

REVIEWED AS NOTED
 REVISION AND RESUBMIT
 NOT REVIEWABLE

Review is only for conformance with the general concept of the Project and compliance with the information given in the Contract Documents. Contractor is responsible for determining the accuracy of the information shown on the job site for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

DATE: MAR 8 1964
 SHELL ENVIRONMENTAL GROUP, INC.
 LANSING, MICHIGAN

APPROVED

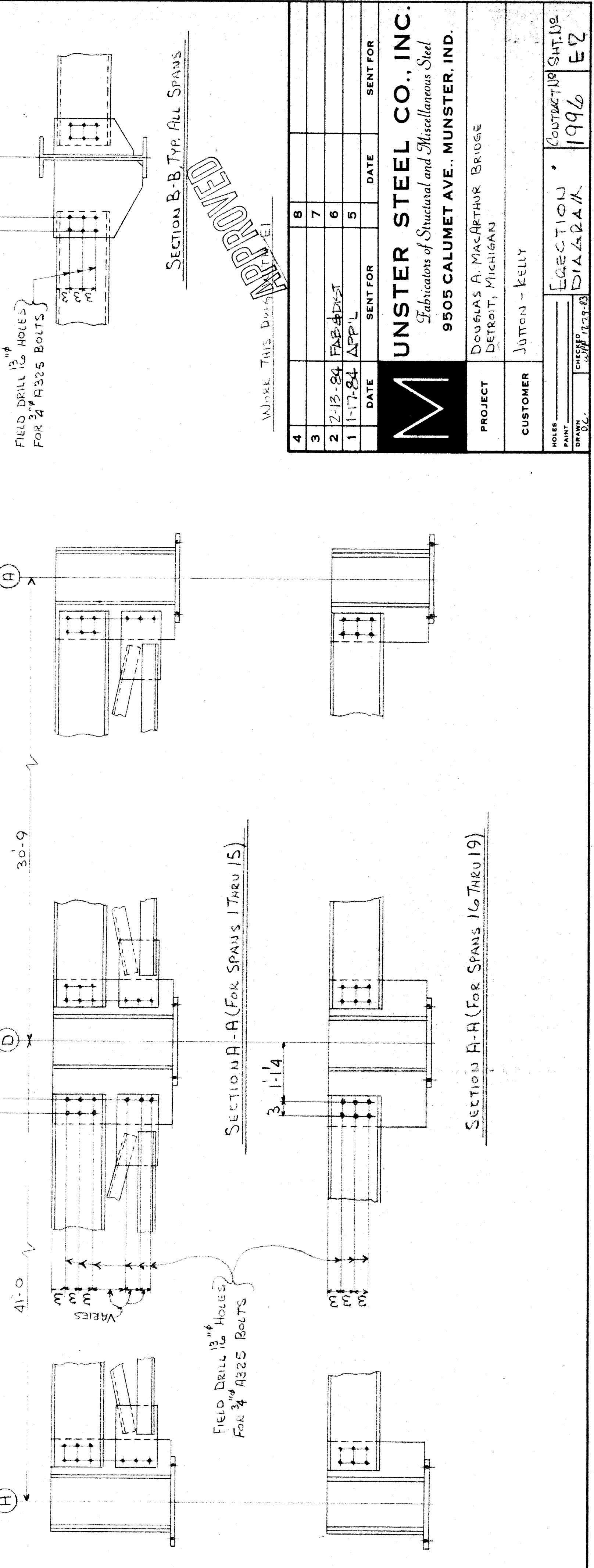
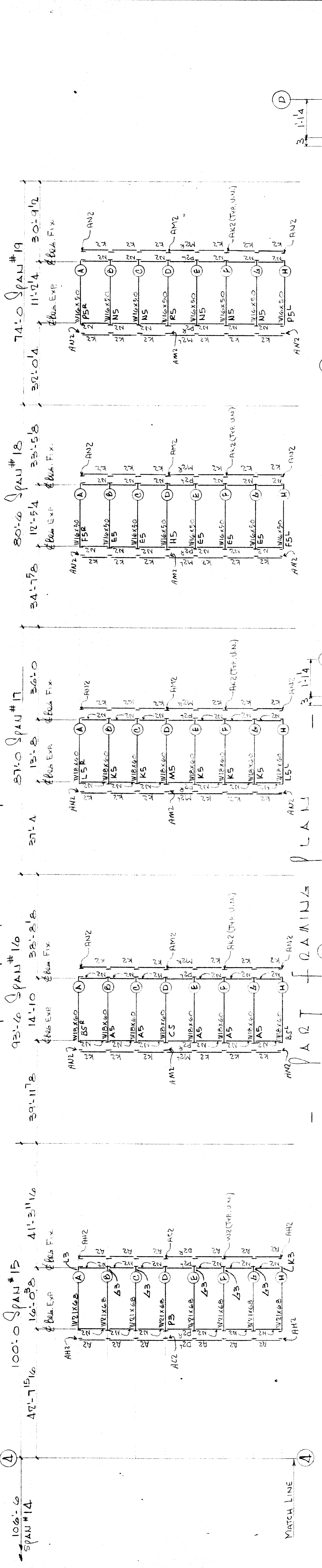
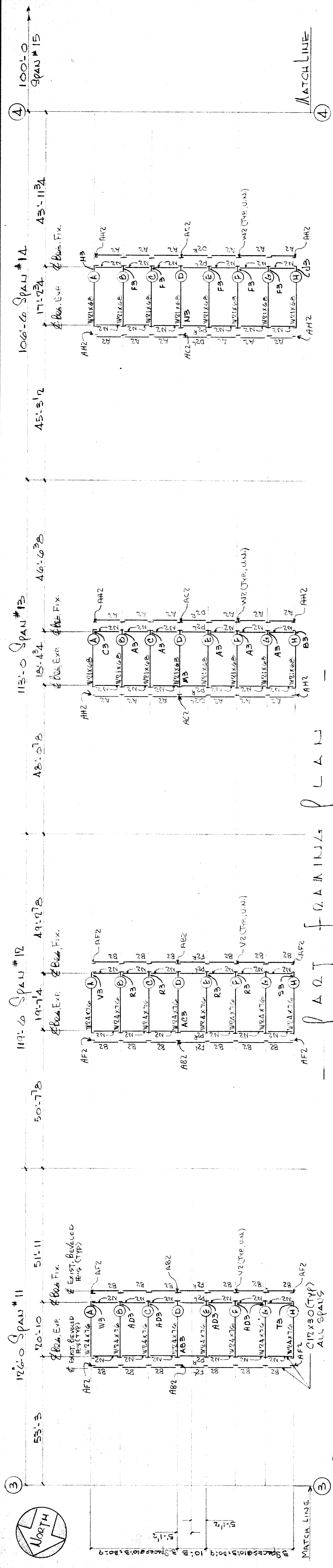
WORK THIS DRAWING WITH DWG. E-2

NO.	DATE	SENT FOR	DATE	SENT FOR
4				
3				
2	2-13-64	FIELD TEST	6	
1	1-17-64	APPL	5	

MUNSTER STEEL CO., INC.
 Fabricators of Structural and Miscellaneous Steel
 9505 CALUMET AVE., MUNSTER, IND.

PROJECT: DOUGLAS A. MACARTHUR BRIDGE
 CUSTOMER: JUTTON-KELLY
 DETROIT, MICHIGAN

CONTRACT NO: 1996
 EJECTION DIAGRAM: 1996
 DATE: 11-28-63
 SHEET NO: E-1
 MCD 9-84



- GENERAL NOTES**
- (1) ALL MATERIAL SHOWN SHALL BE FABRICATED IN ACCORDANCE WITH THE 1919 EDITION OF MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION FOR WELDING STRUCTURAL STEEL.
 - (2) ALL MATERIAL SHALL BE ASTM. A572, GRADE 50 UNLESS NOTED, AND SHALL MEET THE CHIPPY V-NOTCH IMPACT REQUIREMENTS AS SHOWN FOR A572 STEEL IN ART. 8.06.04 OF THE STD. SPECIFICATIONS. (15 FT./LBS. @ 40°F)
 - (3) WELDING TO BE DONE IN ACCORDANCE WITH AWS SPECS.
 - (4) ALL BOLTS ARE TO BE A325 TYPE 1.
 - (5) ALL MATERIAL TO BE PAINTED OR GALVANIZED SHALL BE BLAST CLEANED PER SPECIFICATION 830-SP10-03.
 - (6) FOR PAINTING, ALL BURRED OR SHARP EDGES ON ALL STEEL MEMBERS SHALL BE REMOVED BY GRINDING BEFORE CLEANING. ANY AREA AROUND AFTER BLASTING MUST BE REPROFILED BEFORE PAINTING.
 - (7) ALL STEEL SHALL BE PAINTED ONE SHOP COAT OF INORGANIC ZINC, U.N.

NO.	DATE	SENT FOR	DATE	SENT FOR
4				
3	2-13-84	FAB. CHECK		
2	1-17-84	APPROV.		
1				

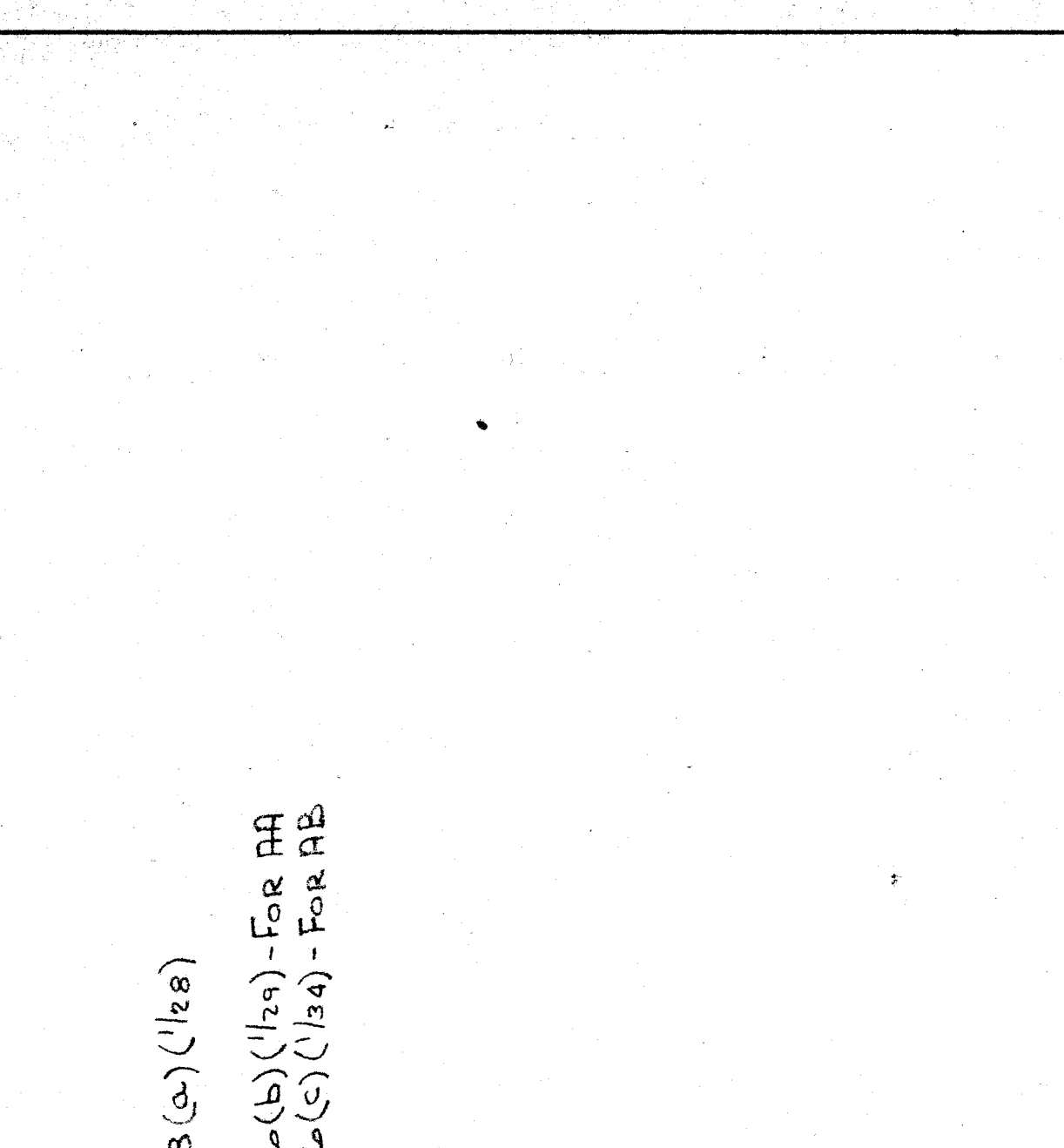
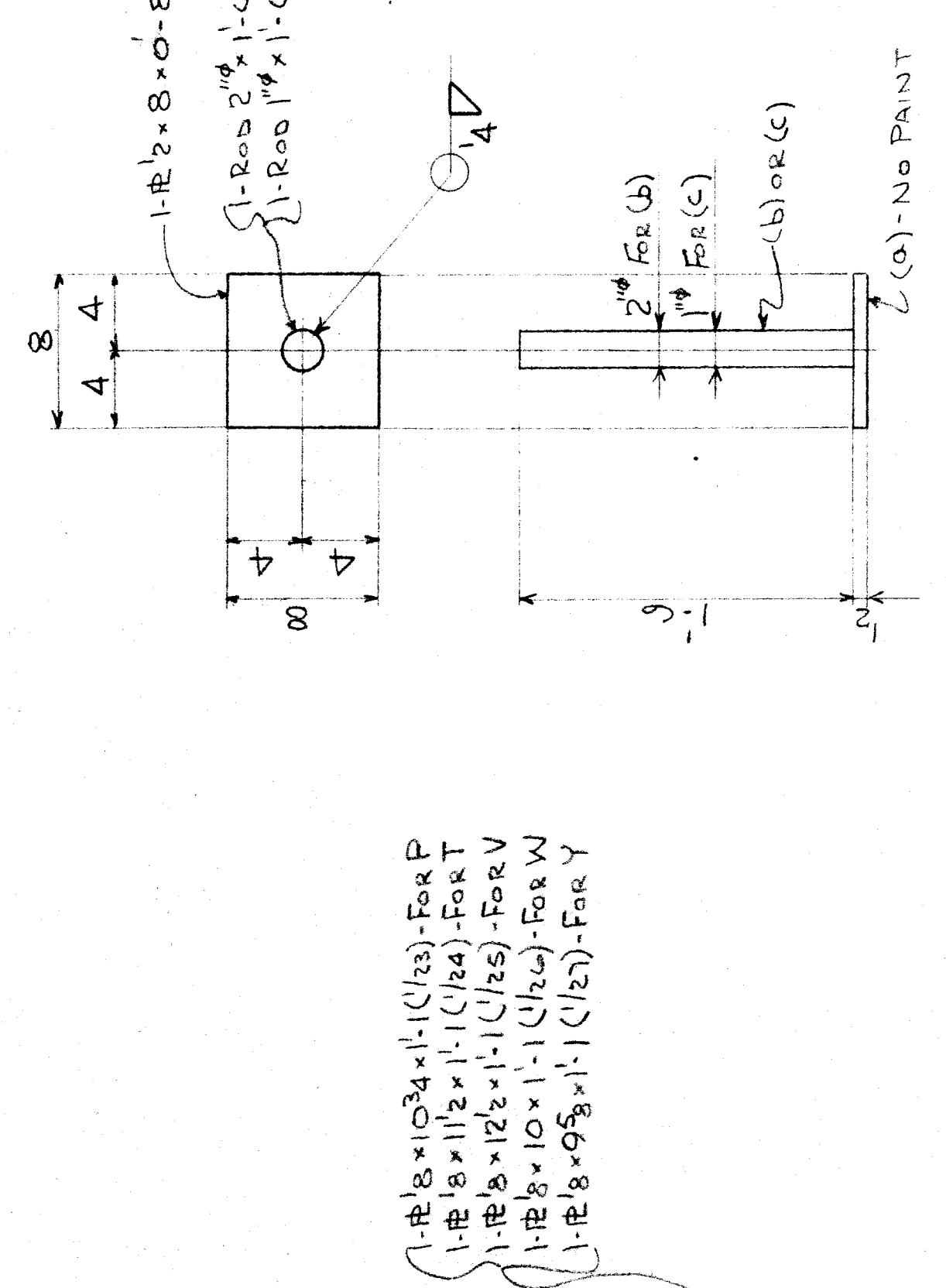
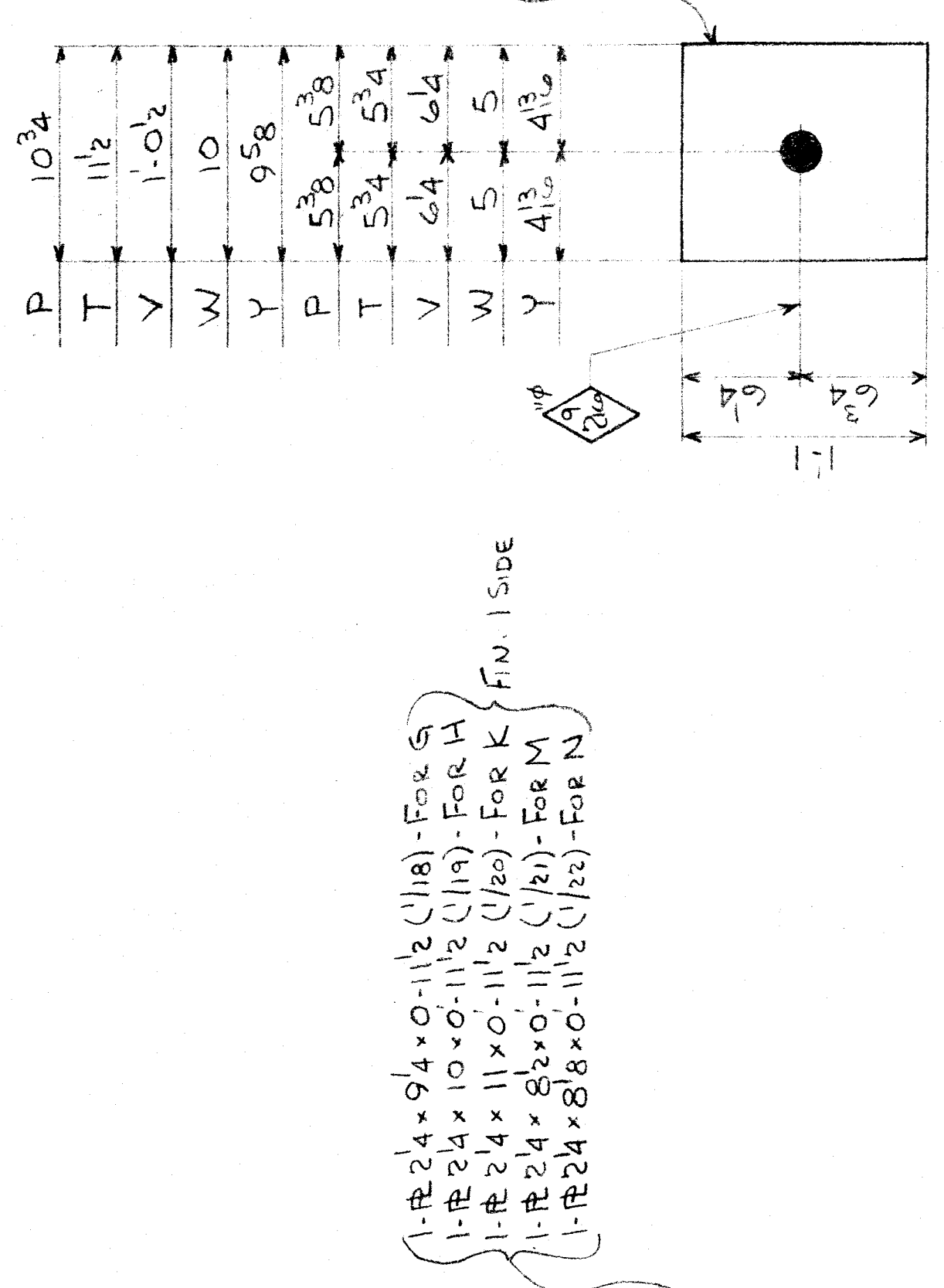
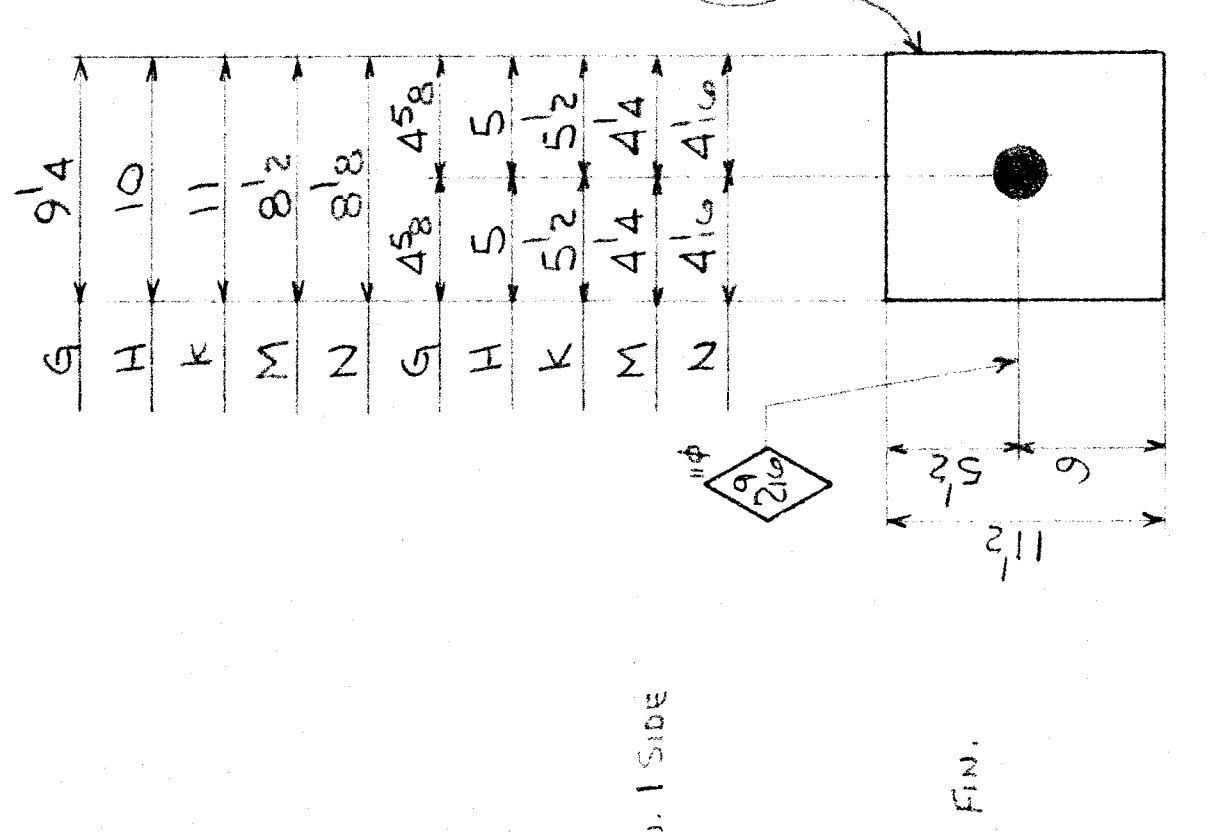
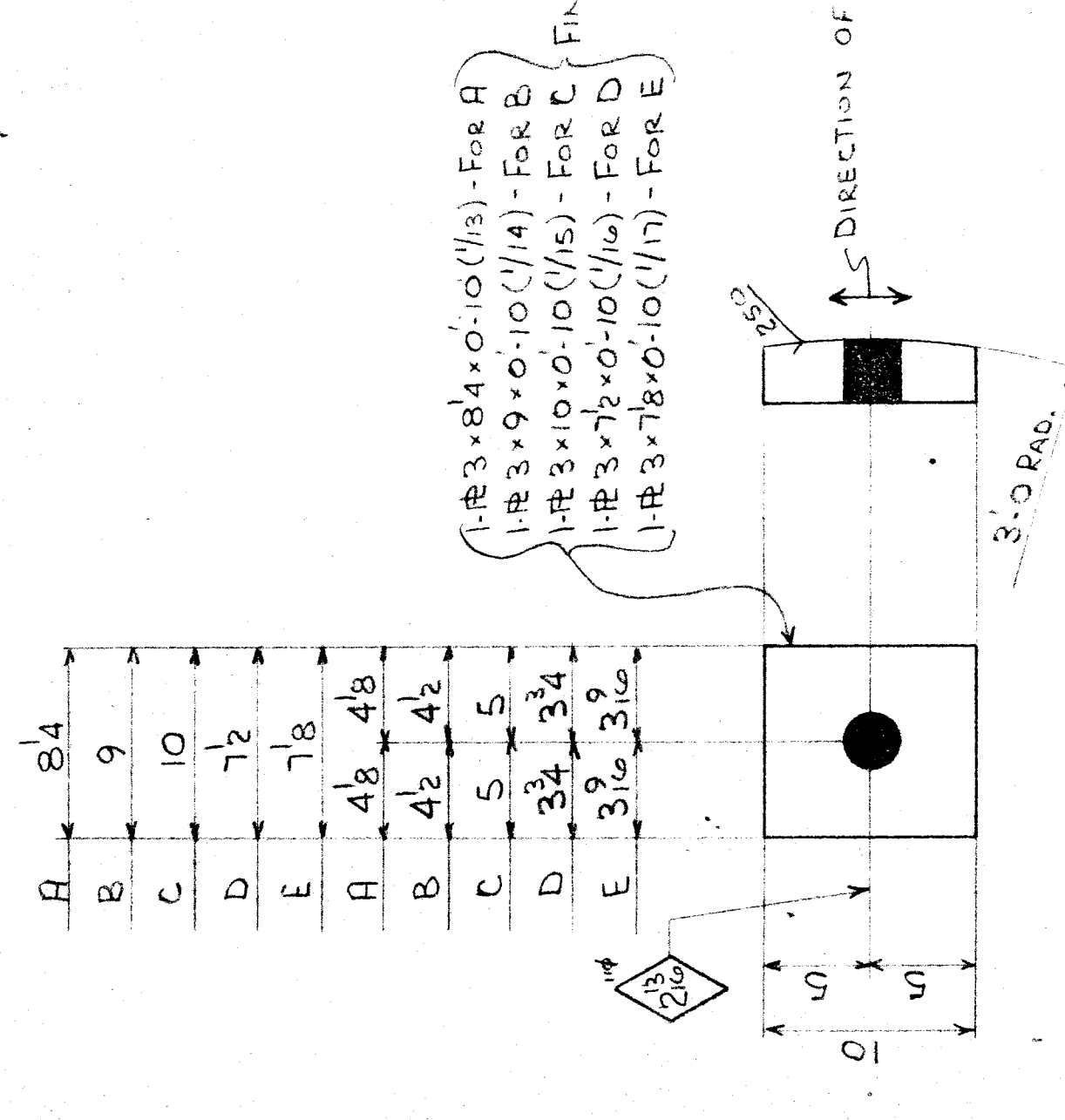
UNSTER STEEL CO., INC.
Fabricators of Structural and Miscellaneous Steel
9505 CALUMET AVE., MUNSTER, IND.

PROJECT: DOUGLAS A. MACARTHUR BRIDGE, DETROIT, MICHIGAN
CUSTOMER: JUTON - KELLY

SECTION: BRIDGE DIAGRAM
DATE: 1976
DRAWN BY: E2

MOORE ENGINEERING CO., INC.
11750 E. 14TH AVE., DETROIT, MICHIGAN 48204

ACD 9-84



32-Sole Pls - A1

32-	-B1
56-	-C1
16-	-D1
16-	-E1

NO GALV. PAINT WITH BEAMS

SHOP WELD TO BEAMS AS SHOWN ON SHTS. #3 & 4 & 5

32-Masonry Pls - G1

32-	-H1
56-	-K1
16-	-M1
16-	-N1

32-Lead Pls - P1

32-	-T1
56-	-V1
16-	-W1
16-	-Y1

NO PAINT, NO GALV.

152-Position Pls - RA1

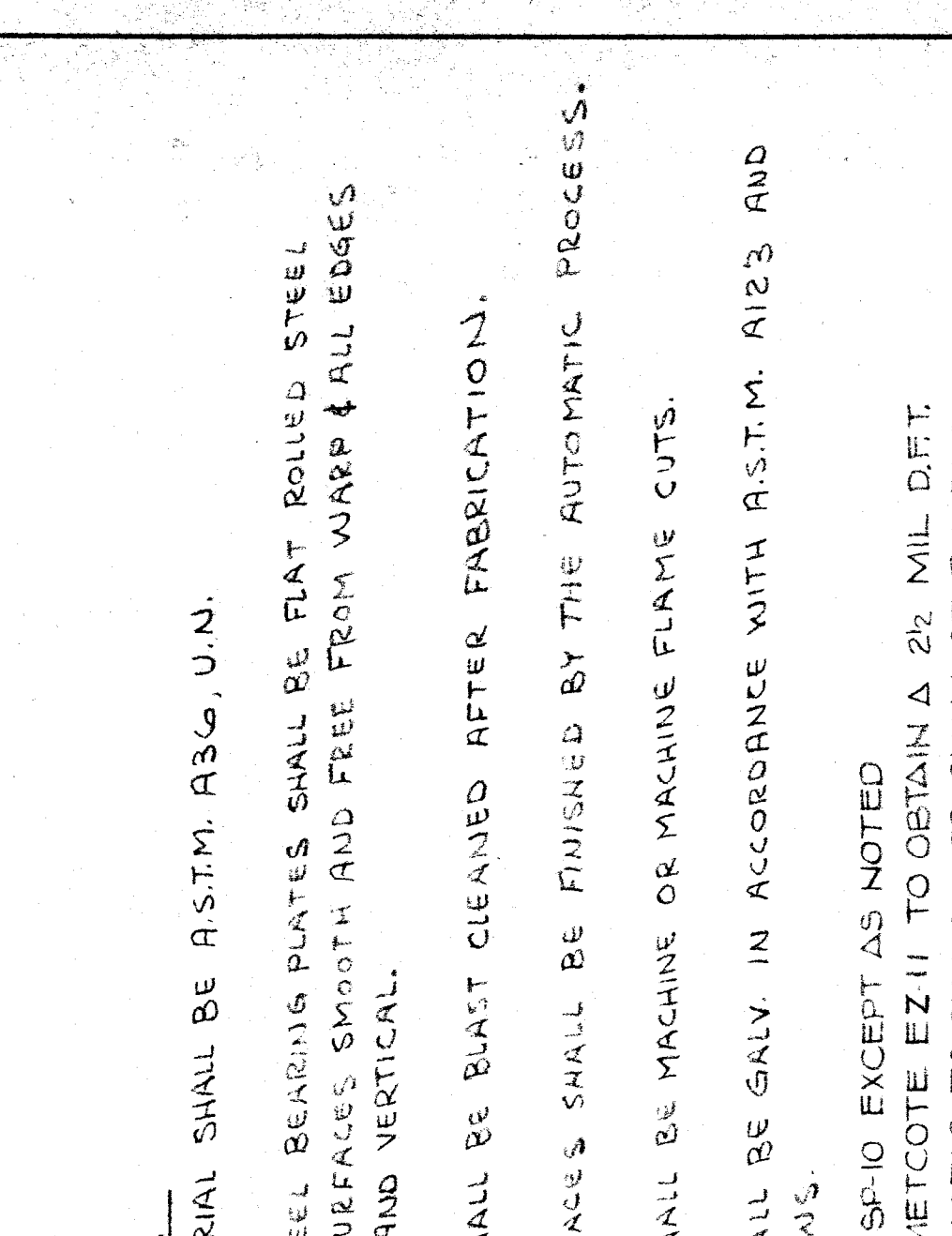
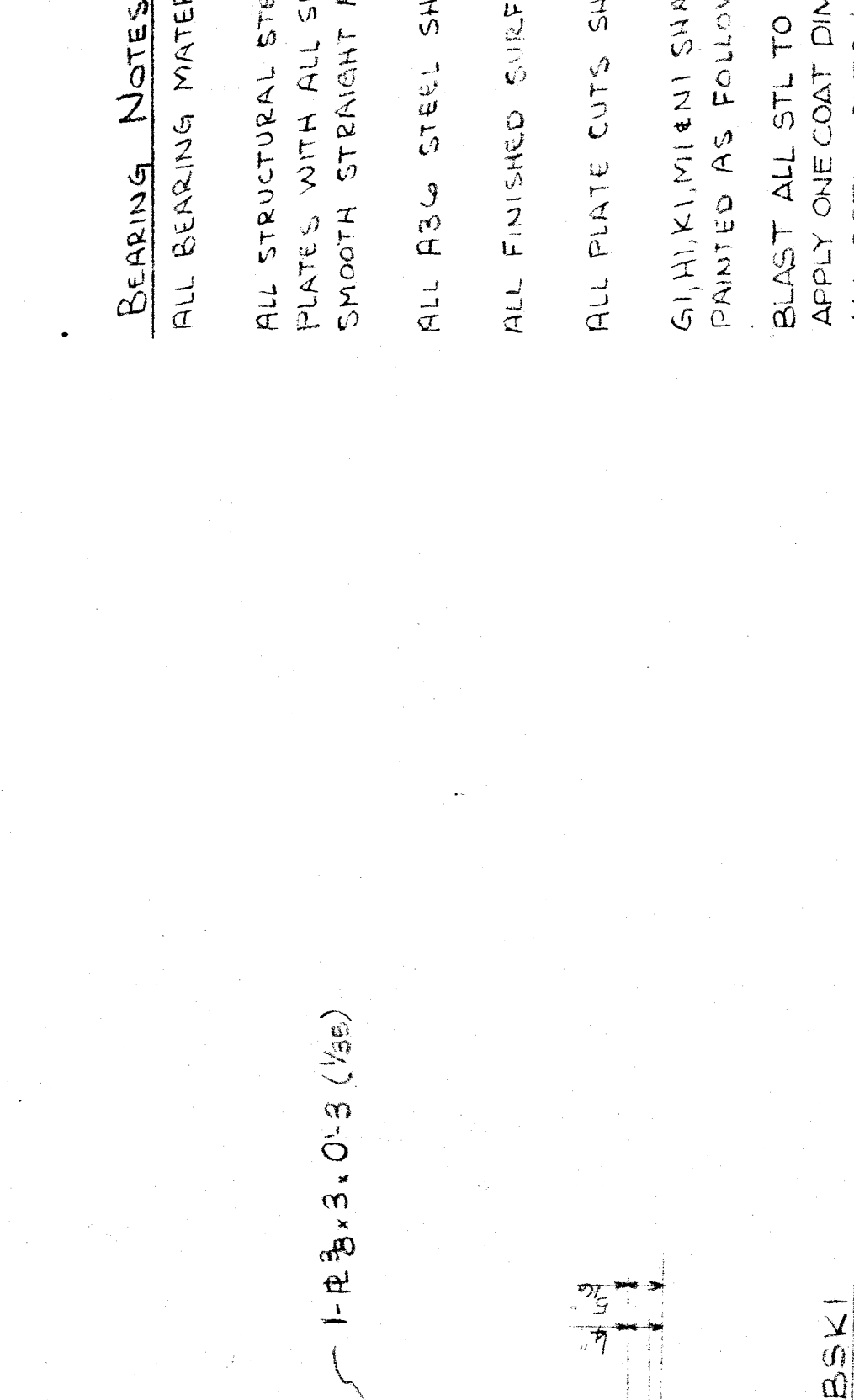
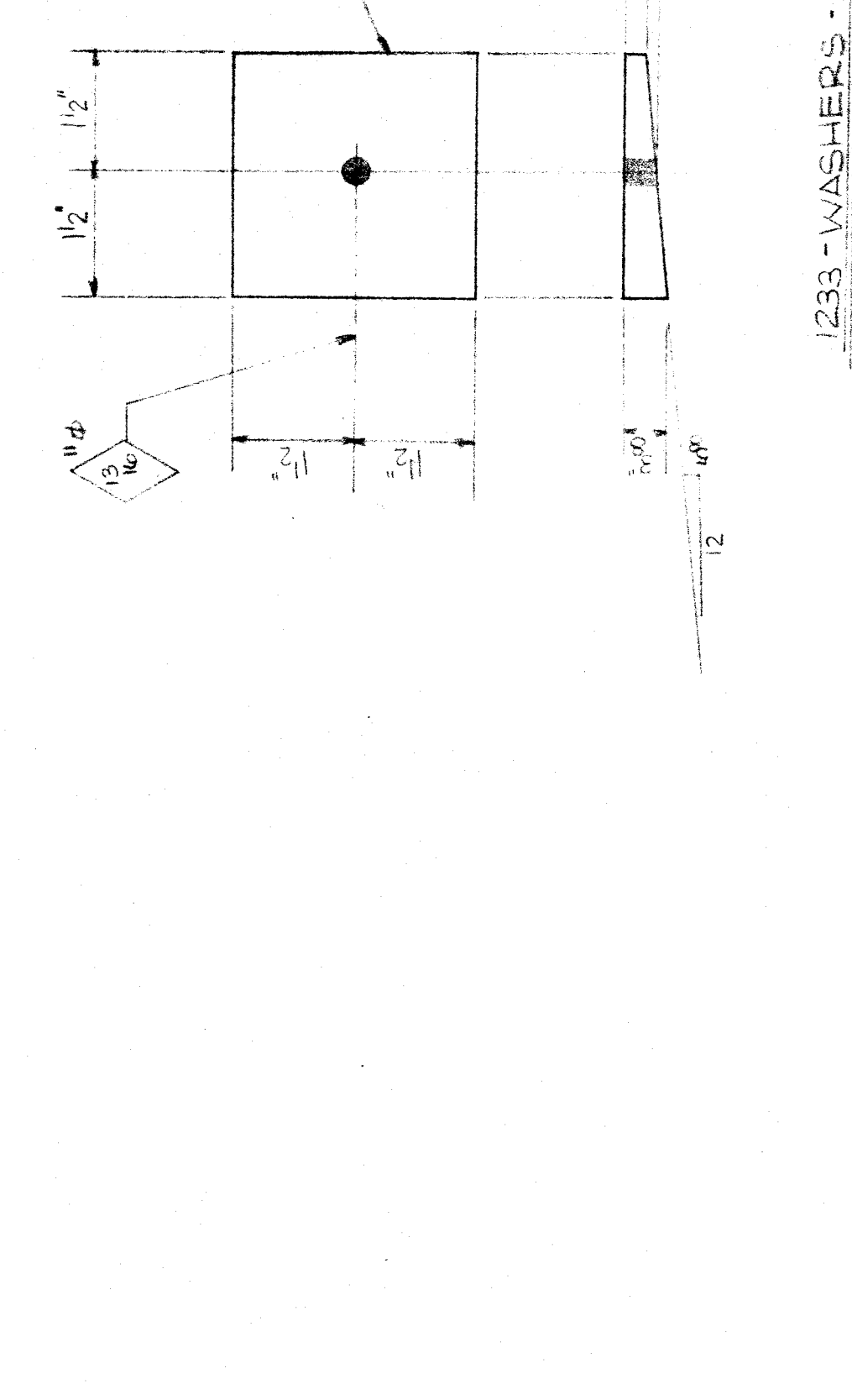
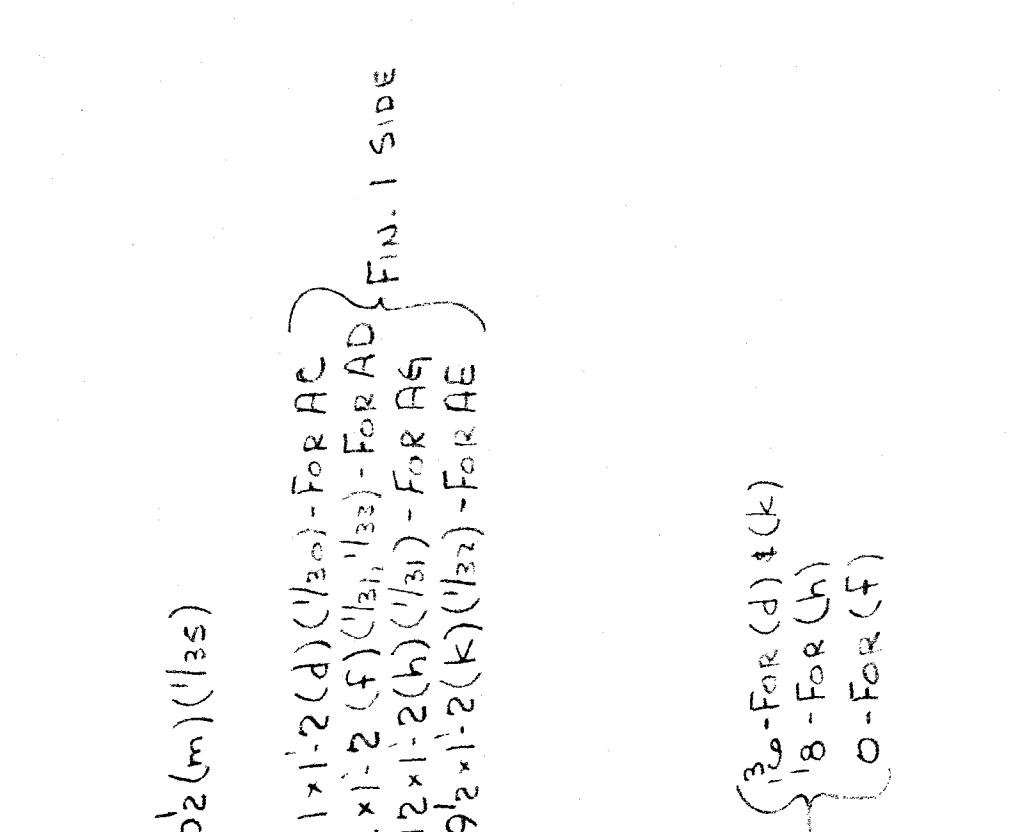
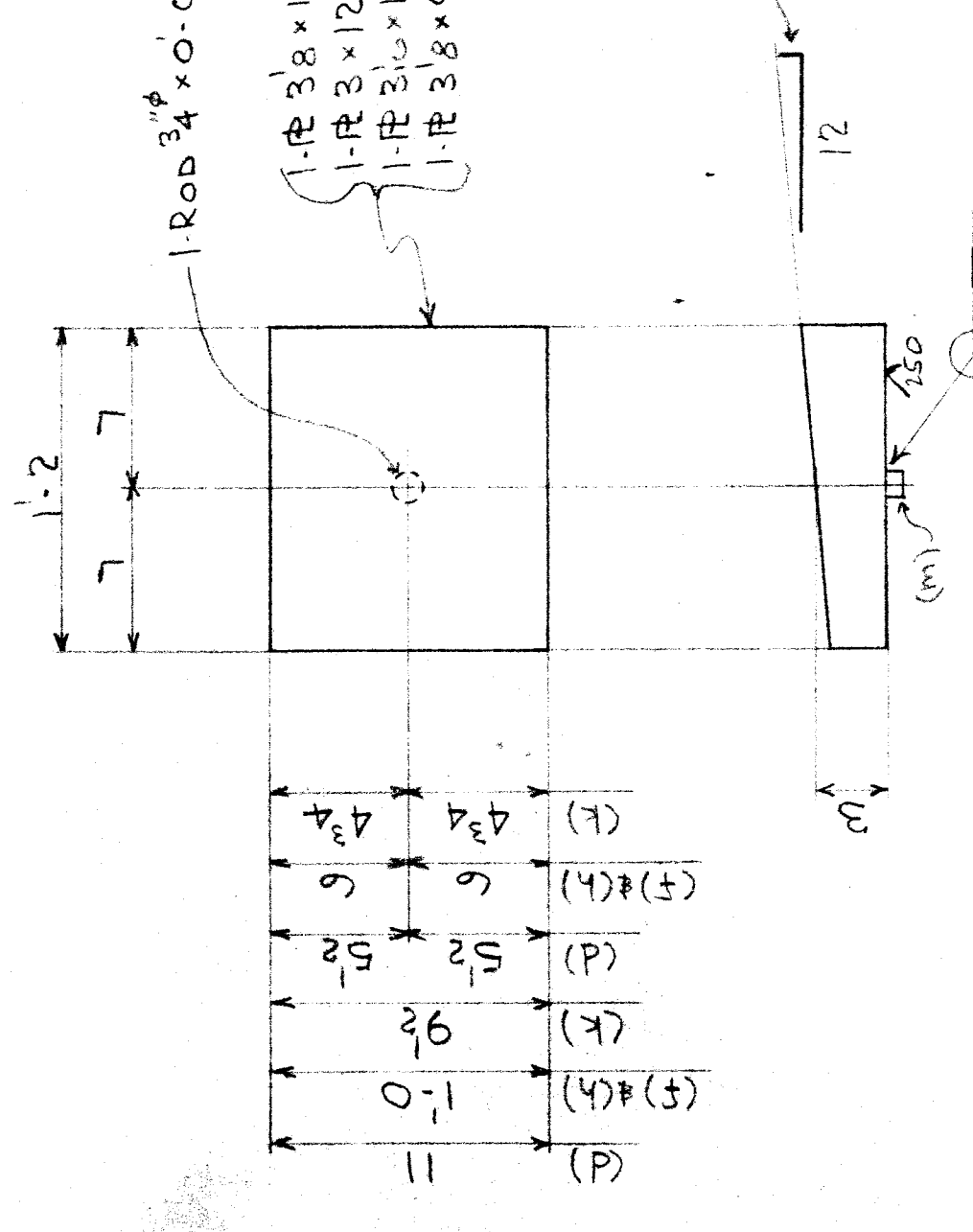
152-	-AB1
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64-Sole Pls - AC1

40-	-AD1
16-	-AG1
32-	-AE1

NO GALV. PAINT WITH BEAMS

SHOP WELD TO BEAMS AS SHOWN ON SHTS. #3 & 4 & 5



32-Sole Pls - A1

32-	-B1
56-	-C1
16-	-D1
16-	-E1

NO GALV. PAINT WITH BEAMS

32-Masonry Pls - G1

32-	-H1
56-	-K1
16-	-M1
16-	-N1

32-Lead Pls - P1

32-	-T1
56-	-V1
16-	-W1
16-	-Y1

NO PAINT, NO GALV.

152-Position Pls - RA1

152-	-AB1
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64-Sole Pls - AC1

40-	-AD1
16-	-AG1
32-	-AE1

NO GALV. PAINT WITH BEAMS

FIELD BOLT LIST

NO.	ACT.	SHIP CT.	DIA.	GRIP TYPE	HEAD	HEIGHT	REMARKS
36	32	3	3/8	4	A325	5/4	HEX
7314	7048	1	1	1	2 1/2	2 1/4	1-BEV WASH (GALV)
465	448	2	1/2	2	2 1/2	2 1/4	
69	64	3	3/8	3	4	4	
135	128	4	1/2	4	4 1/2	4 1/2	
234	224	5	5/8	5	4 1/2	4 1/2	
201	192	3	3/8	3	4	4	
36	32	3	3/8	3	4	4	
36	32	4	1/2	4	5	5	
36	32	4	1/2	4	5	5	
36	32	4	1/2	4	5	5	
7314							STD. RD. HARDENED WASH. WITH 1/16" HOLE

FOR LOCATION SEE SHT. E1

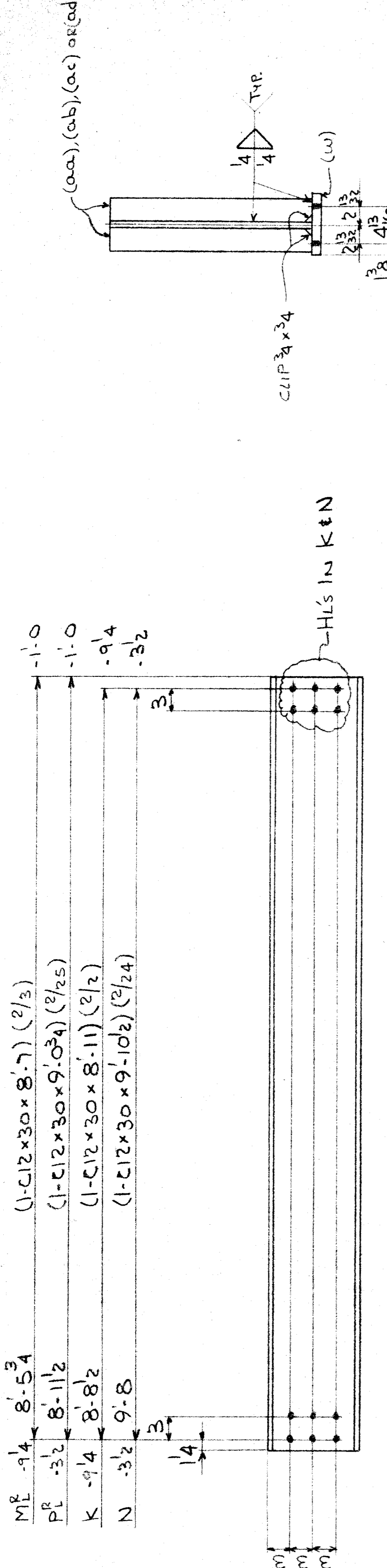
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3		7		
2	2-13-84	FAB & DET	6	
1	1-17-84	APPL	5	
	DATE	SENT FOR	DATE	SENT FOR

MUNSTER STEEL CO., INC.
Fabricators of Structural and Miscellaneous Steel
 9505 CALUMET AVE., MUNSTER, IND.

PROJECT: DOUGLAS R. MACARTHUR BRIDGE
 CUSTOMER: JUTON-KELLY
 DETROIT, MICHIGAN

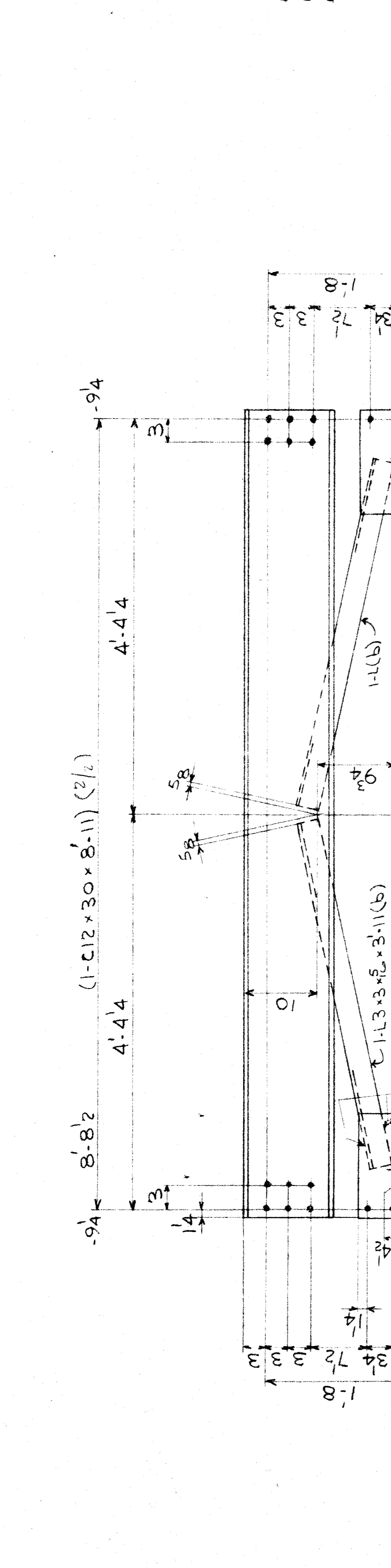
CONTRACT No. 15MT-MB-1996
 DRAWING No. BEARINGS
 SHEET No. 33 OF 33

APPROVED

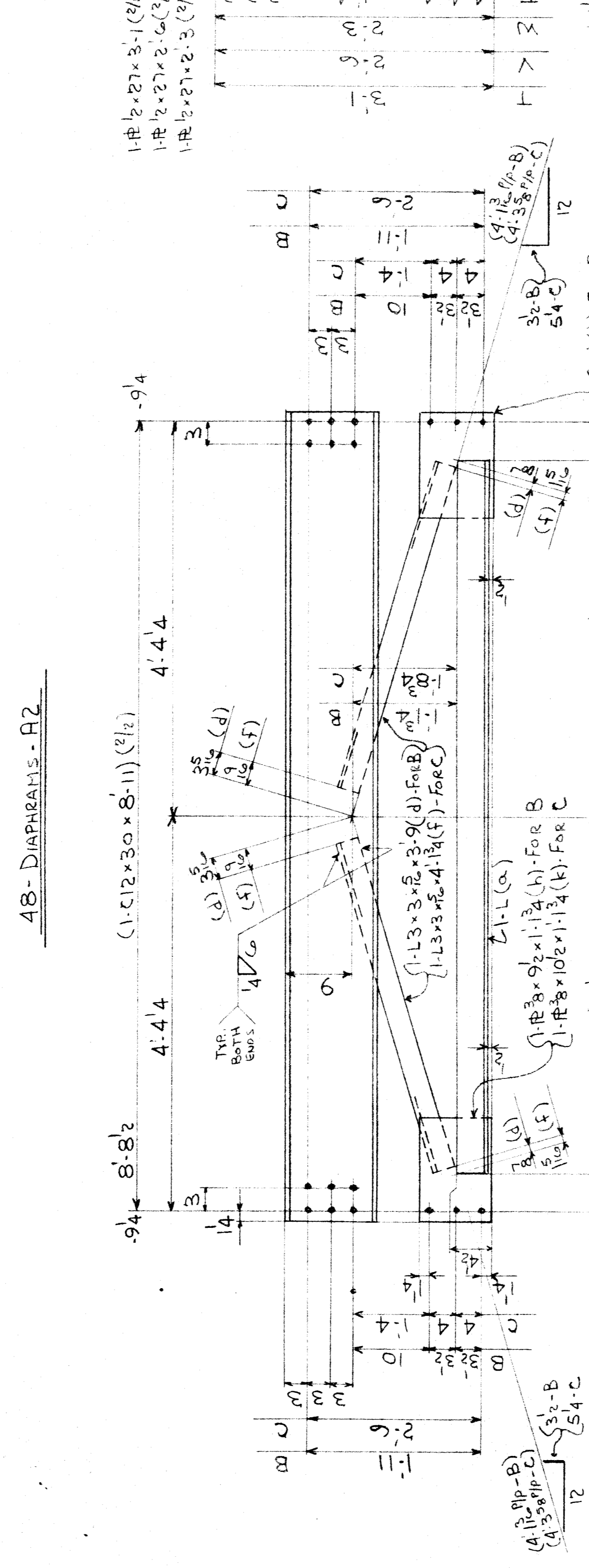
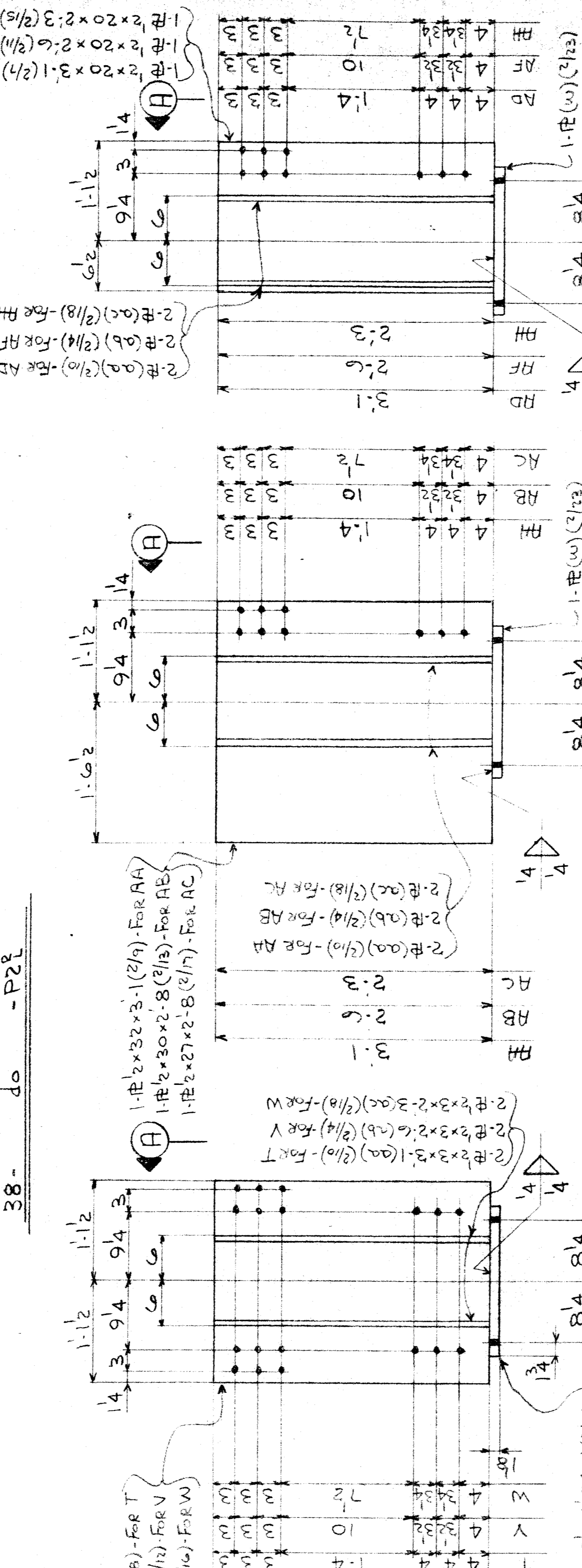


48 - DIAPHRAGMS - K Z

8 -	- M22
228 -	- N2
38 -	- P22



48 - DIAPHRAGMS - A2



10-Pier Frames - AH2

12 -	- AB2
8 -	- AC2

20-Pier Frames - AD2

24 -	- AF2
16 -	- AH2

30-Pier Frames - T2

60 -	- V2
40 -	- W2

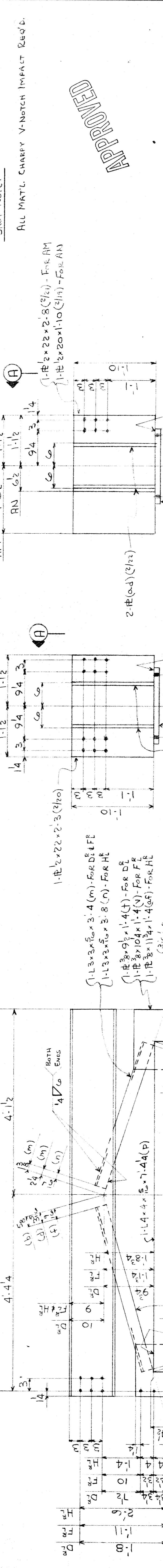
72 - DIAPHRAGMS - B2

60 - DIAPHRAGMS - C2

8-Pier Frames - AM2

16 -	- AS2
-	- AT2

40-Pier Frames - AK2



8-Pier Frames - AM2

16 -	- AS2
-	- AT2

40-Pier Frames - AK2

8 - DIAPHRAGMS - D22

12 -	- F22
10 -	- H22

8 - DIAPHRAGMS - K Z

8 -	- M22
228 -	- N2
38 -	- P22

MUNSTER STEEL CO., INC.
Fabricators of Structural and Miscellaneous Steel
9505 CALUMET AVE., MUNSTER, IND.

PROJECT: DOUGLAS A. MACARTHUR BRIDGE
DETROIT, MICHIGAN

CUSTOMER: JUTTON - KELLY

DIAHRAGMS & PIER FRAMES

CONTRACT No. 199G

SINT. No. 2

DATE: 1-17-84
DATE: 2-13-84
DATE: 1-17-84

SENT FOR: APPL
SENT FOR: FAB & DET
SENT FOR: 8

DATE: 5
DATE: 6
DATE: 7
DATE: 8

DATE: 5
DATE: 6
DATE: 7
DATE: 8

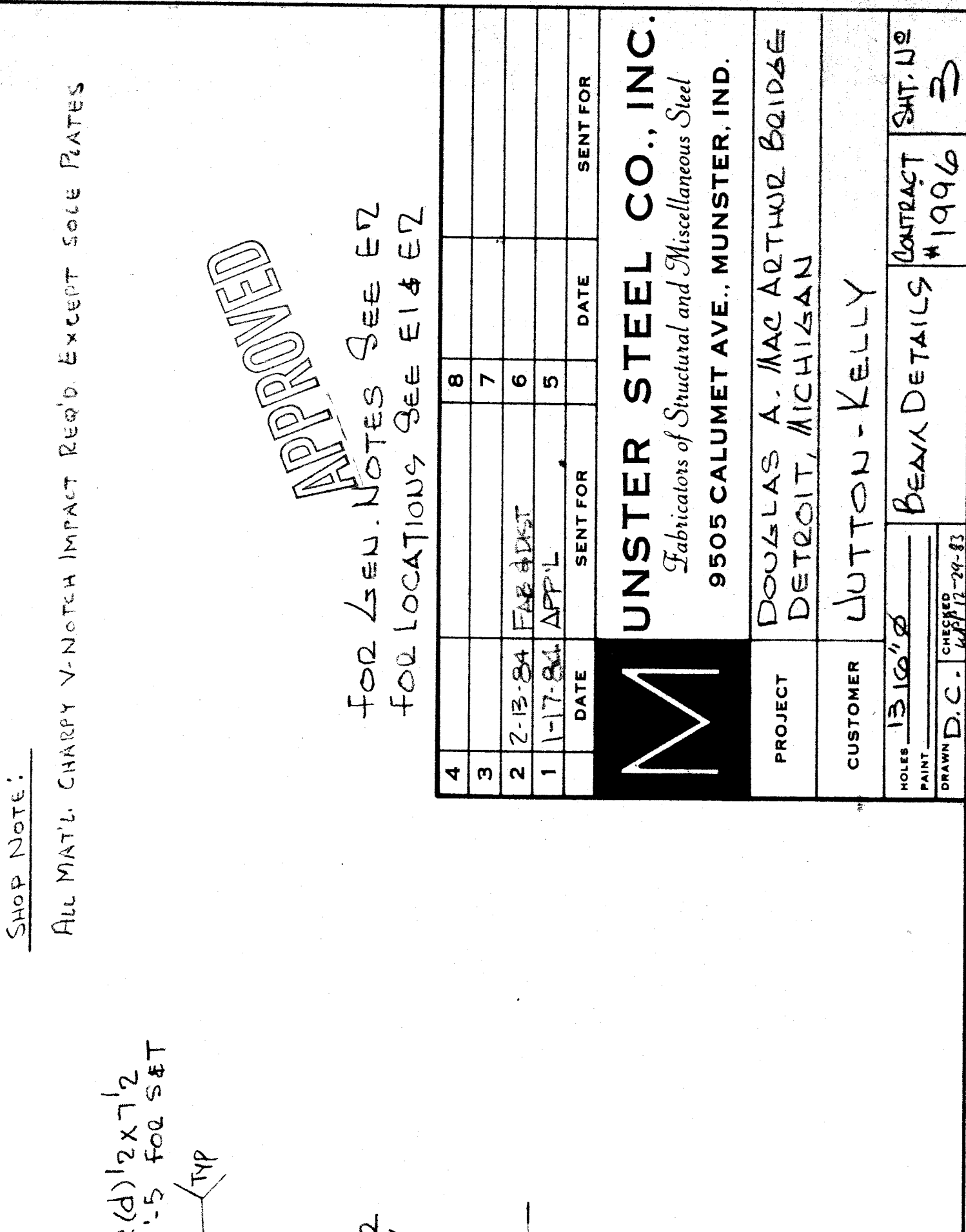
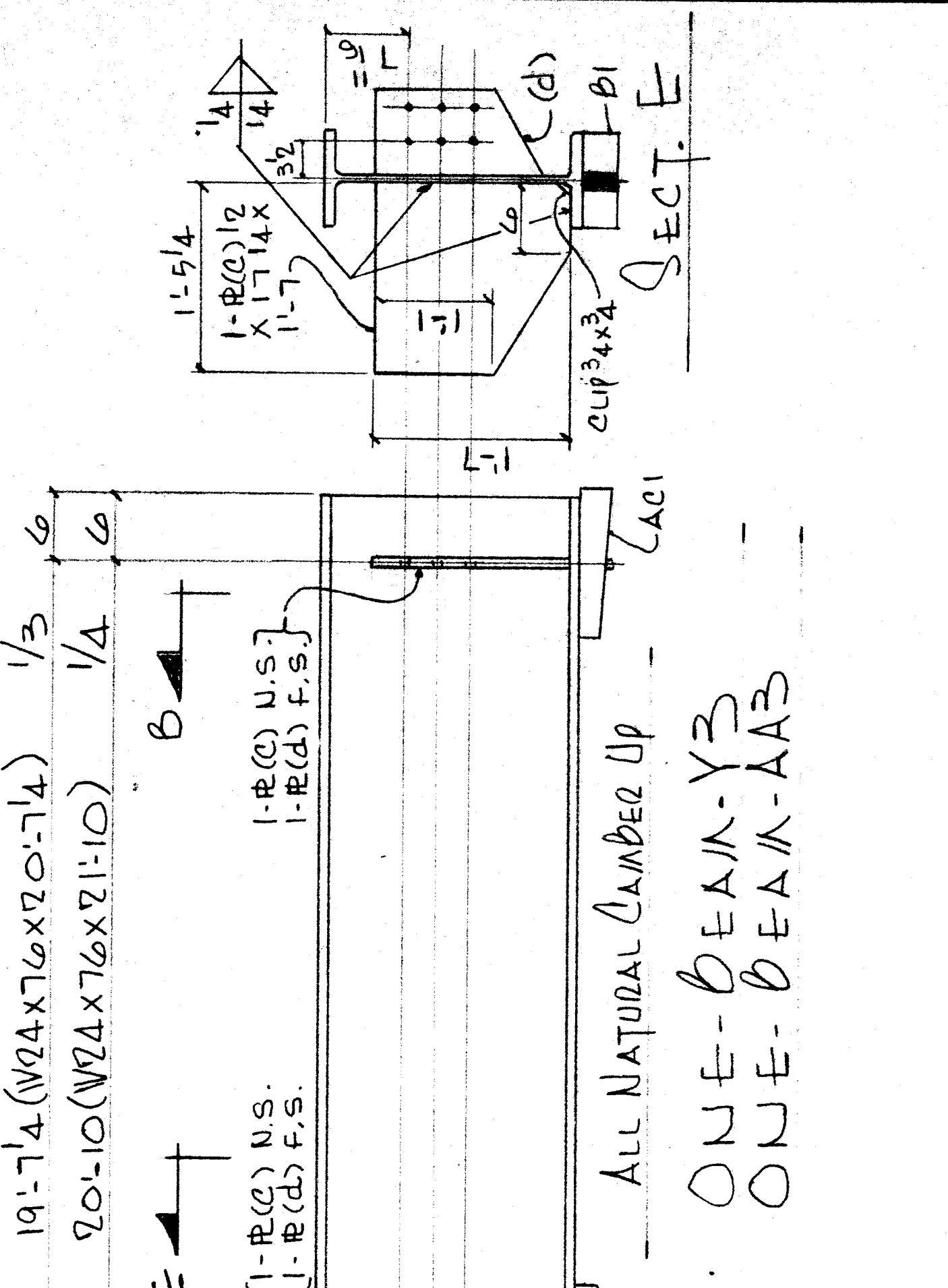
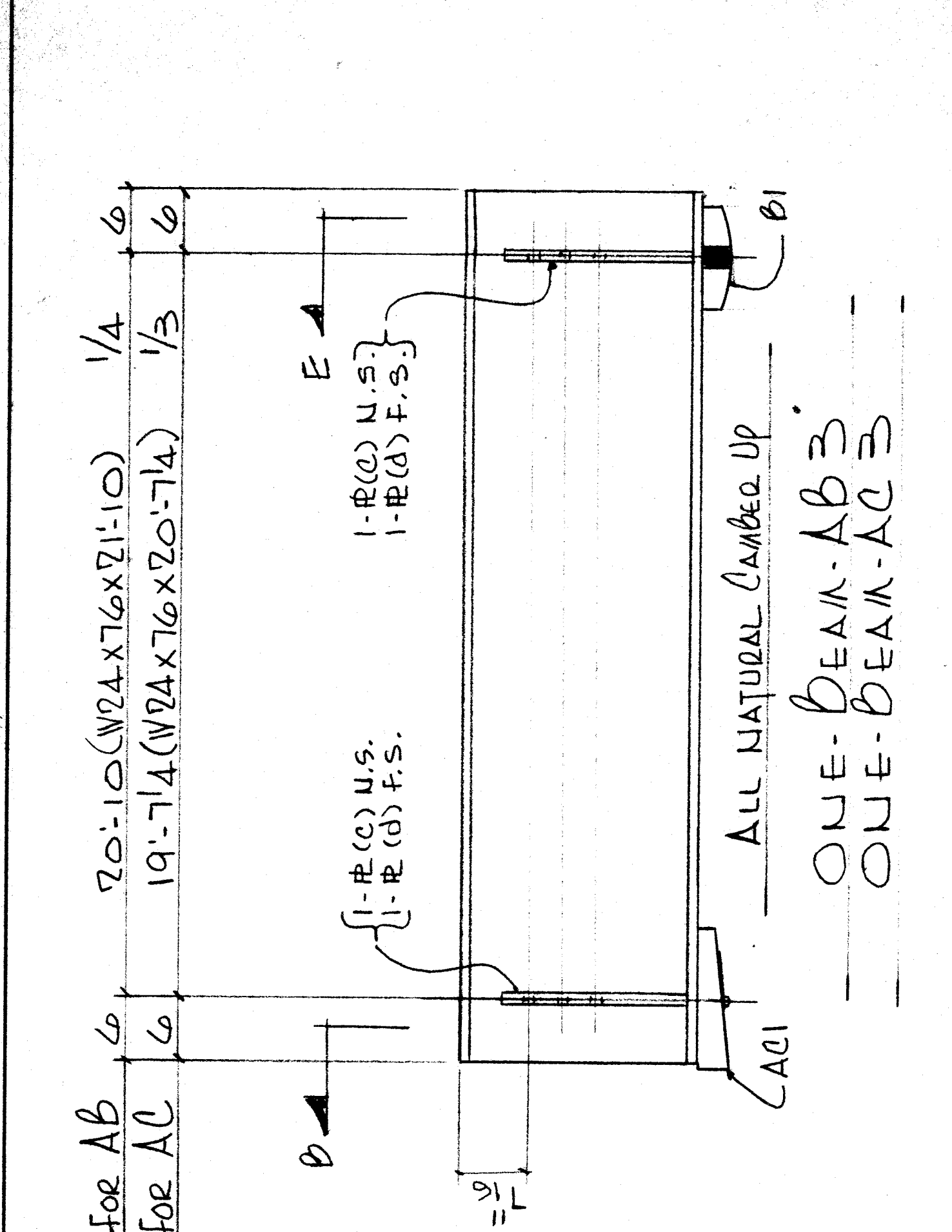
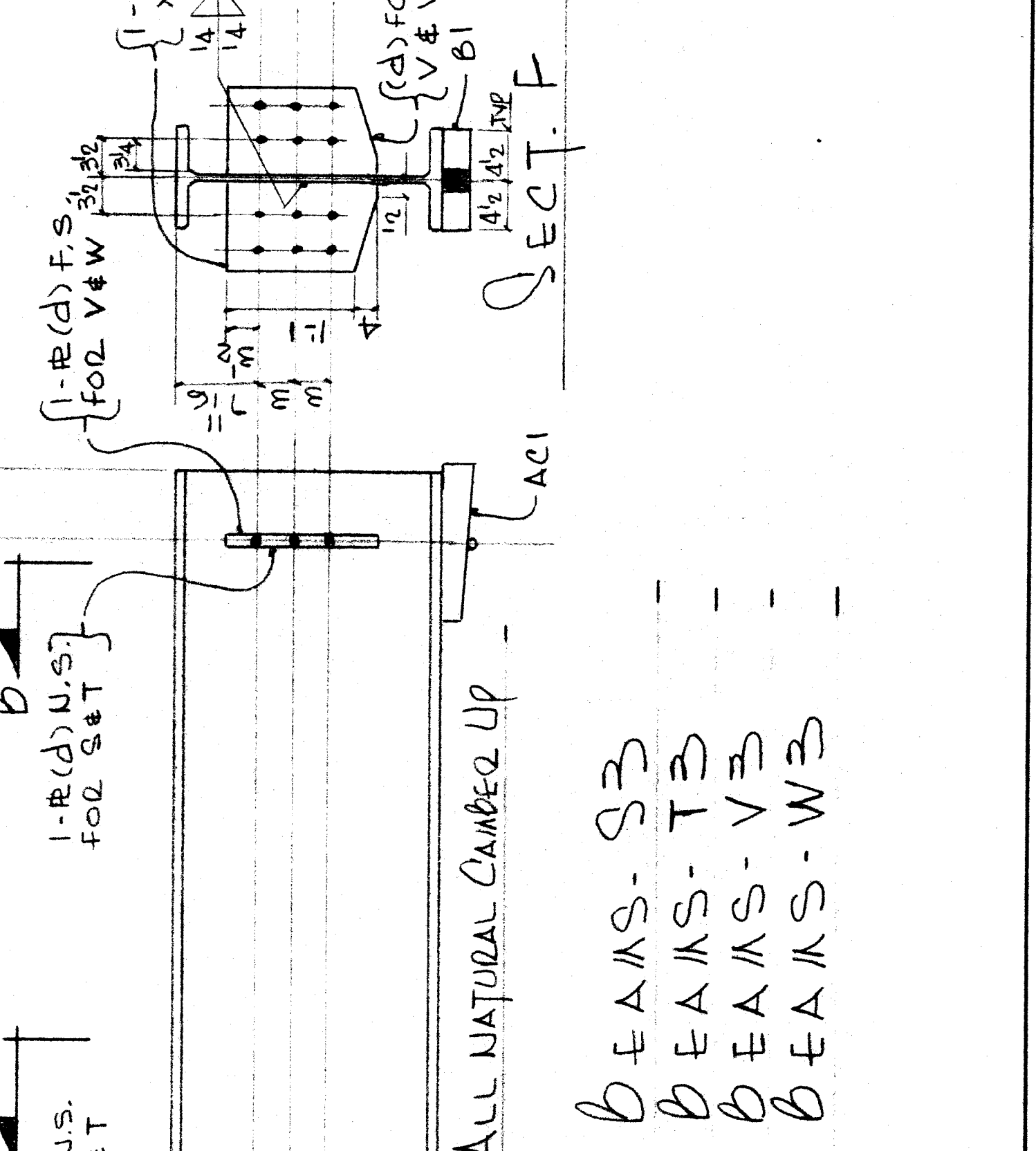
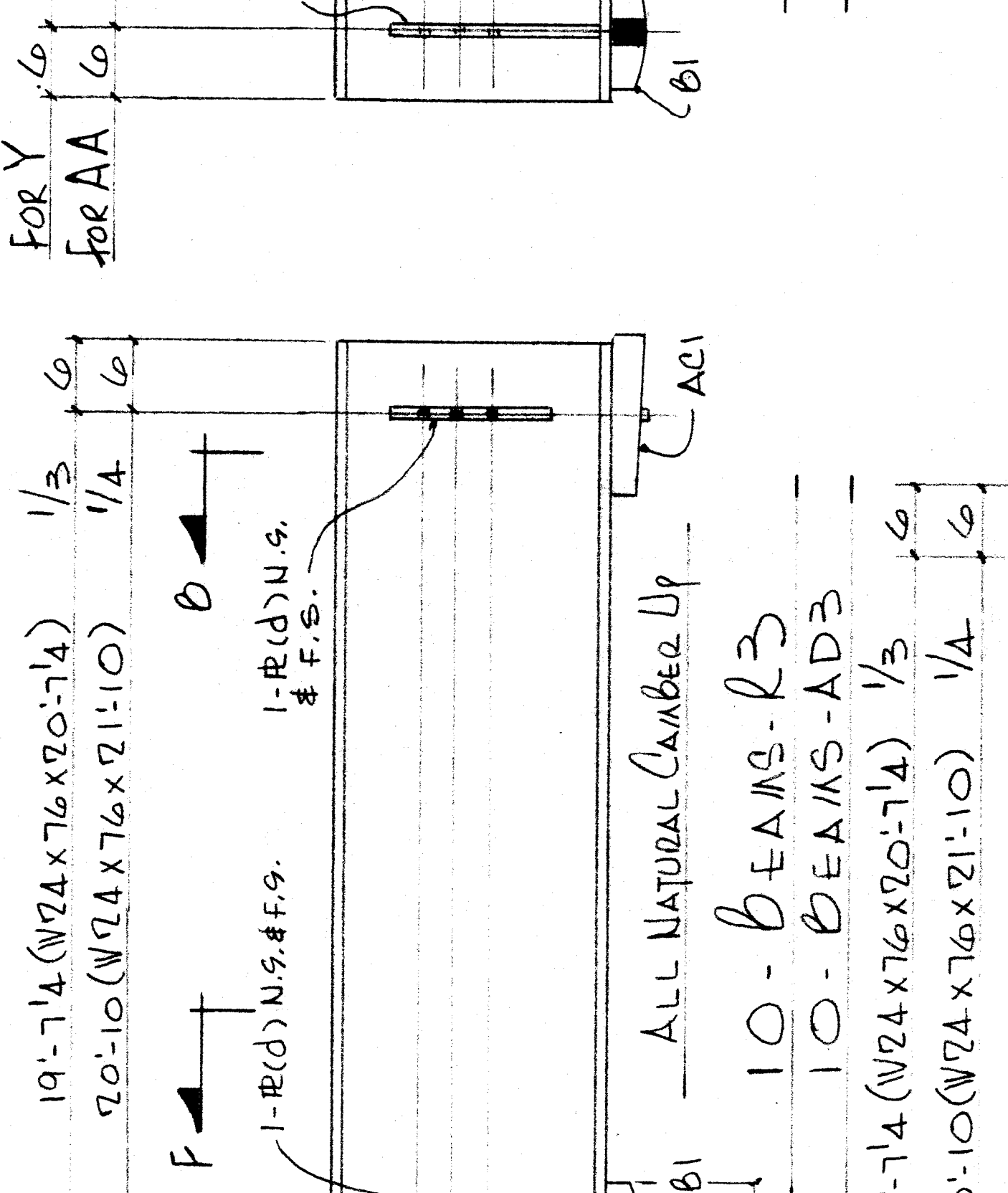
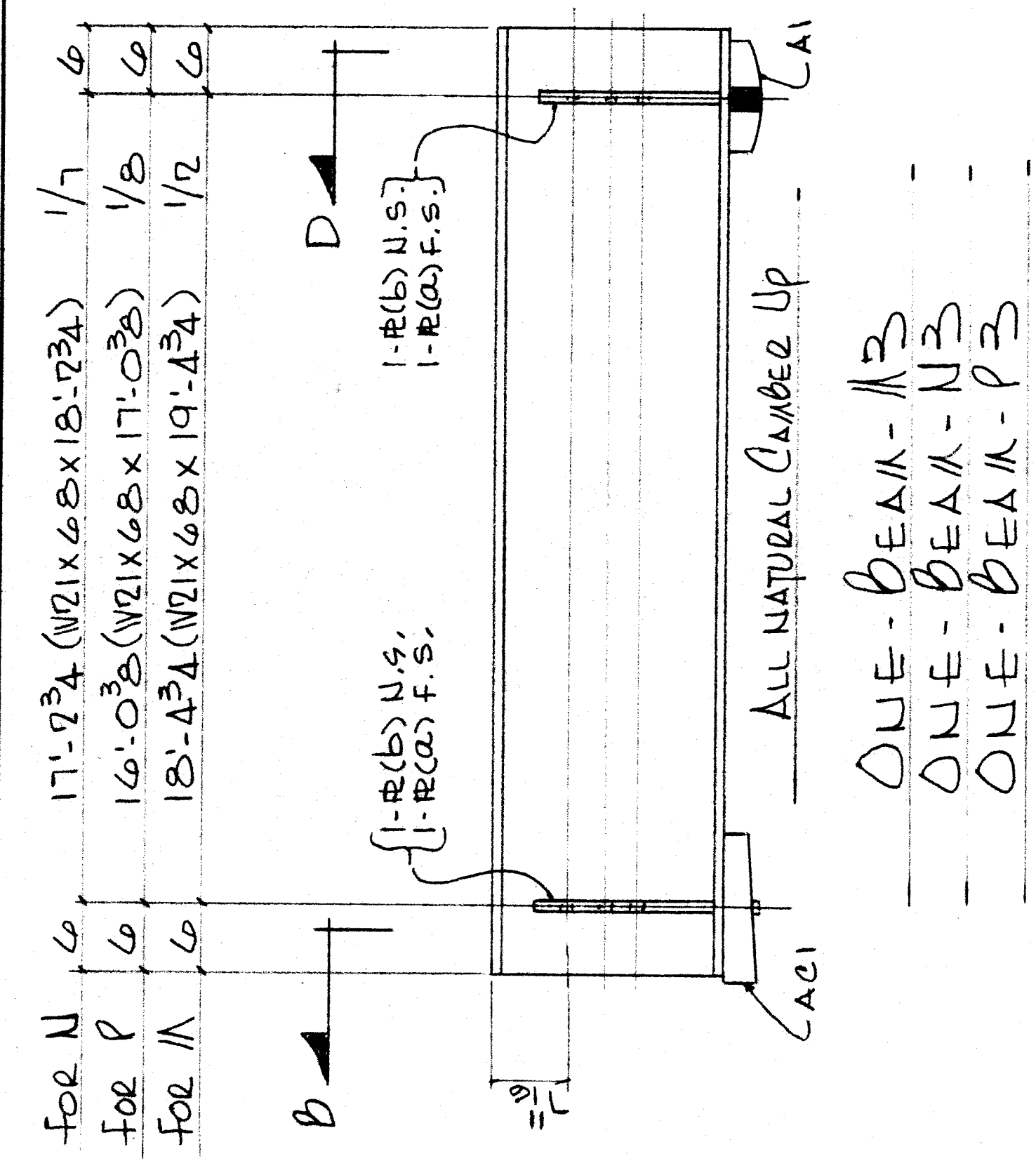
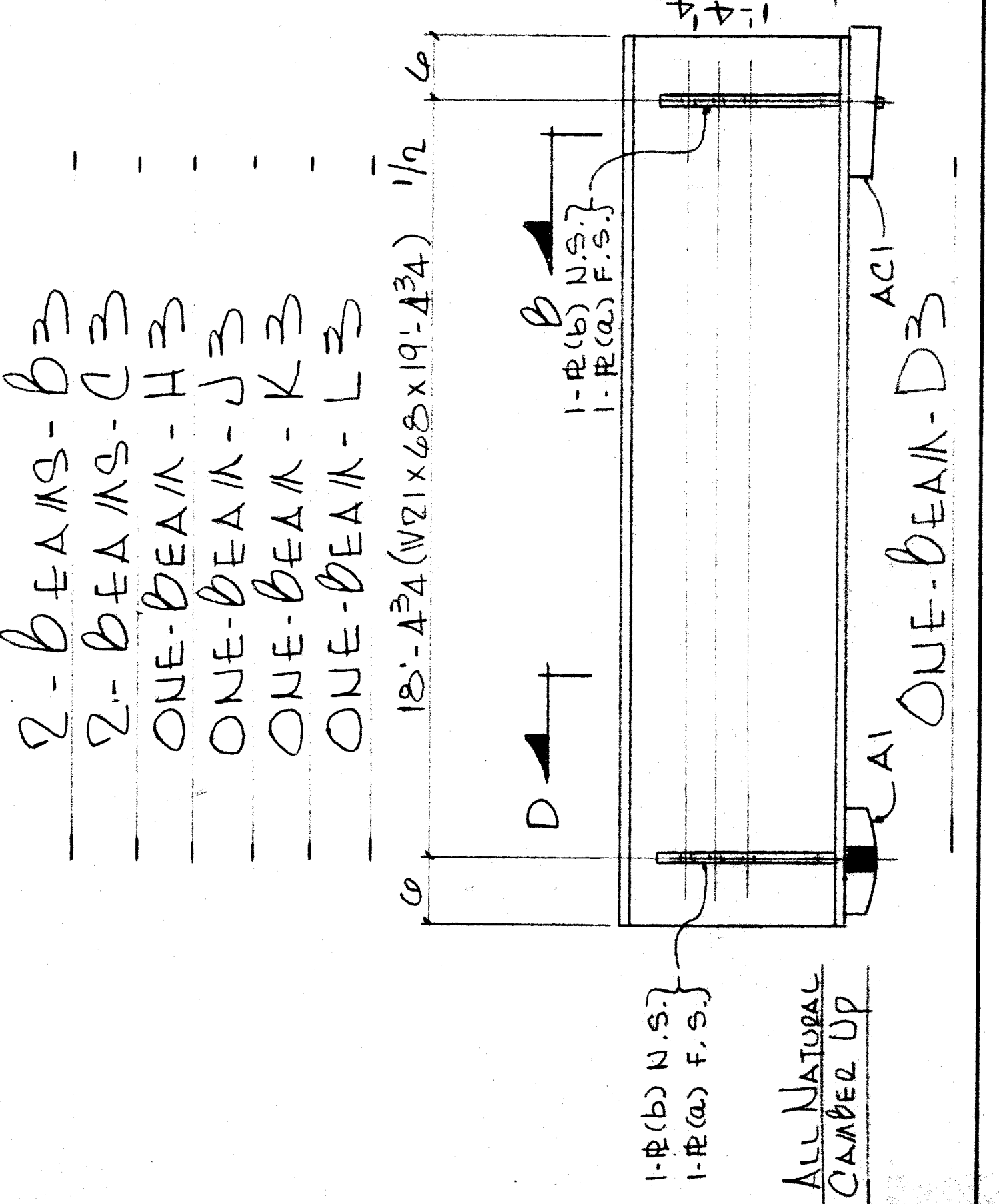
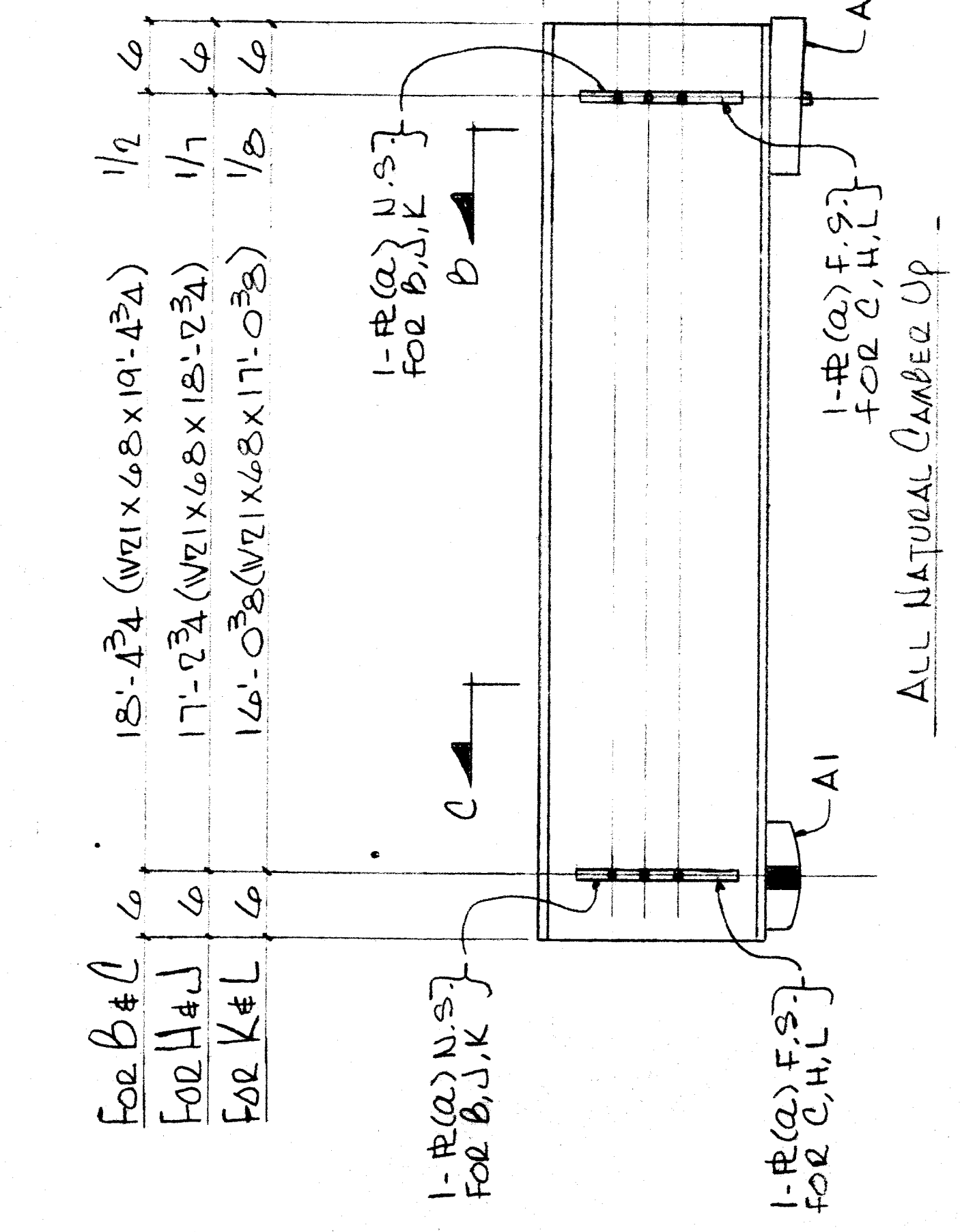
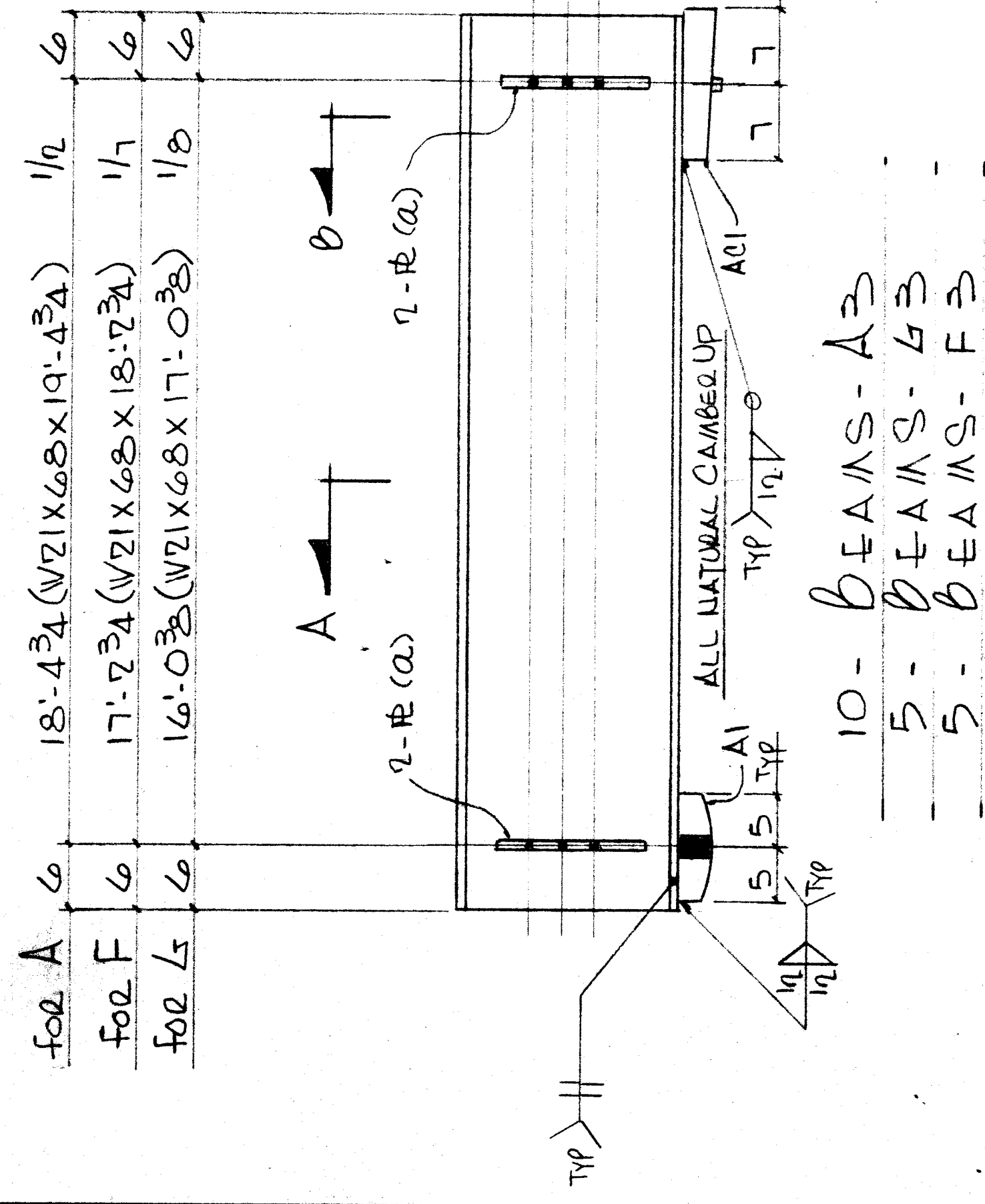
SENT FOR: DATE

SHOP NOTE:
ALL MAT'L. CHECKY V-NOTCH IMPACT REQ'D.

FOR G.W. NOTES SEE SNT. E2
FOR LOCATION SEE SNT. E1 # E2

M.C.D. 9.84

APPROVED



SHOP NOTE:

ALL MINUT. CHARPY V-NOTCH IMPACT REQ'D EXCEPT SOLE PLATES

APPROVED

FOR SEEN. NOTES SEE E12
 FOR LOCATIONS SEE E1 & E7

NO.	DATE	SENT FOR	DATE	SENT FOR
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3				
2	2-13-84	FOR E12	6	
1	1-17-84	APPL	5	

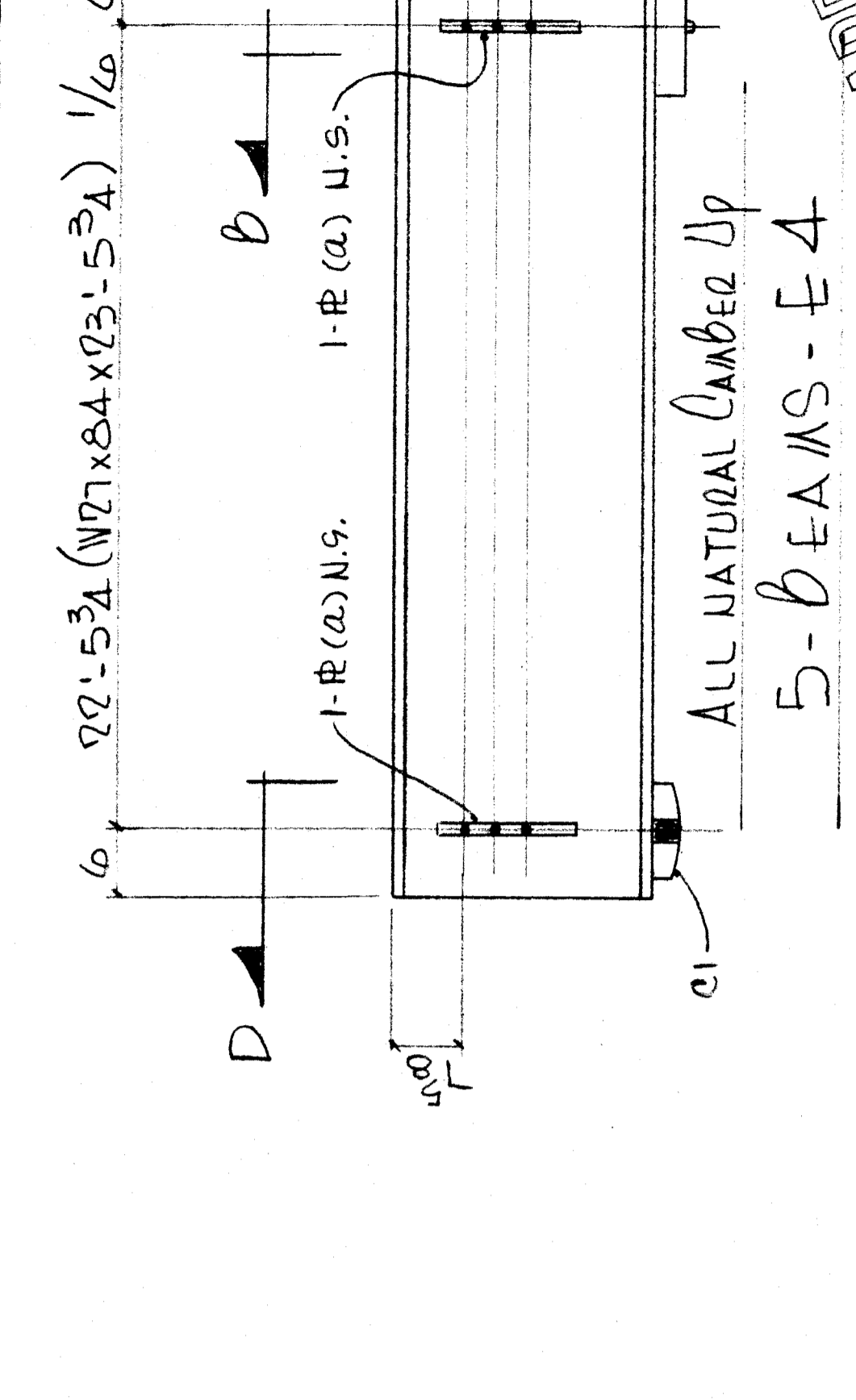
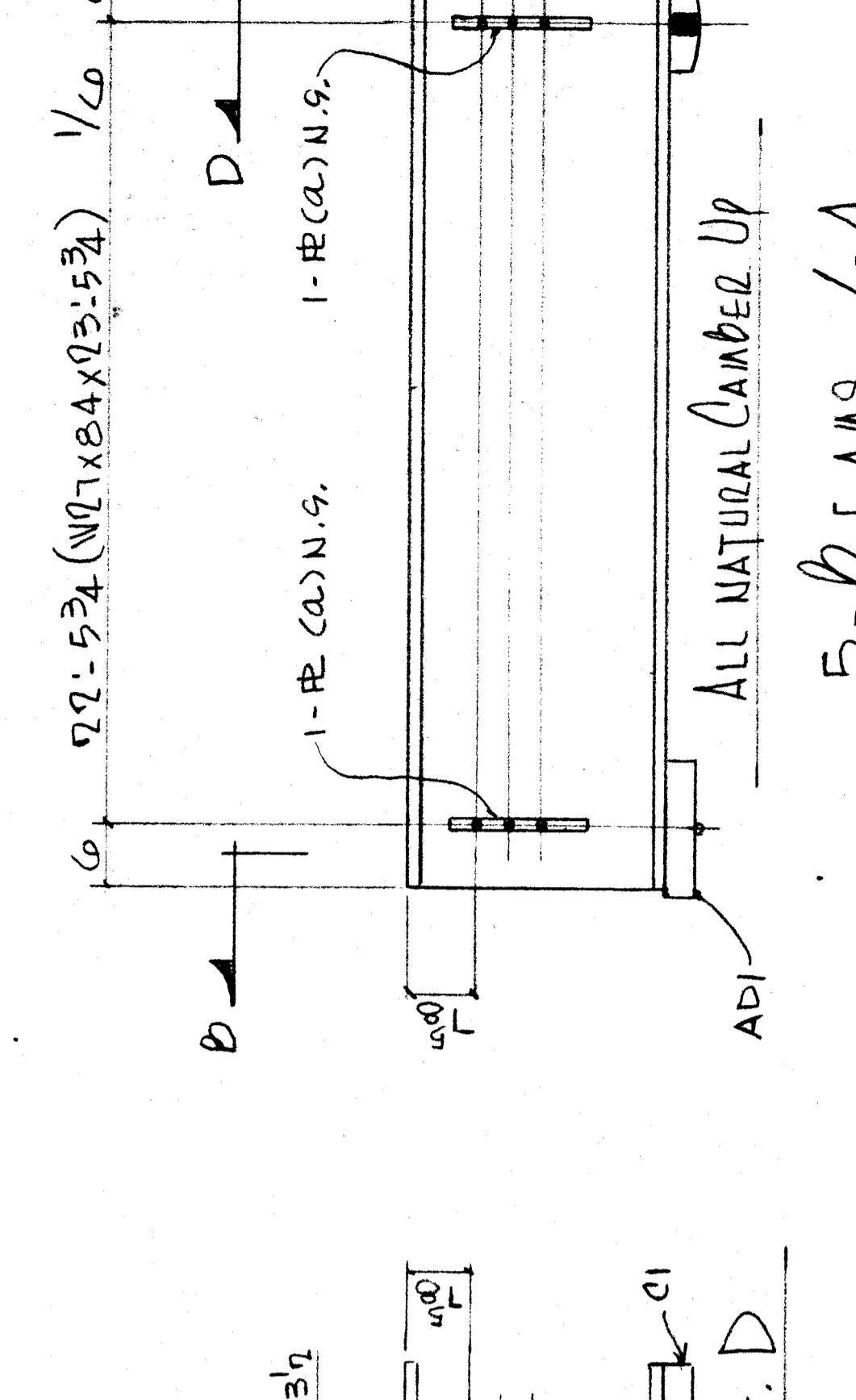
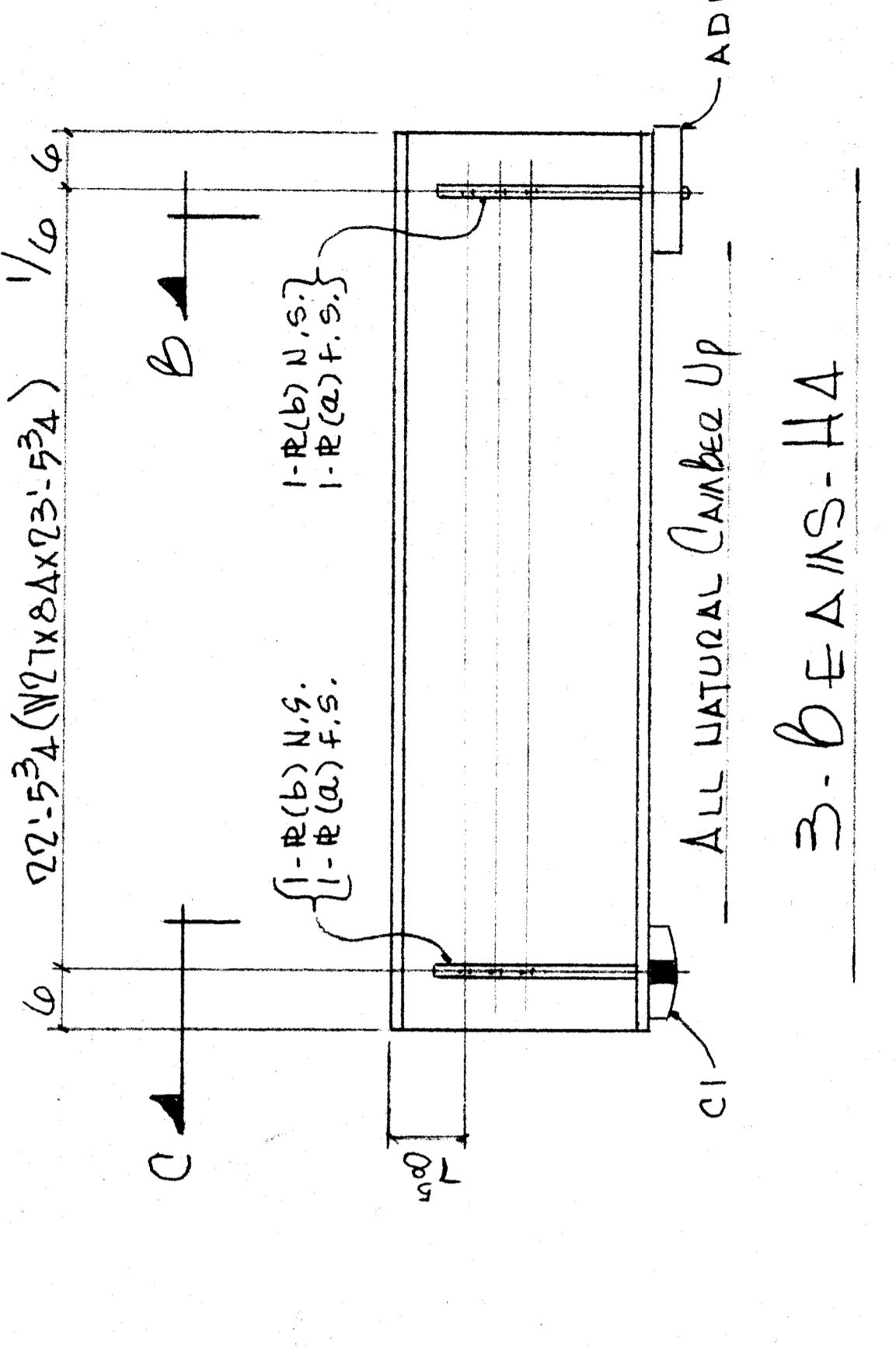
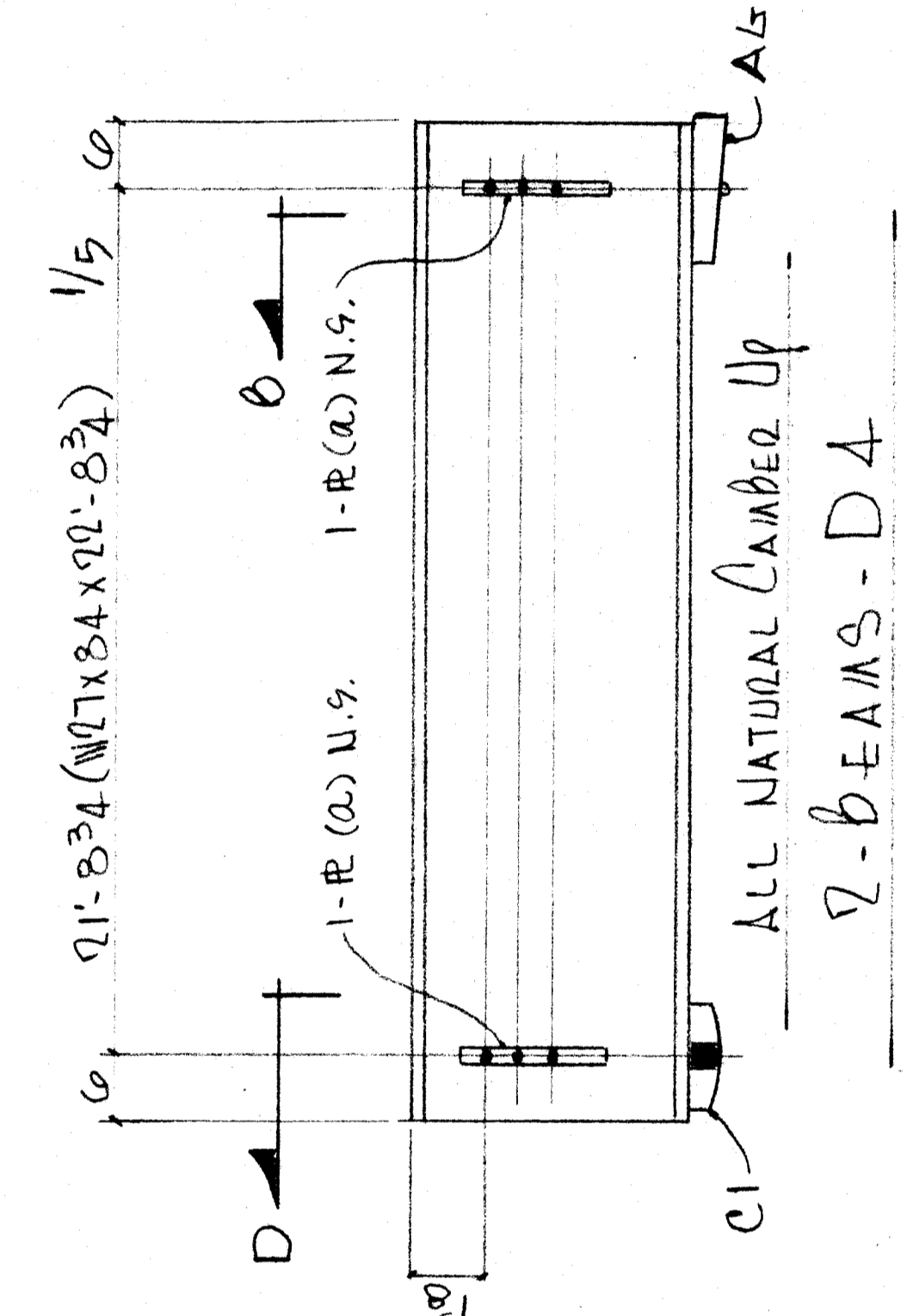
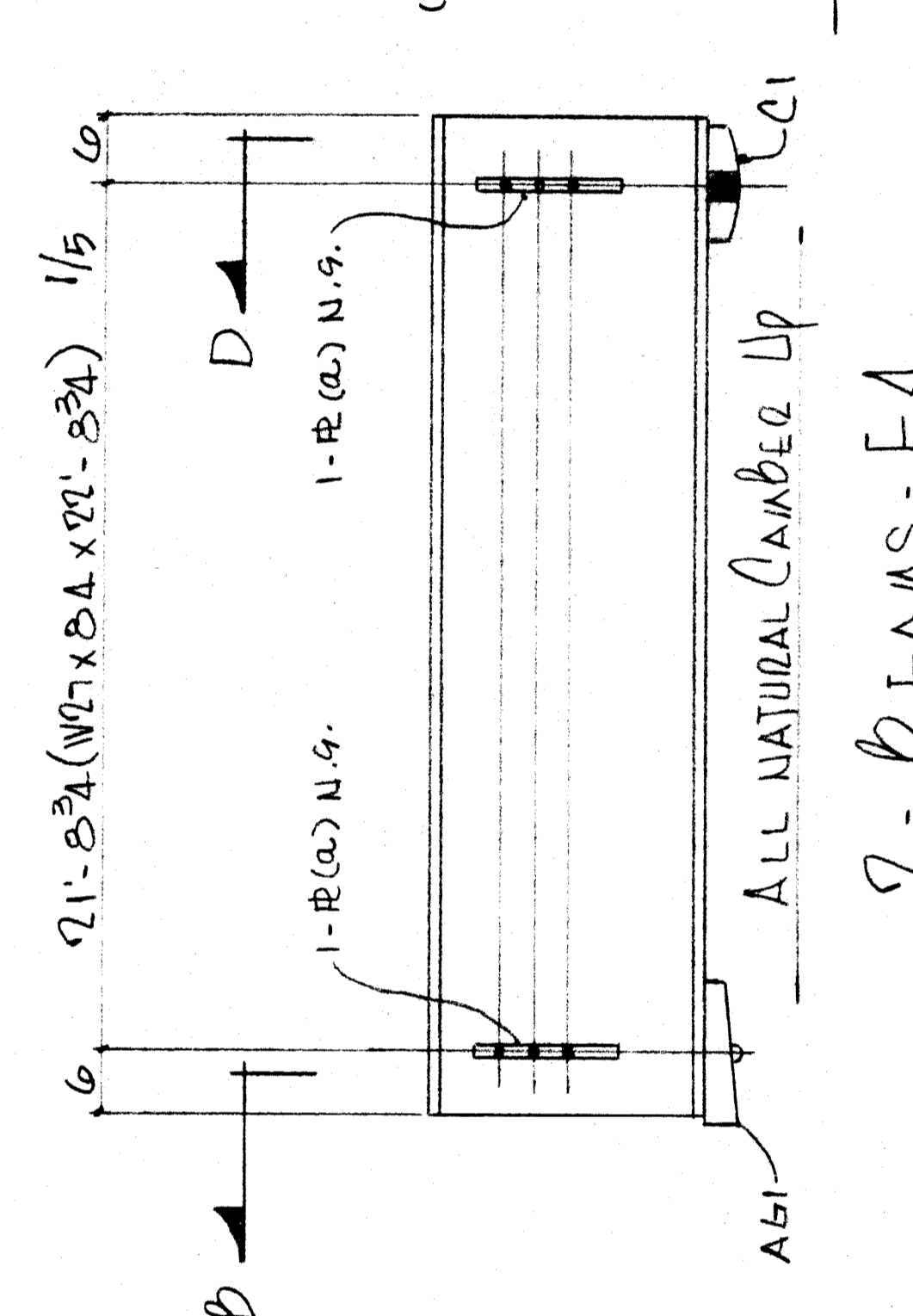
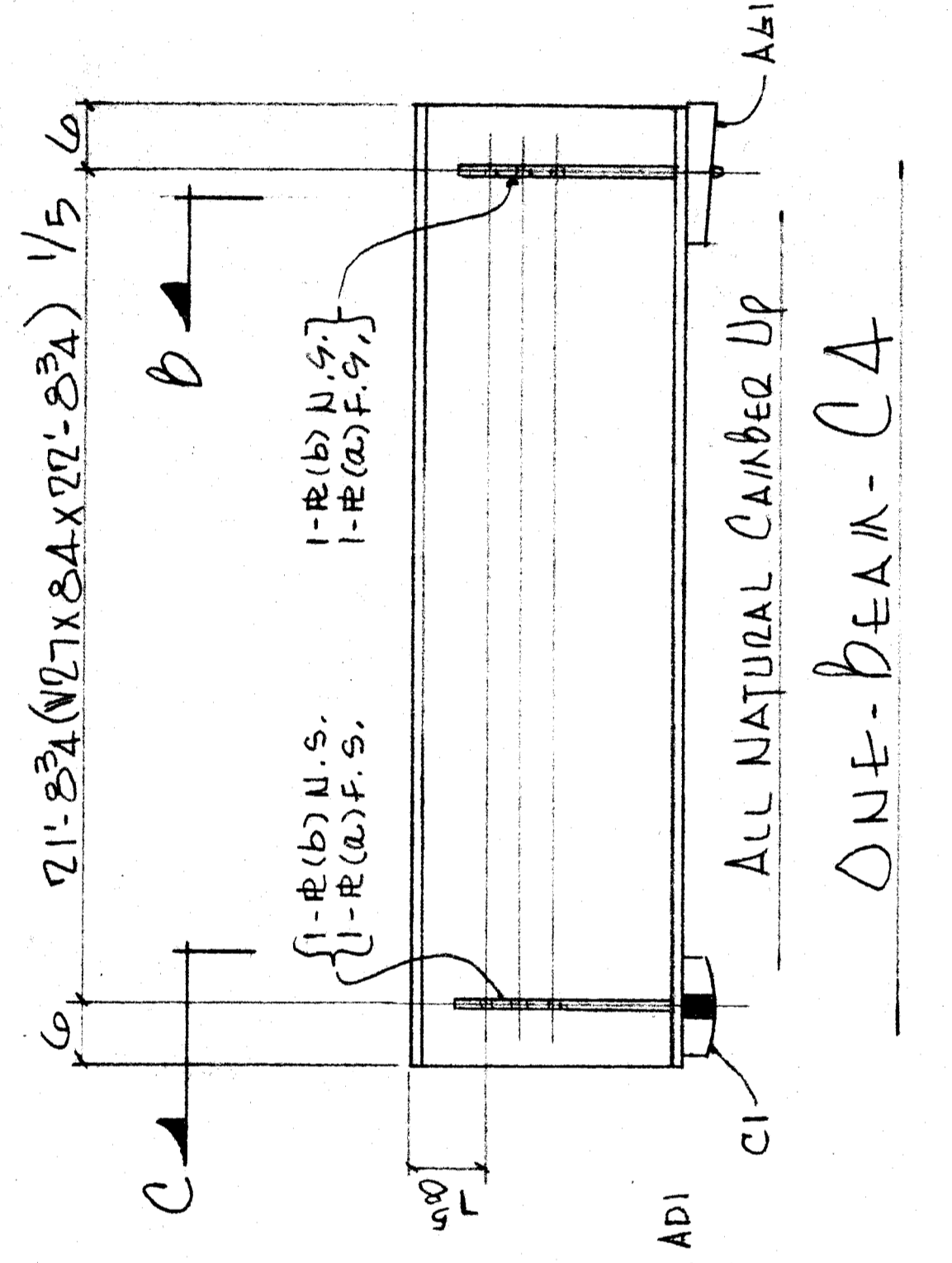
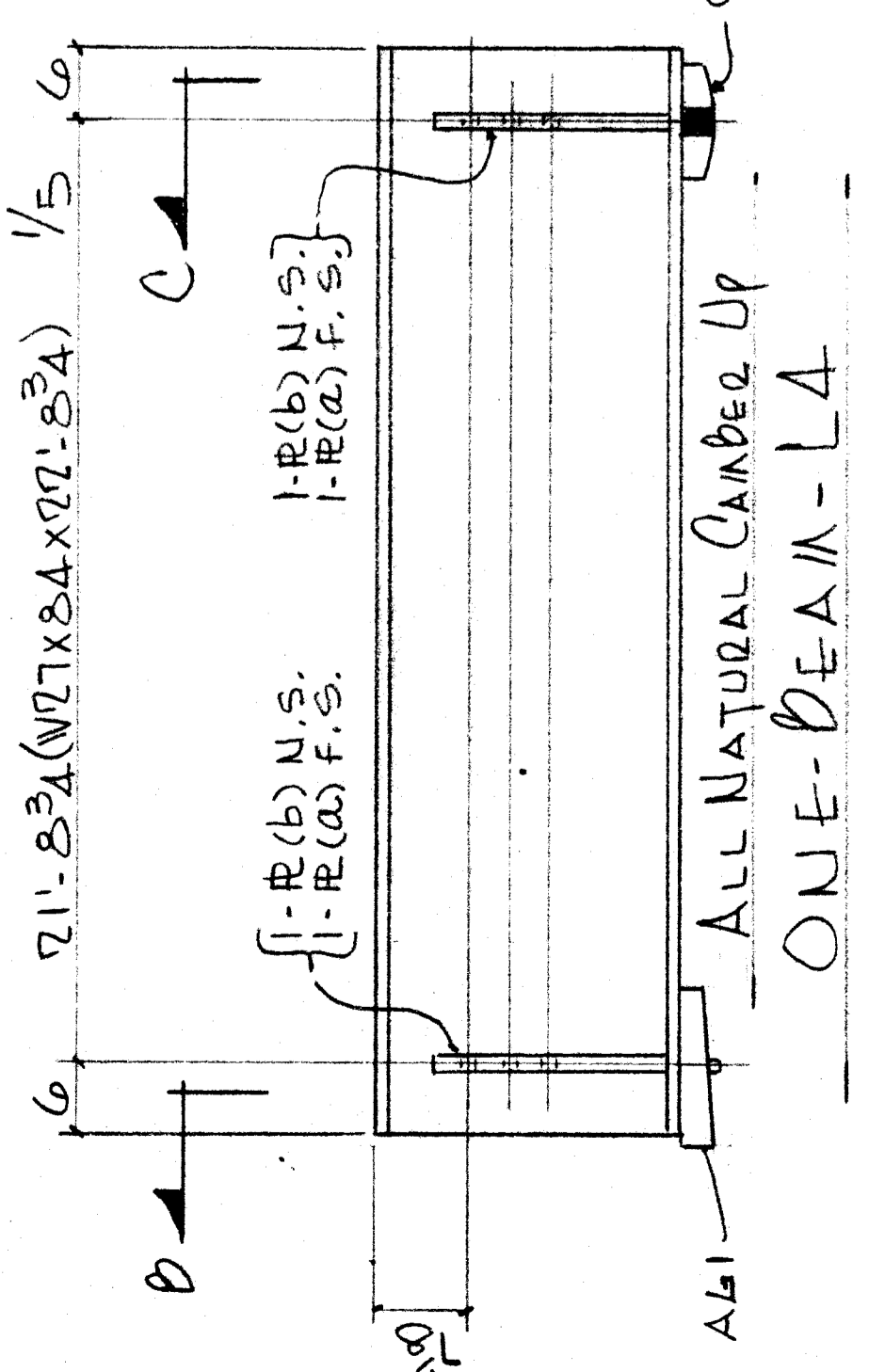
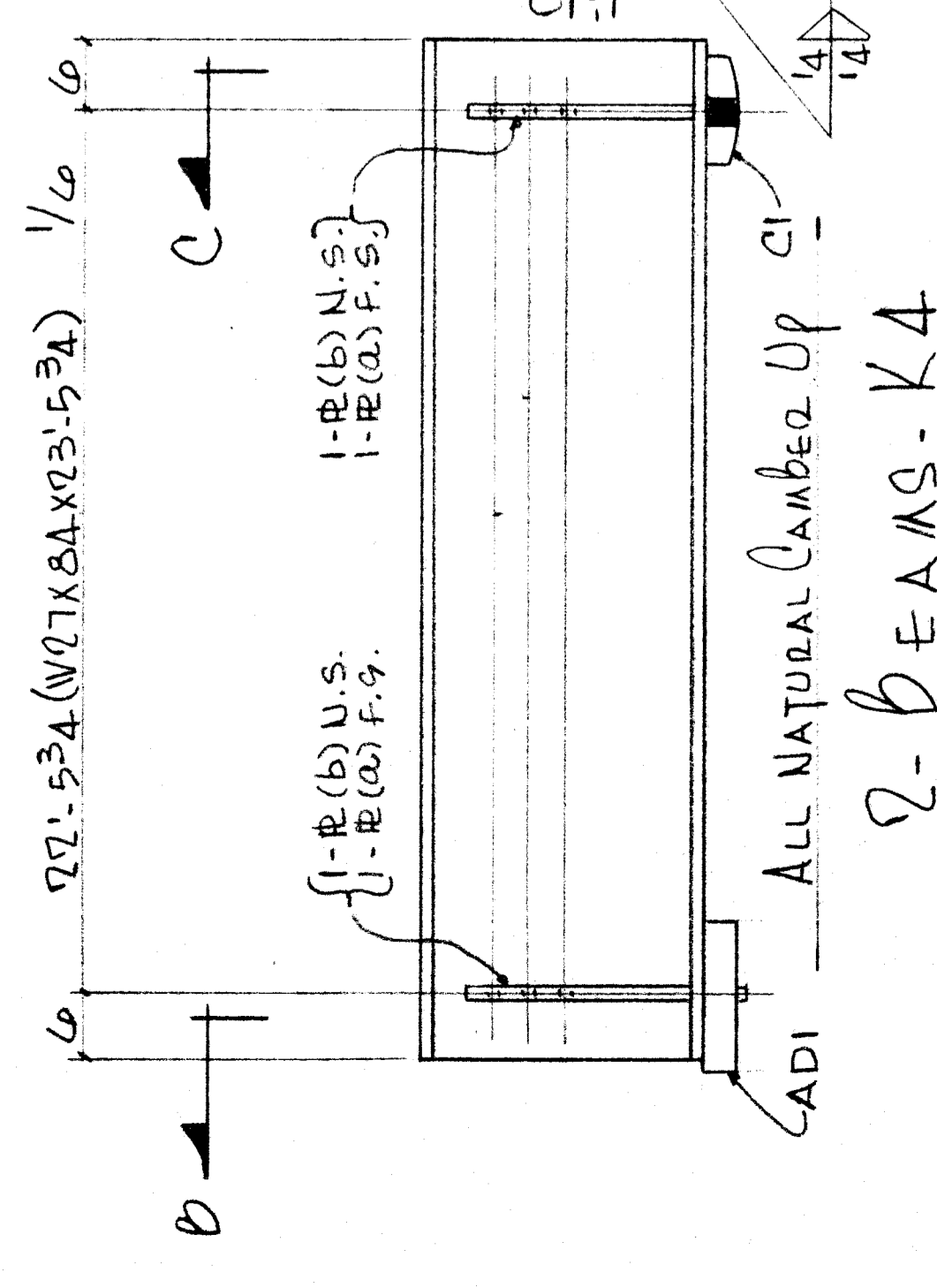
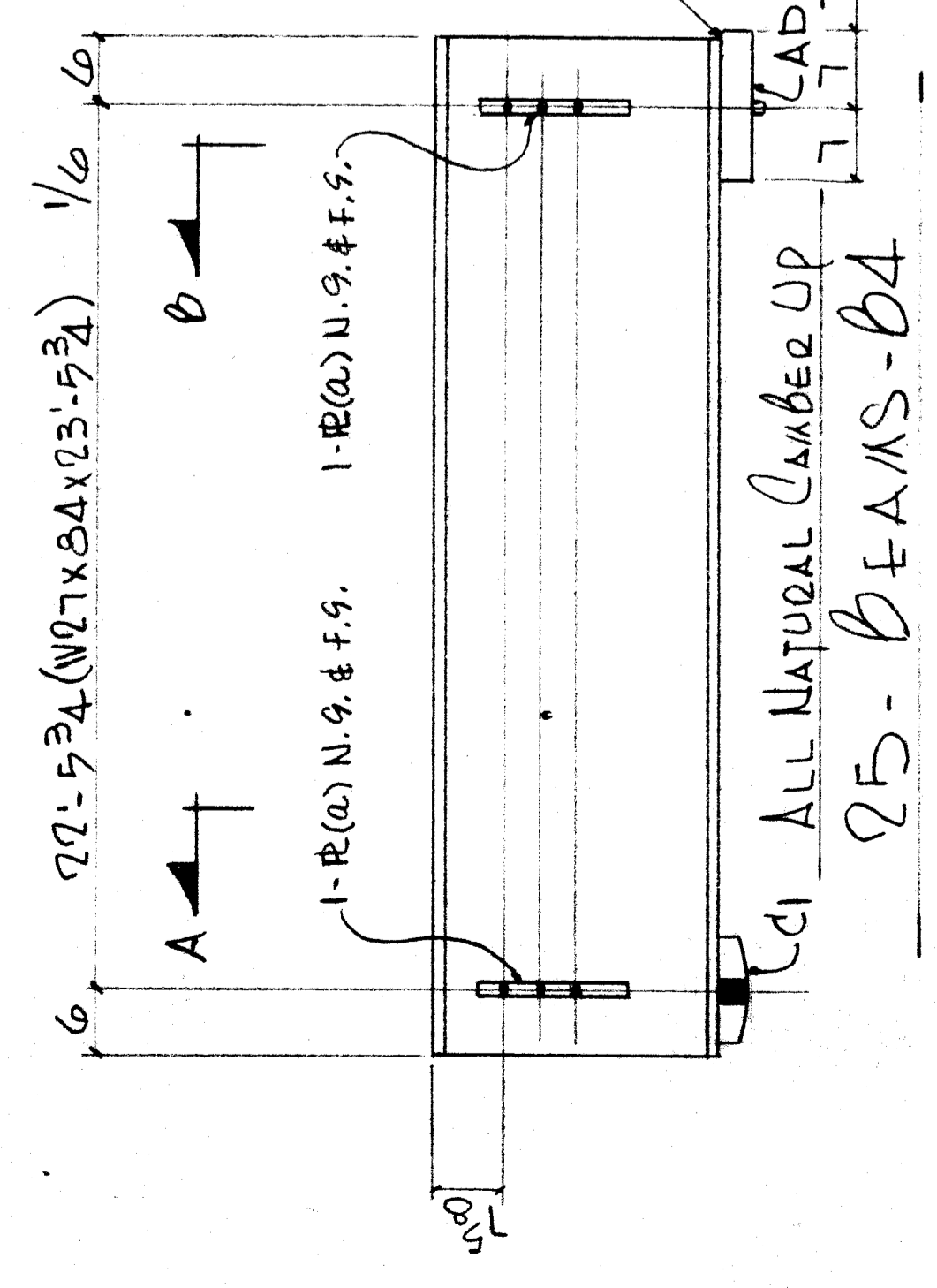
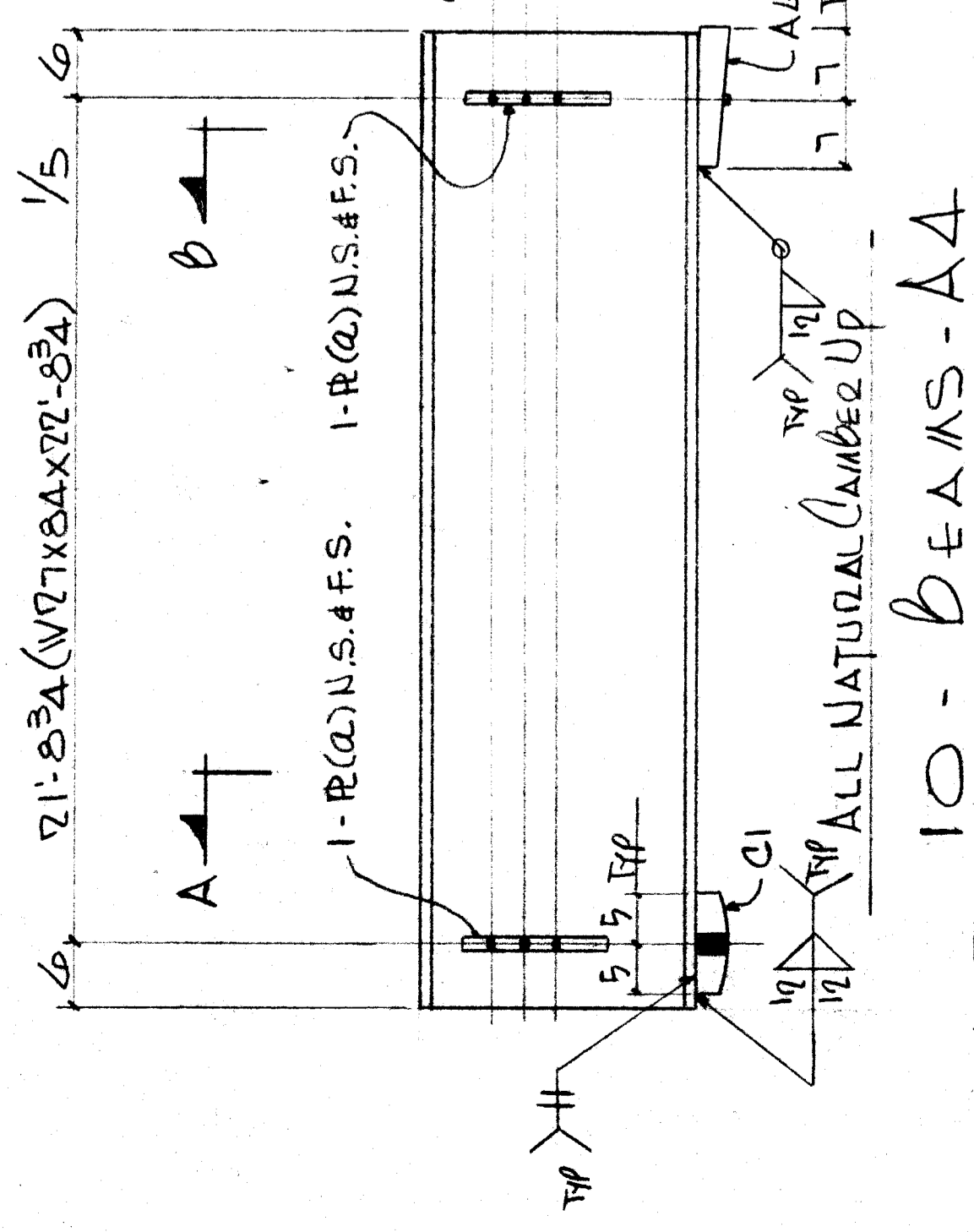
UNSTER STEEL CO., INC.
 Fabricators of Structural and Miscellaneous Steel
 9505 CALUMET AVE., MUNSTER, IND.

PROJECT DOUGLAS A. MACARTHUR BRIDGE
 DETROIT, MICHIGAN

CUSTOMER LUTTON-KELLY

NOTES 13 16 18
 DRAWN D.C. 10/2/84
 CONTRACT # 1996
 SHEET 3

ACD 984



FOR GEN. NOTES SEE E2
 FOR LOCATION SEE E1

SHEP NOTE:
 ALL MAT'L CHIPPY V-NOTCH IMPACT REQ'D. EXCEPT SOLE PLATE

4		8	
3		7	
2	2-13-84	6	
1	1-17-84	5	
	DATE	SENT FOR	DATE
			SENT FOR

M UNSTER STEEL CO., INC.
 Fabricators of Structural and Miscellaneous Steel
 9505 CALUMET AVE. MUNSTER, IND.

PROJECT: DOUGLAS A. MACARTHUR BRIDGE
 DETROIT, MICHIGAN

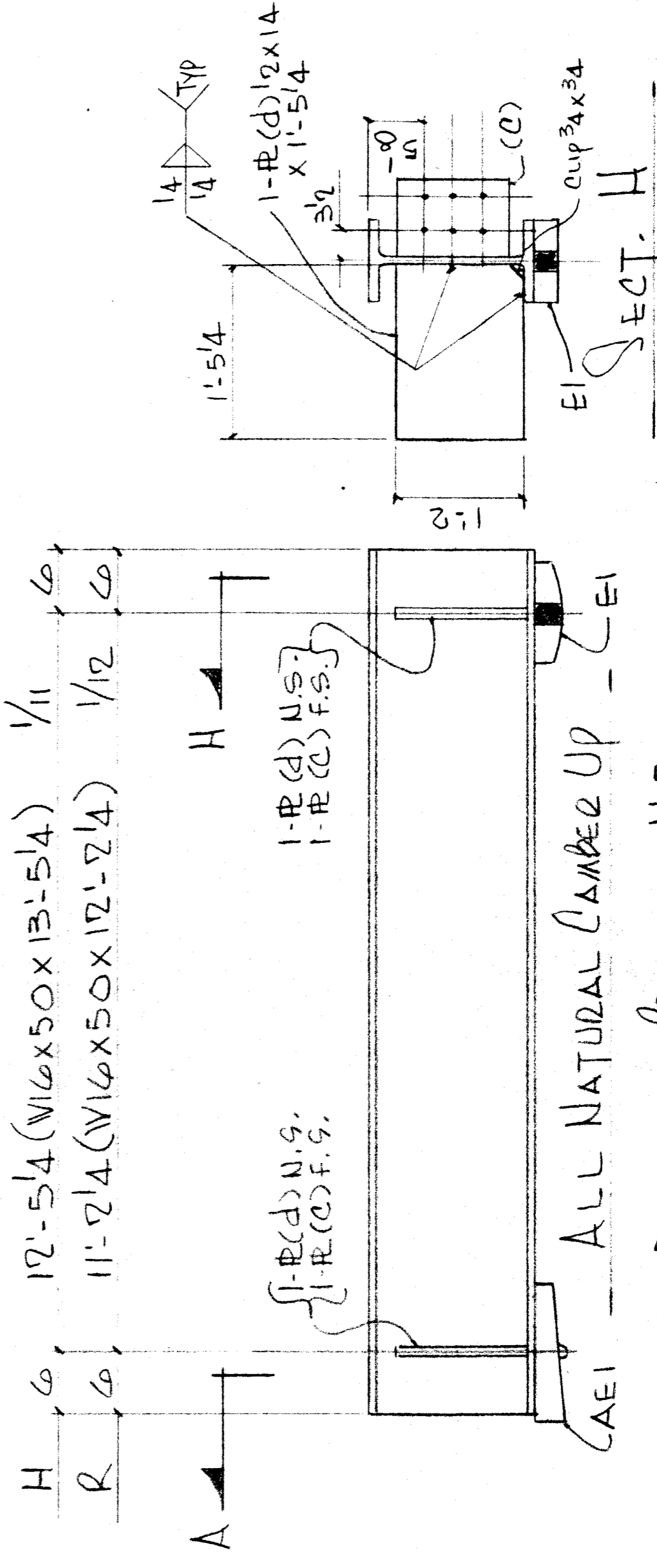
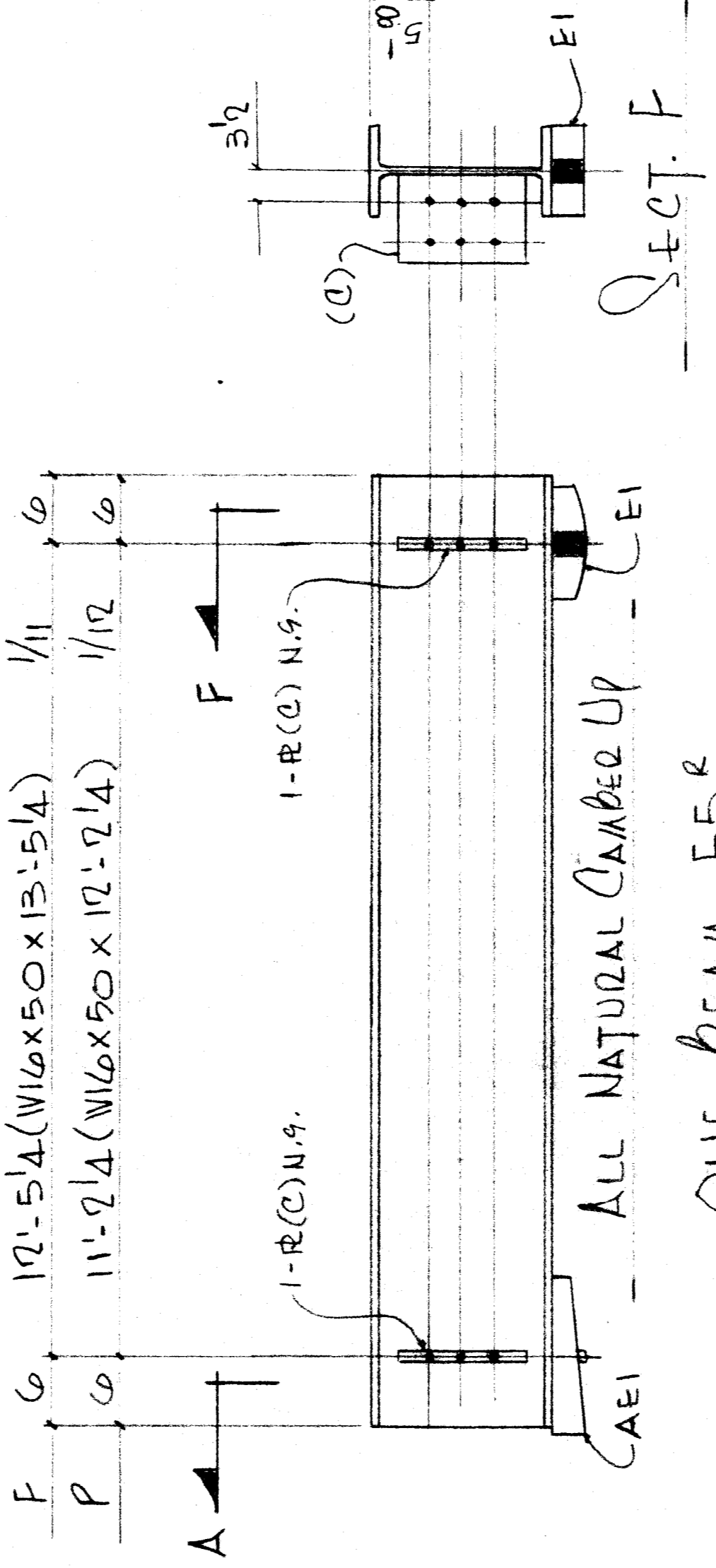
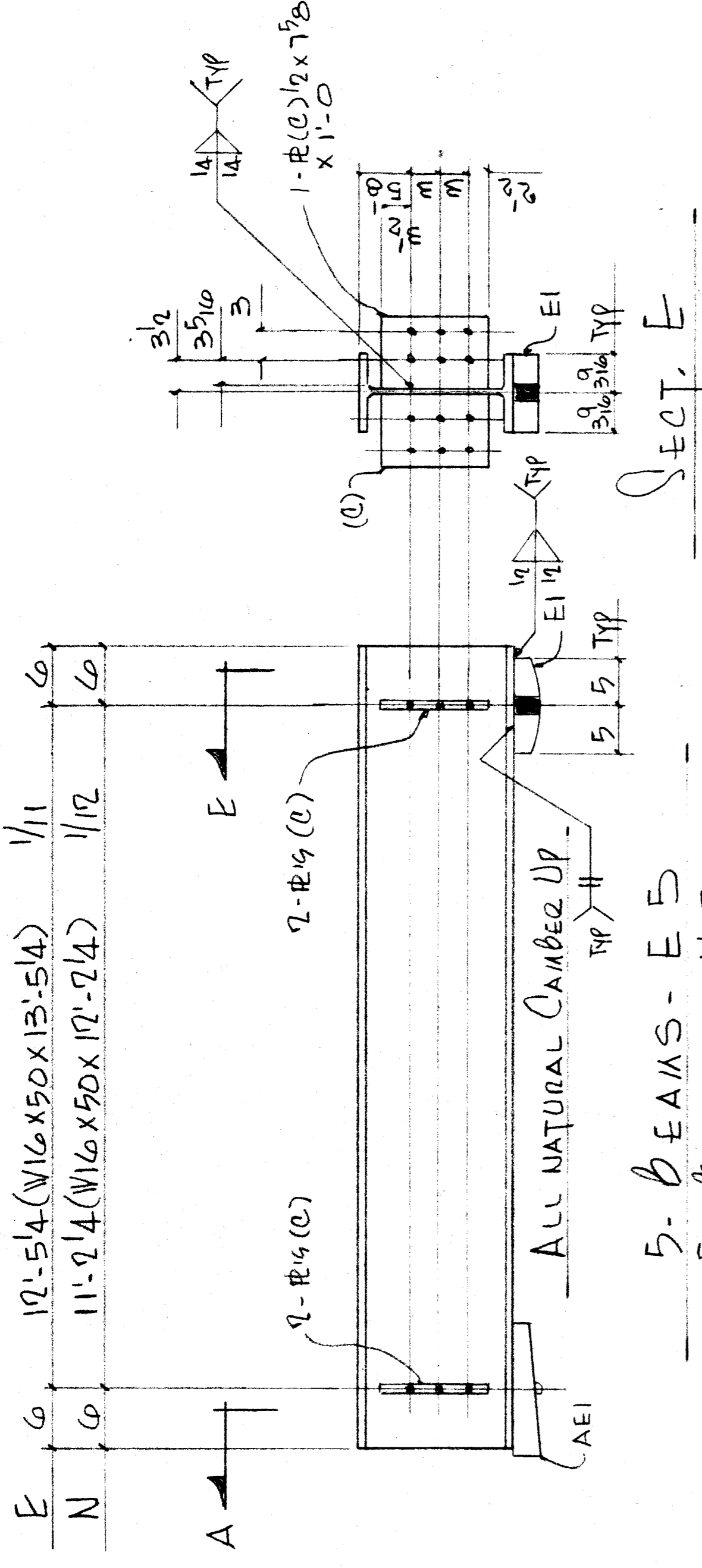
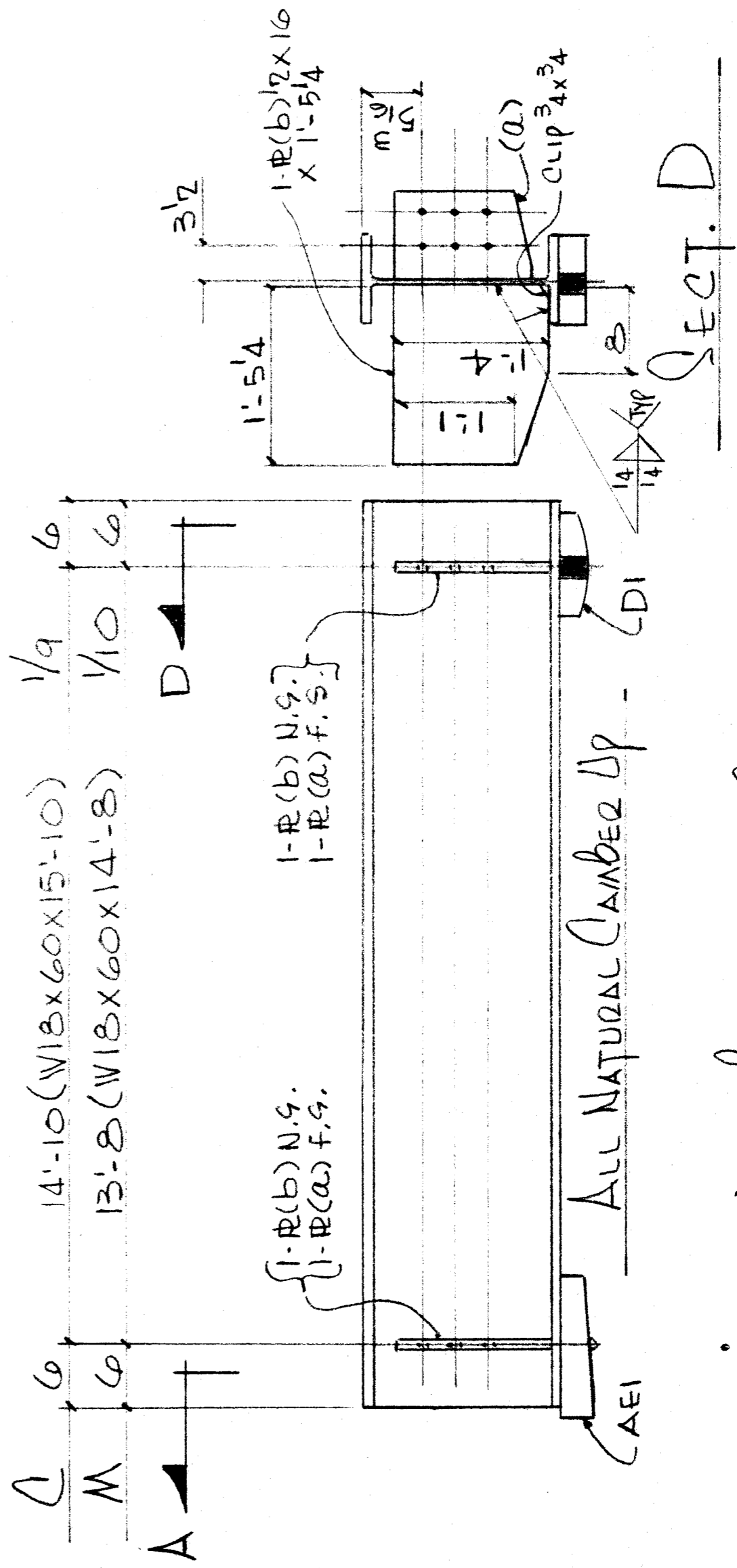
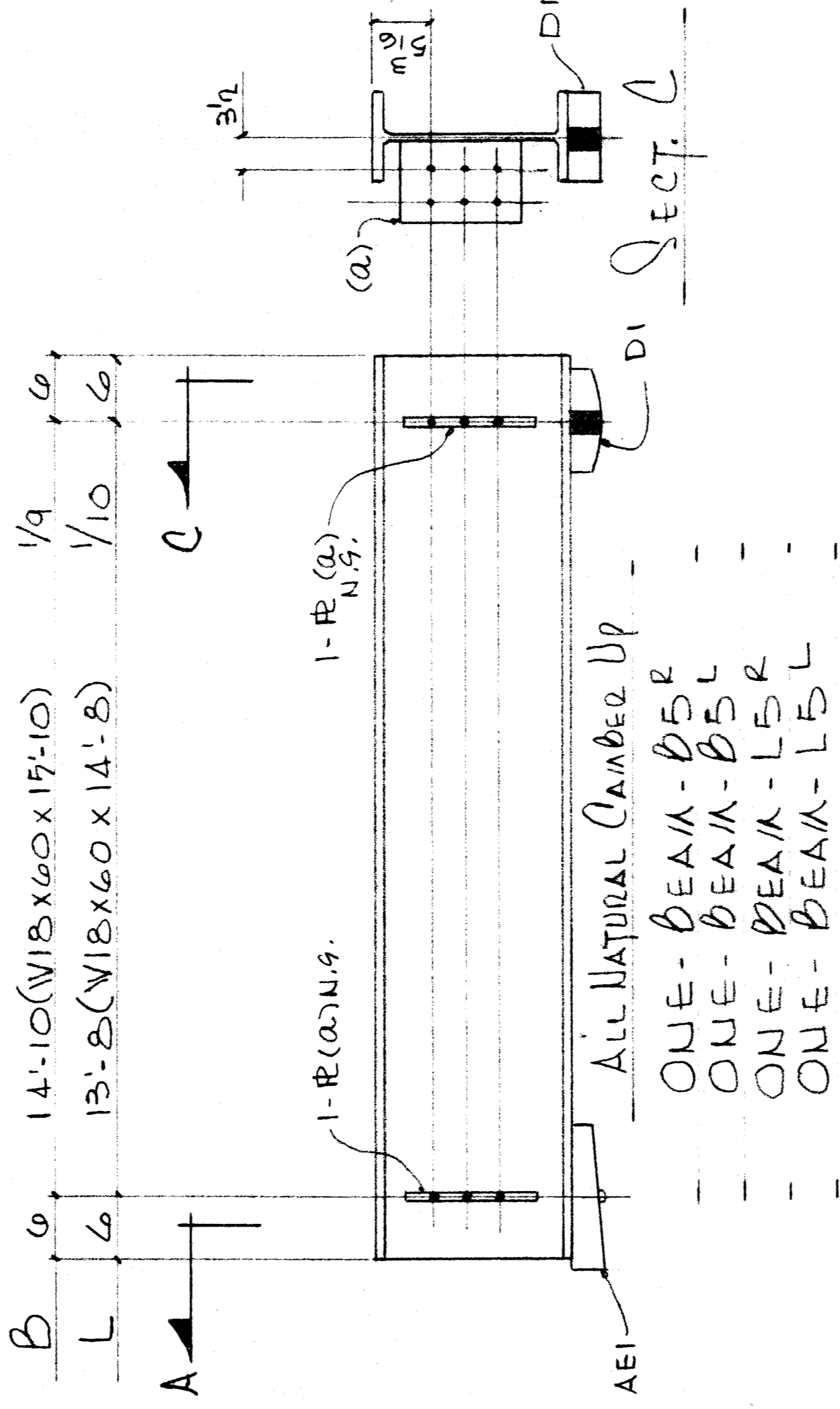
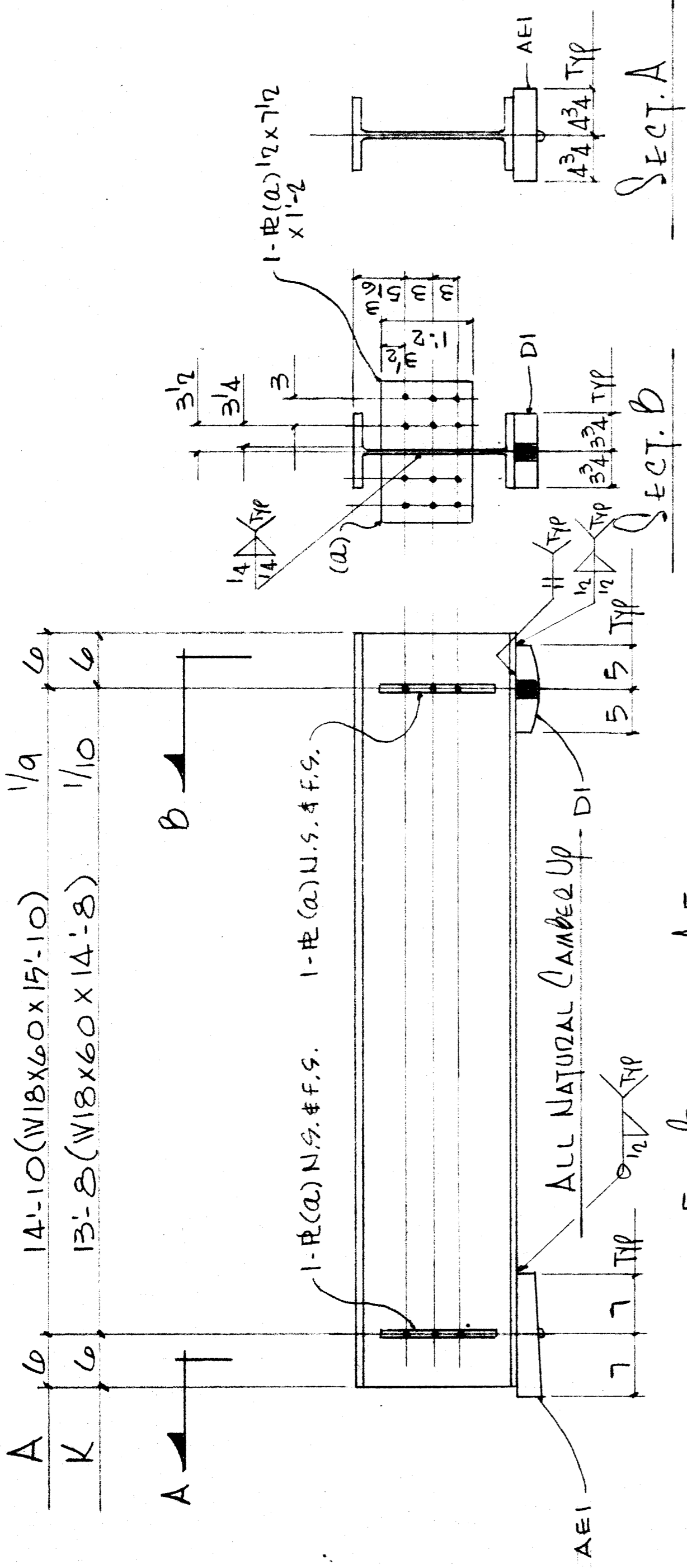
CUSTOMER: JUTTON - KELLY

NO. 13 1/2
 BEAM DETAILS 1996 4

CONTRACT # 1996 4
 SHEET # 4

APPROVED

MD 9-84



SHOP NOTE:
 ALL WELDED CHARPY V-NOTCH IMPACT REQ'D. EXCEPT SOLE PLATES

APPROVED

NO.	DATE	SENT FOR	DATE	SENT FOR
4				
3	2-12-33	FABRICATION		
2	1-17-34	APPL.		
1				

UNSTER STEEL CO., INC. Fabricators of Structural and Miscellaneous Steel 9505 CALUMET AVE., MUNSTER, IND.	
PROJECT	DOUGLAS A. MACARTHUR BRIDGE
CUSTOMER	JUTTON-KELLY
SCALE	1" = 1'-0"
DRW'G. NO.	1316
COUNT	5
DATE	1946
SHEET NO.	5

FOR GEN. NOTES & FOR LOCATION SEE E2

MCD 9-84