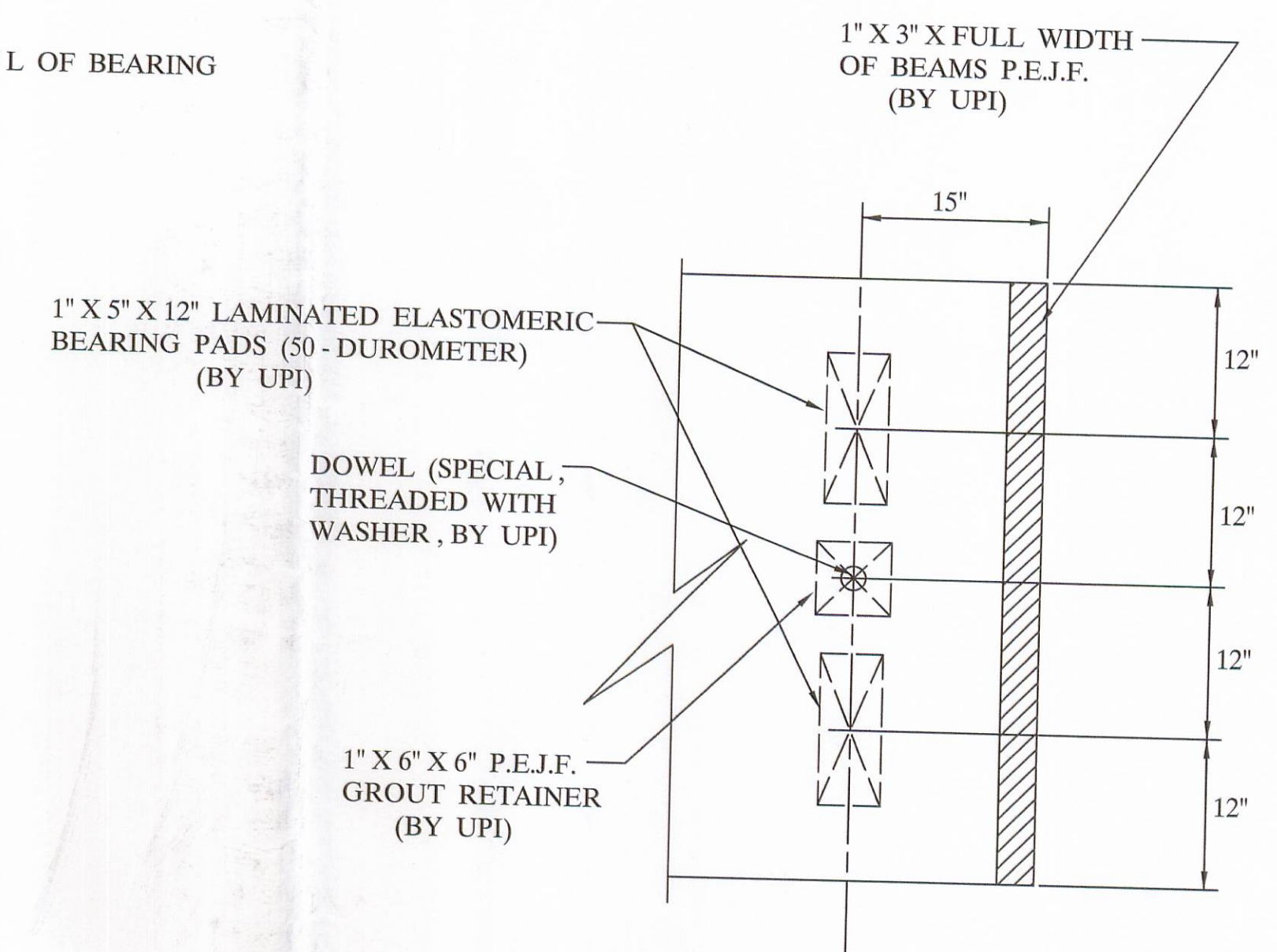
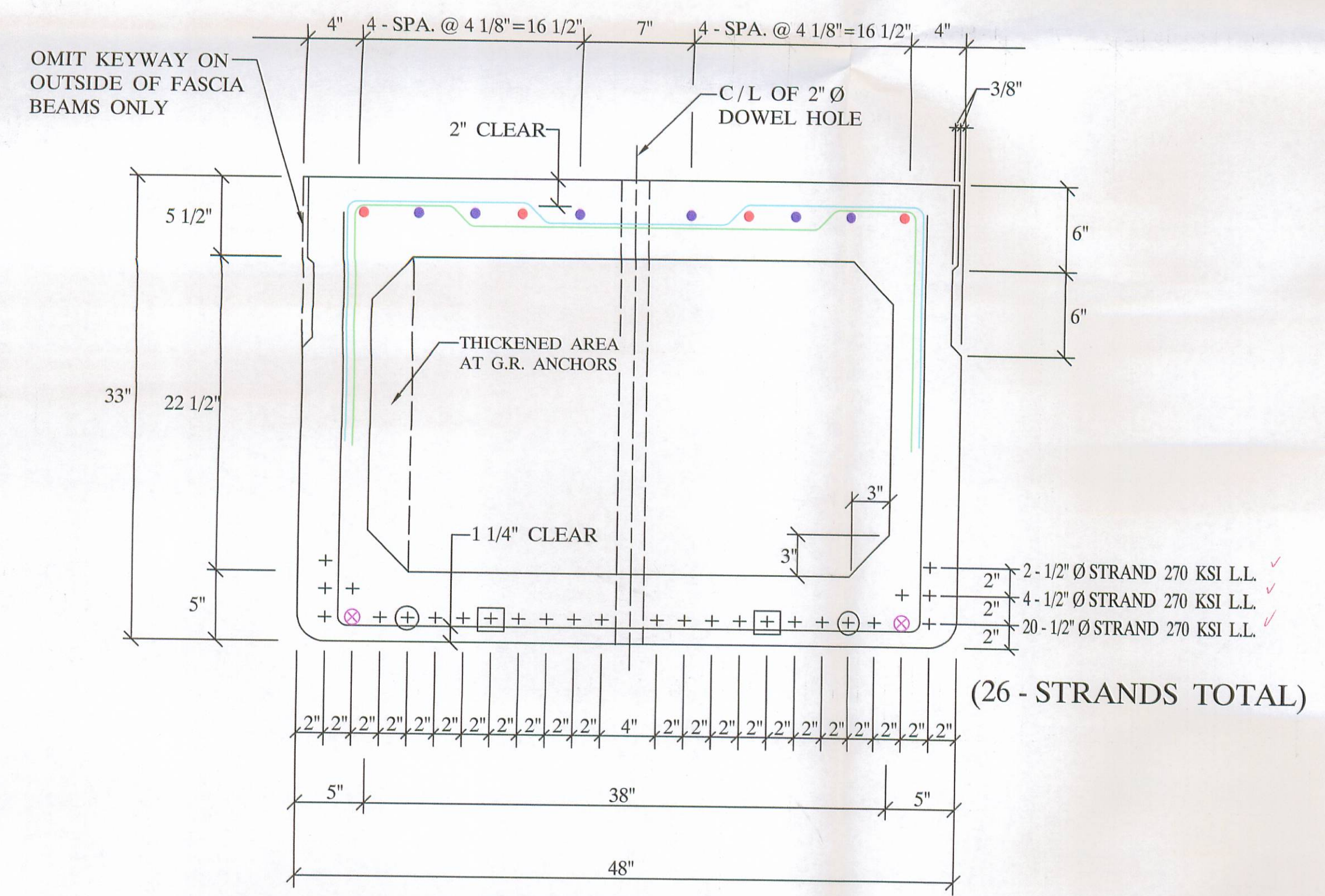


**DECK PLAN**



**BEARING PAD LAYOUT  
(PLAN VIEW)**

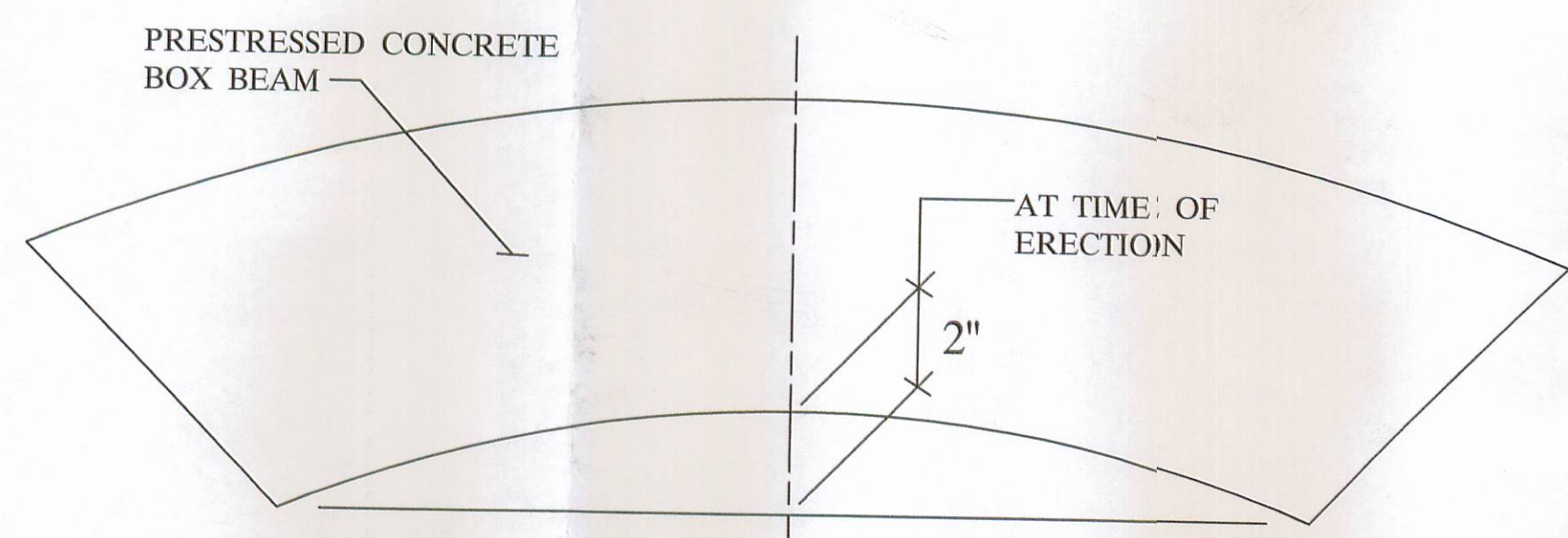


**B33-48**

- 4 - #5 BARS FULL LENGTH RUN (TOP)
- 6 - #5 ADDITIONAL BARS 10'-6" LONG AT EACH END OF BEAM (TOP)
- ⊗ 2 - #6 BARS FULL LENGTH RUN (BOTTOM)
- ⊕ DEBOND STRAND 1'-6" AT EACH END OF BEAM
- ⊕ DEBOND STRAND 2'-6" AT EACH END OF BEAM

**QUALITY CONTROL NOTE :**

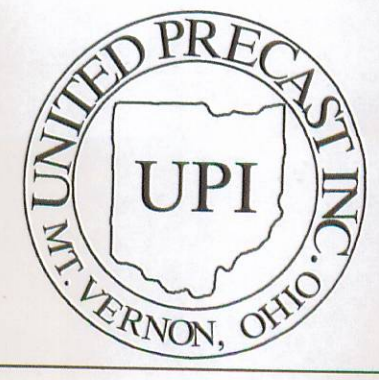
- STRAND AREA IS .153 SQ. IN.
- STRAND IS LOW LAX.
- INITIAL LOAD IS 30,982 # / STRAND.
- REBAR IS ALL GRADE - 60.
- STIRRUPS UNDER STRAND.



**CAMBER DETAIL  
(ELEVATION)**

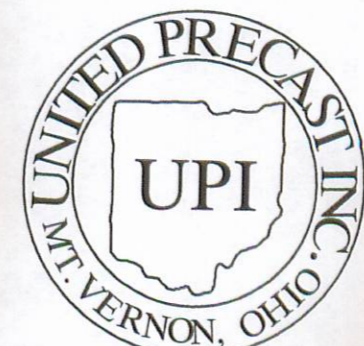
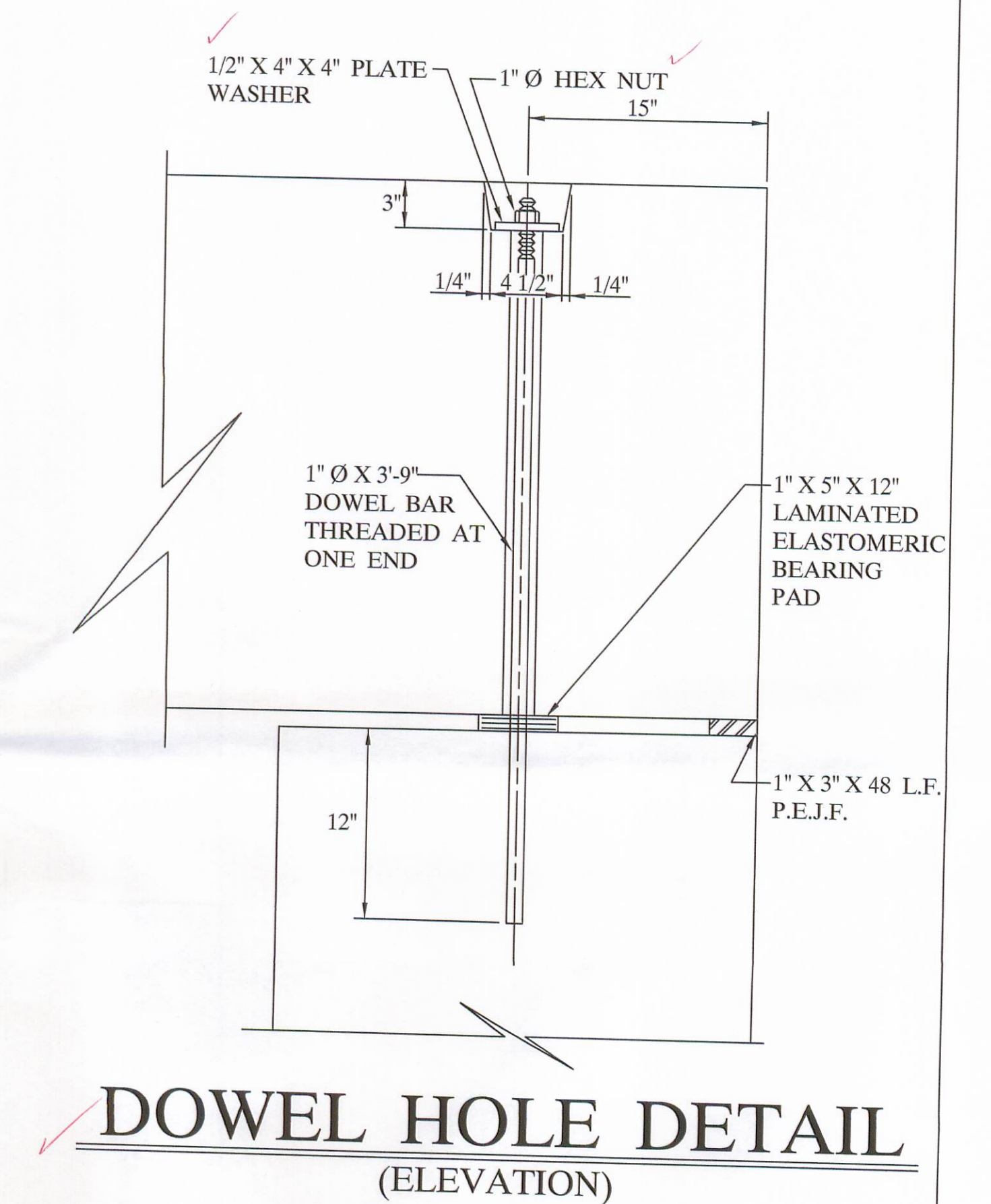
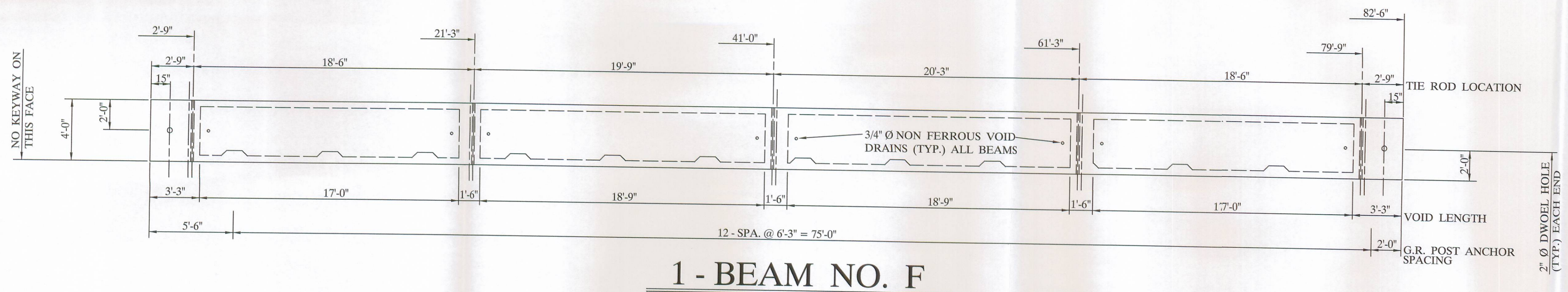
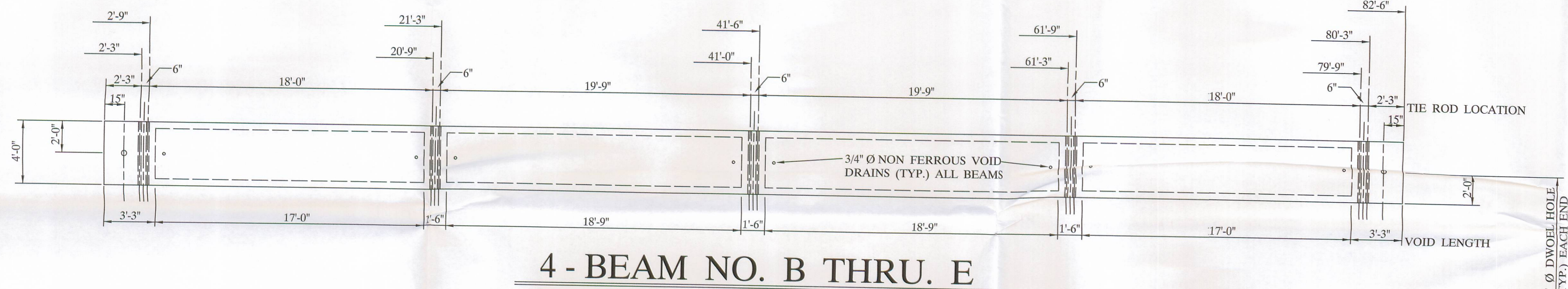
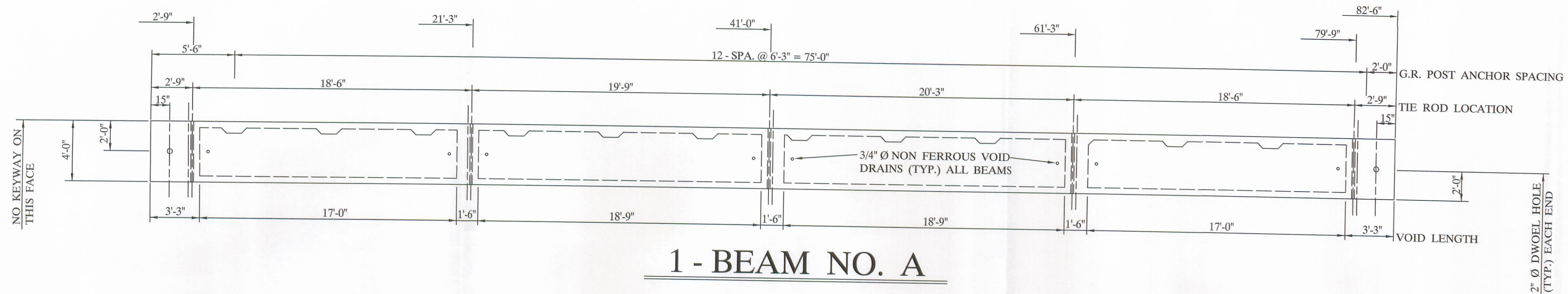
**BILL OF MATERIALS**

NO	ITEM	QTY / BEAM	NOTES	TOTAL
1	BEAM WEIGHT		76,273 #	
2	CONCRETE	18.2 CY.		436.8 GAL.
3	CALCIUM NITRITE (D.C.I.)	72.8 GAL.		109.2 CY.
4	STRAND		4 - GAL. / CY.	15,600 L.F.
5	RE - STEEL		1/2" Ø STRAND 270 KSI LL.	12,293 #
6	VOID		GRADE - 60	429 L.F.
7	VOID DRAINS		22 1/2" X 38"	48 EA.
8	TIE ROD	12'-0"	3/4" Ø NON FERROUS	10 EA.
		8'-0"	1" Ø STEEL ROD	5 EA.
9	TIE ROD SLEEVES		1" Ø STEEL ROD	160 L.F.
10	TYPE - B - ANCHORS			52 EA.
11	TYPE - C - ANCHORS			26 EA.
12	DOWELS & SLEEVES			12 EA.
13	INTERTUF - 132		SPECIAL (THREADED) Including nuts & washers	0.8 GAL.
14	SILANE			5.2 GAL.
15	JUTE			413 L.F.
16	BEARING PADS		1" X 5" X 12" , 3 - LAM.	24 EA.
17	GUARDRAIL POST		TYPE - 2	26 EA.
18	OFF DECK POST			4 EA.
19	GUARDRAIL ELEMENT			175 L.F.
20	TUBULAR BACK - UP			175 L.F.
21	P.E.J.F.		1" X 3" X 48 L.F.	12 S.F.
22	NON - SHRINK GROUT ADDITIVE	(2 1/4 CY. OF 9 BAG GROUT, BY OTHERS)		21 lbs.



**UNITED PRECAST INC.**  
 ROUNDHOUSE LANE  
 MOUNT VERNON, OHIO 43050  
 PHONE : (740) 393-1121  
 FAX : (740) 392-9708

DESCRIPTION: <b>BOX BEAM DETAILS</b>	SCALE: -----	DRAWN BY: PHIL
JOB NAME: BRIDGE NO. 94 - 1.40 LOGAN COUNTY	ITEM 515 PROJECT NO. T.R. 94	REVISED:
DATE: AUGUST 2003	APPROVED BY: E.O.C.	DRAWING NO. 8 / 20 / 03 1 OF 4

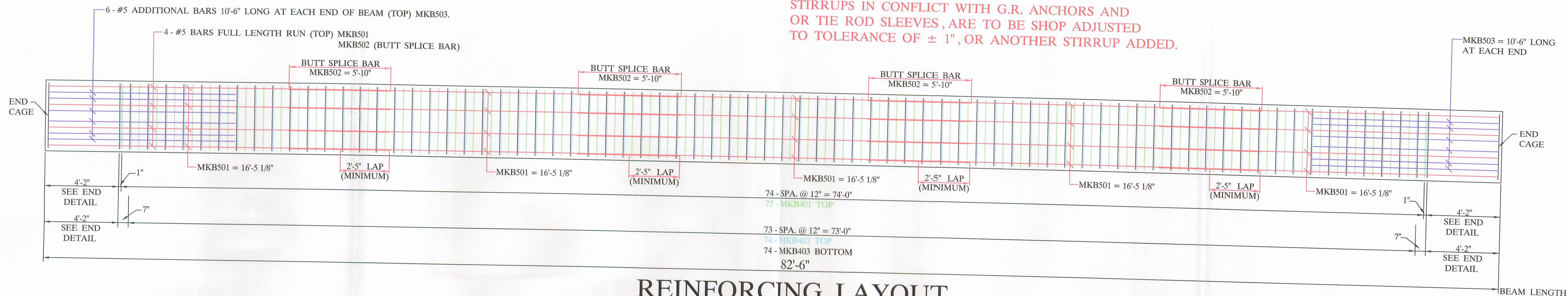


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DESCRIPTION:	BOX BEAM DETAILS	SCALE:	DRAWN BY:
JOB NAME:	ITEM 515		PHIL
	BRIDGE NO. 94 - 1.40		REVISED:
	LOGAN COUNTY	PROJECT NO. T.R. 94	
DATE:	APPROVED BY:		DRAWING NO.
AUGUST 2003	E.O.C.	8/20/03	2 OF 4

**NOTE :**

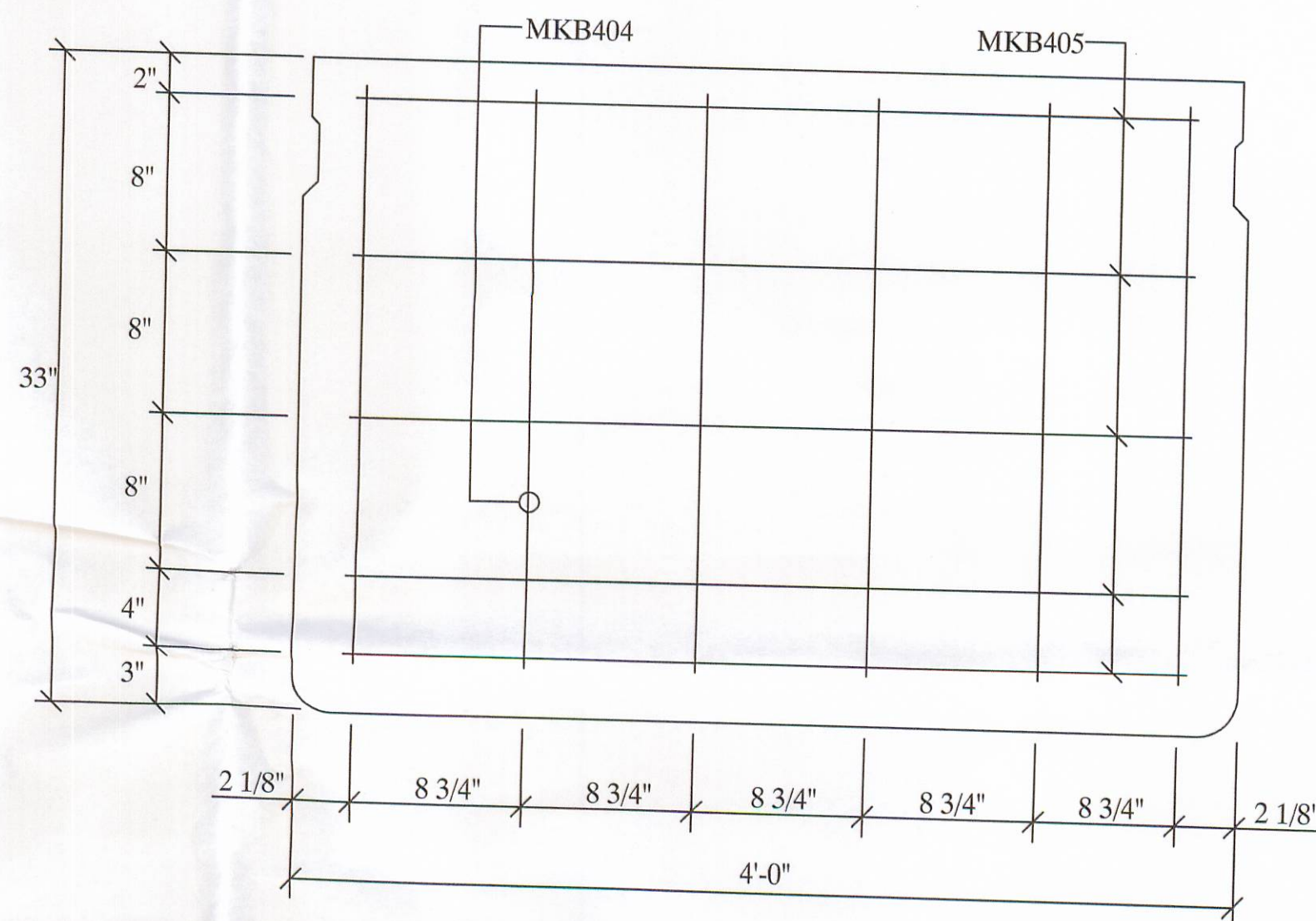
STIRRUPS IN CONFLICT WITH G.R. ANCHORS AND OR TIE ROD SLEEVES, ARE TO BE SHOP ADJUSTED TO TOLERANCE OF  $\pm 1"$ , OR ANOTHER STIRRUP ADDED.



**REINFORCING LAYOUT**  
(PLAN VIEW)

**NOTE :**

MINIMUM BUTT SPLICE LENGTH REQUIRED IF CAGE FIT UP IS PERFECT IS AS FOLLOWS:  
 #5, UNCOATED 58", (29" EACH SIDE)  
 #6, UNCOATED 68", (34" EACH SIDE)

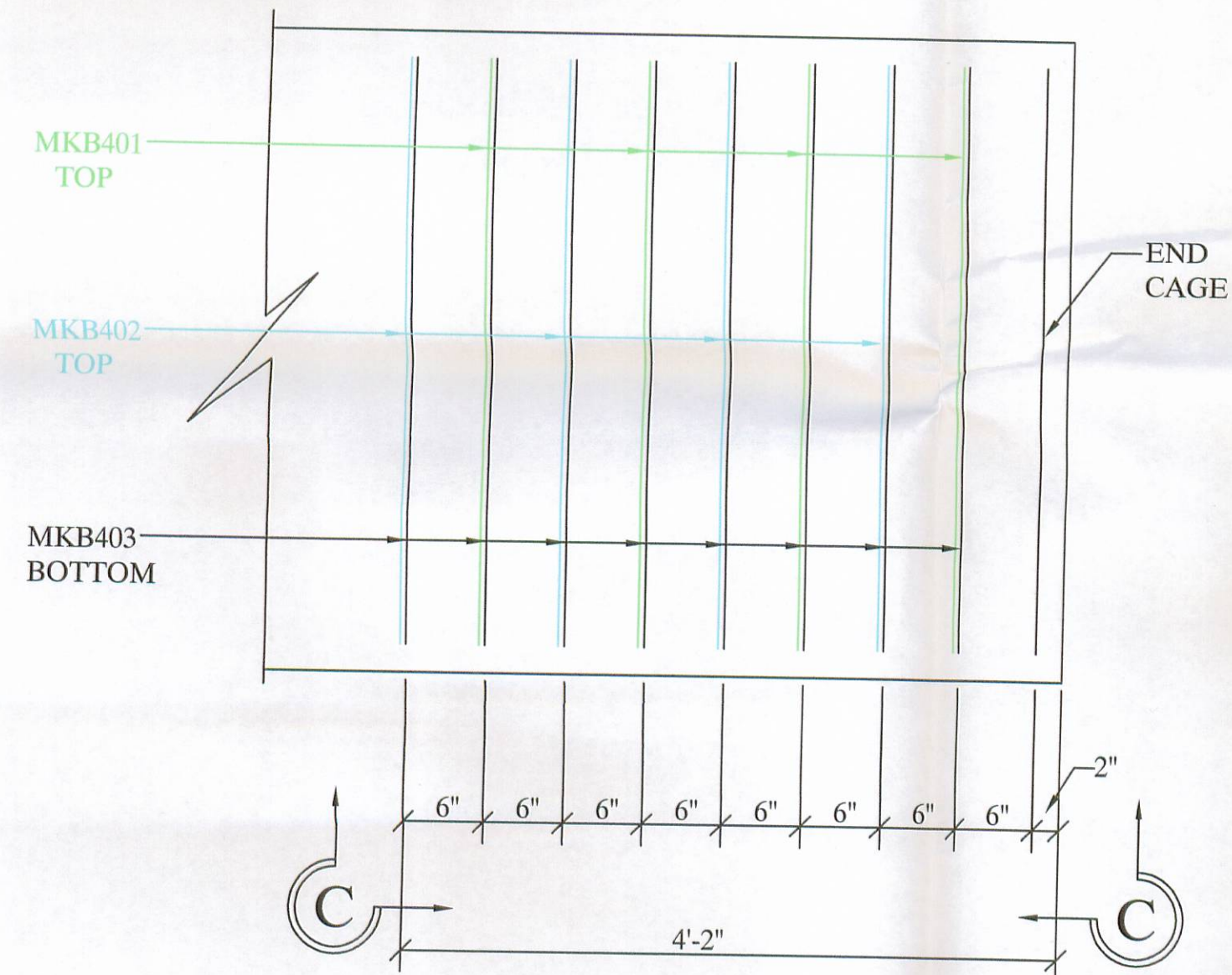


**BEAM END CAGE**  
(ELEVATION)

6 - B33-48 X 82'-6" WITH NO SKEW

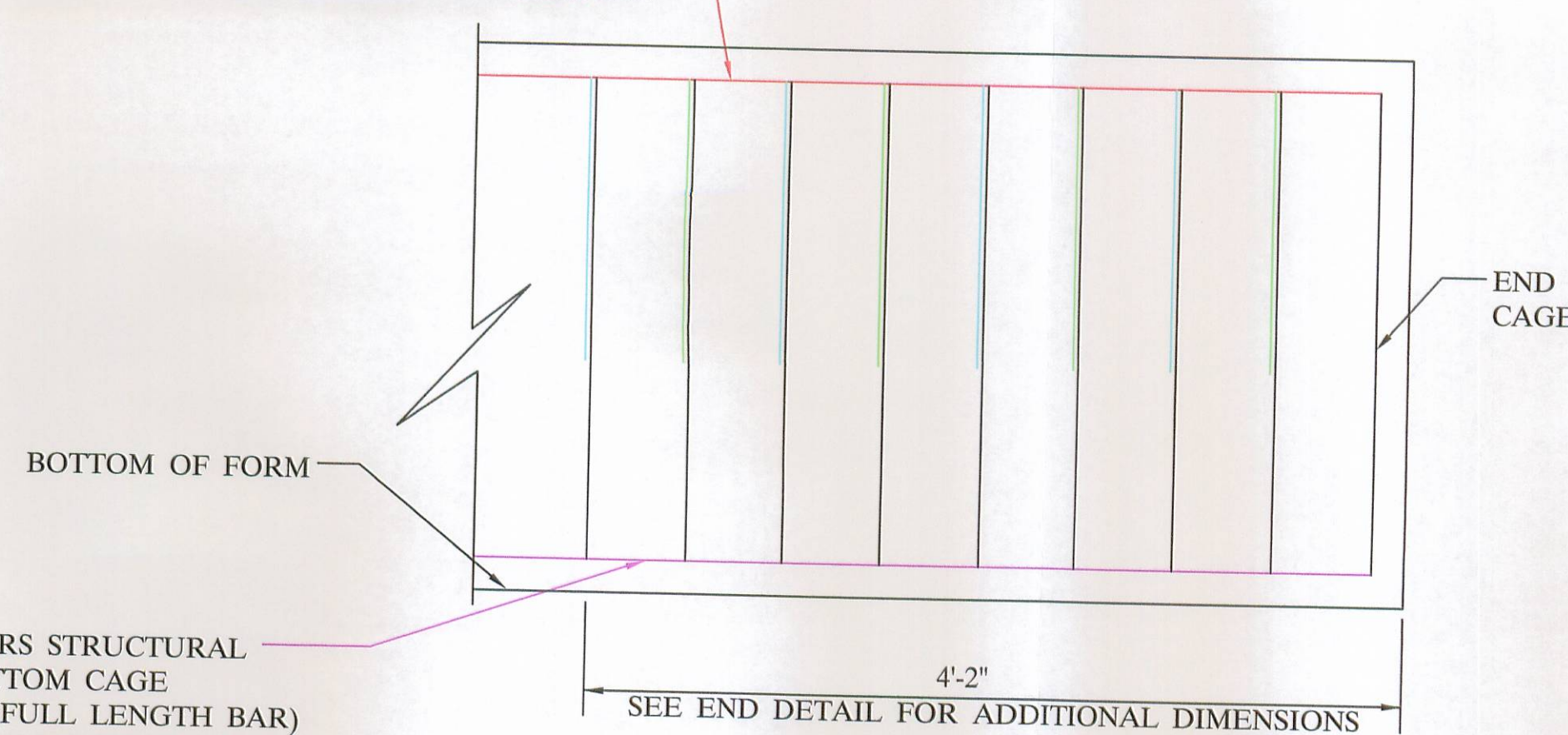
**BAR LIST**

MARK	SIZE	LENGTH	QUANTITY	SHAPE	A	B	C	D	E
B401	4	6'-2 1/2"	498	TYPE - 1	43"	17"	7"	2"	25"
B402	4	6'-2 1/2"	492	TYPE - 1	43"	17"	13"	2"	13"
B403	4	8'-2 1/2"	540	TYPE - 2	43"	29"			
B404	4	2'-5"	72	TYPE - 3	29"				
B405	4	3'-8 3/4"	60	TYPE - 3	44 3/4"				
B501	5	16'-5 1/8"	120	TYPE - 3	16'-5 1/8"				
B502	5	5'-10"	96	TYPE - 3	5'-10"				
B503	5	10'-6"	72	TYPE - 3	10'-6"				
B601	6	16'-5 1/8"	60	TYPE - 3	16'-5 1/8"				
B602	6	6'-8"	48	TYPE - 3	6'-8"				



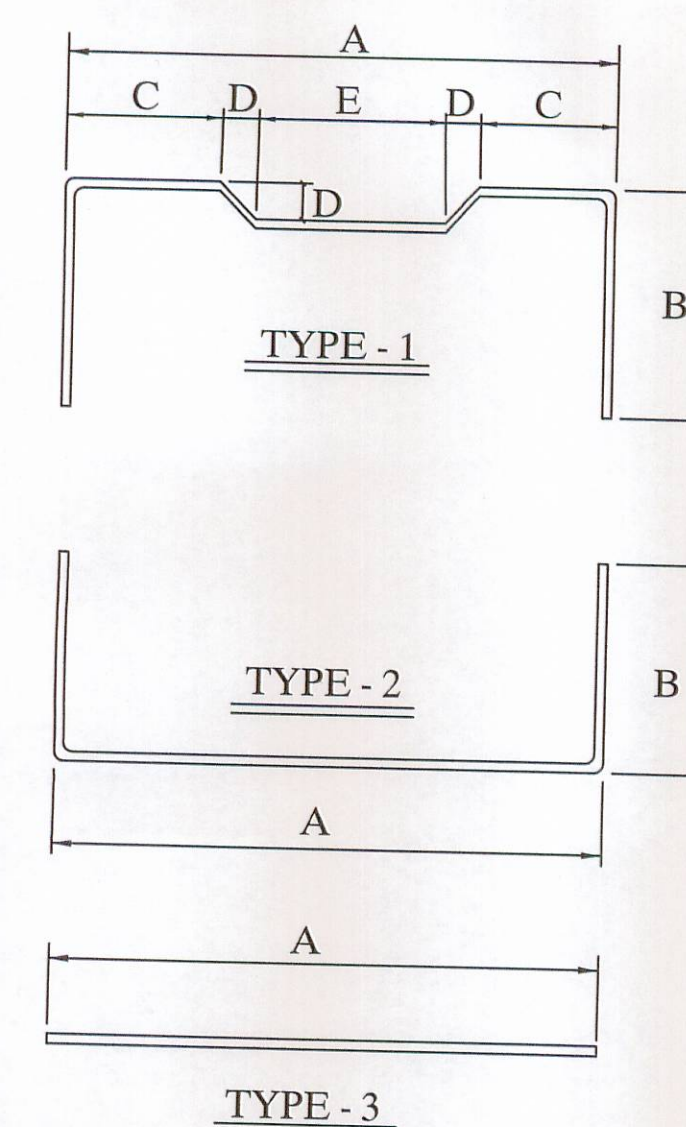
**(TYP.) END DETAIL**  
(PLAN VIEW)

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



**ELEVATION C-C**

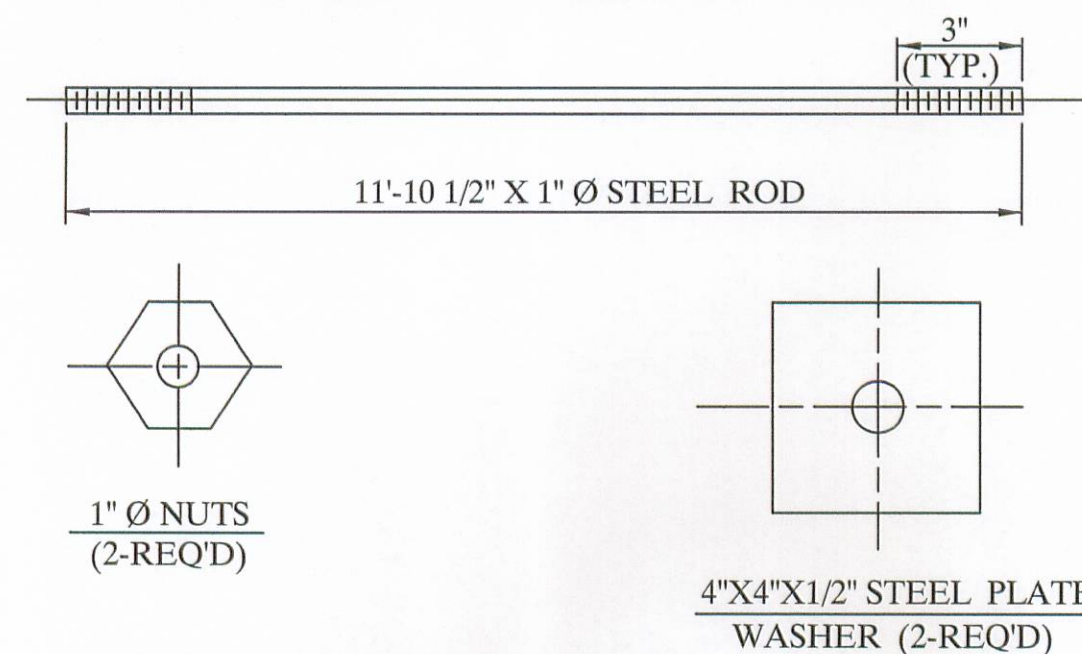
2 - #6 BARS STRUCTURAL FOR BOTTOM CAGE  
 MKB601 (FULL LENGTH BAR)  
 MKB602 (BUTT SPLICE BAR)



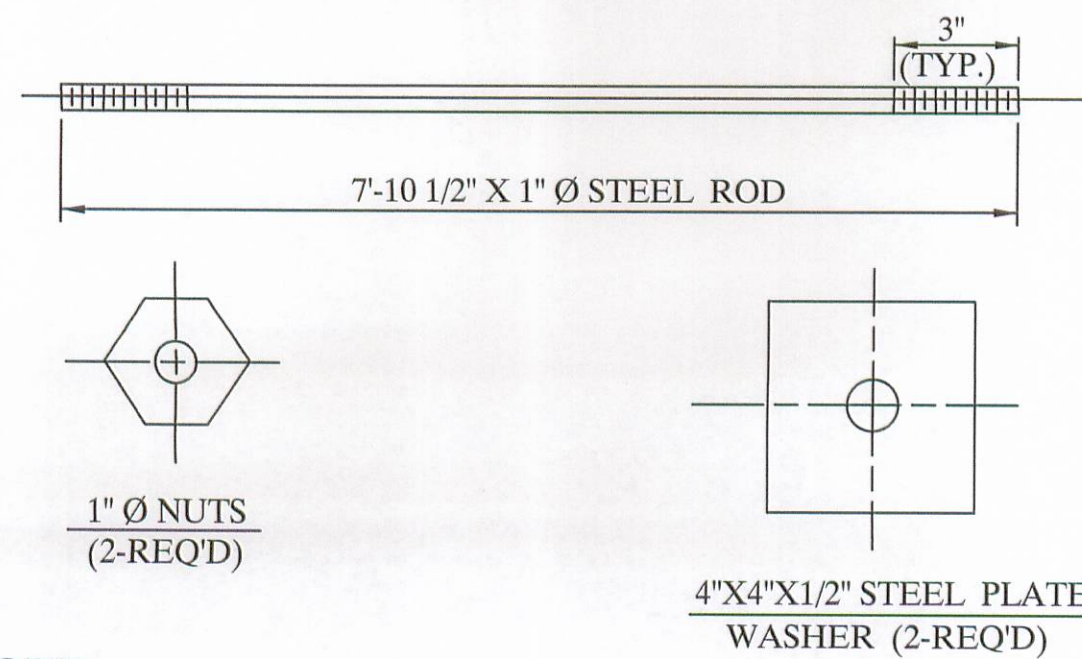
**UNITED PRECAST INC.**  
 ROUNDHOUSE LANE  
 MOUNT VERNON, OHIO 43050  
 PHONE : (740) 393-1121  
 FAX : (740) 392-9708

DESCRIPTION: <b>REINFORCING DETAILS</b>	SCALE: -----	DRAWN BY: PHIL
JOB NAME: BRIDGE NO. 94 - 1.40 LOGAN COUNTY	ITEM 515 PROJECT NO. T.R. 94	REVISED:
DATE: AUGUST 2003	APPROVED BY: E.O.C. 8 / 20 / 03	DRAWING NO. 3 OF 4

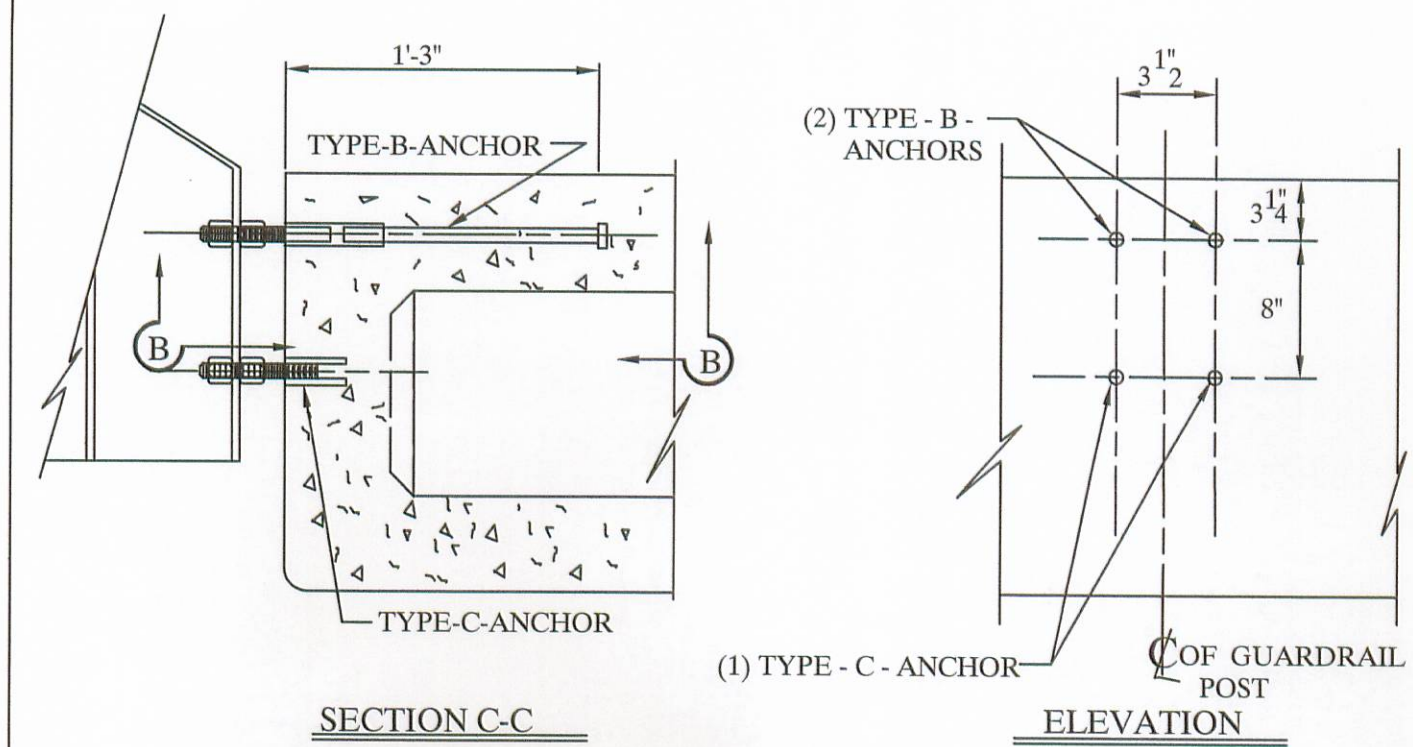
### 12'-0" TIE ROD ASS'Y



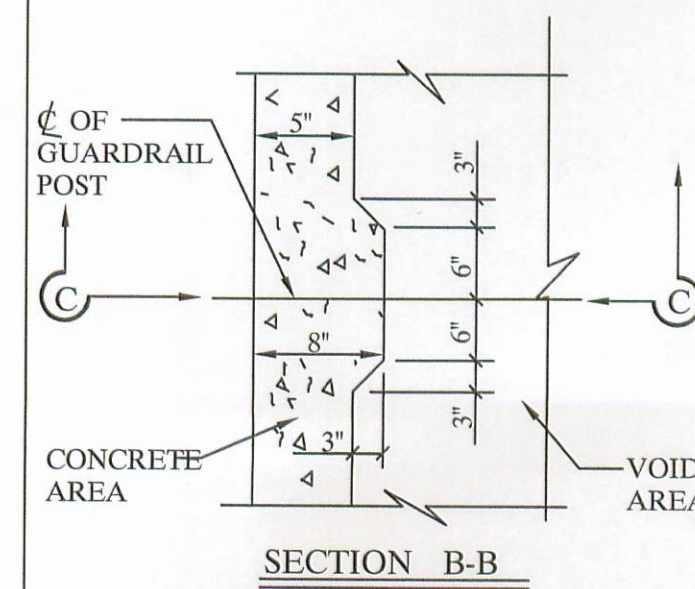
### 8'-0" TIE ROD ASS'Y



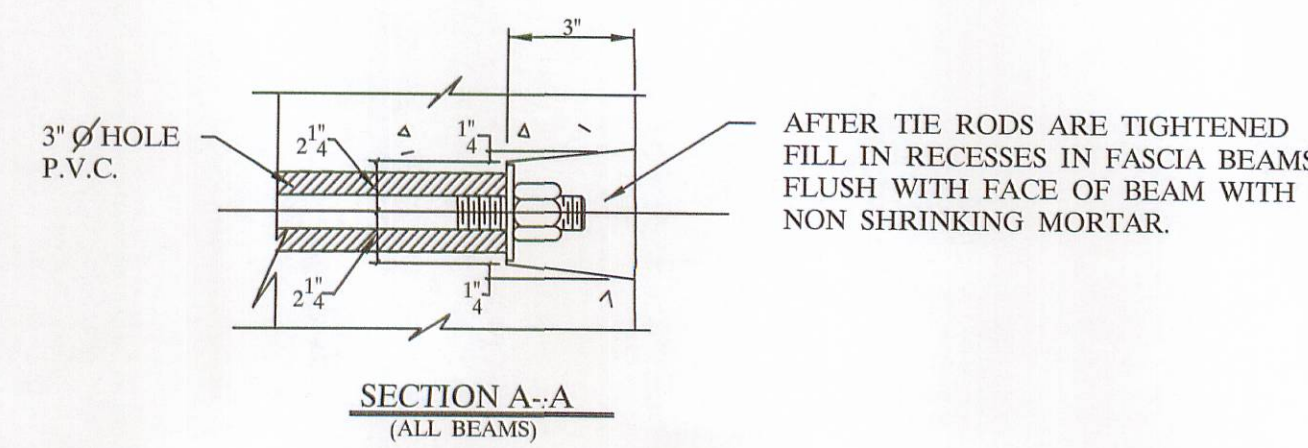
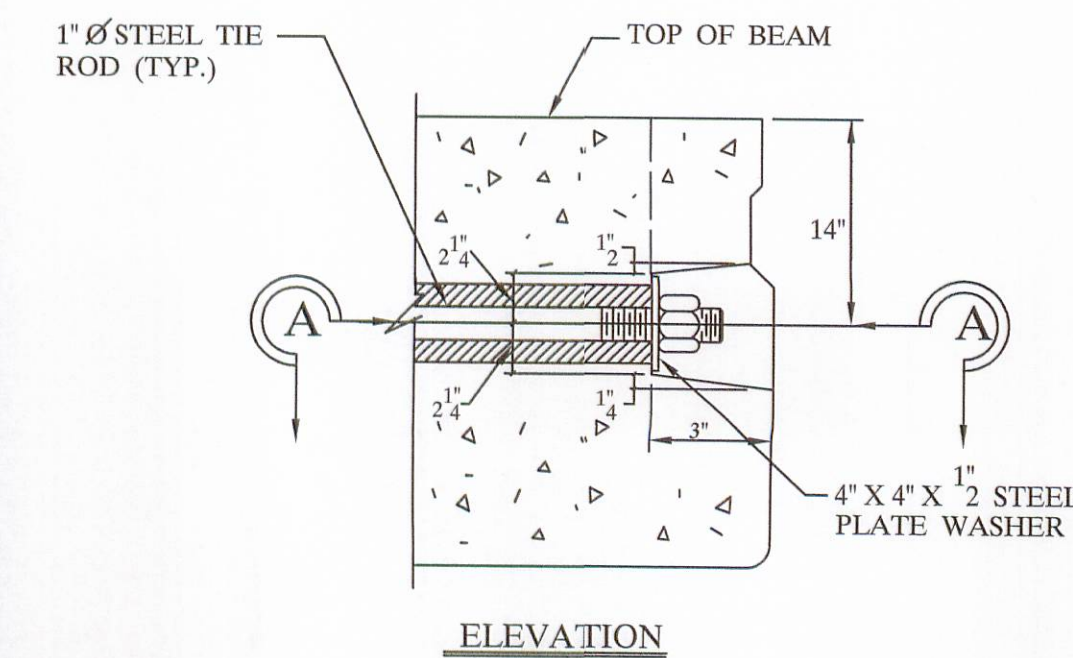
NOTE:  
ALL ITEMS INCLUDING TIE RODS ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM-123 OR 153. PER CMS 711.02, UNLESS OTHERWISE NOTED.



NOTE:  
ONE TYPE "C" ANCHOR PROVIDE S 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.

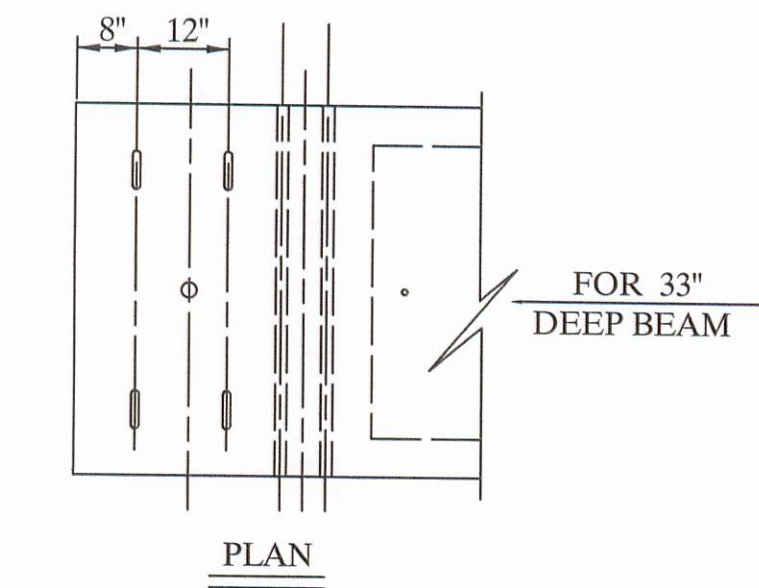
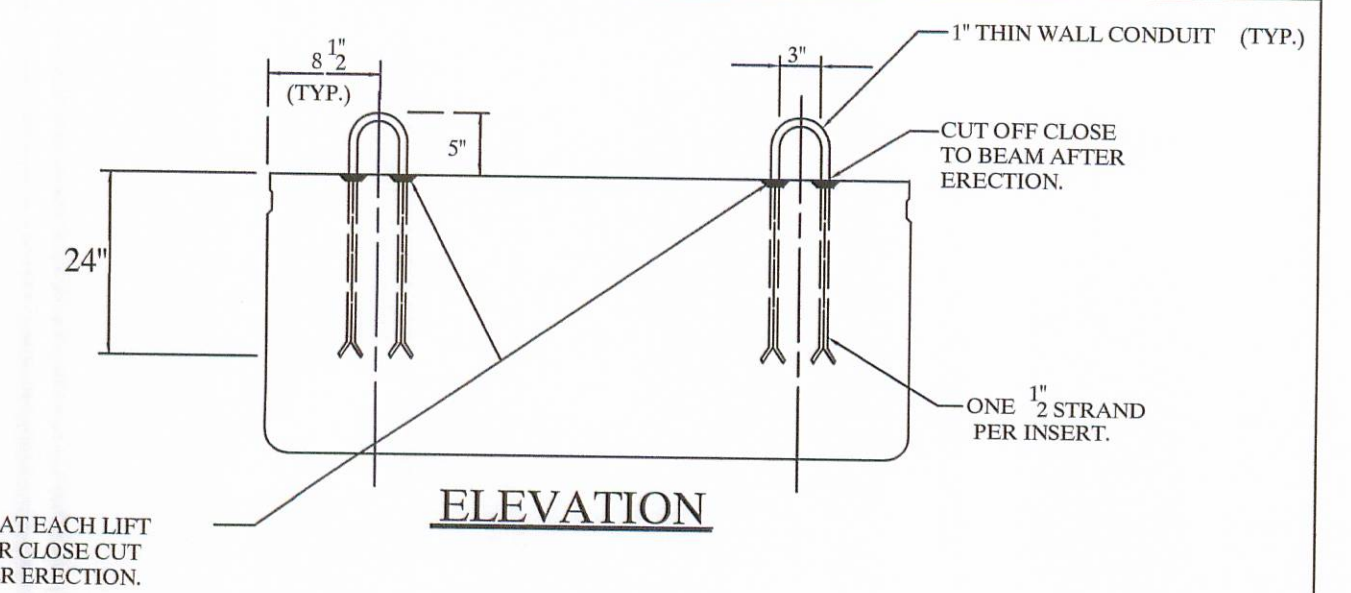


NOTE:  
THE RODS SHALL BE A311 - G1018 STEEL, OR A-36 MODIFIED.

### END DETAIL OF TRANSVERSE TIE ROD ANCHORAGE

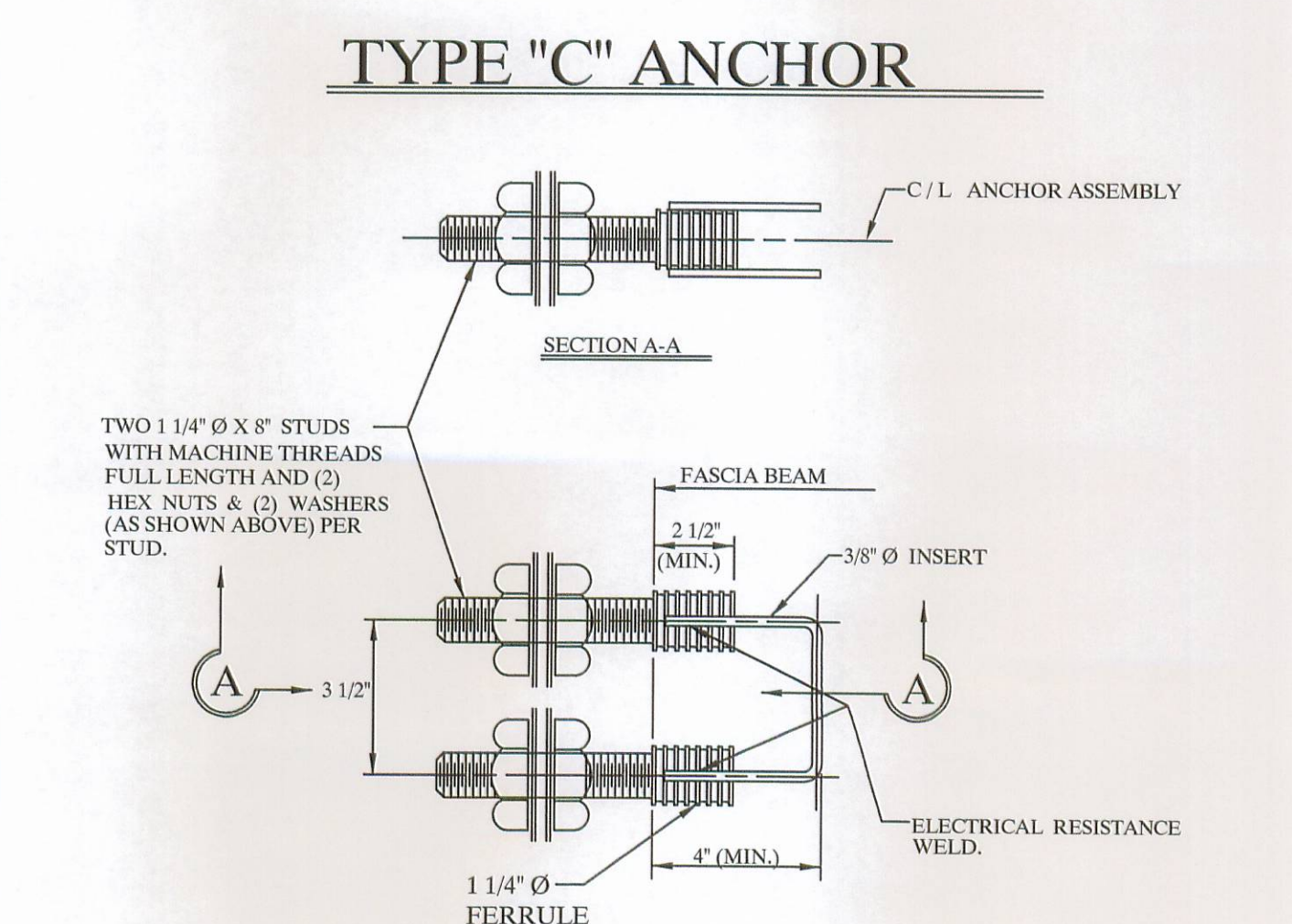
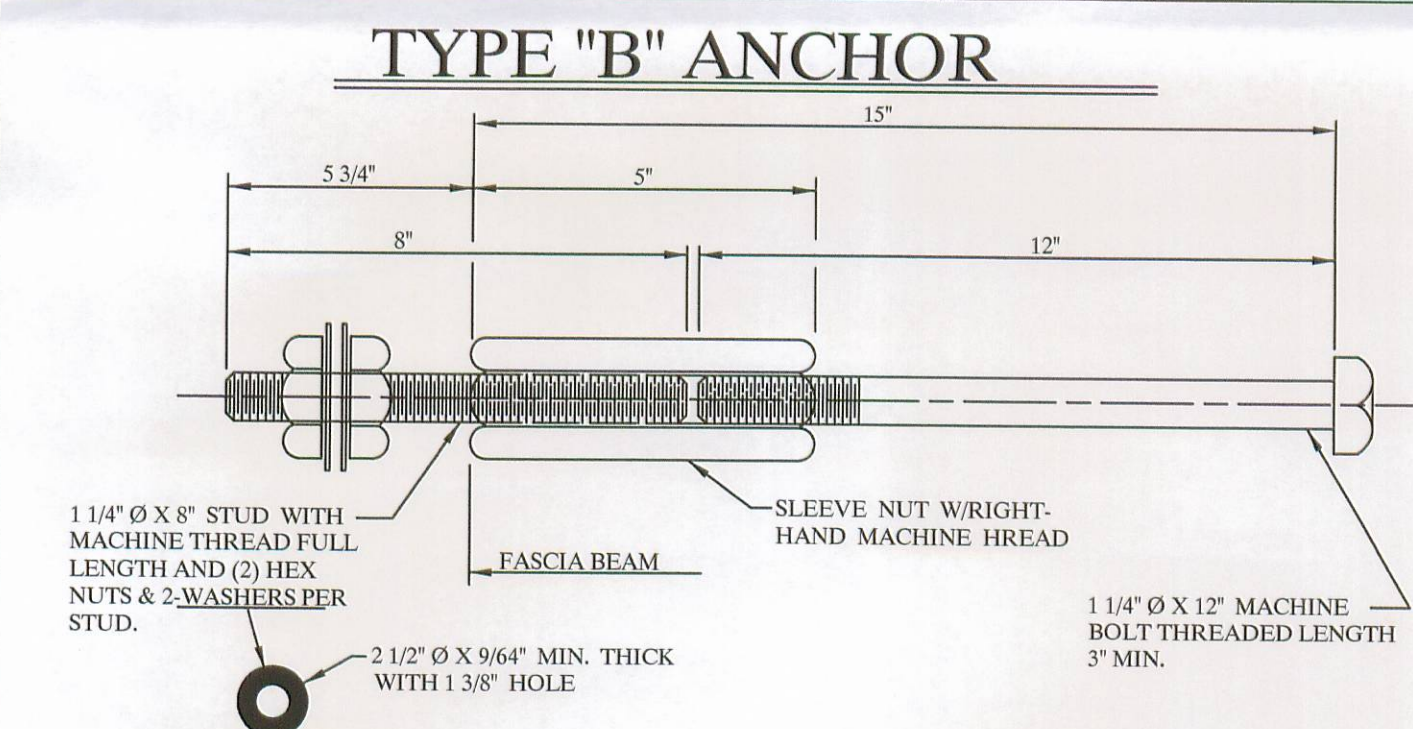
### NOTE:

- 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 SYMETRICALLY ABOUT CENTERLINE.



NOTE:  
LIFTING INSERTS ARE HAND PLACED IN THE SHOP 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

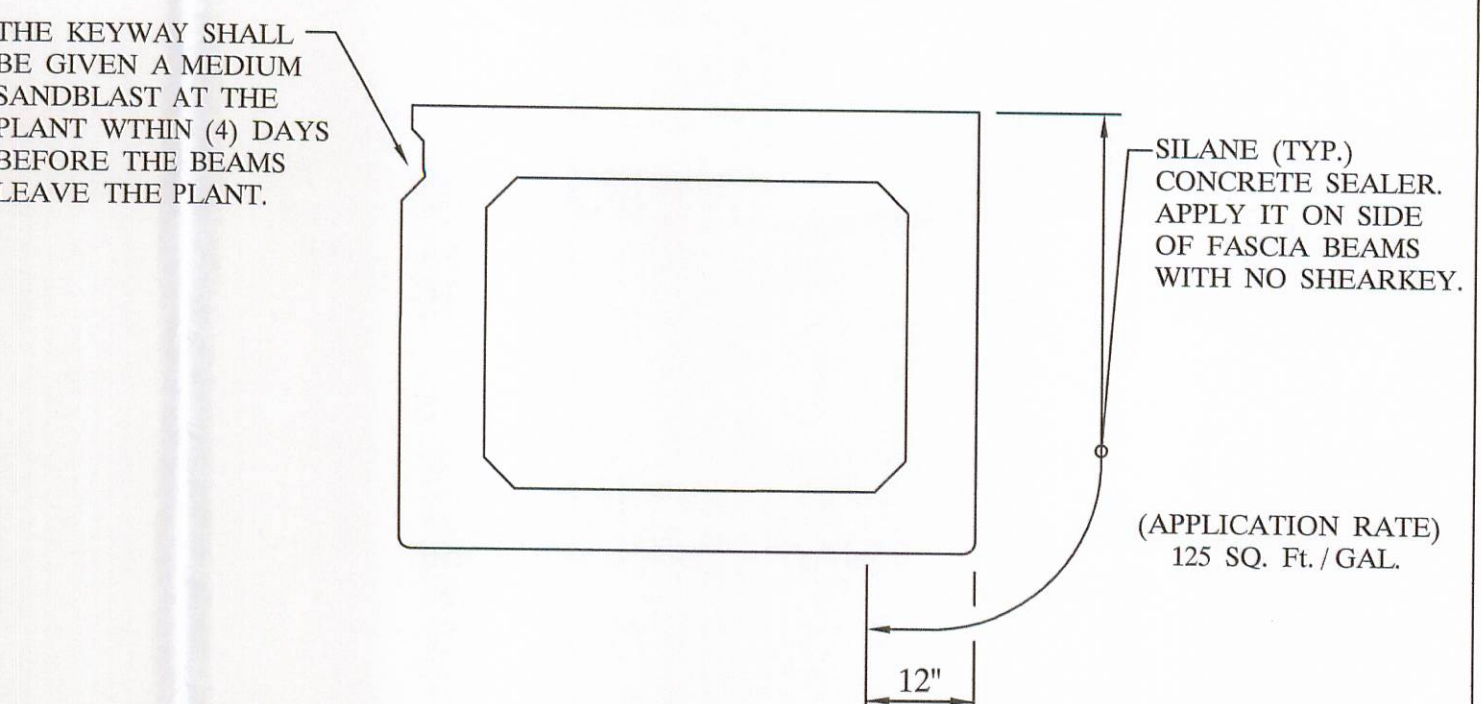


### "B"&"C" ANCHOR DETAILS

### 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. $f_s = 270$ 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 APPURTENACES CONFORM TO O.D.O.T. STANDARD BRIDGE DRAWINGS PSBD - 1 - 93 SHEETS ONE, TWO, THREE, & FOUR.



### TYPICAL FASCIA BEAM

BRIDGE NO. 94 - 1.40 PROJECT NO. T.R. 94 ITEM 515

LOGAN COUNTY

## UNITED PRECAST INC.

ROUNDHOUSE LANE MT. VERNON, OHIO 43050 PHONE:(740)393-1121, FAX:(740)392-9708	SCALE -----	DRAWN BY: PHIL REVISED
DATE AUG. '03	APPROVED BY: E.O.C.	DRAWING NO. 4 OF 4

8 / 20 / 03