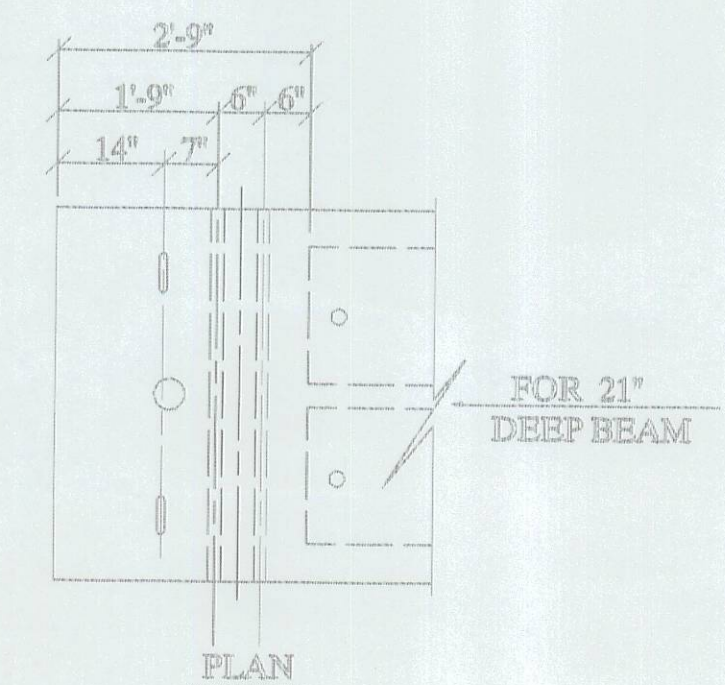


NOTE:
TIE RODS SHALL BE A311 - CH019 STEEL.

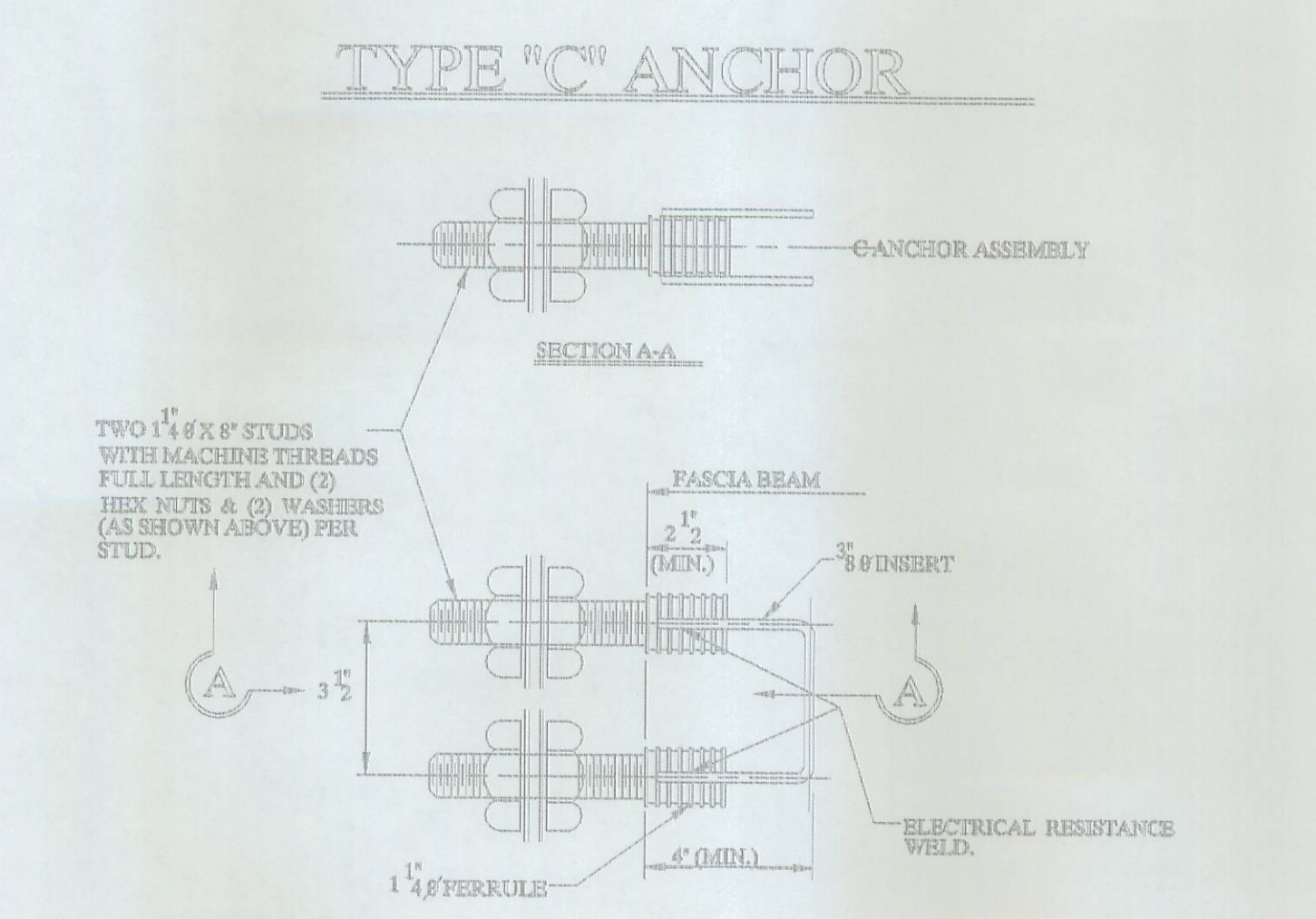
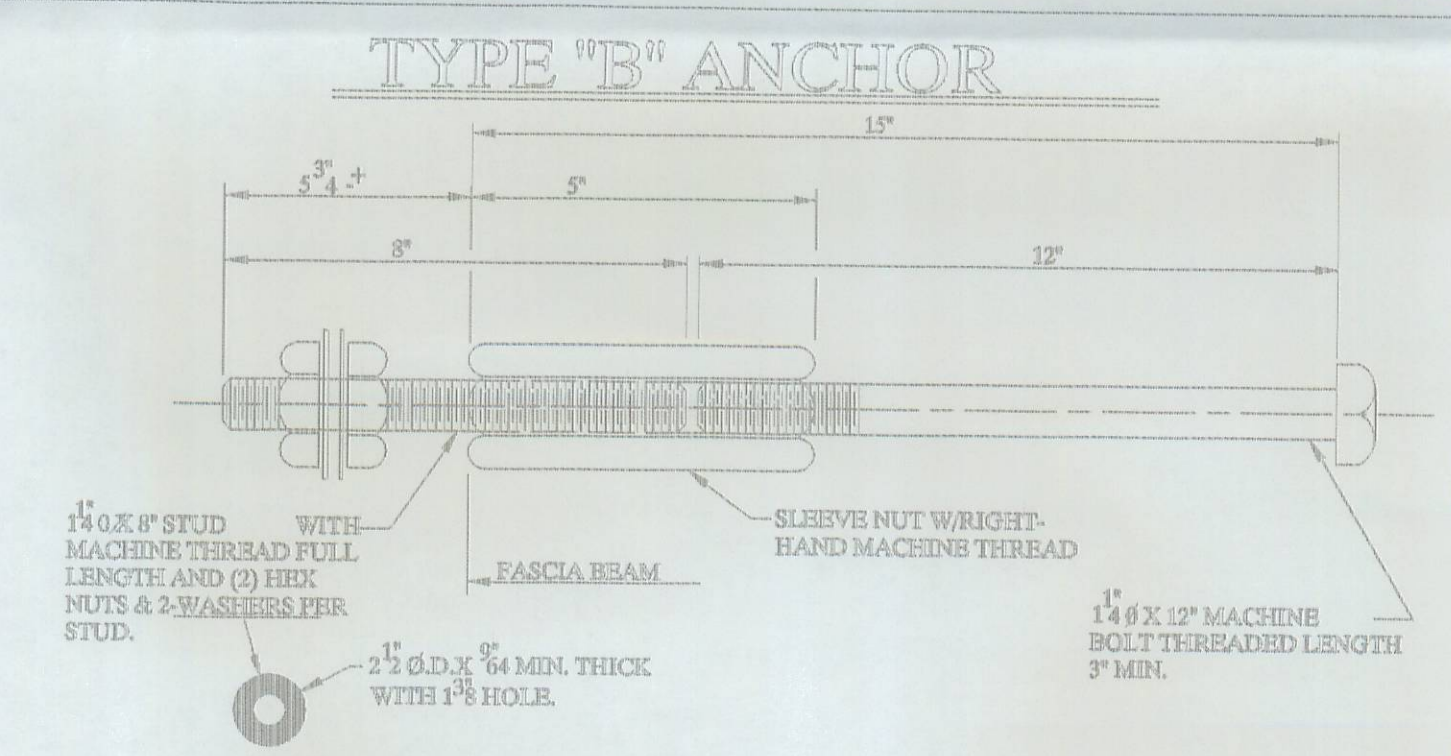
END DETAIL OF TRANSVERSE TIE ROD ANCHORAGE



NOTE:
LIFTING INSERTS ARE HAND PLACED IN THE FIELD AND ARE TO BE ADJUSTED TO CLEAR REINFORCEMENT, ANCHOR DOWEL SLEEVES, TIE ROD SLEEVES, OR ANY ADDITIONAL EMBEDDED ITEMS IN THIS REGION.



LIFTING INSERT DETAIL



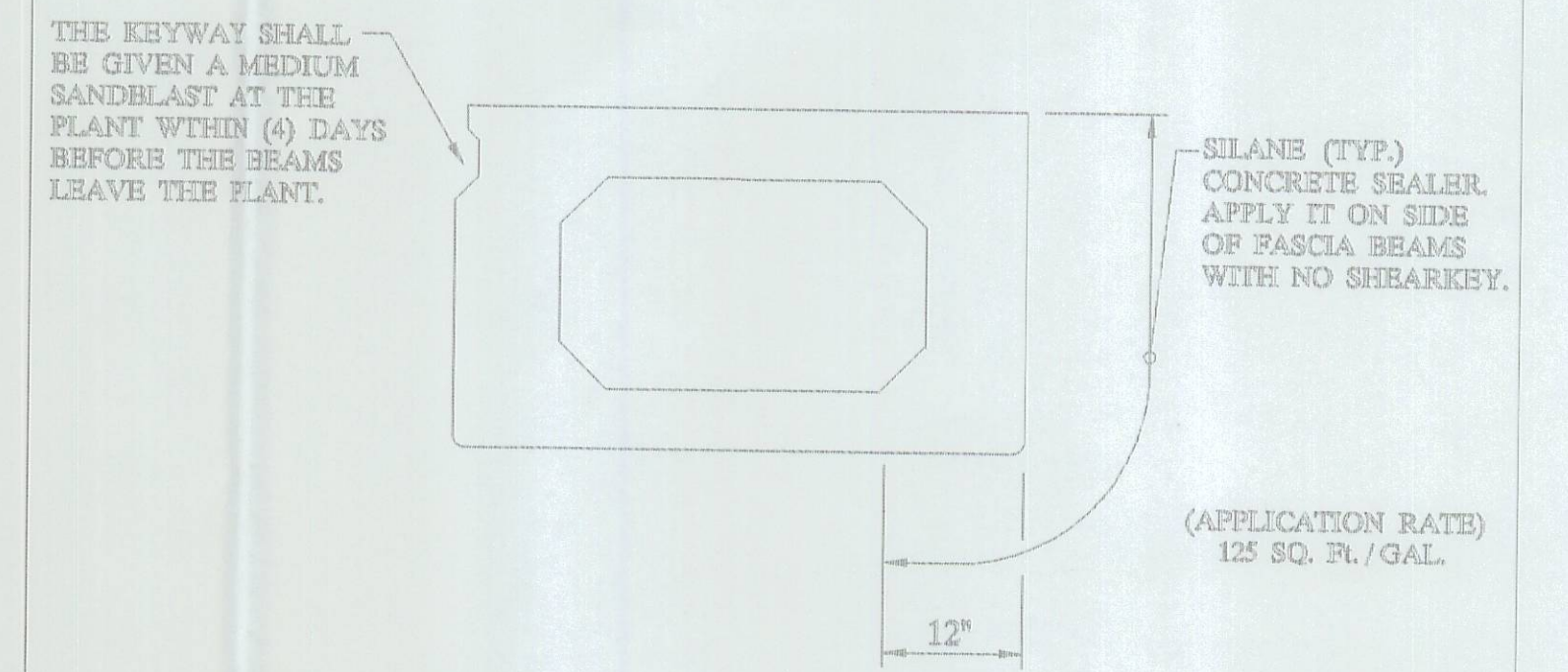
"B" & "C" ANCHOR DETAILS

- NOTE:
- 1) GALVANIZE ALL HARDWARE PER CMS. 711.02.
 - 2) PROVIDE A BROOM FINISH ON TOP SURFACE OF BEAM SUITABLE FOR WATERPROOFING.
 - 3) ADD D.C.I. TO CONCRETE (4-GAL./CUBIC YARD).
 - 4) WATERPROOF BEAM ENDS.
 - 5) DETENSION STRAND SYMMETRICALLY ABOUT CENTERLINE.

SPECIFICATIONS

- DESIGN LOADING: HS20-44 AND ALTERNATE MILITARY LOADING.
- CONCRETE: COMPRESSIVE STRENGTH, f_c = 5500 PSI @ 28 DAYS (SHIPPING), f_c = 4000 PSI @ RELEASE.
- PRESTRESSING STRAND: ASTM A-416 GRADE 270, 1/2" DIAMETER, SEVEN WIRE, UNCOATED LOW RELAXATION STRAND, A_s = .153 in. f_u = 270 KSI. INITIAL STRESS: 0.75 f_s = 202.5 KSI.
- REINFORCING STEEL: GRADE - 60; ASTM A-615, ASTM A-616, ASTM A-617. UNIT STRESS 24,000 PSI.

NOTE:
PRESTRESSED CONCRETE BEAMS AND APPURTENANCES CONFORM TO O.D.O.T. STANDARD BRIDGE DRAWINGS PRSD-1 - 93 SHEETS ONE, TWO, THREE, & FOUR.



TYPICAL FASCIA BEAM

BRIDGE NO.	LOG - C.R. 74 - 0.84	LOGAN COUNTY	ITEM 515
PROJECT NO. C.R. 74			
UNITED PRECAST INC.			
ROUNDHOUSE LANE MT. VERNON, OHIO 43050 PHONE: (740) 393-1121, FAX: (740) 392-9708	SCALE	DRAWN BY: PHIL REVISED	
DATE JAN. '01	APPROVED BY: E.O.C.	1/15/01	DRAWING NO. 4 OF 4