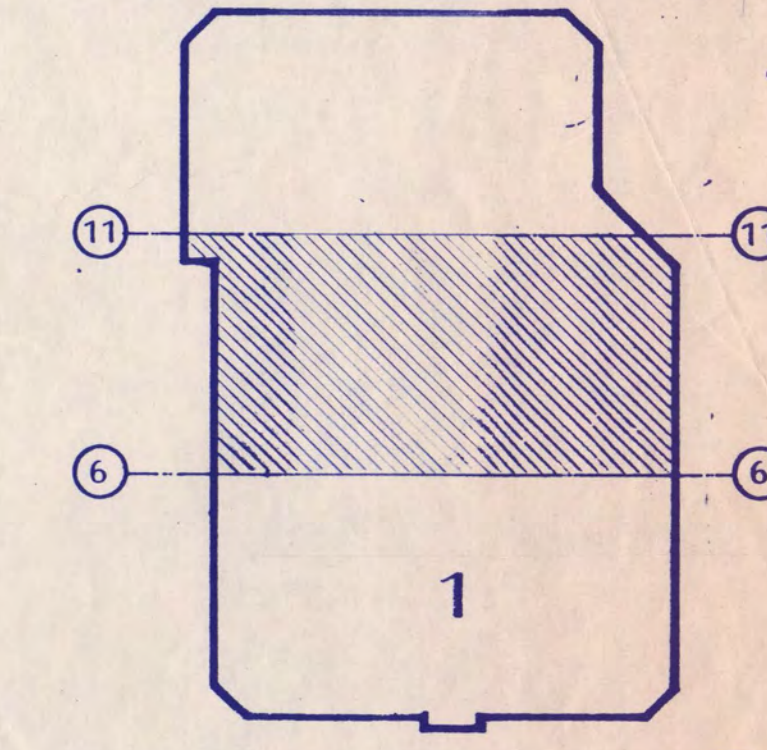


- SHEET NOTES:**
- SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
  - SEE ARCH. DRAWINGS FOR DIMENSIONS NOT GIVEN.
  - VERIFY SIZE & LOCATION OF MECH. OPNGS. W/MECH. CONTRACTOR.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Scott E. Sandeen*  
 Date 7/1/88 Reg. No. 10887



**KEY PLAN**  
**NATIONAL HOCKEY CENTER**

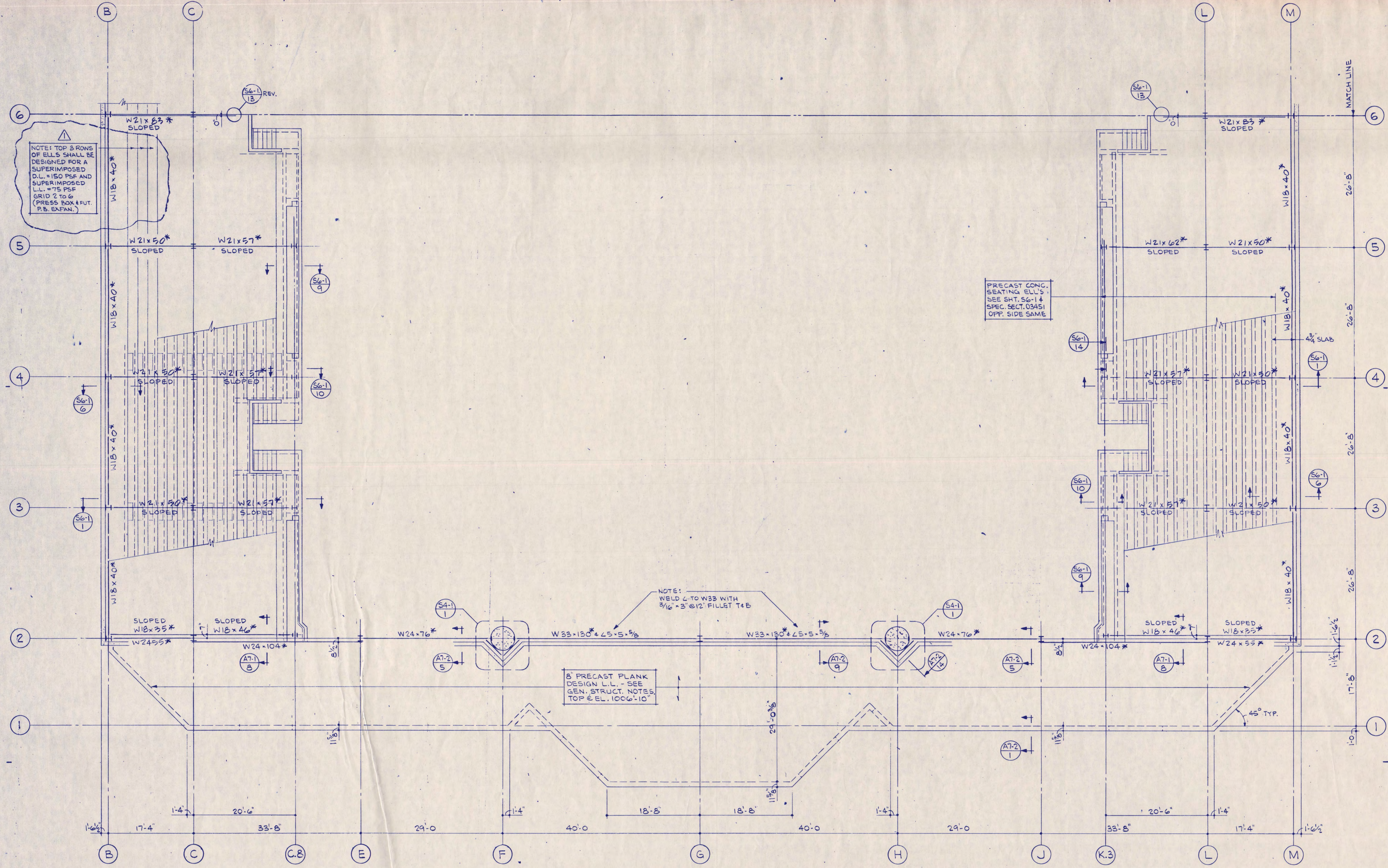
**ST. CLOUD STATE UNIVERSITY**  
 ST. CLOUD, MINNESOTA

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 One Appletree Square  
 Minneapolis, MN 55425  
 (612) 853-2000  
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**CONCOURSE LEVEL FLOOR FRAMING PLAN AREA 2**

Scale 1/8" = 1'-0" ALTERNATE NO. 1  
 Date SEP. 9, 1988 Comm. No. 8766-871  
 In Charge SES  
 Drawn By RAS/JTL  
 Checked By SES

**S2-2A**



NOTE: TOP 3 ROWS OF ELLS SHALL BE DESIGNED FOR A SUPERIMPOSED D.L. = 150 PSF AND SUPERIMPOSED L.L. = 75 PSF GRID 2 TO 6 (PRESS. BOX 4 FT. P.B. EXFAN.)

PRECAST CONC. SEATING ELLS. SEE SHT. S6-14 SPEC. SECT. 03451 OPP. SIDE SAME

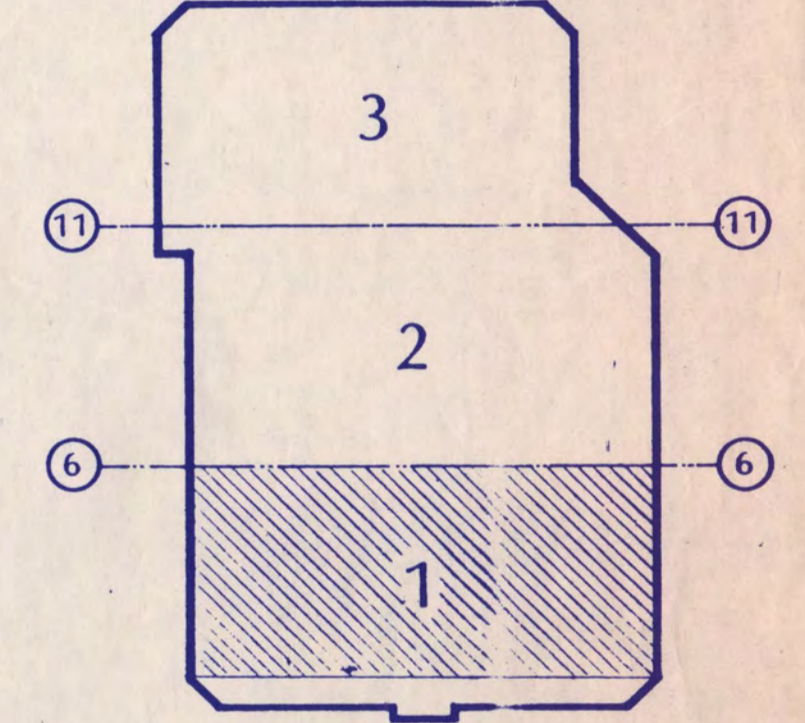
8' PRECAST PLANK DESIGN L.L. - SEE GEN. STRUCT. NOTES, TOP @ EL. 1006'-10"

NOTE: WELD 4 TO W33 WITH 3/16 x 3 @ 12" FILLST T4B

- SHEET NOTES:**
- SEE SHEET S6-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
  - SEE ARCH. DRAWINGS FOR MECH. OPNGS. W/MECH. CONTRACTOR.
  - VERIFY SIZE & LOCATION OF MECH. OPNGS. W/MECH. CONTRACTOR.

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*Scott E. Saunders*  
 Date 9/12/88 Reg. No. 10889



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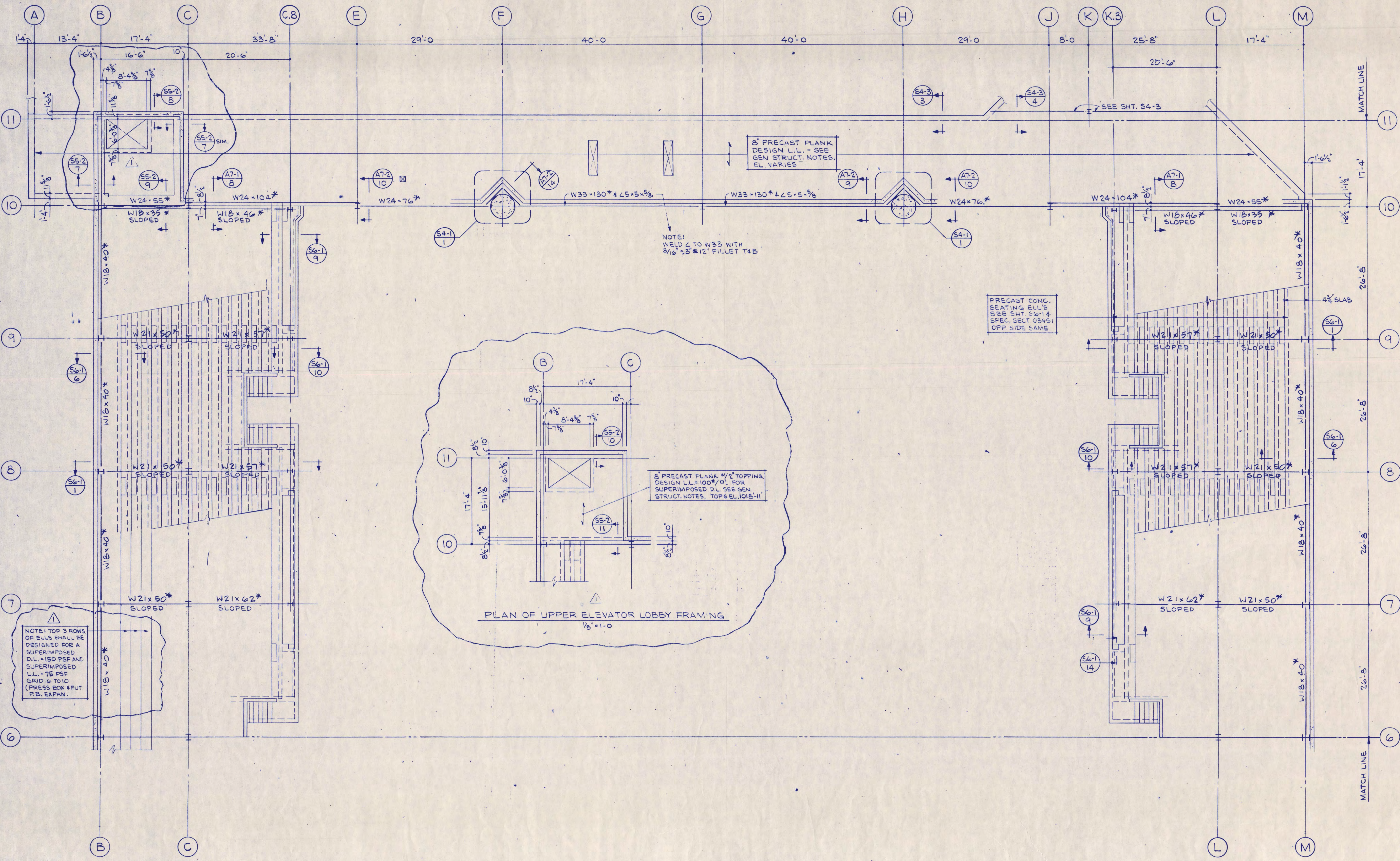
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 Minneapolis, MN 55425  
 (612) 853-2000  
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UPPER SEATING & LOW ROOF FRAMING PLAN AREA 1

Scale 1/8" = 1'-0"

Date SEP. 9, 1988 Comm. No. 8766-871  
 In Charge SES  
 Drawn By RAS  
 Checked By SES

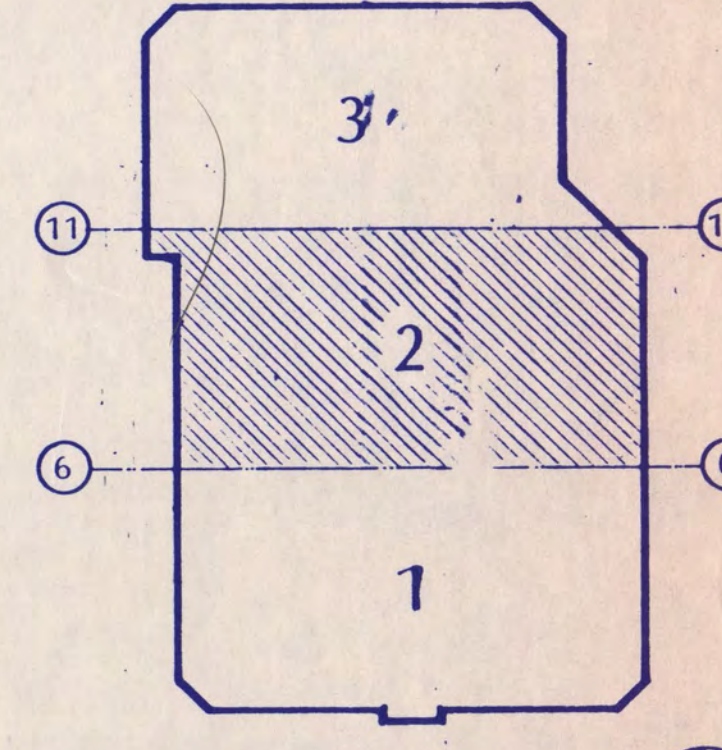
**S3-1**



- SHEET NOTES:**
- SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
  - SEE ARCH. DRAWINGS FOR DIMENSIONS NOT GIVEN.
  - VERIFY SIZE & LOCATION OF MECH. OPGNS. W/MECH. CONTRACTOR.

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*Scott E. Sanderson*  
 Date 7/12/88 Reg. No. 10887



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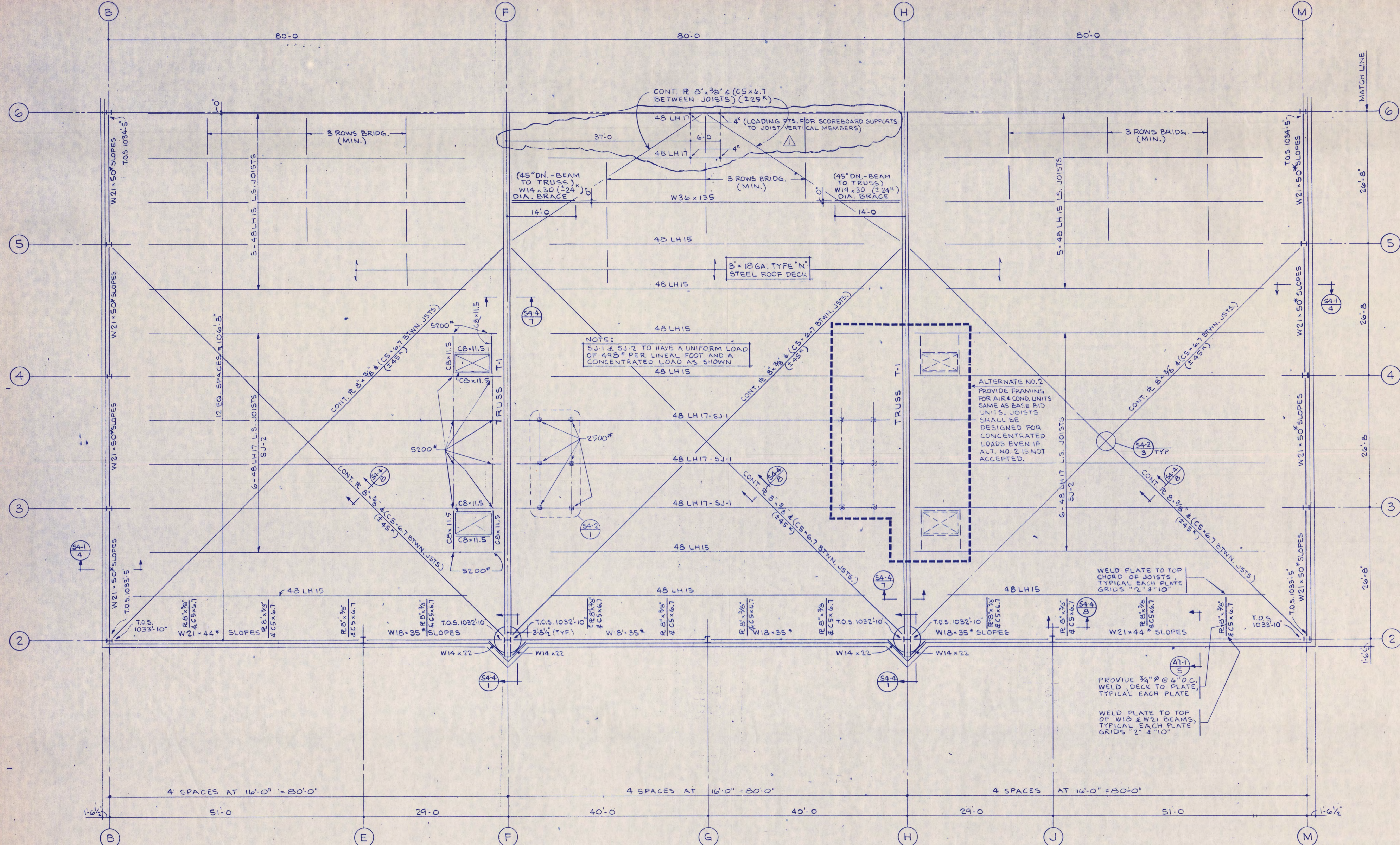
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 Minneapolis, MN 55425  
 (612) 853-2000  
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**UPPER SEATING & LOW ROOF FRAMING PLAN AREA 2**

Scale 1/8" = 1'-0"

Date SEP. 9, 1988 Comm. No. 8766-B71  
 In Charge SES  
 Drawn By RAS  
 Checked By SES

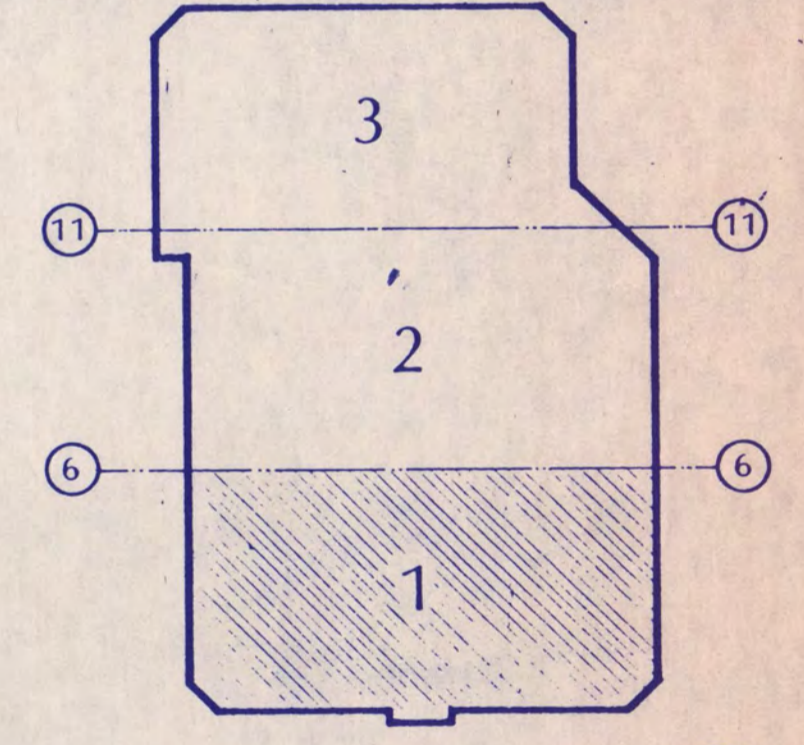
**S3-2**



- SHEET NOTES:**
- SEE SHEET S0-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
  - SEE SHEET S4-4 FOR TRUSS T-1 DIAGRAM & DETAILS.
  - VERIFY SIZE & LOCATION OF MECH. ENGS. W/MECH. CONTRACTOR.
  - JOIST FABRICATOR SHALL COORDINATE W/MECH. CONTR. FOR SPECIFIC LOCATIONS OF CONCENTRATED LOADS.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Scott Sander*  
 Date 7/12/88 Reg. No. 10887



KEY PLAN  
**NATIONAL HOCKEY CENTER**

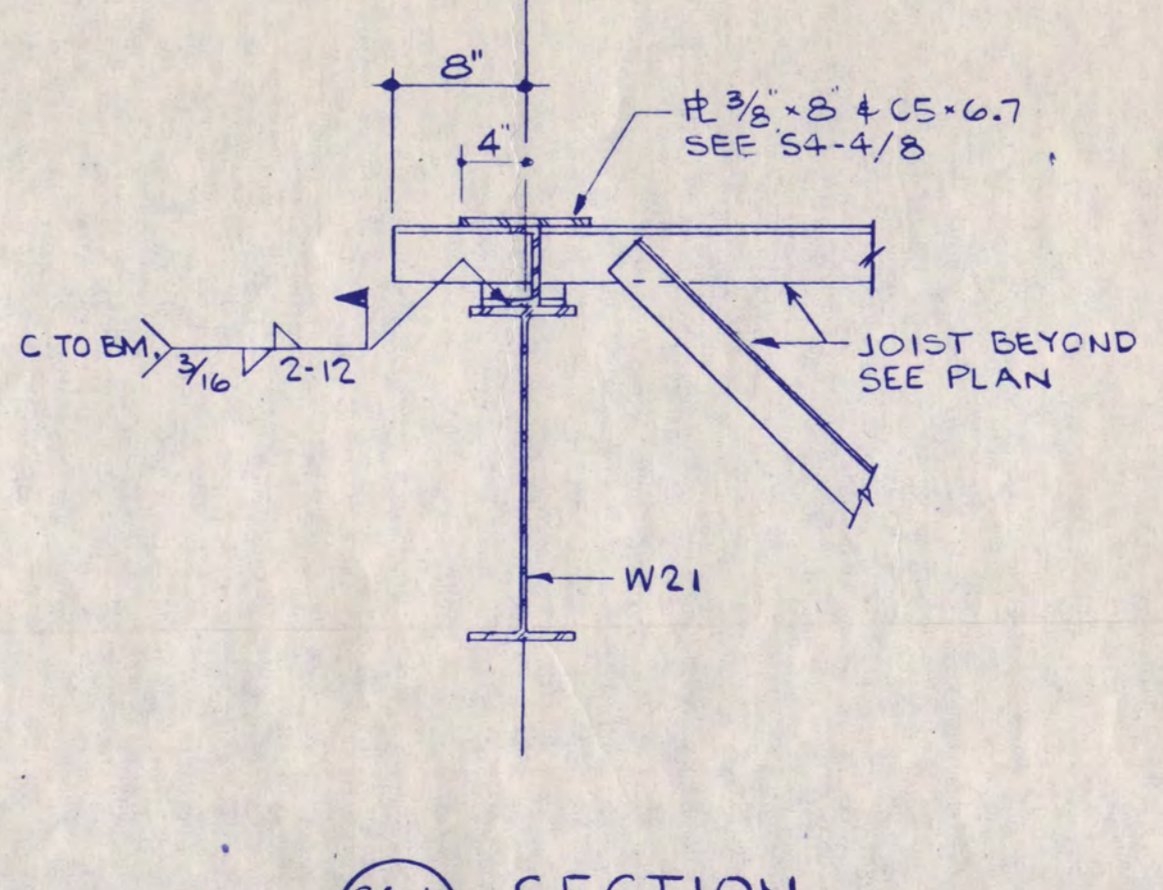
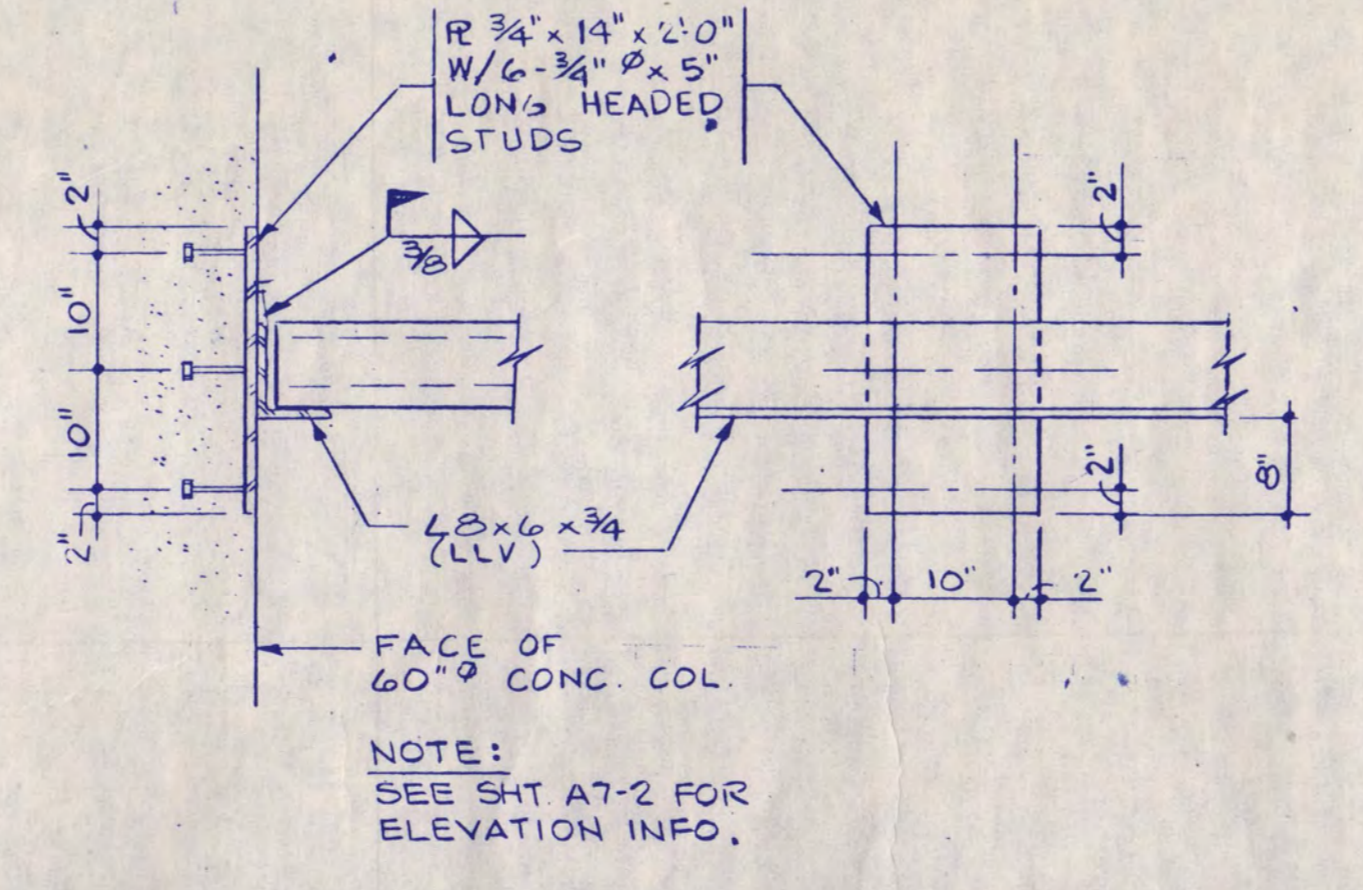
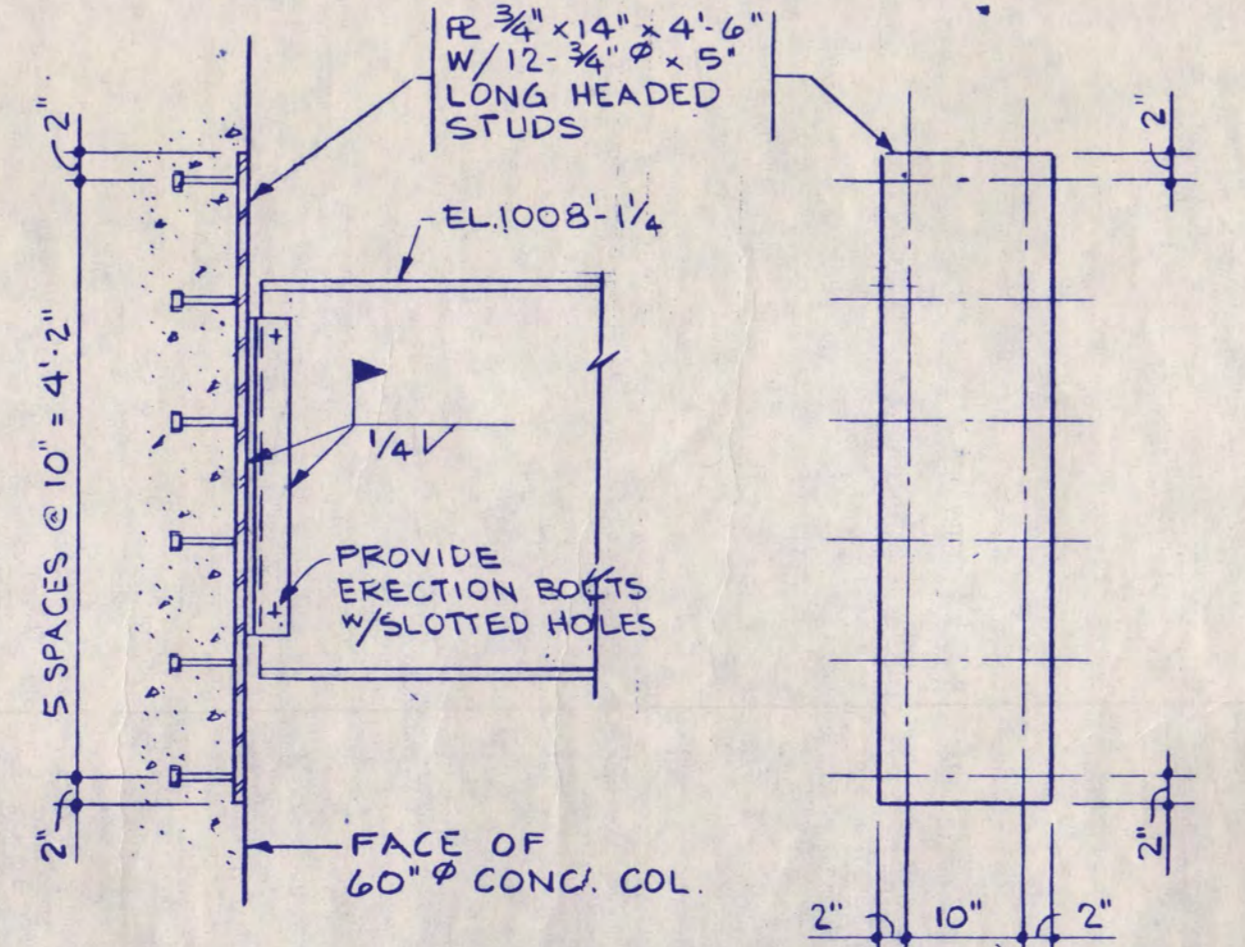
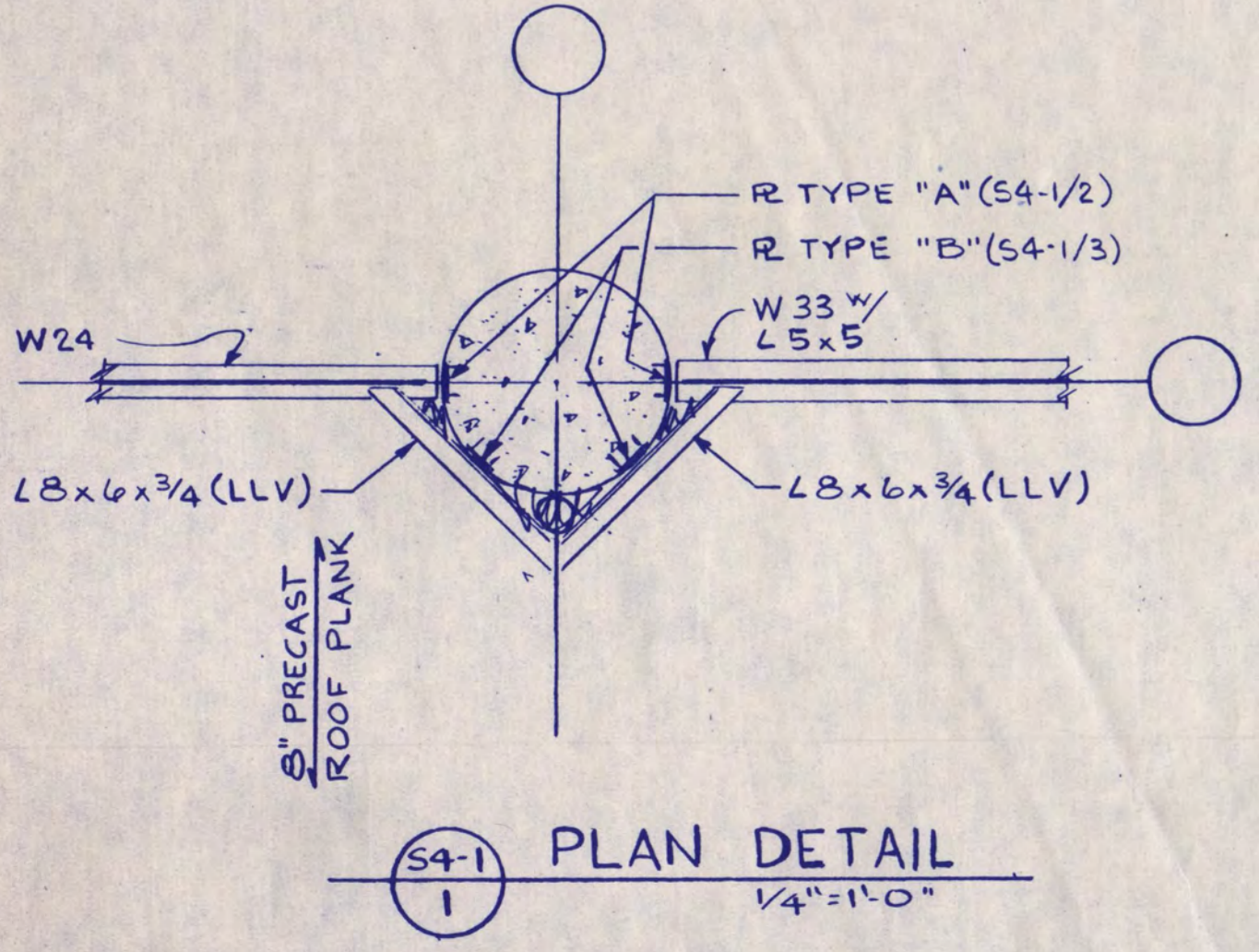
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**HIGH ROOF FRAMING PLAN AREA 1**

Scale 1/8" = 1'-0"  
 Date SEP. 9, 1988 Comm. No. 8766-871  
 In Charge SES  
 Drawn By JAJ  
 Checked By SES

**S4-1**

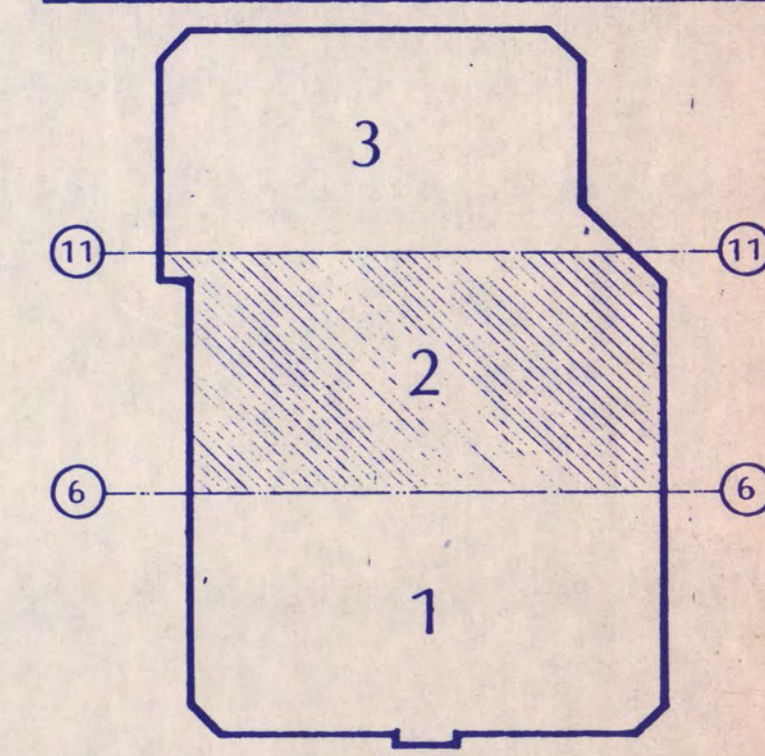


Revision	Date	No.
DD REVIEW ISSUE	6-6-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
CCA #3	12-1-88	
BULLETIN NO. 1	2-10-89	

- SHEET NOTES:**
- SEE SHEET S0-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
  - SEE SHEET S4-4 FOR TRUSS T-1 DIAGRAM & DETAILS.
  - VERIFY SIZE & LOCATION OF MECH. OPNGS. W/MECH. CONTRACTOR.
  - JOIST FABRICATOR SHALL COORDINATE W/MECH. CONTR. FOR SPECIFIC LOCATIONS OF CONCENTRATED LOADS.

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*Scott E. Sandness*  
 Date 7/12/88 Reg. No. 10889



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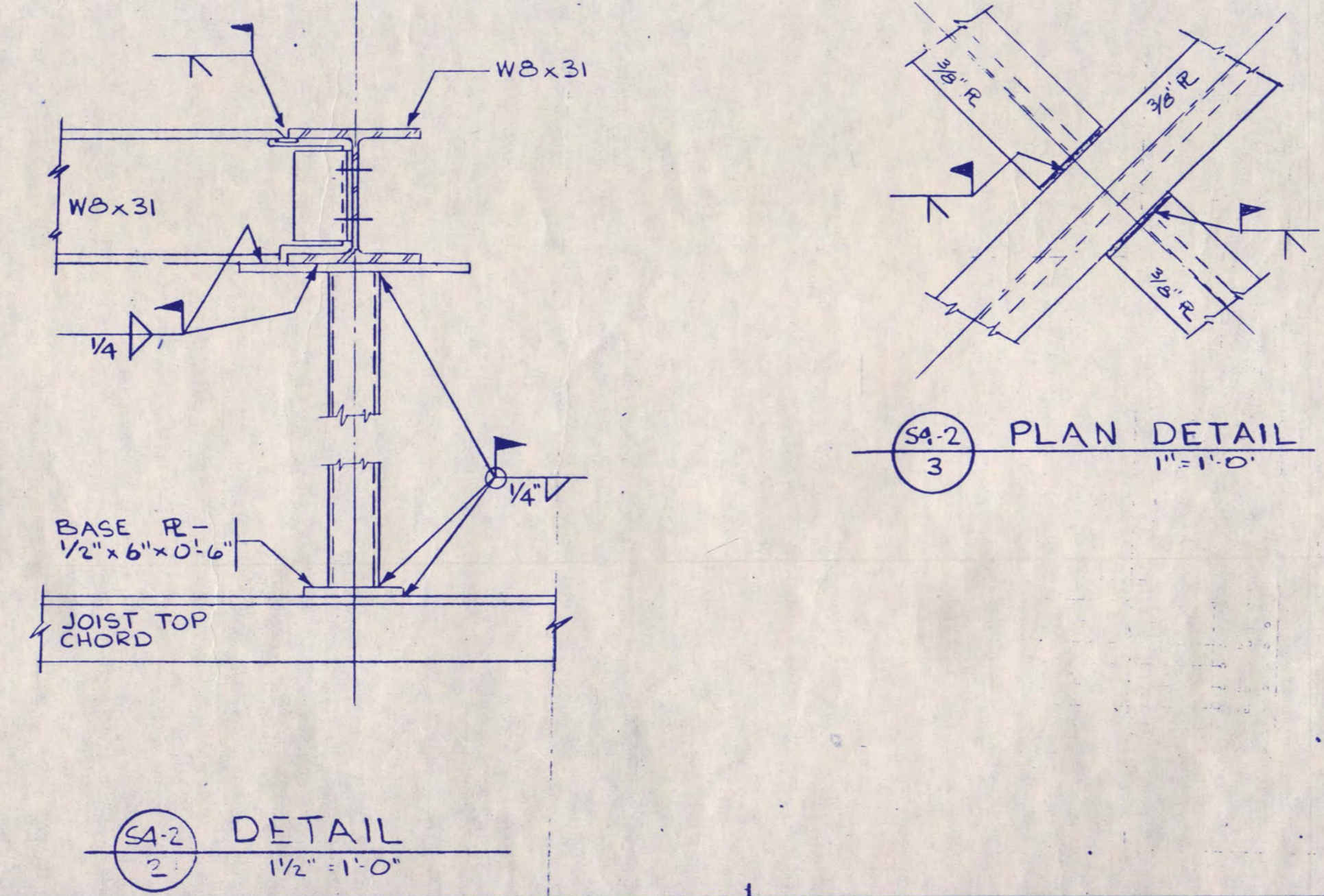
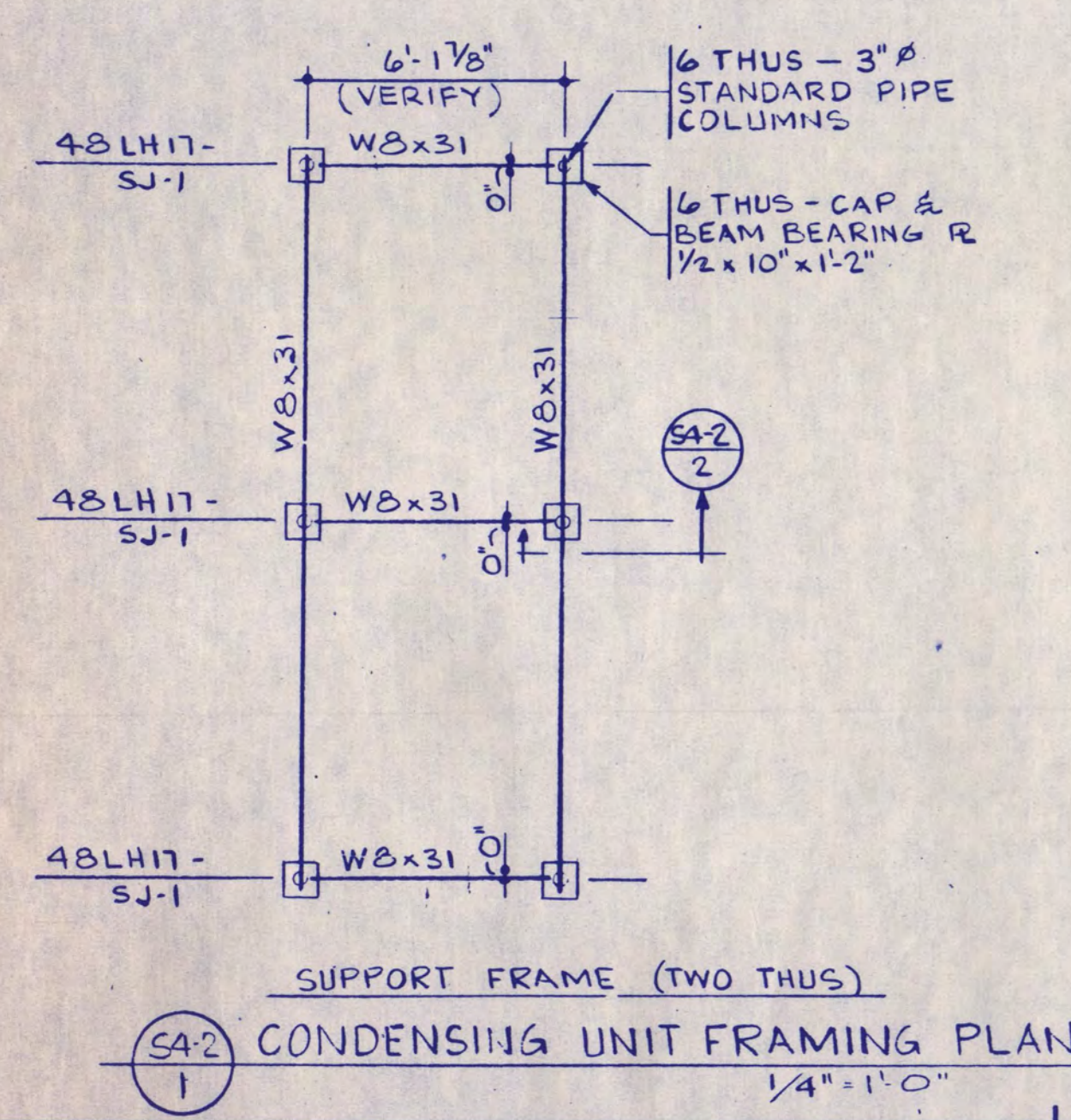
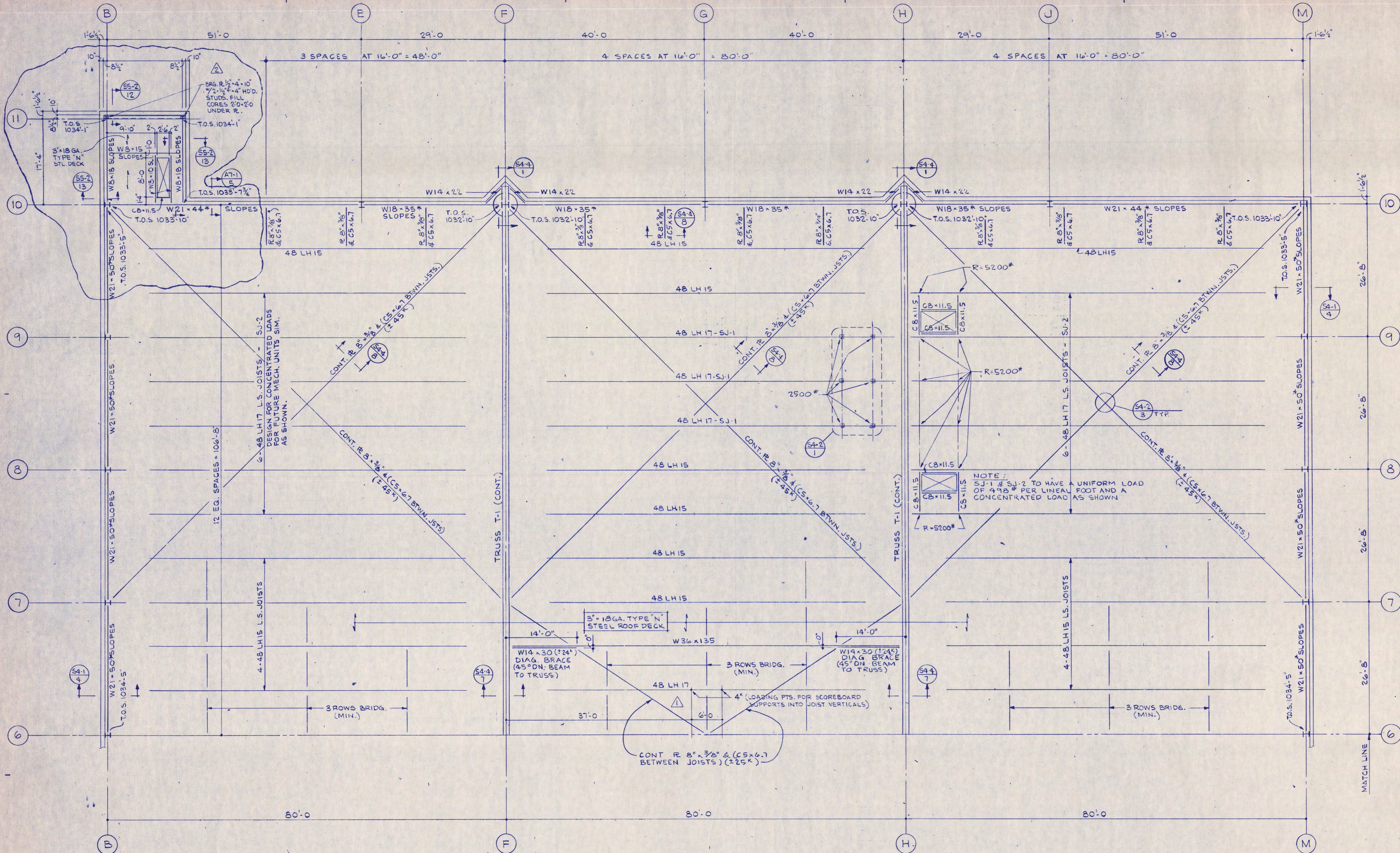
One Appletree Square  
 Minneapolis, MN 55425  
 (612) 853-2000  
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**HIGH ROOF FRAMING PLAN AREA 2**

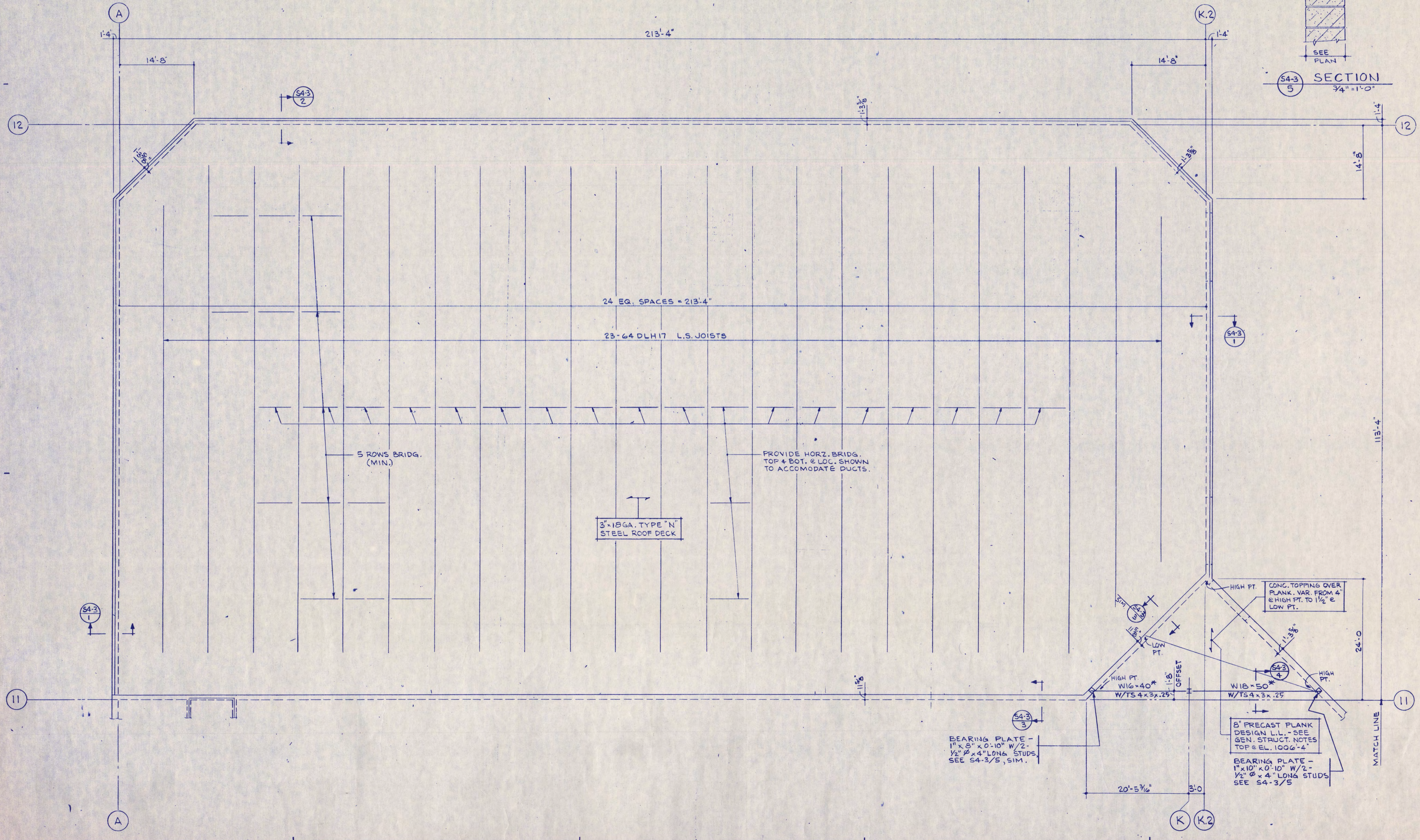
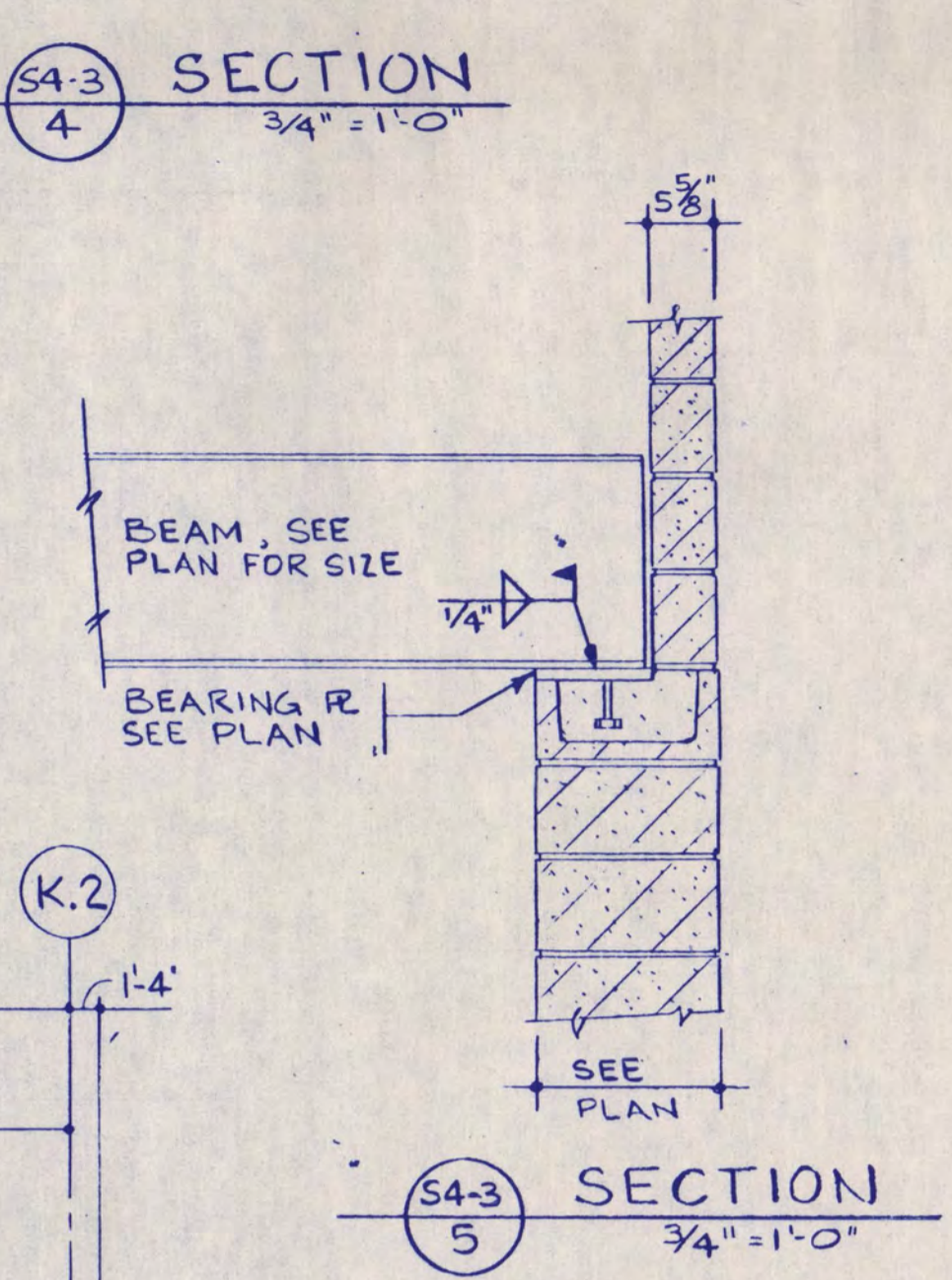
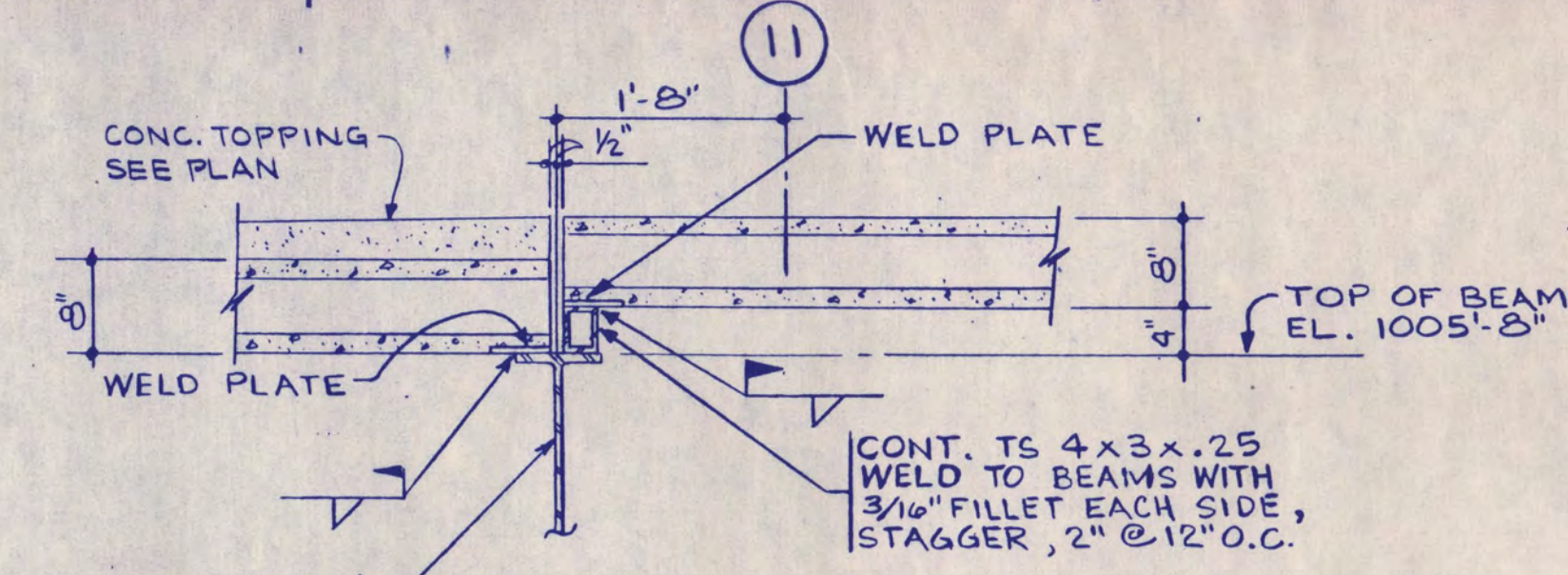
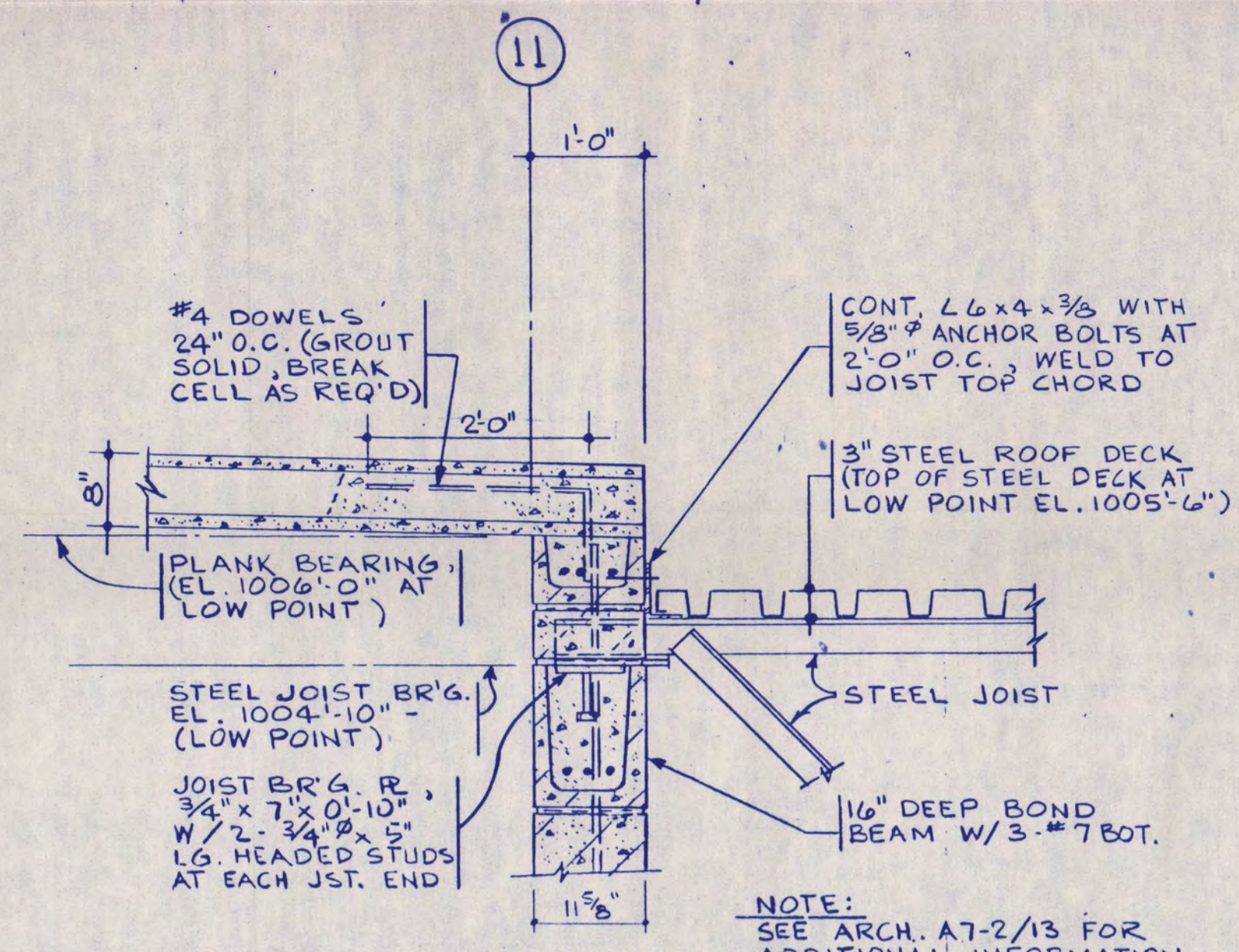
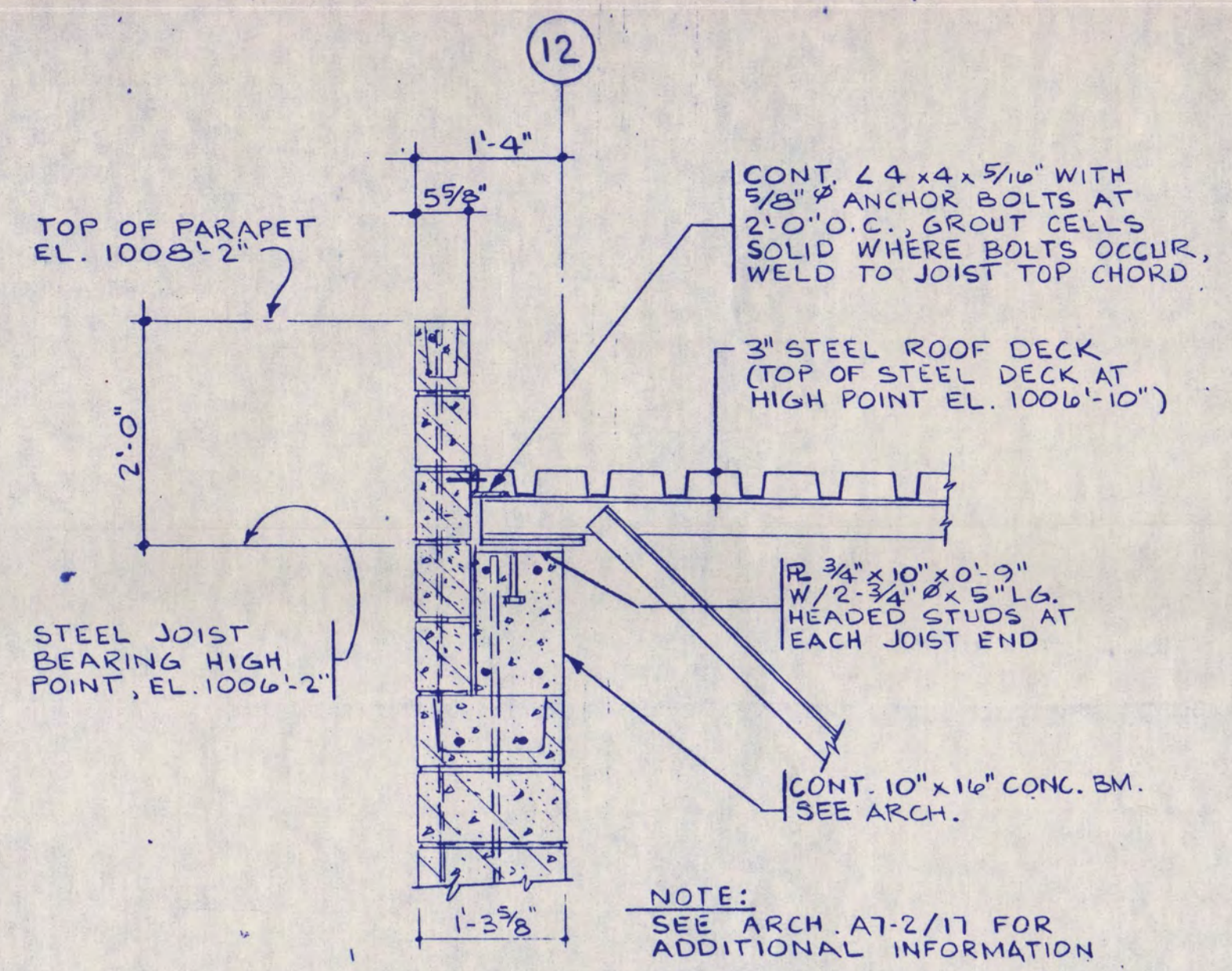
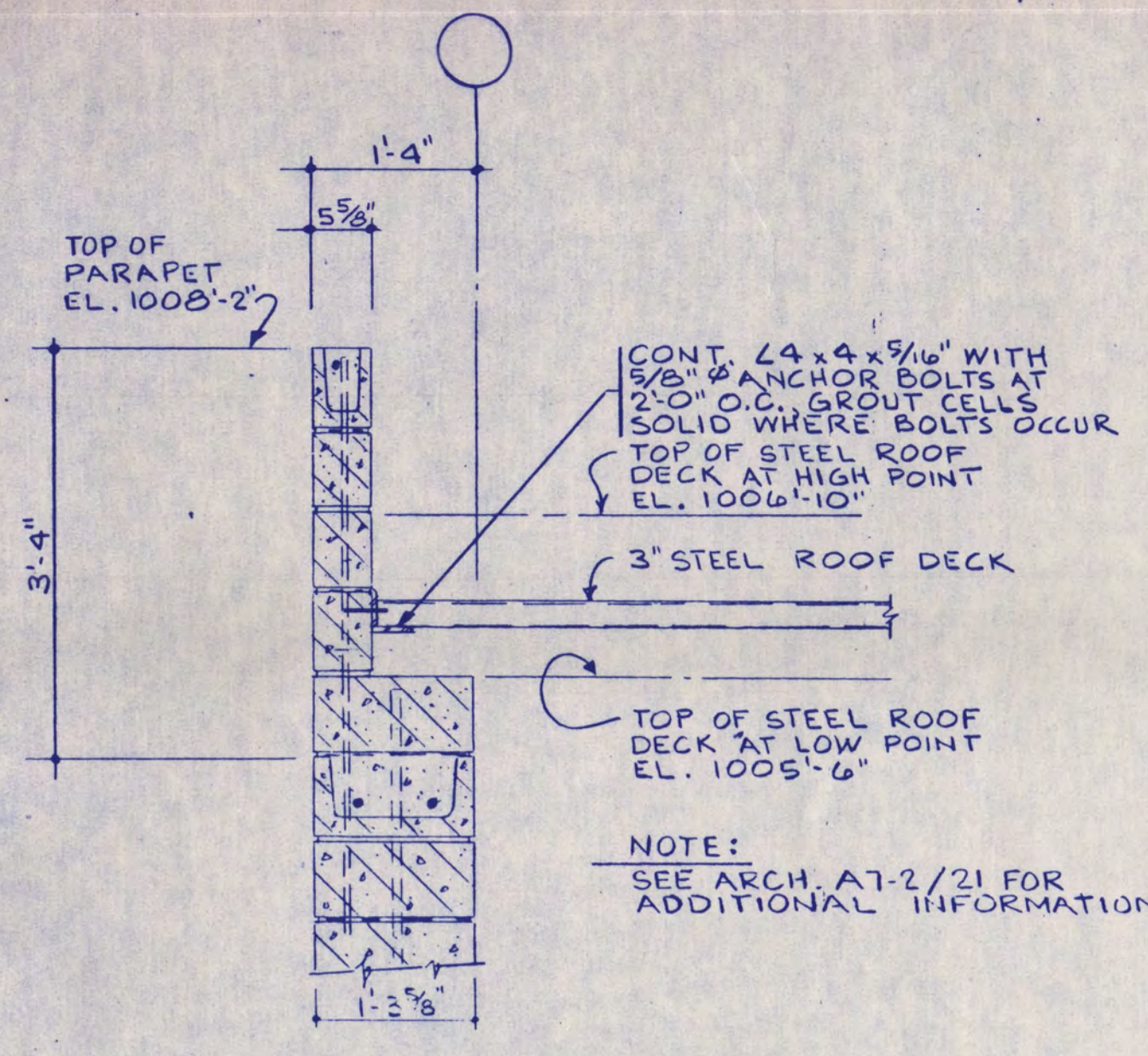
Scale 1/8" = 1'-0"

Date SEP. 9, 1988 Comm. No. 8766-871  
 In Charge SES  
 Drawn By JAJ  
 Checked By SES

**S4-2**



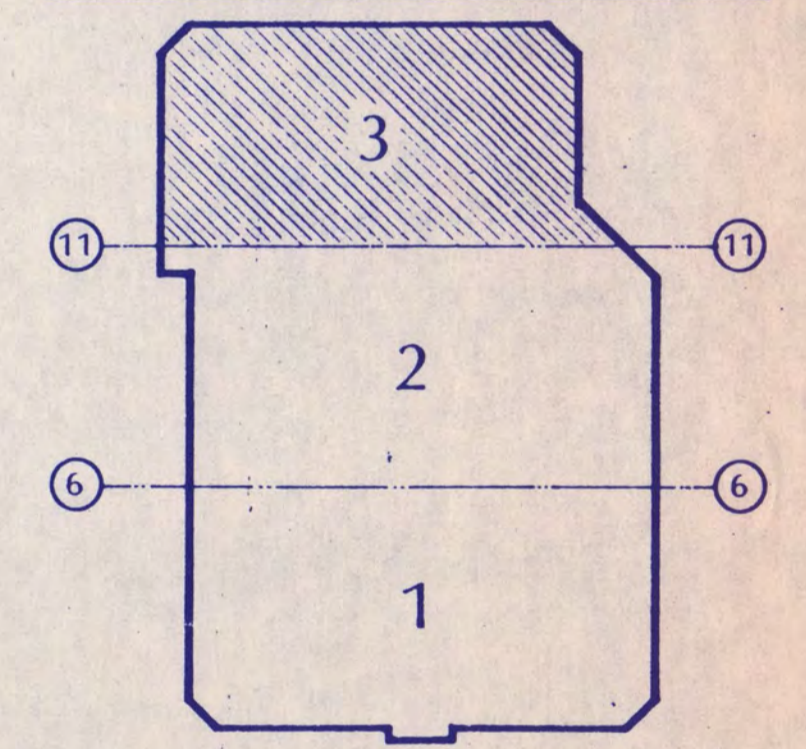
E-1388-1/88



- SHEET NOTES:
- SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
  - ASTERISK \* AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.

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Scott E. Samuels  
 Date 9/12/88 Reg. No. 10887



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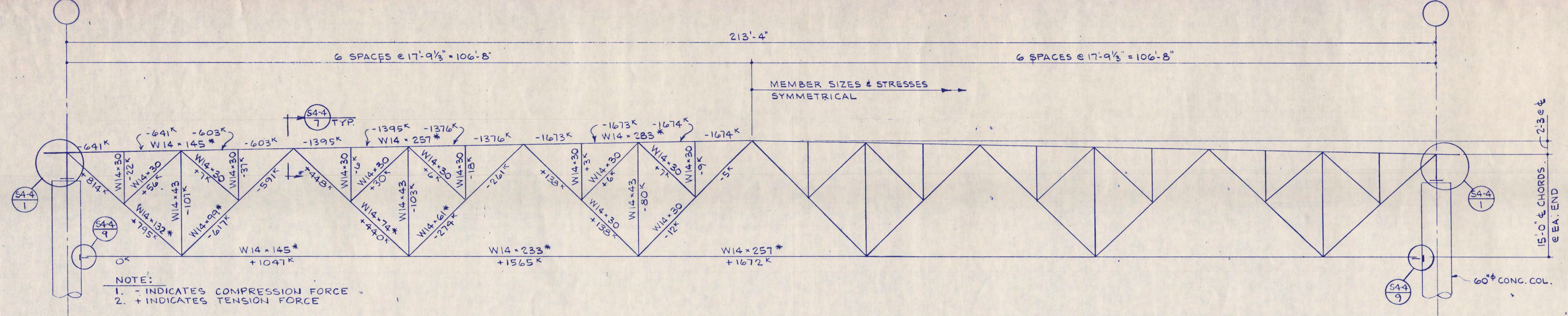
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ROOF FRAMING PLAN  
 AREA 3

Scale 1/8" = 1'-0"  
 Date SEP. 9, 1988 Comm. No. 8766-871  
 In Charge SES  
 Drawn By RAS  
 Checked By SES

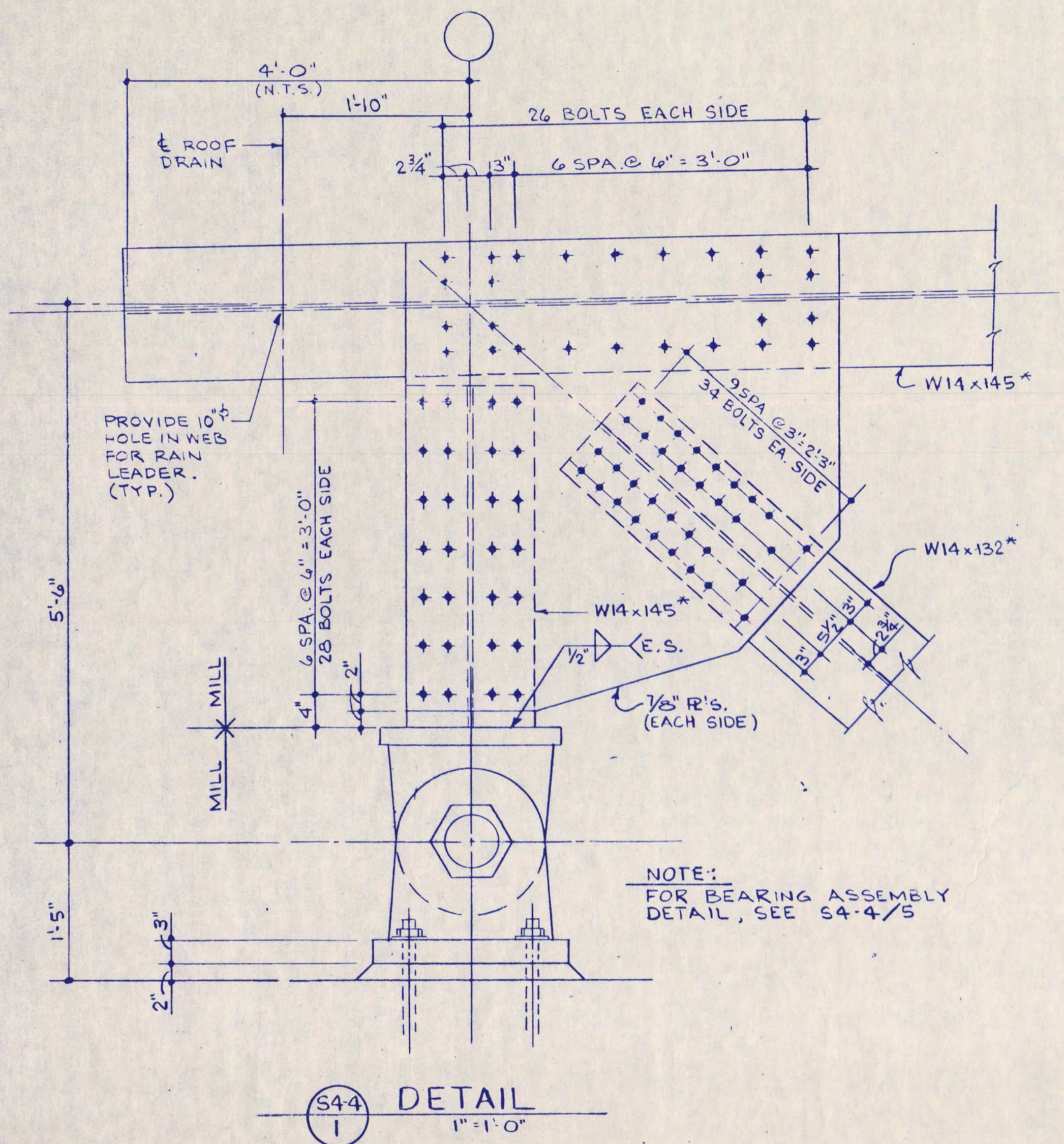
**S4-3**



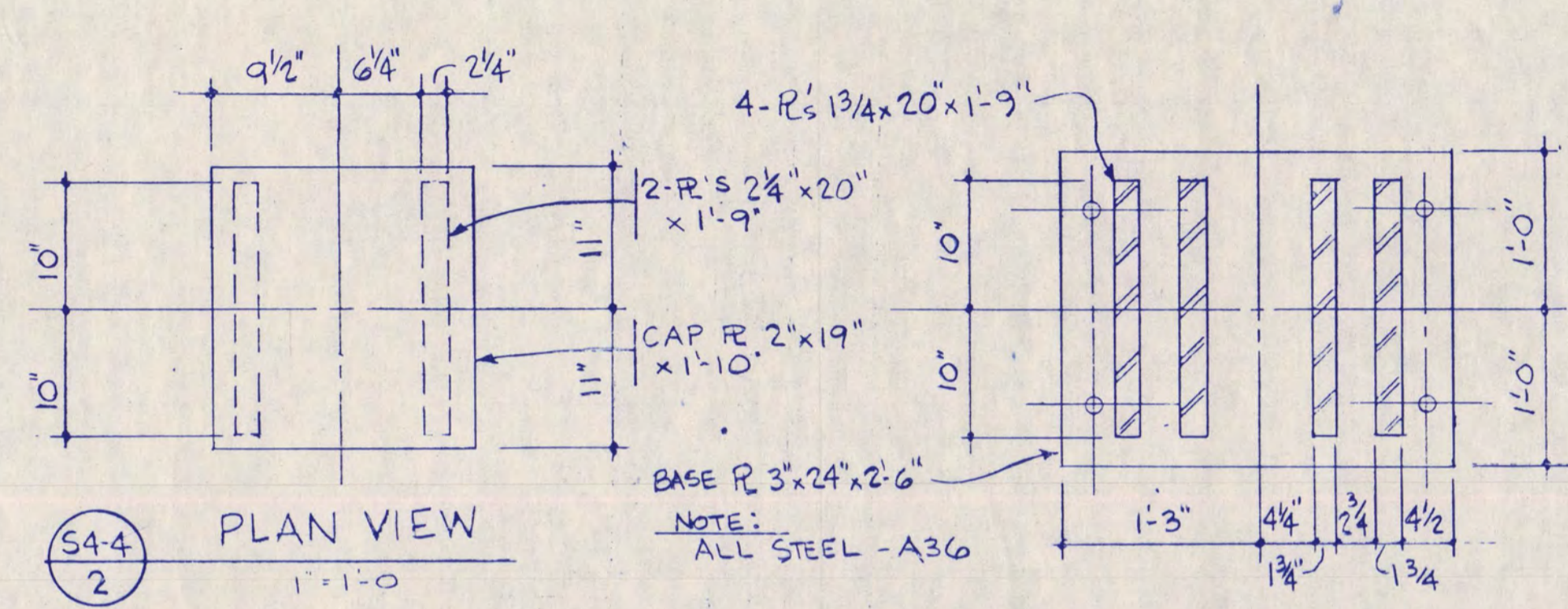
NOTE:  
 1. - INDICATES COMPRESSION FORCE  
 2. + INDICATES TENSION FORCE

ELEVATION TRUSS T-1  
 1/8" = 1'-0"

SHEET NOTES  
 1. \* INDICATES ASTM A-572 GRADE 50 STEEL. ALL OTHER IS ASTM A-36.  
 2. TYPICAL TRUSS CONNECTIONS REQUIRE 1" A325N BOLTS, (EXCEPT AT DETAIL S4-4/1 PROVIDE 1" A325F)

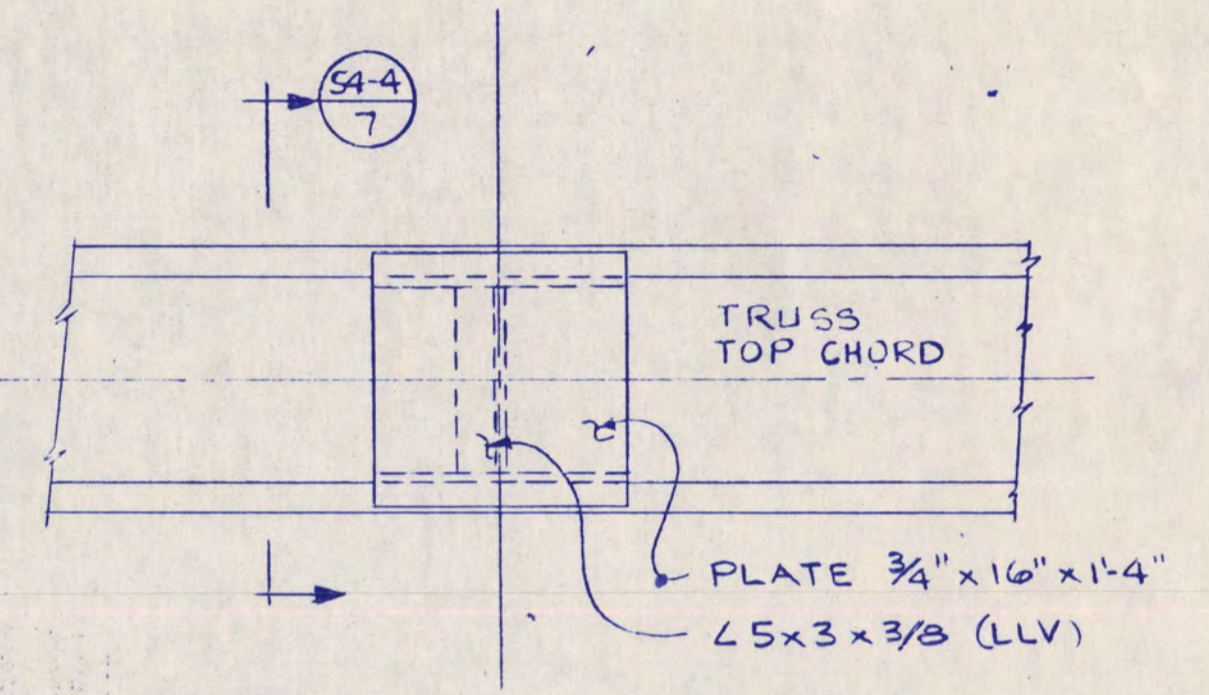


S4-4/1  
 1" = 1'-0"

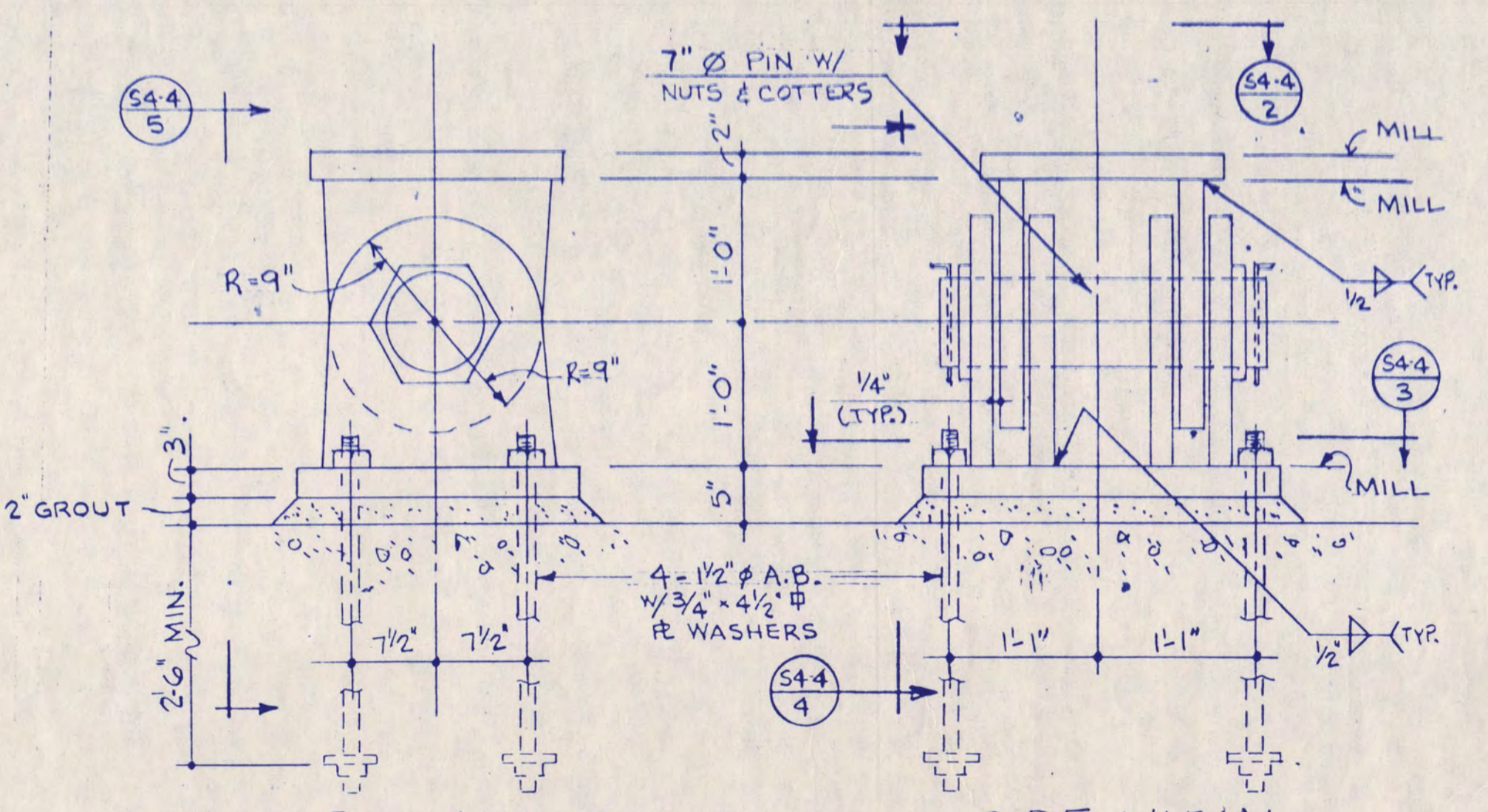


S4-4/2  
 1" = 1'-0"

S4-4/3  
 1" = 1'-0"

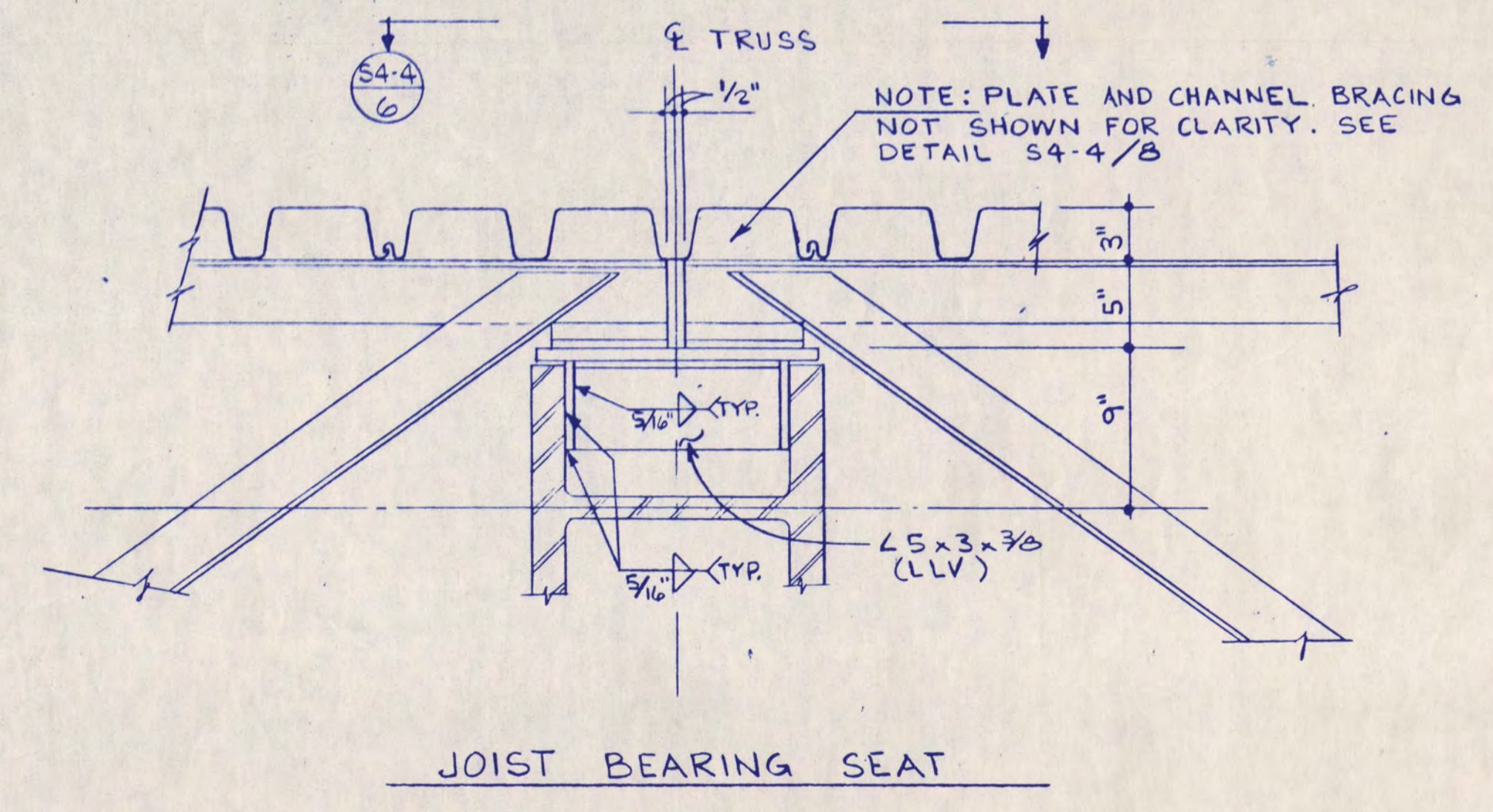


S4-4/6  
 1" = 1'-0"

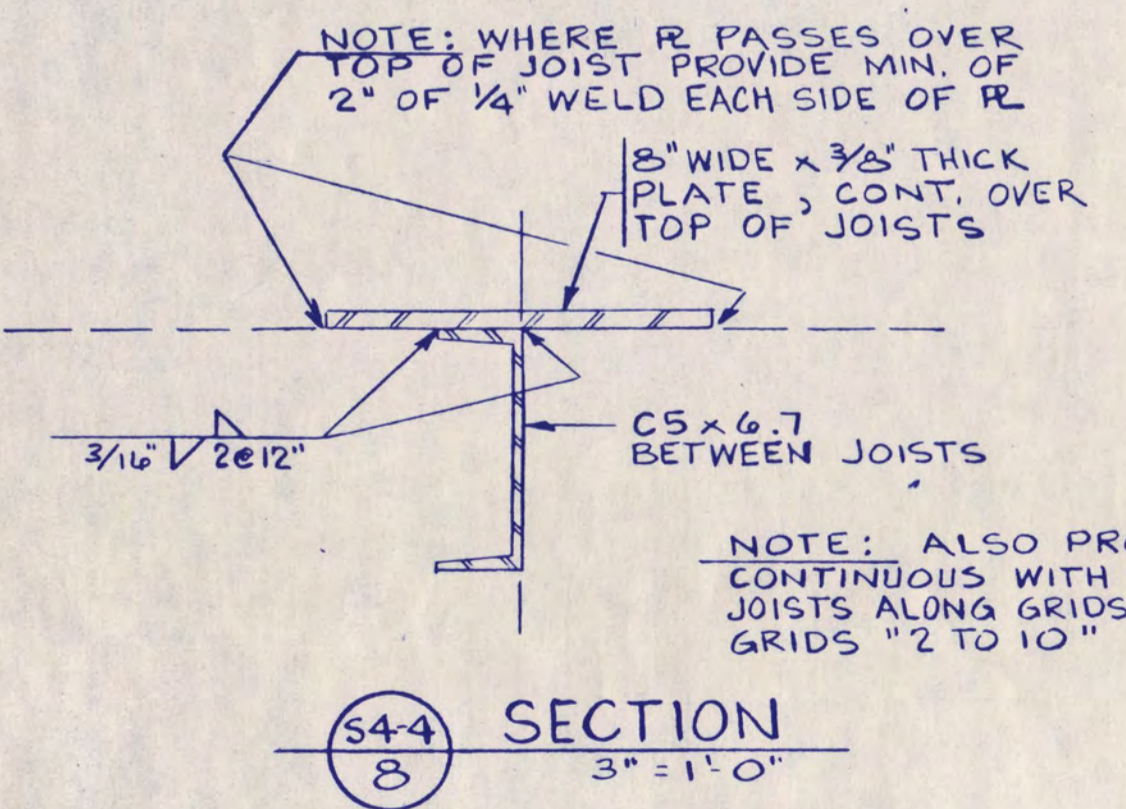


S4-4/4  
 1" = 1'-0"

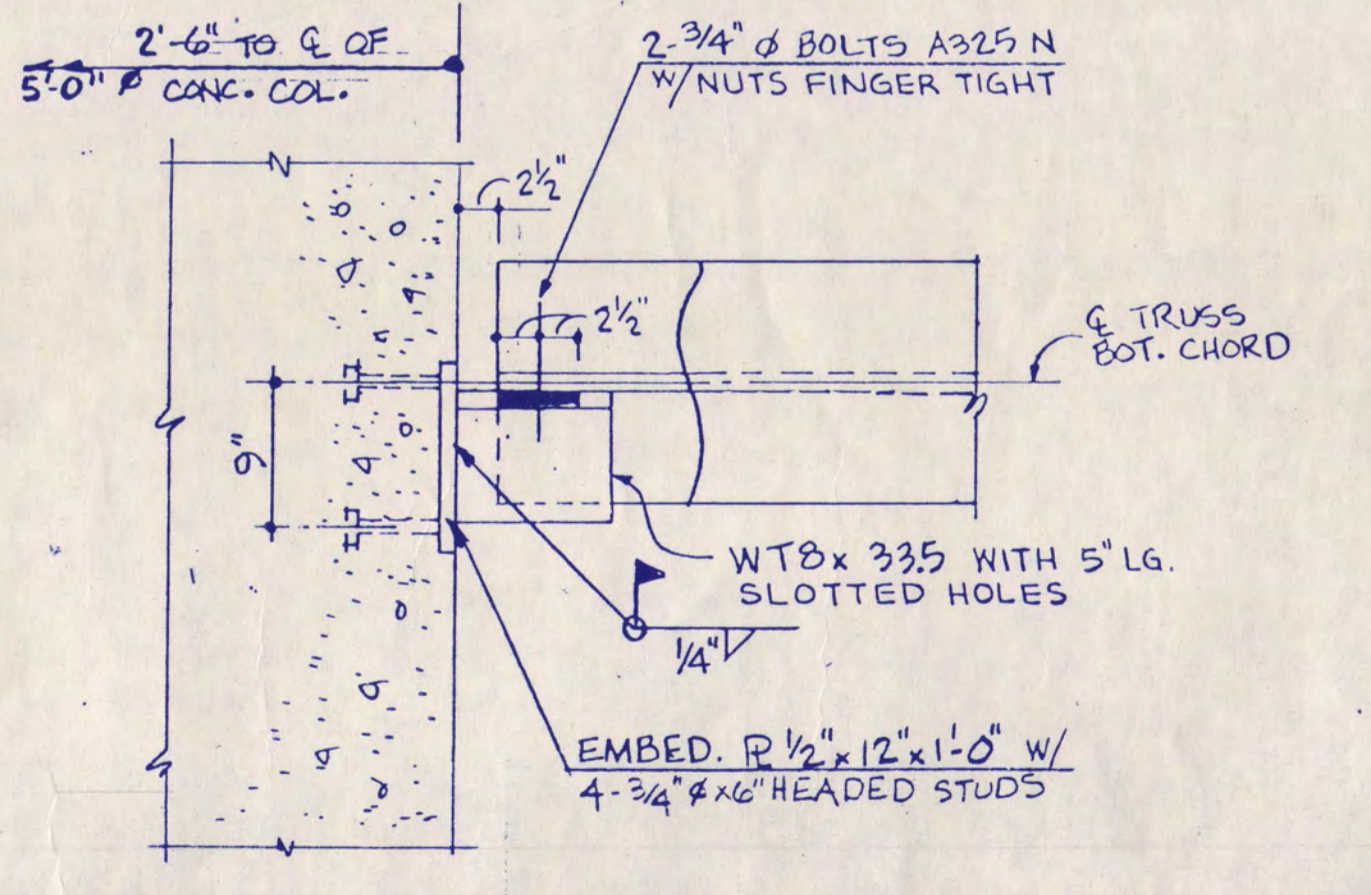
S4-4/5  
 1" = 1'-0"



S4-4/7  
 1/2" = 1'-0"



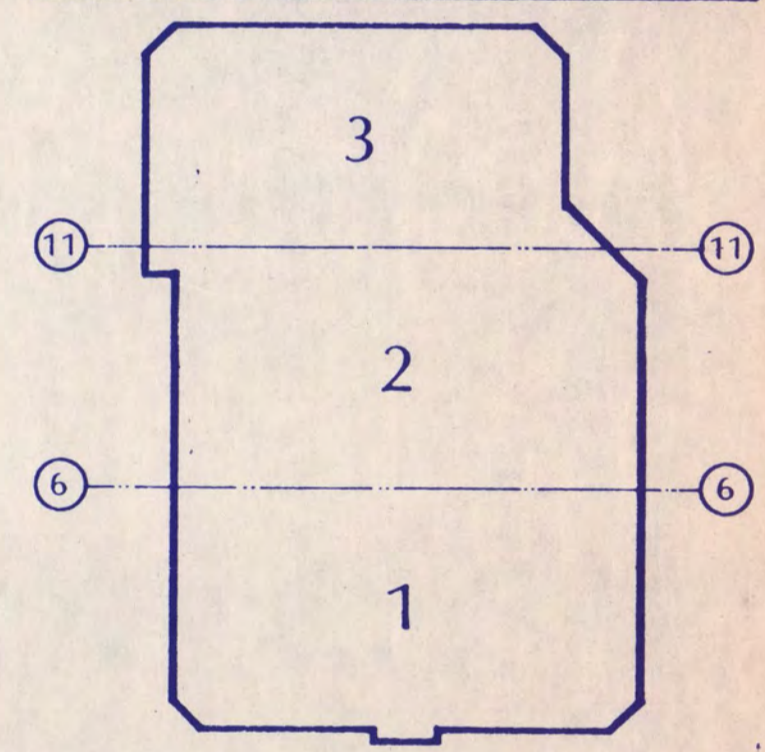
S4-4/8  
 3" = 1'-0"



S4-4/9  
 1" = 1'-0"

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*Scott E. Saunderson*  
 Date 7/12/88 Reg. No. 10889



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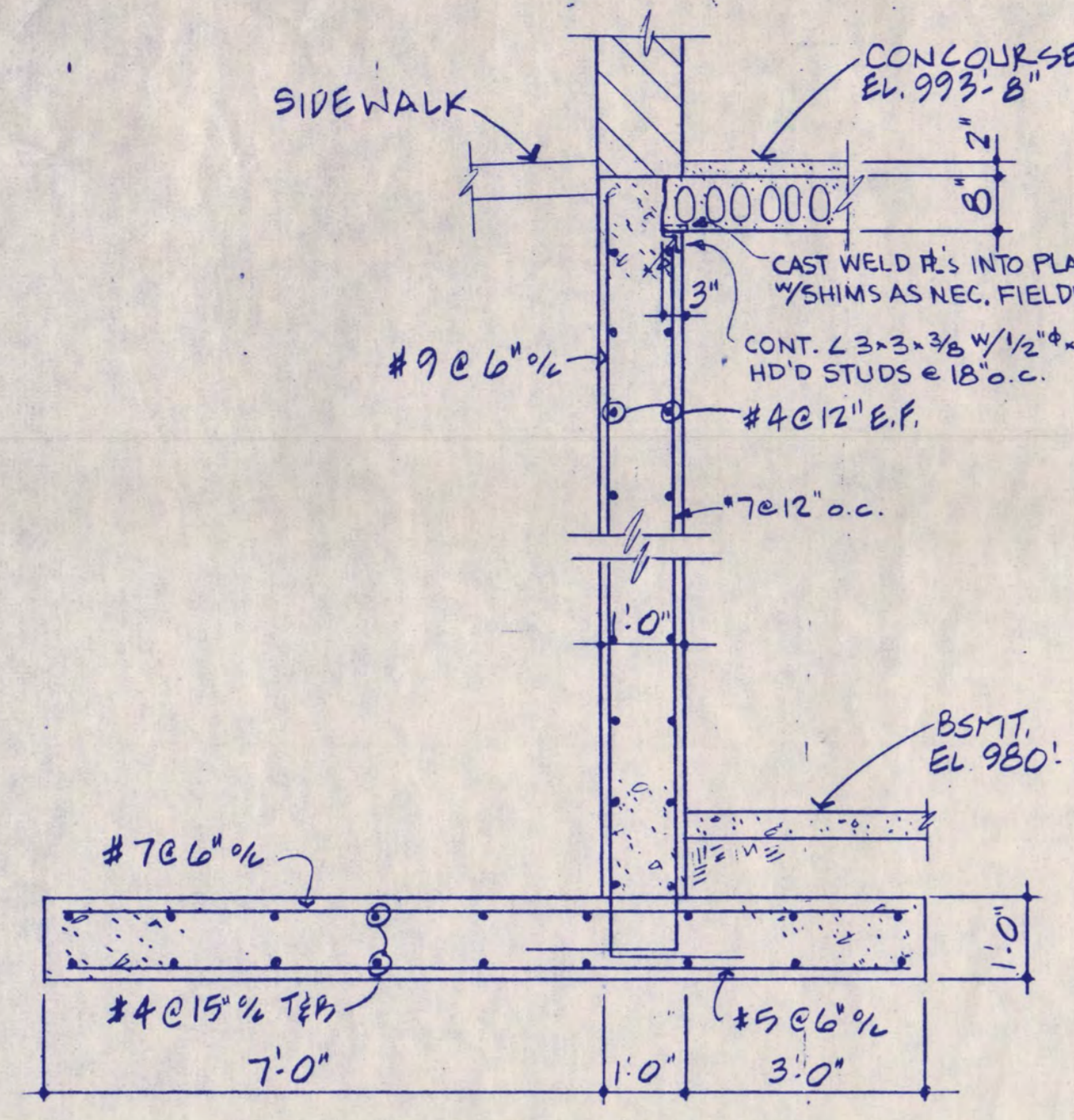
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TRUSS ELEVATION

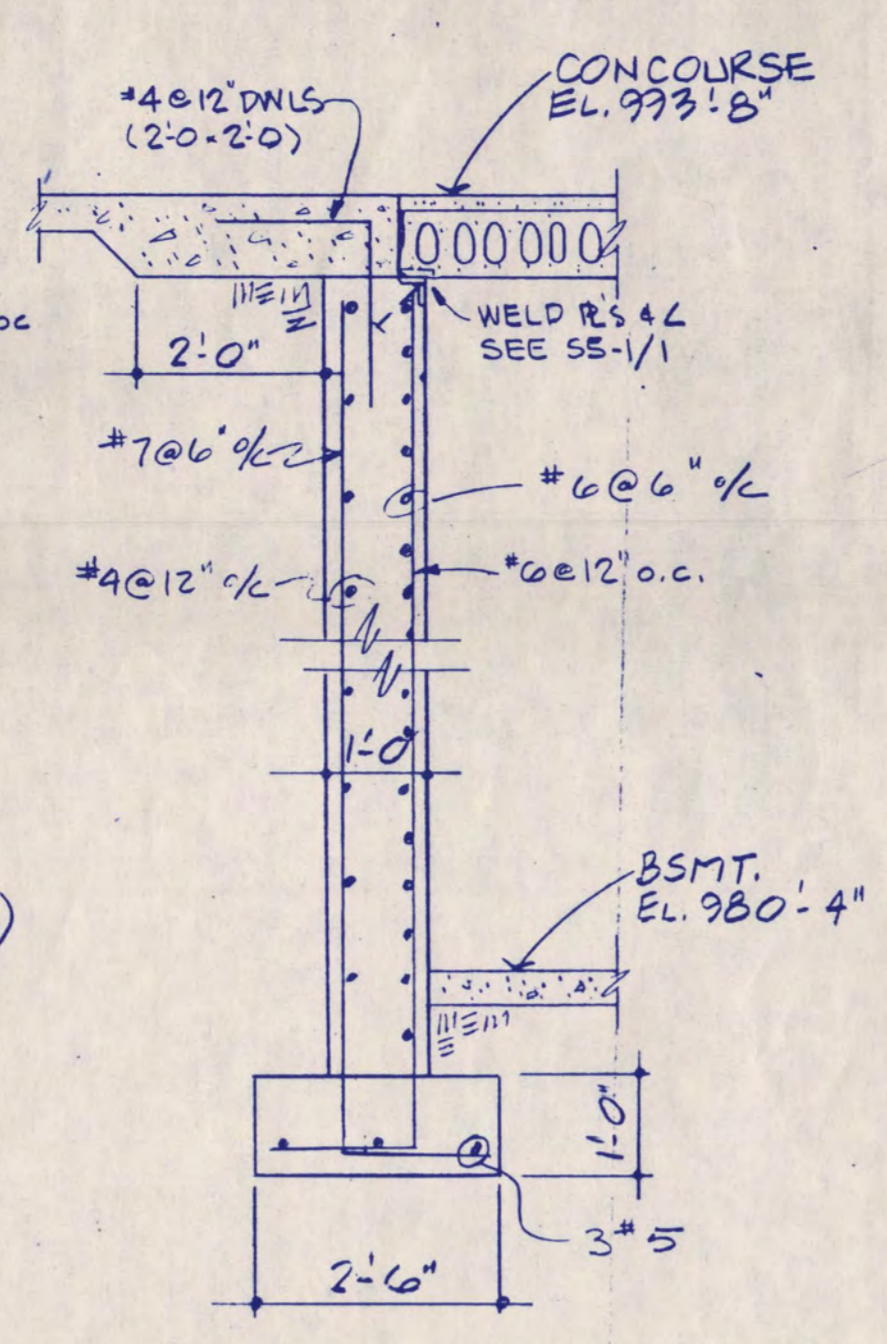
Scale AS NOTED

Date SEP. 9, 1988 Conn. No. 8766-871  
 In Charge SES  
 Drawn By RAS  
 Checked By SES

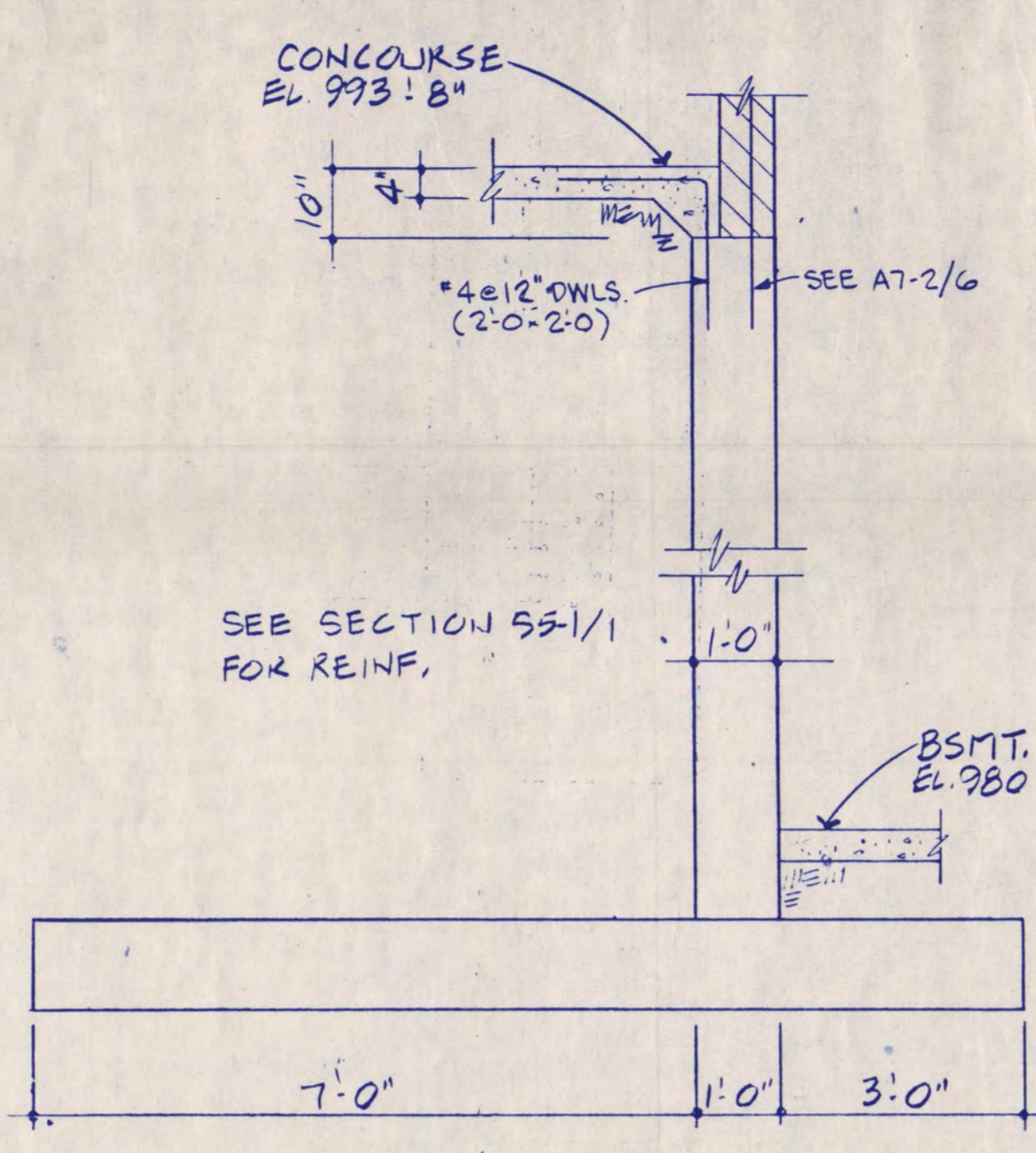
S4-4



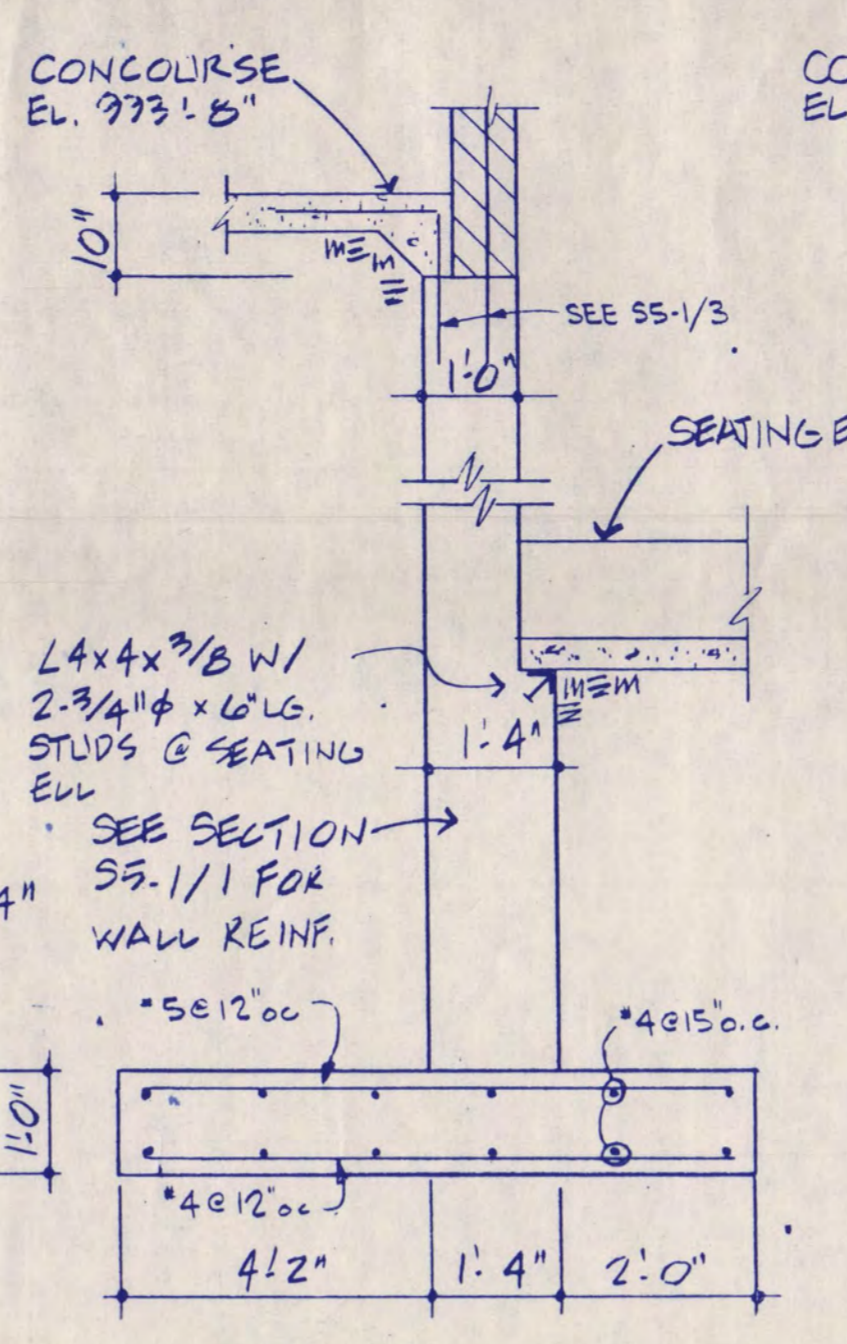
SS-1 SECTION 1  
1/2" = 1'-0"



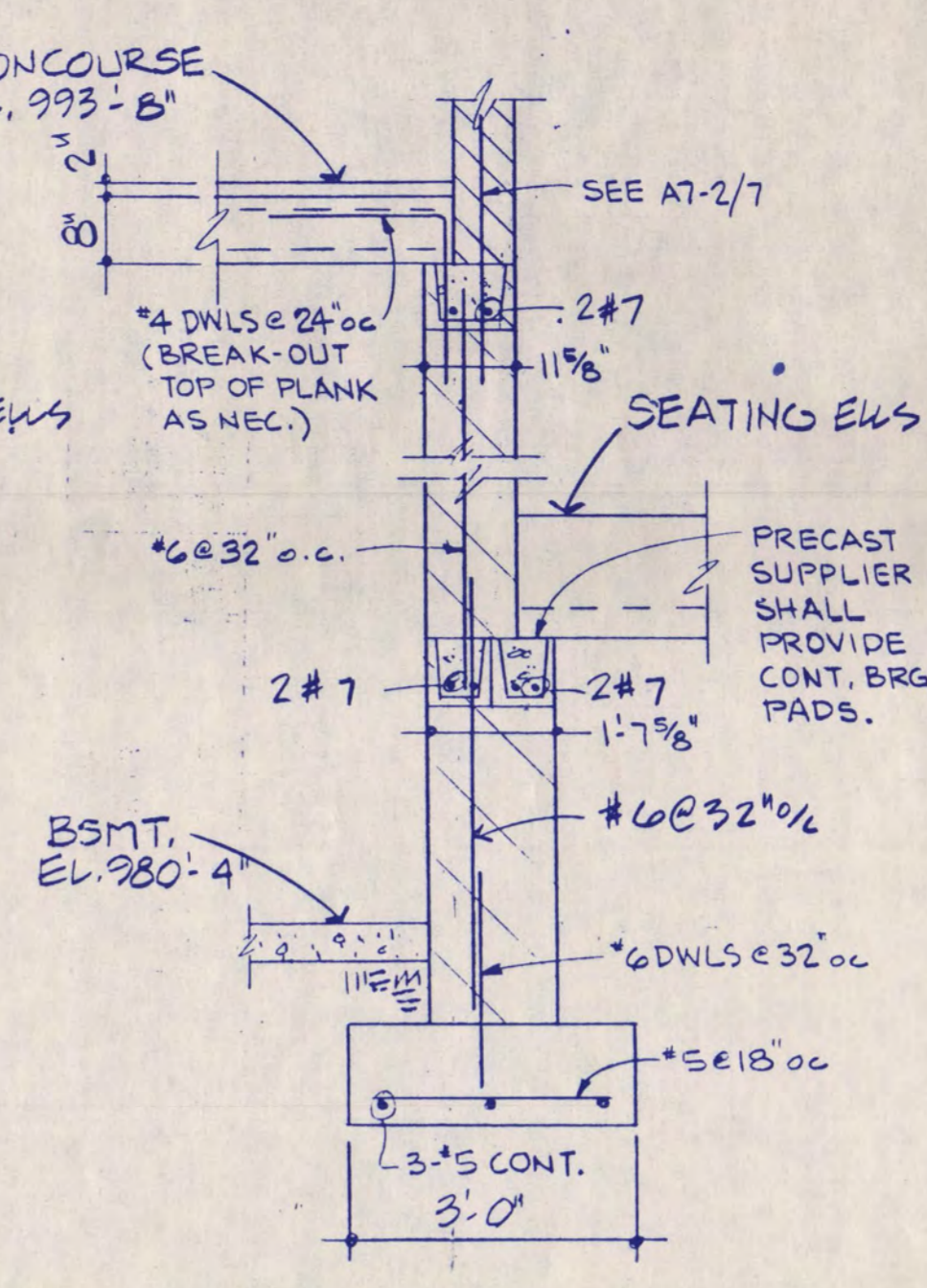
SS-1 SECTION 2  
1/2" = 1'-0"



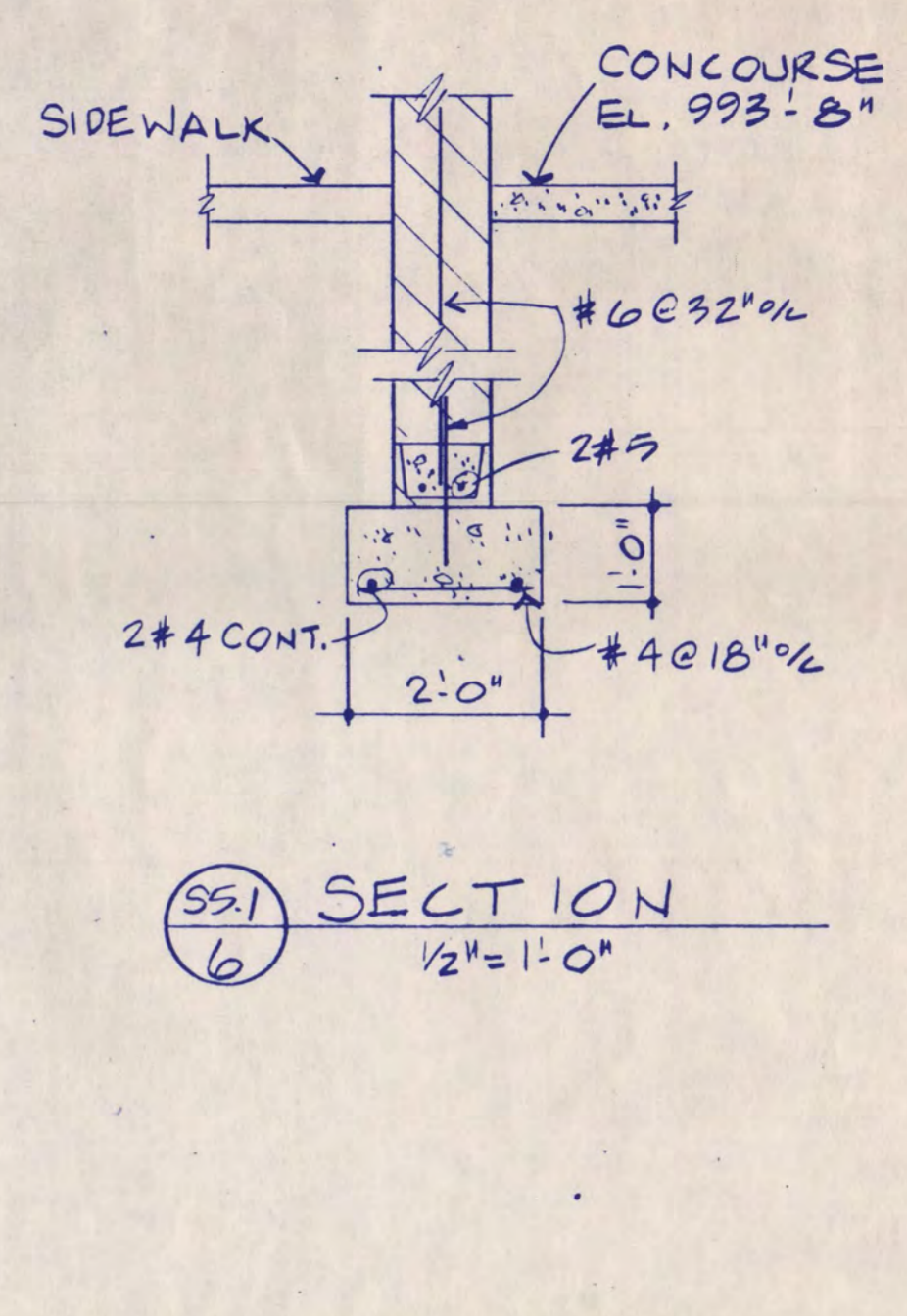
SS-1 SECTION 3  
1/2" = 1'-0"



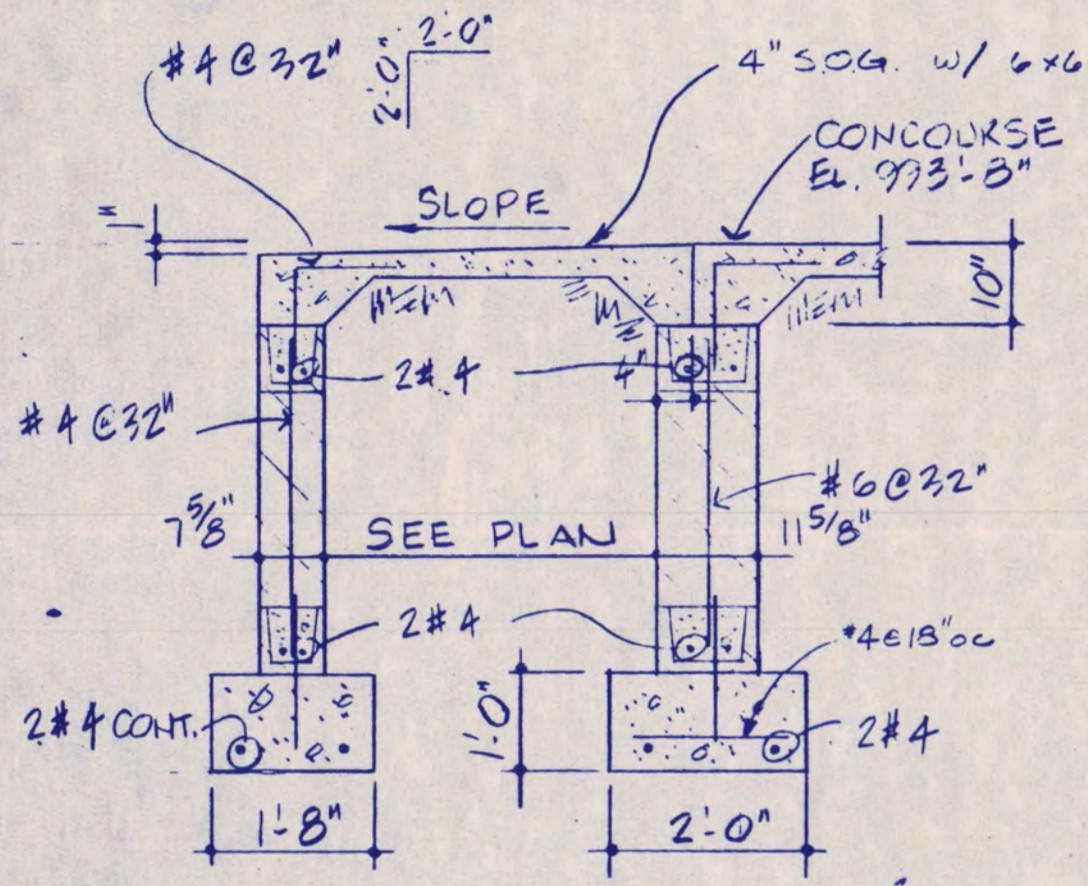
SS-1 SECTION 4  
1/2" = 1'-0"



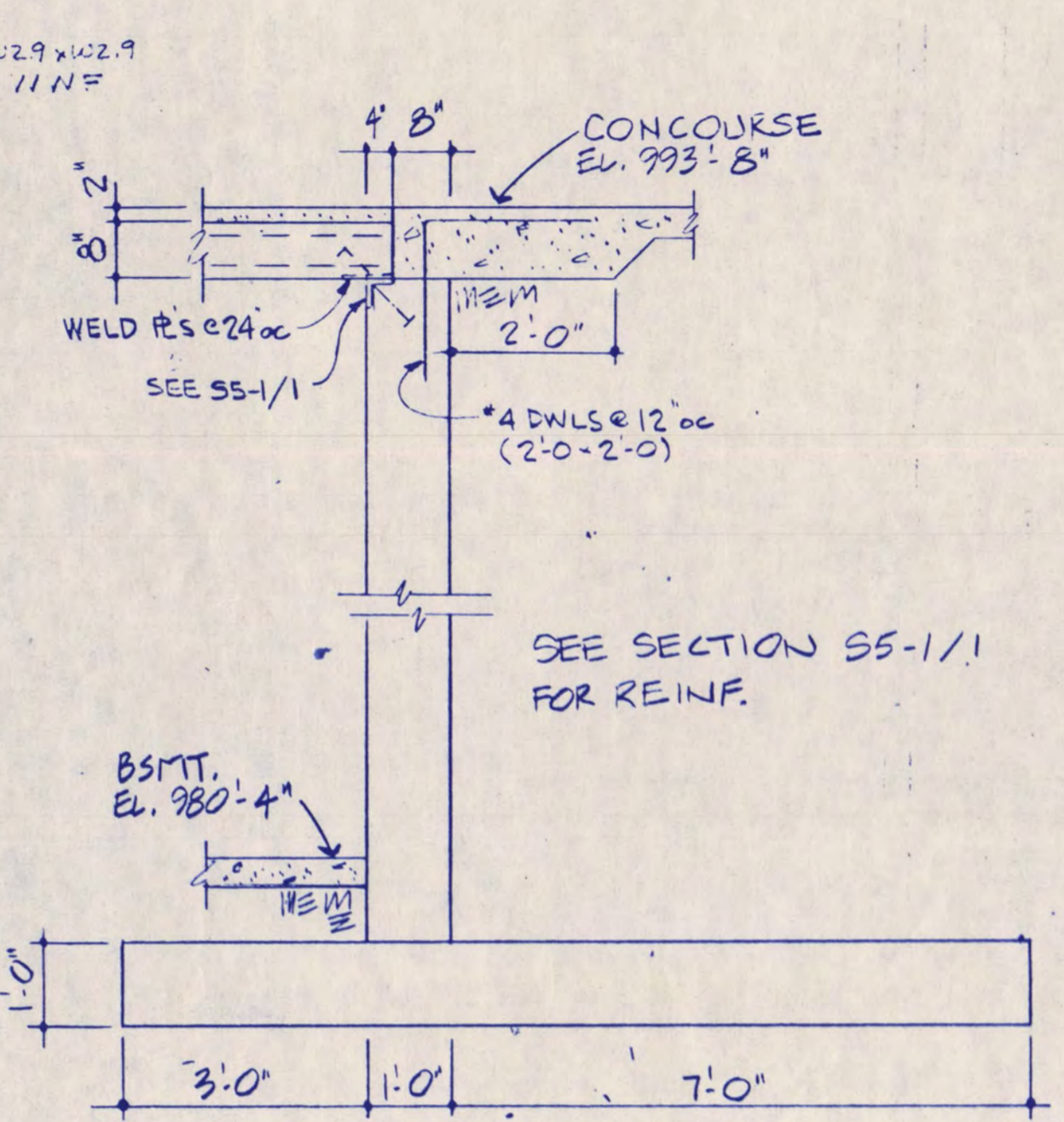
SS-1 SECTION 5  
1/2" = 1'-0"



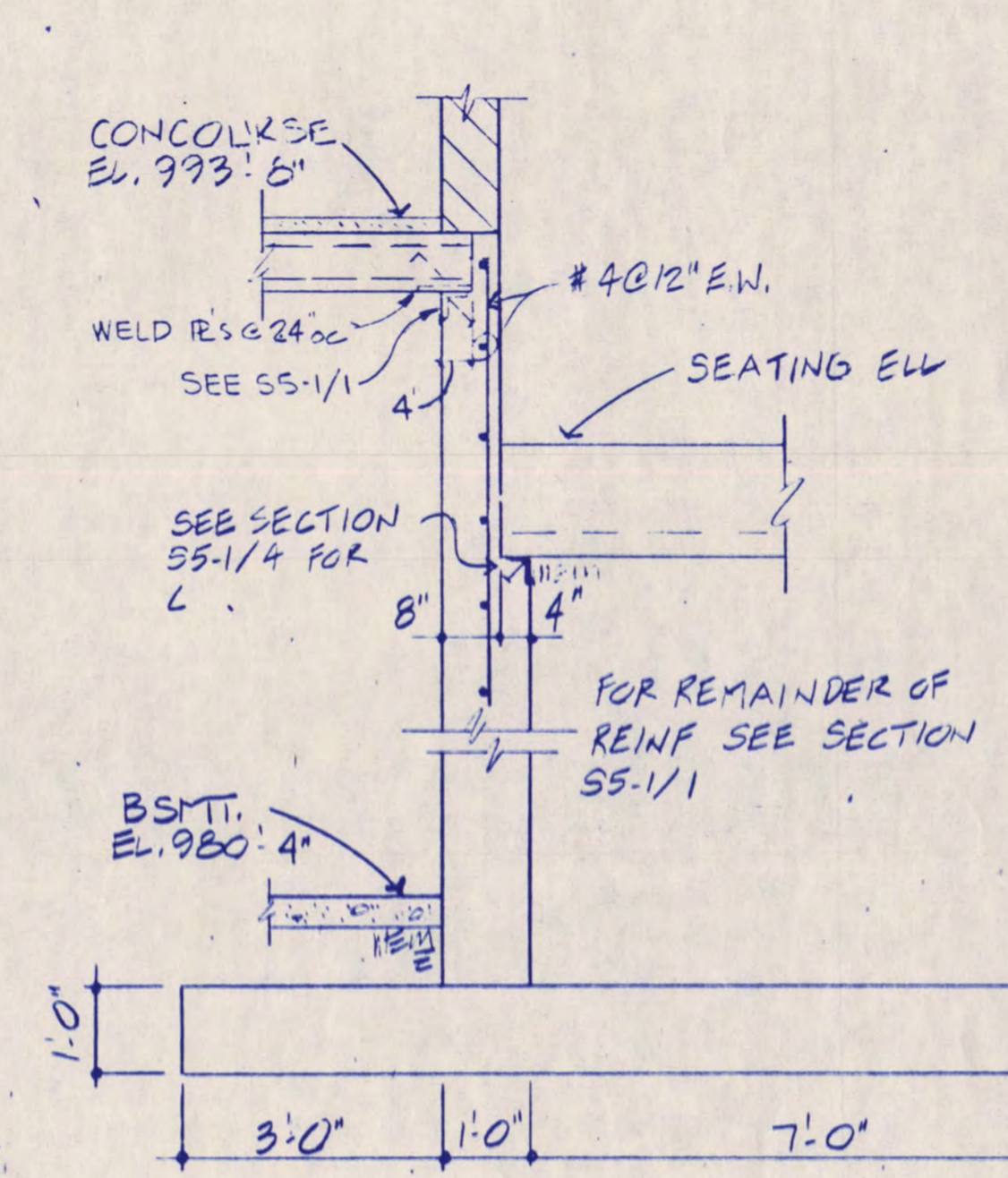
SS-1 SECTION 6  
1/2" = 1'-0"



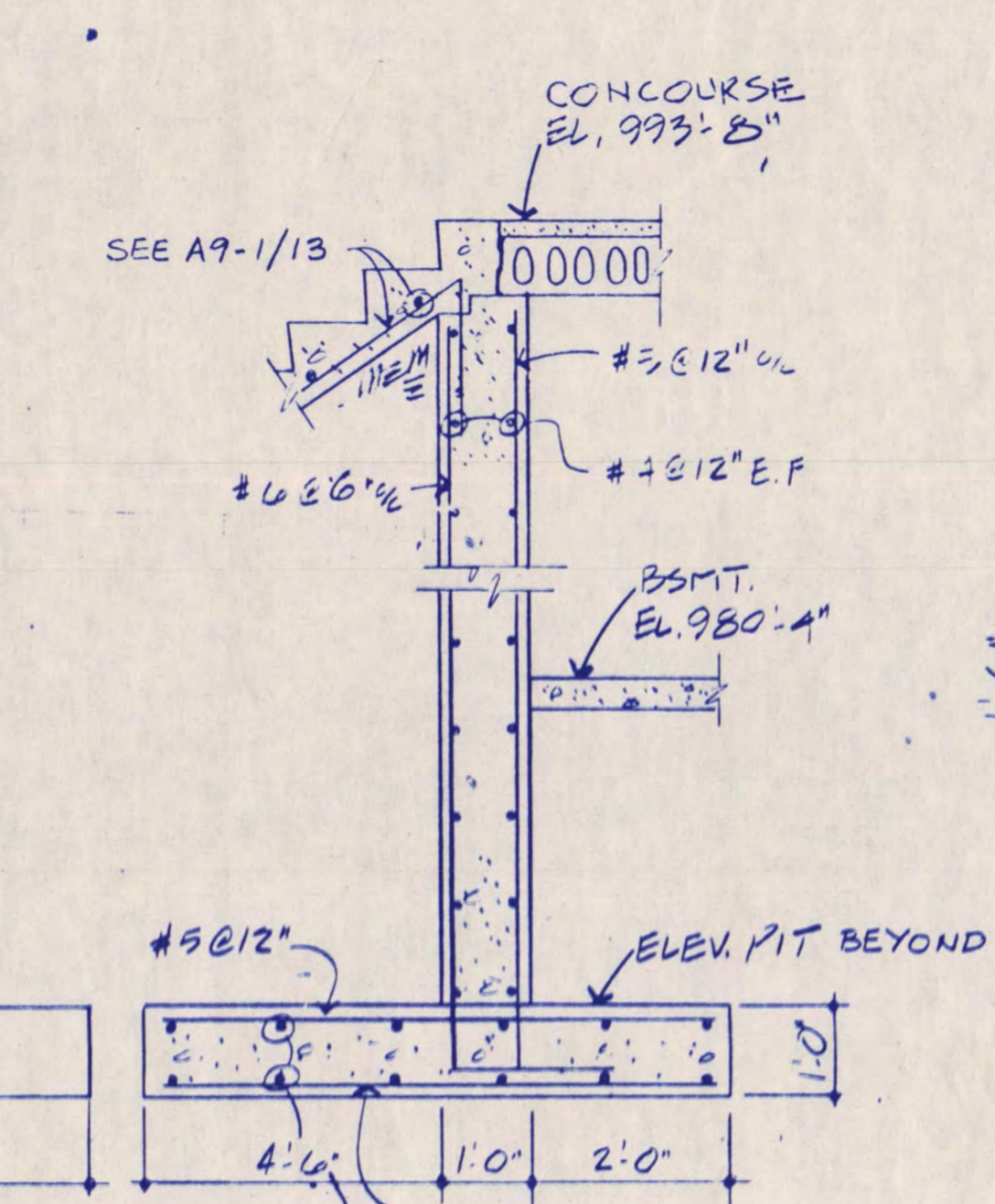
SS-1 SECTION 7  
1/2" = 1'-0"



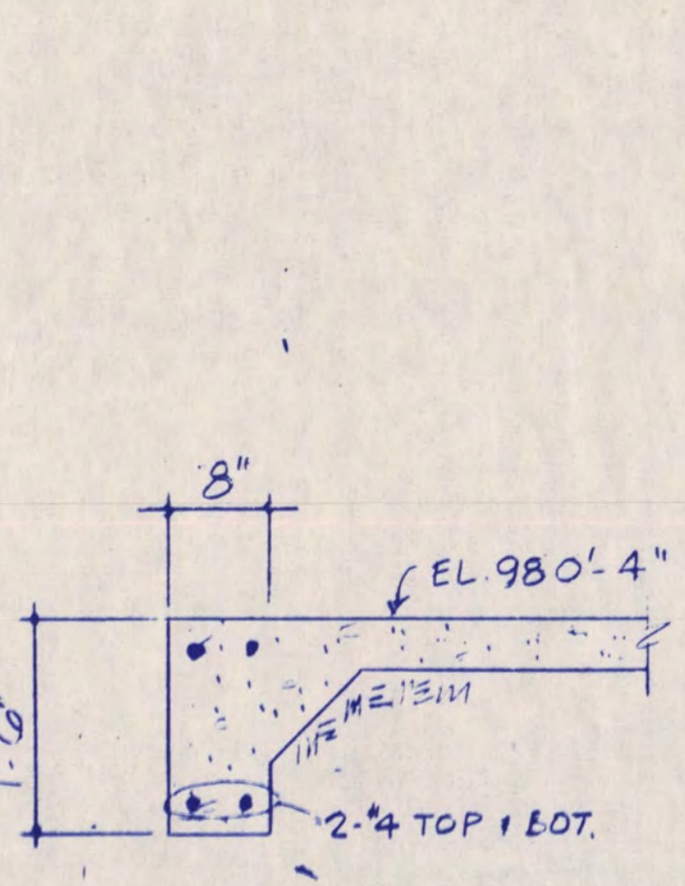
SS-1 SECTION 8  
1/2" = 1'-0"



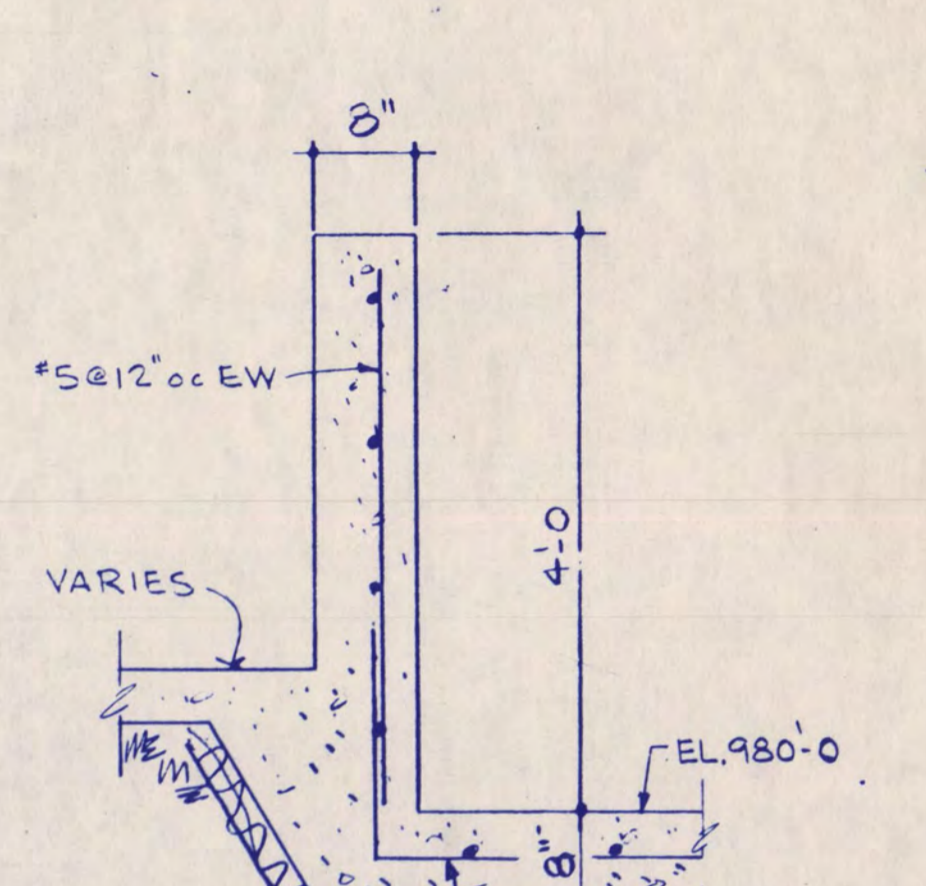
SS-1 SECTION 9  
1/2" = 1'-0"



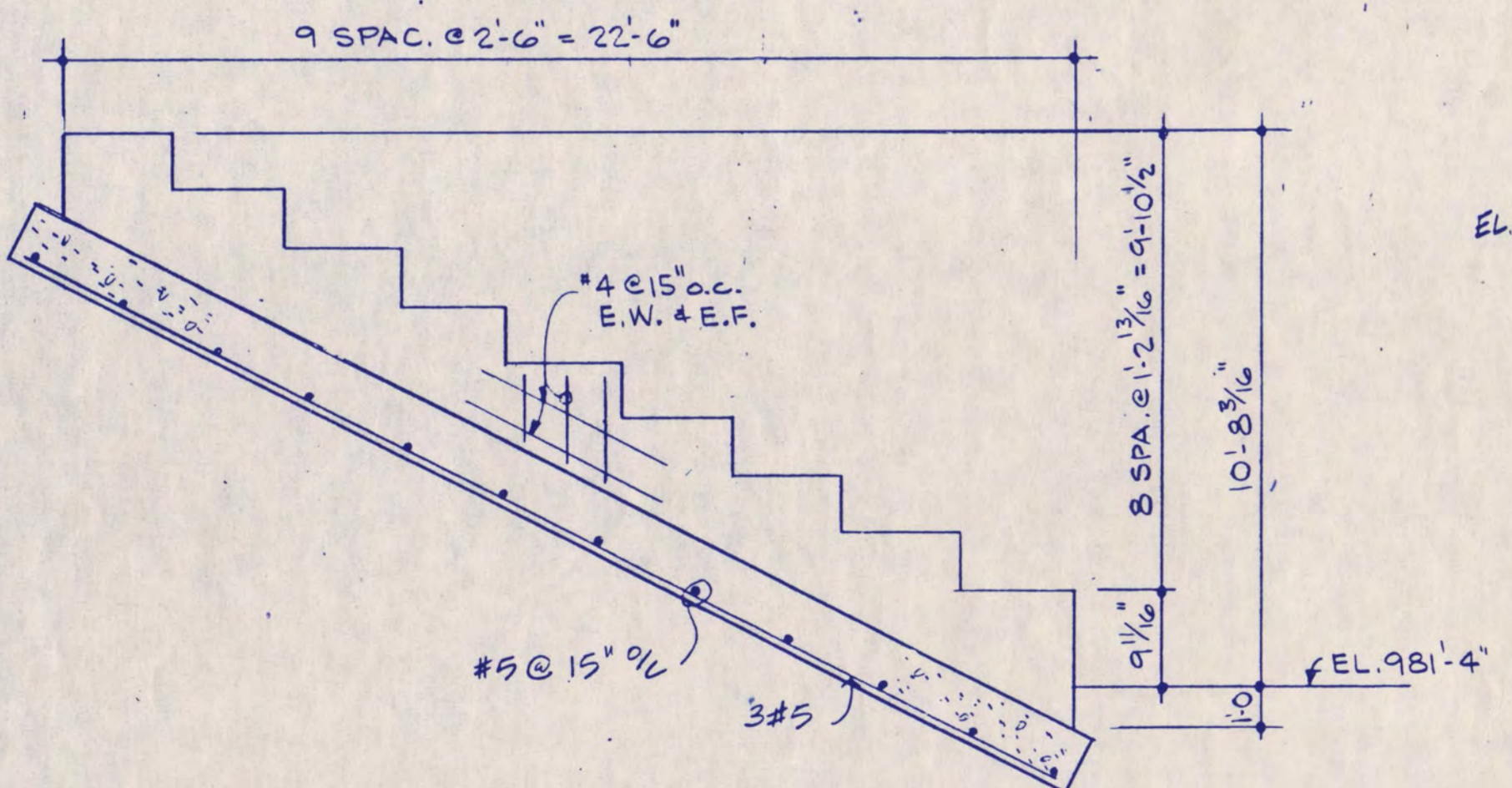
SS-1 SECTION 10  
1/2" = 1'-0"



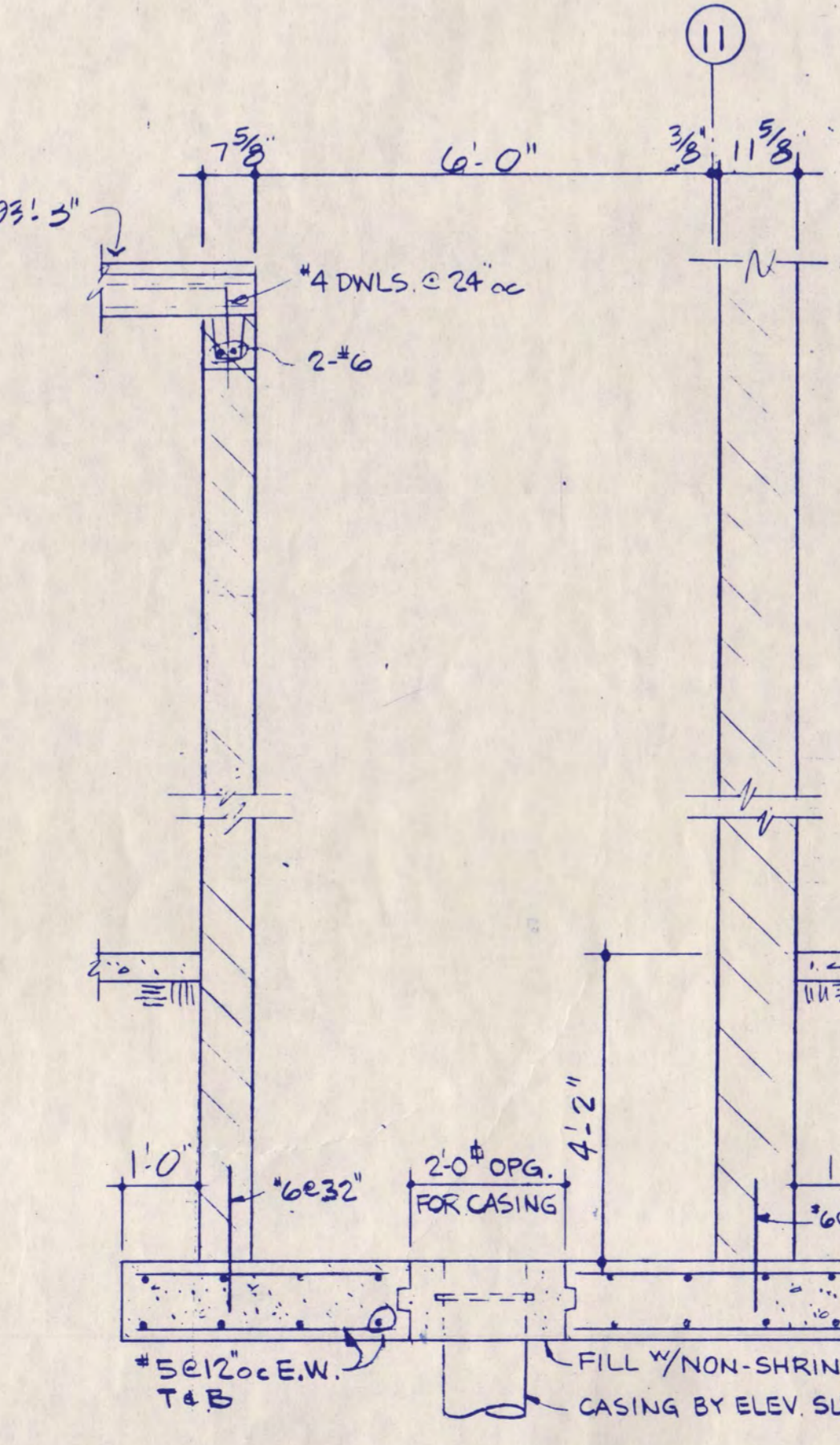
SS-1 SECTION 11  
3/4" = 1'-0"



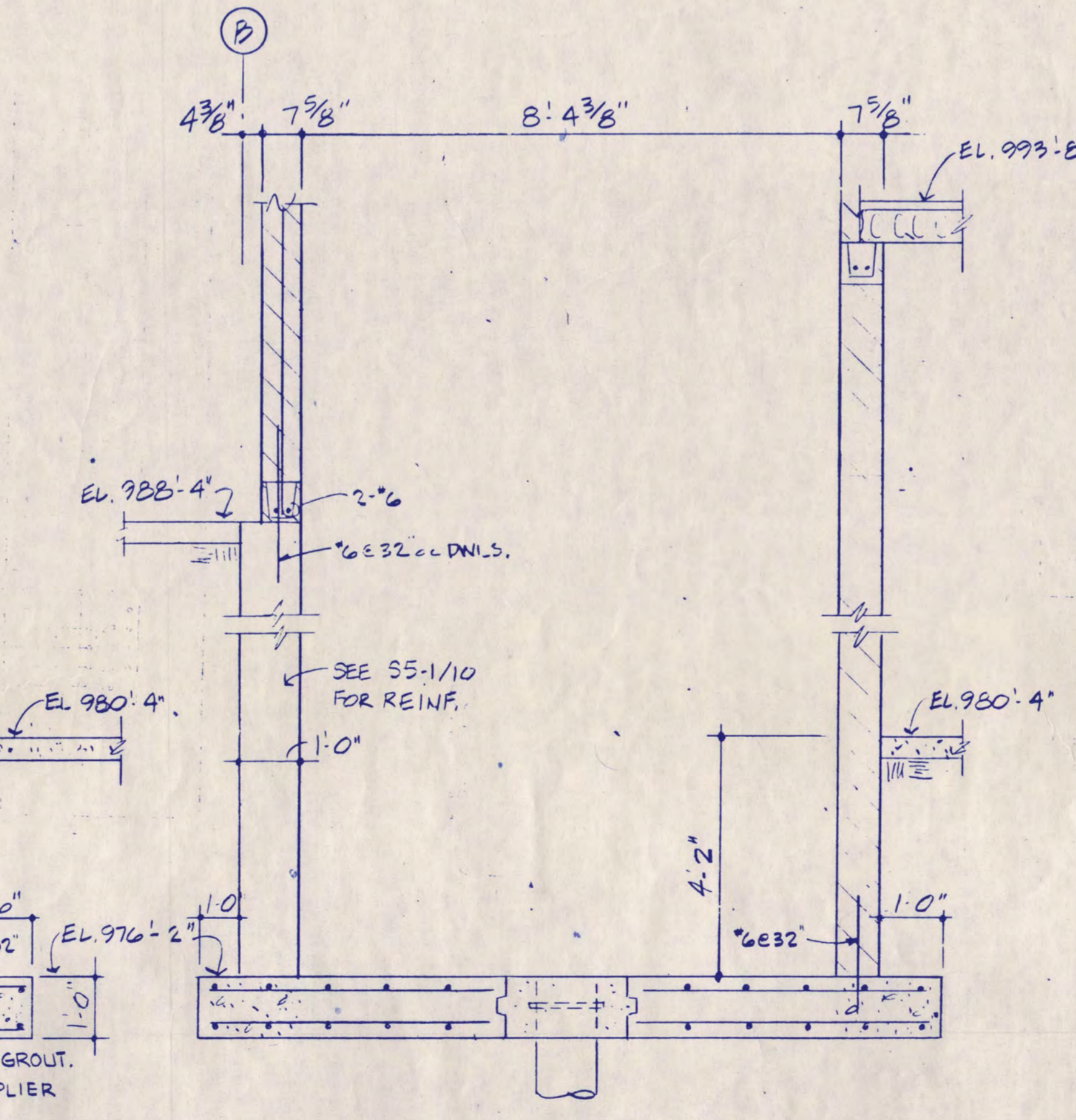
SS-1 SECTION 12  
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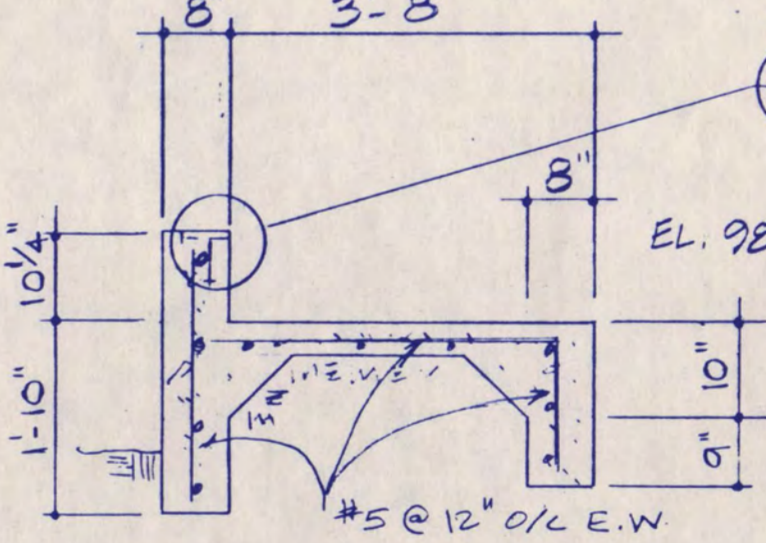
SS-1 SECTION 13  
1/4" = 1'-0"



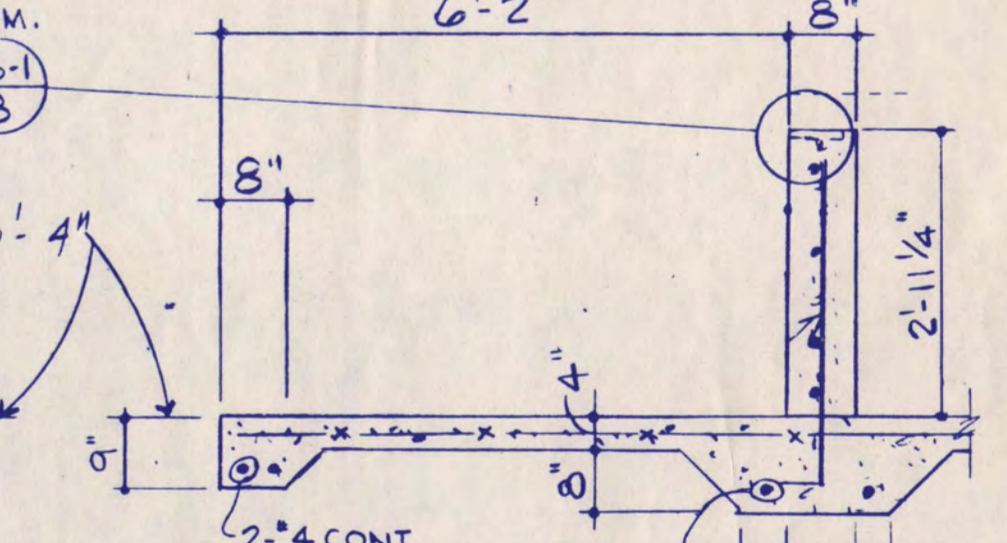
SS-1 SECTION 14  
1/2" = 1'-0"



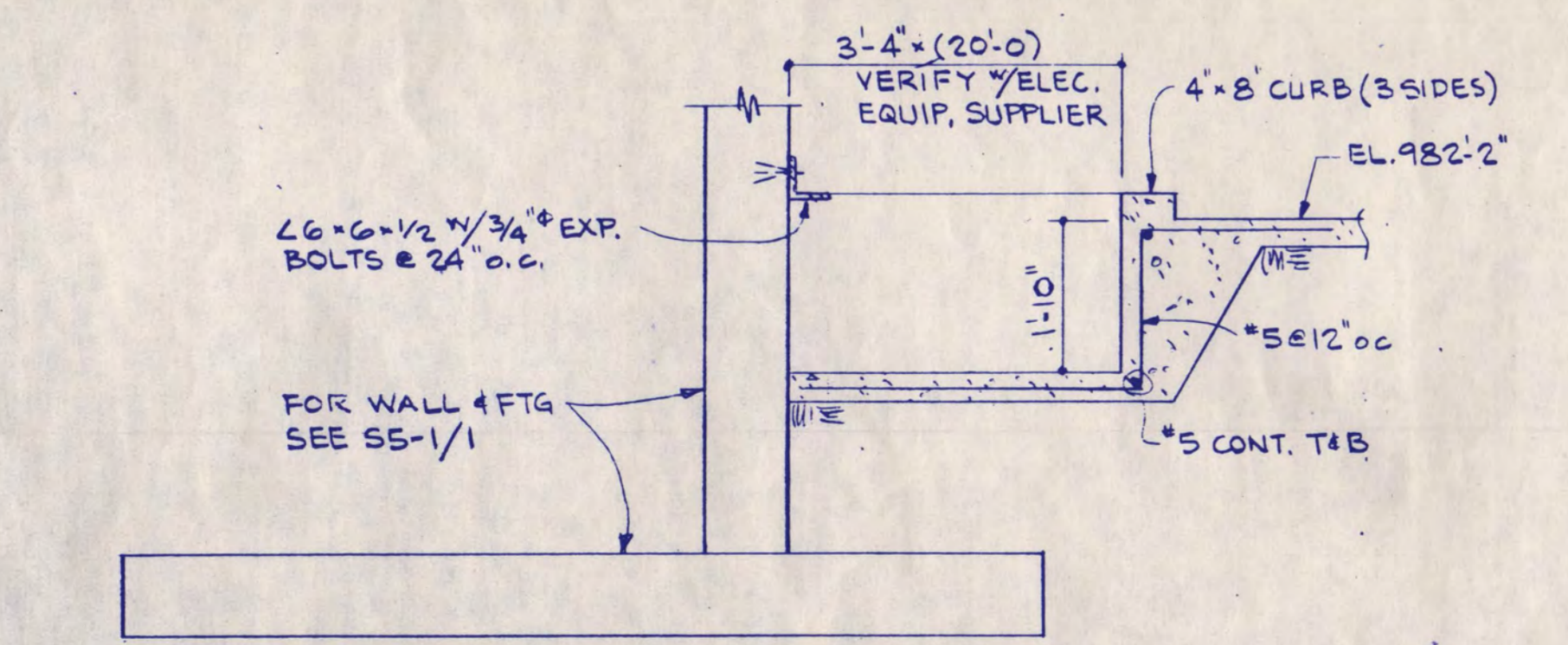
SS-1 SECTION 15  
1/2" = 1'-0"



SS-1 SECTION 16  
1/2" = 1'-0"



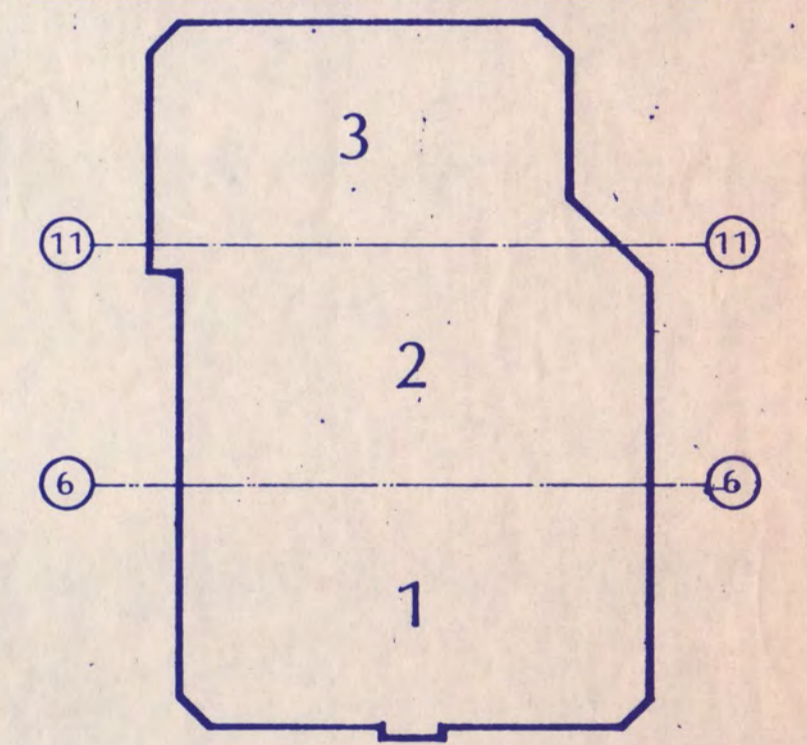
SS-1 SECTION 17  
1/2" = 1'-0"



SS-1 SECTION 20  
1/2" = 1'-0"

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Scott E. Samuels  
Date 7/12/88 Reg. No. 10889



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ST. CLOUD, MINNESOTA

Ellerbe

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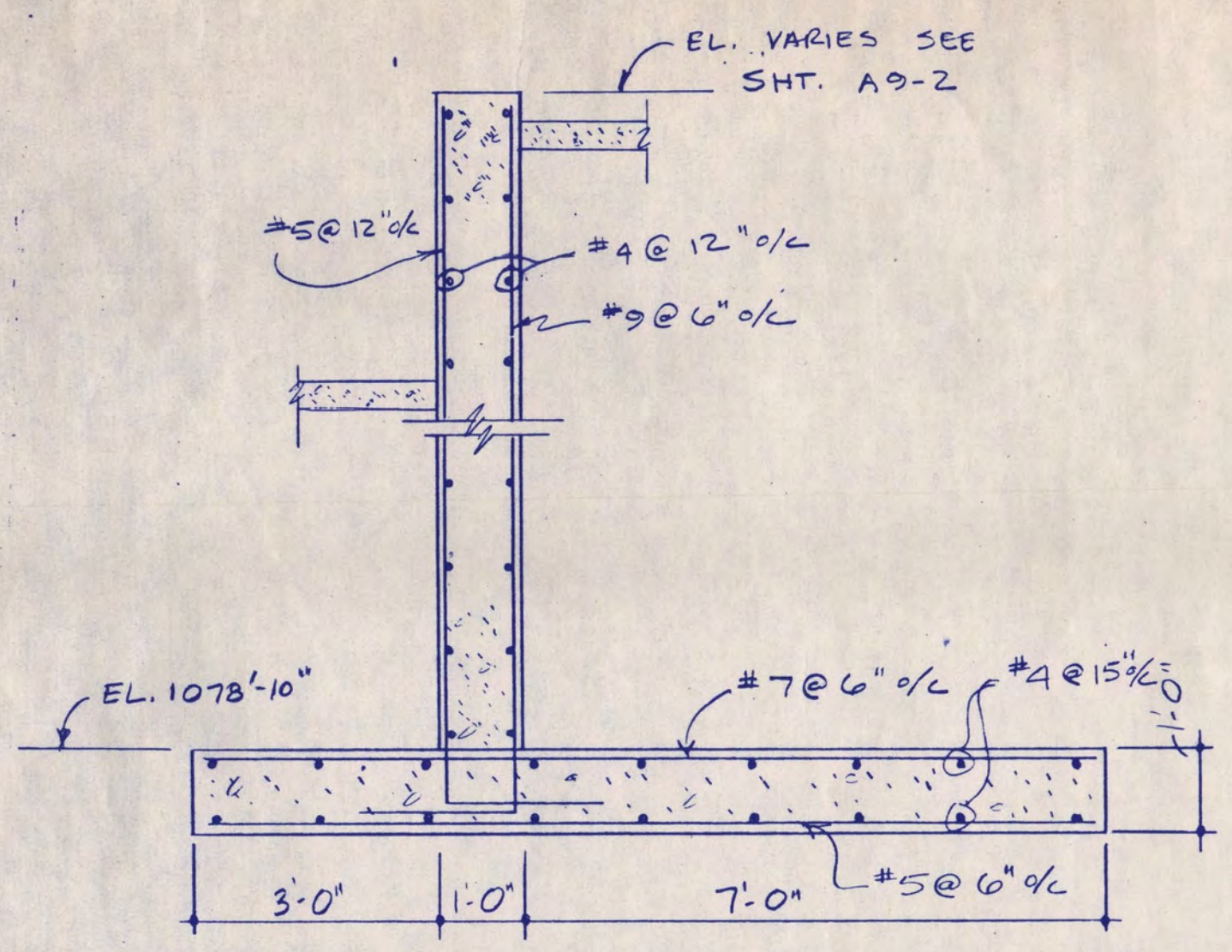
## FOUNDATION SECTIONS & DETAILS

Scale AS NOTED

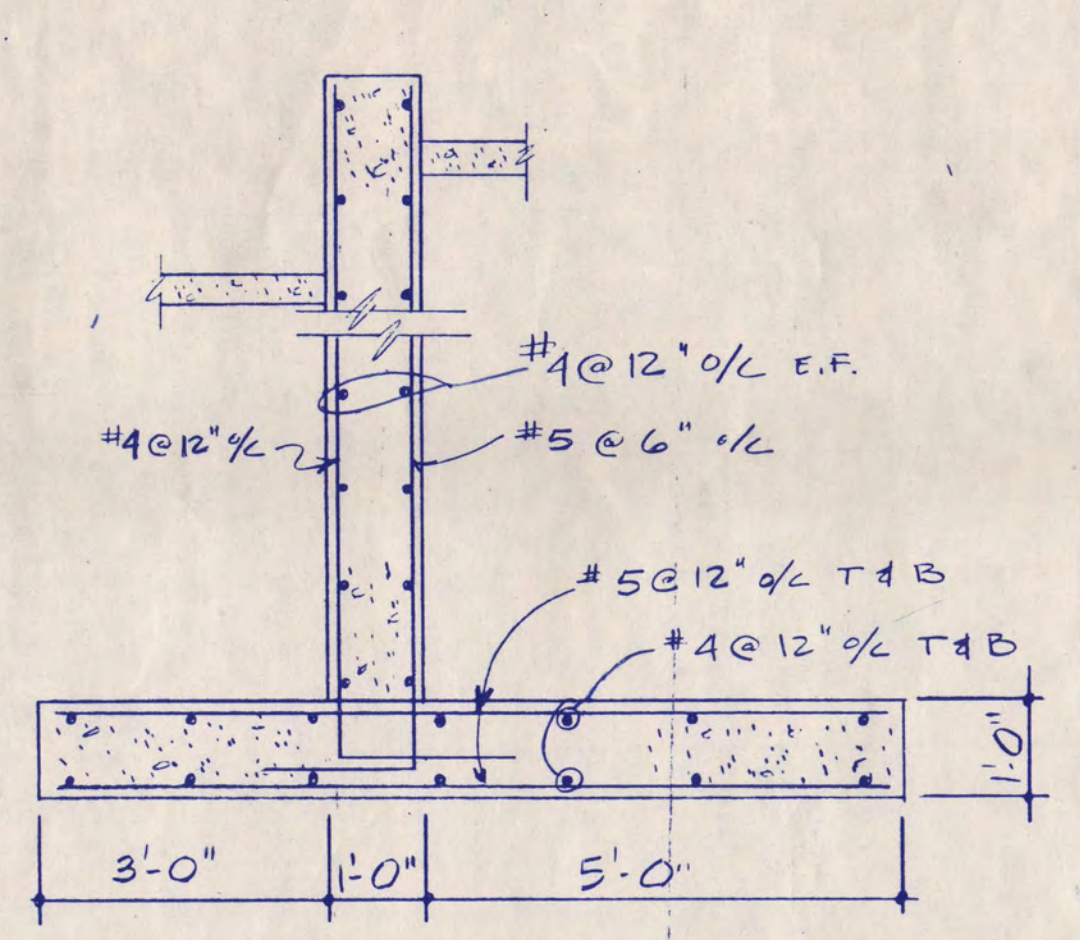
Date SEP. 9, 1988 Comm. No. 8766-871  
In Charge SES  
Drawn By JTL  
Checked By SES

S5-1

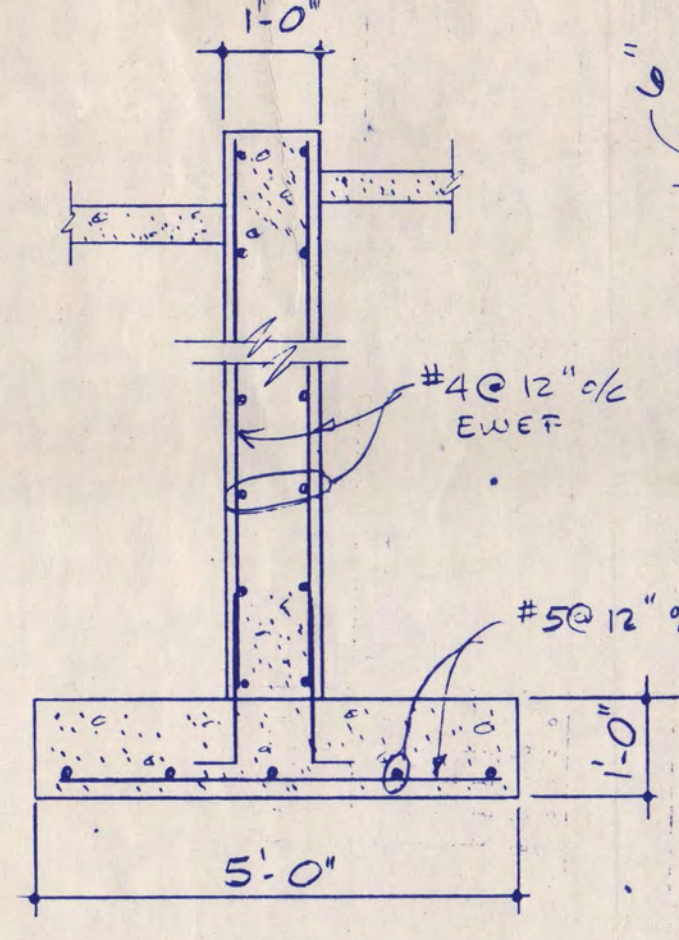




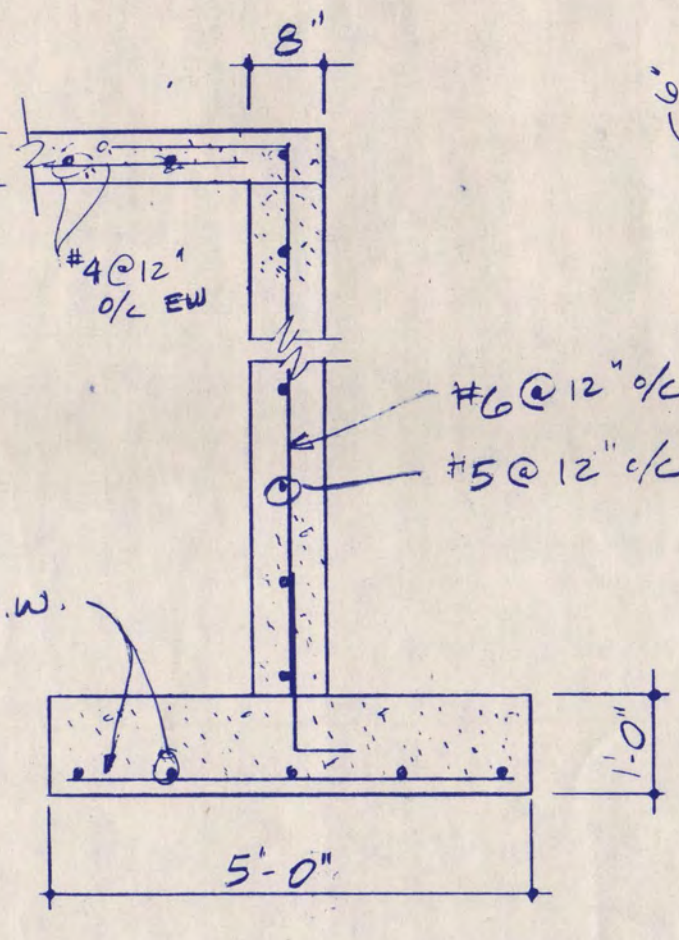
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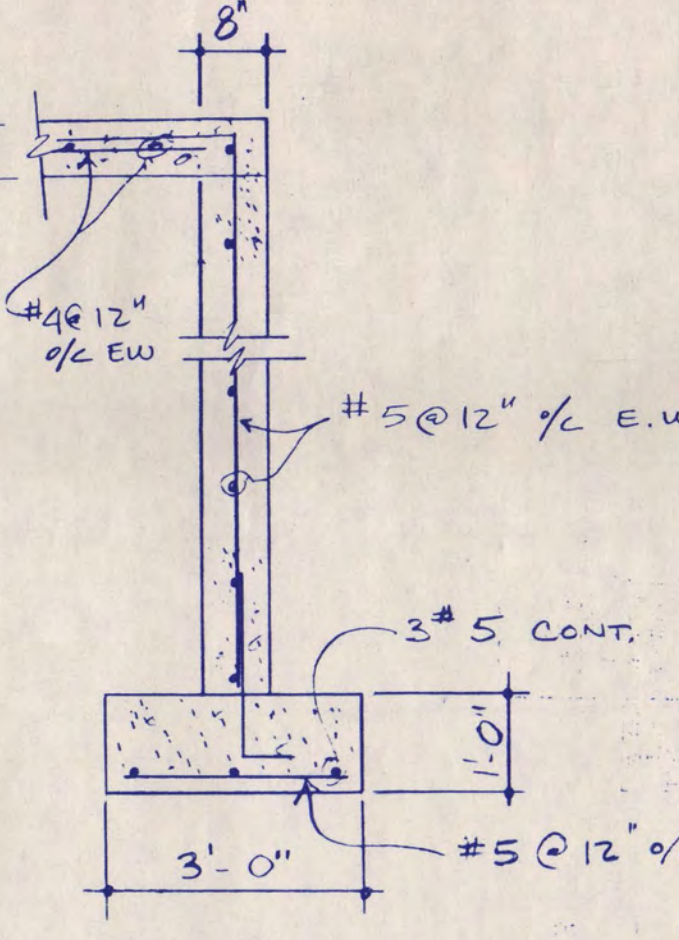
SS-2 SECTION 2  
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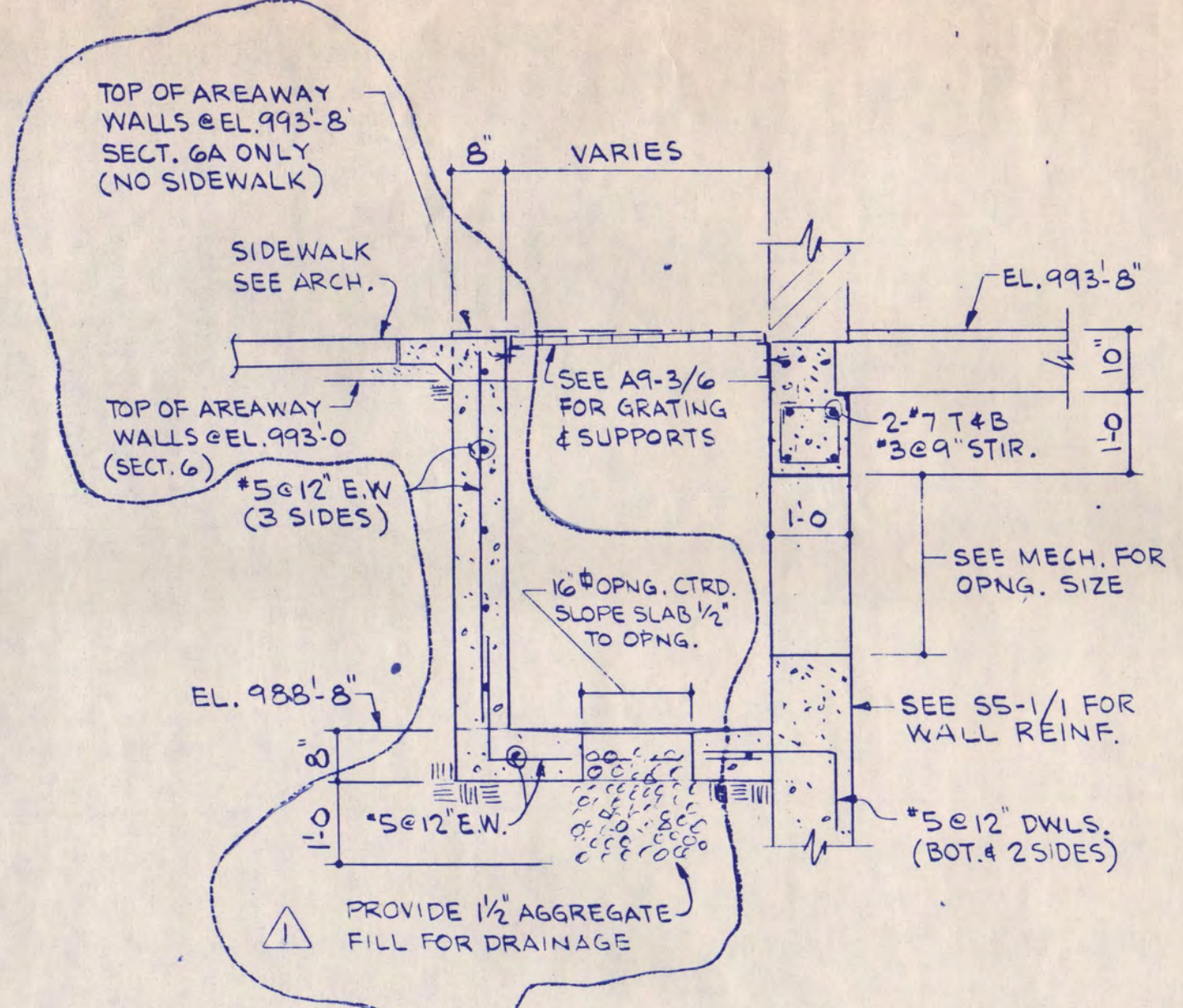
SS-2 SECTION 3  
1/2" = 1'-0"



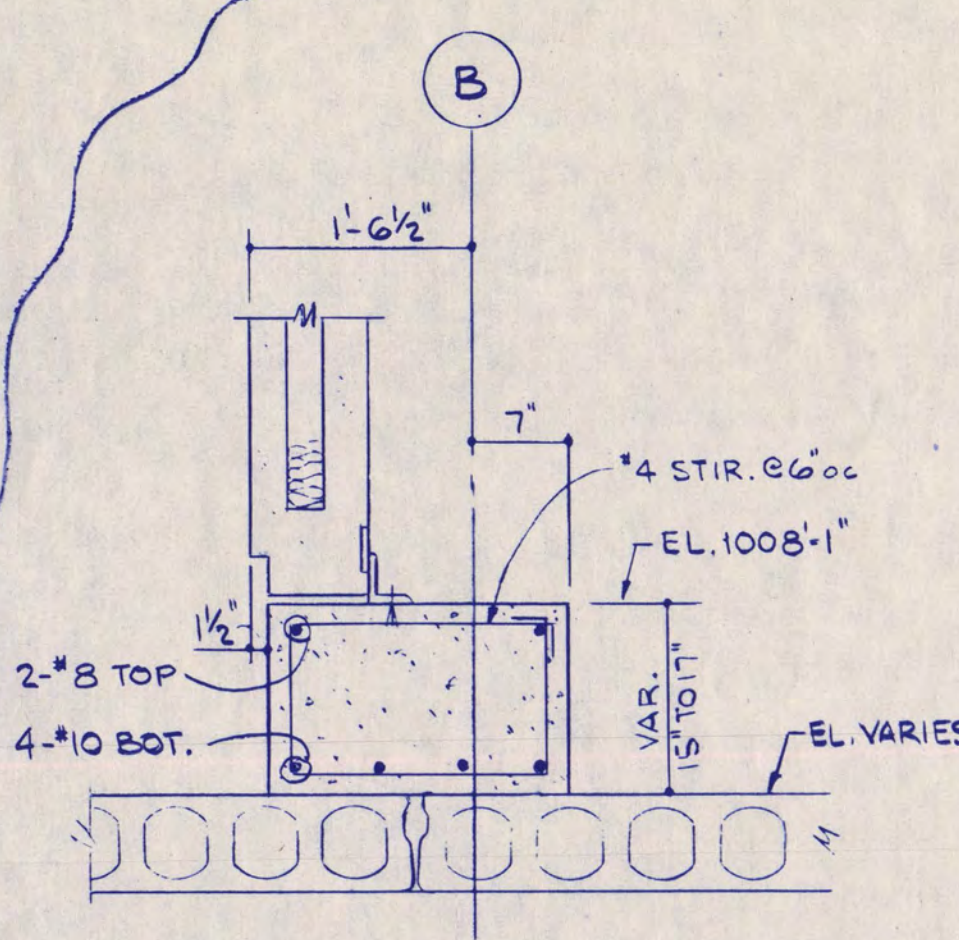
SS-2 SECTION 4  
1/2" = 1'-0"



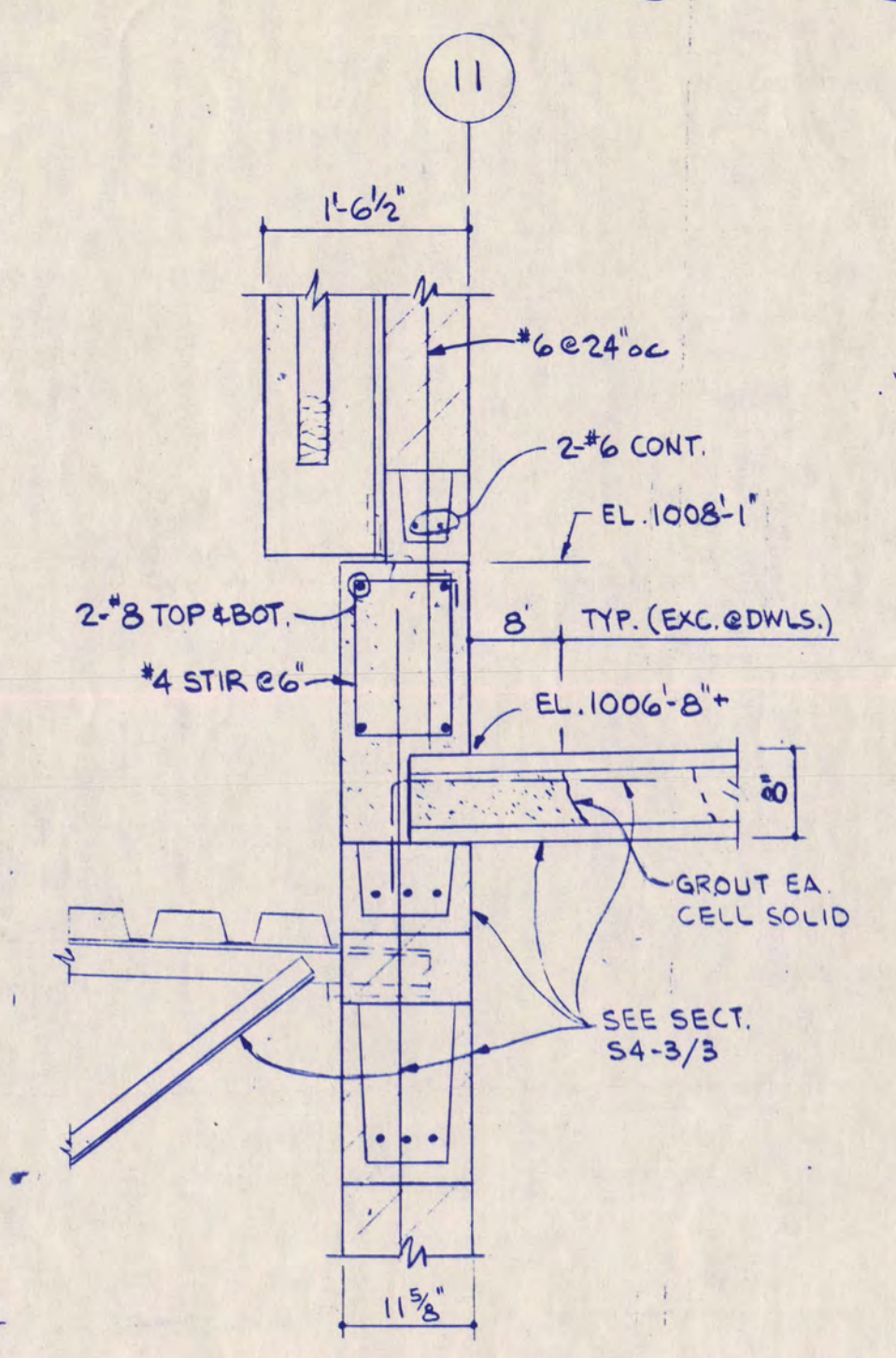
SS-2 SECTION 5  
1/2" = 1'-0"



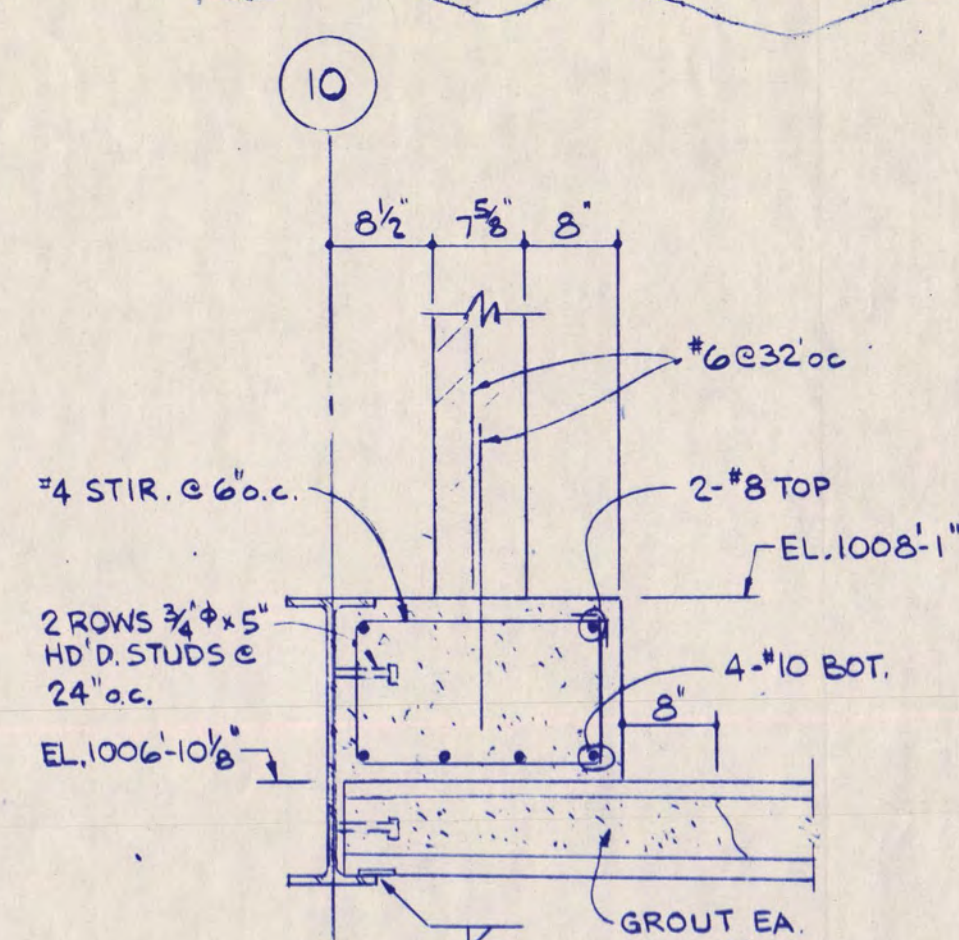
SS-2 SECTION 6  
1/2" = 1'-0"



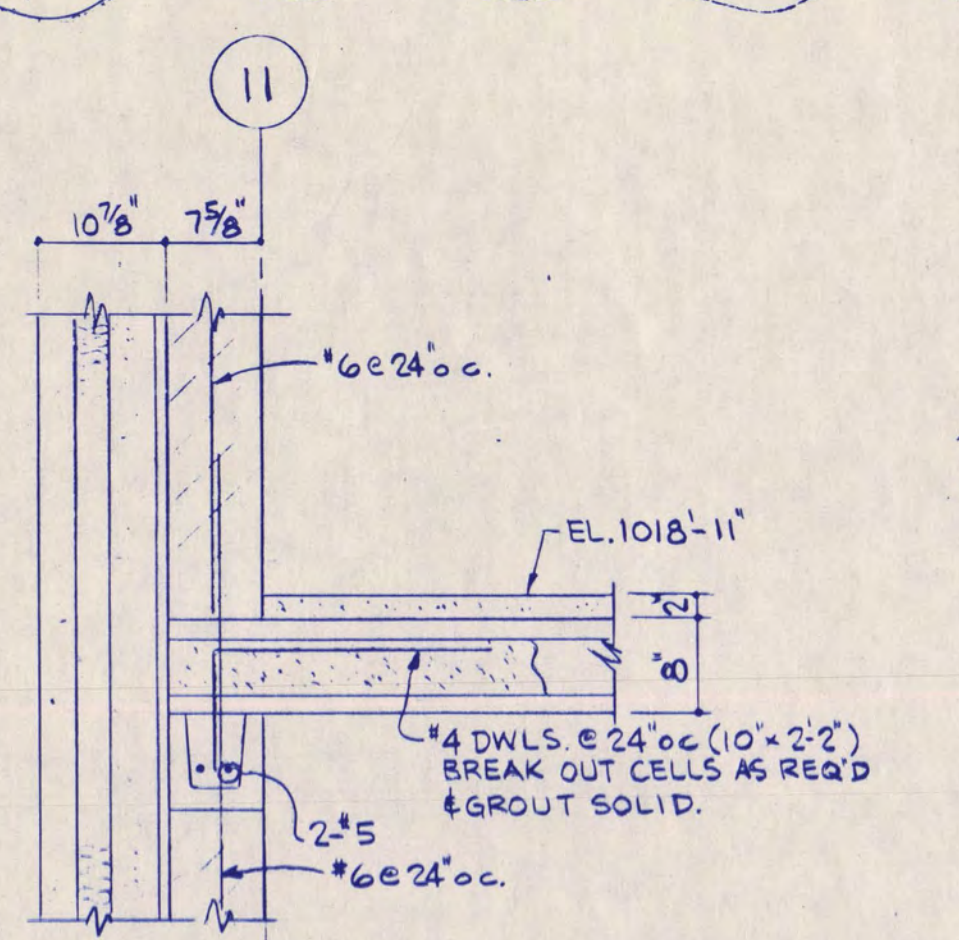
SS-2 SECTION 7  
3/4" = 1'-0"



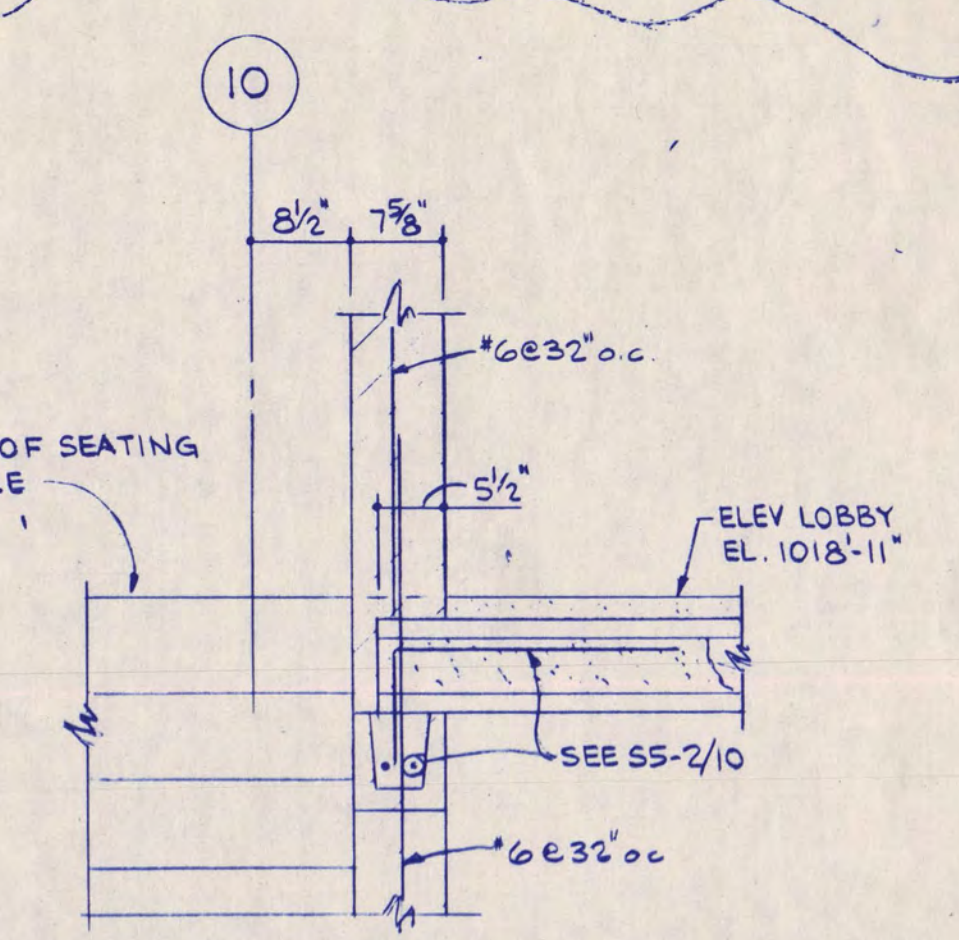
SS-2 SECTION 8  
3/4" = 1'-0"



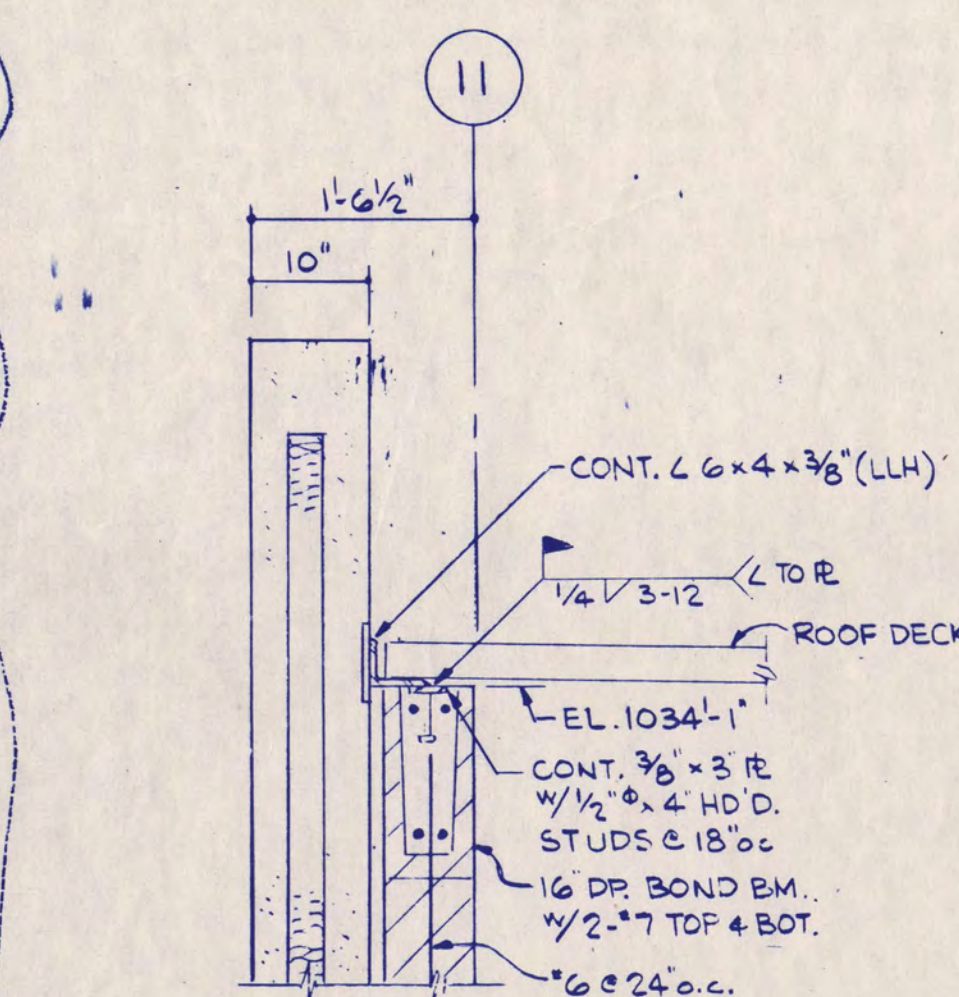
SS-2 SECTION 9  
3/4" = 1'-0"



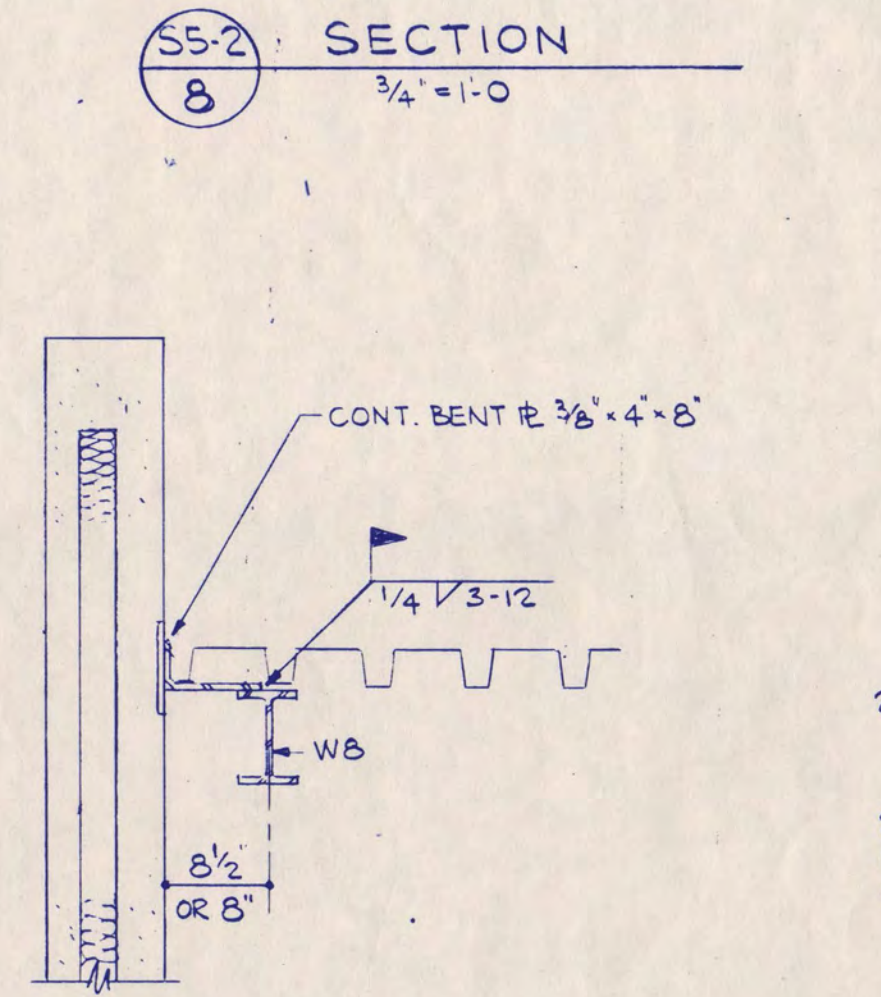
SS-2 SECTION 10  
3/4" = 1'-0"



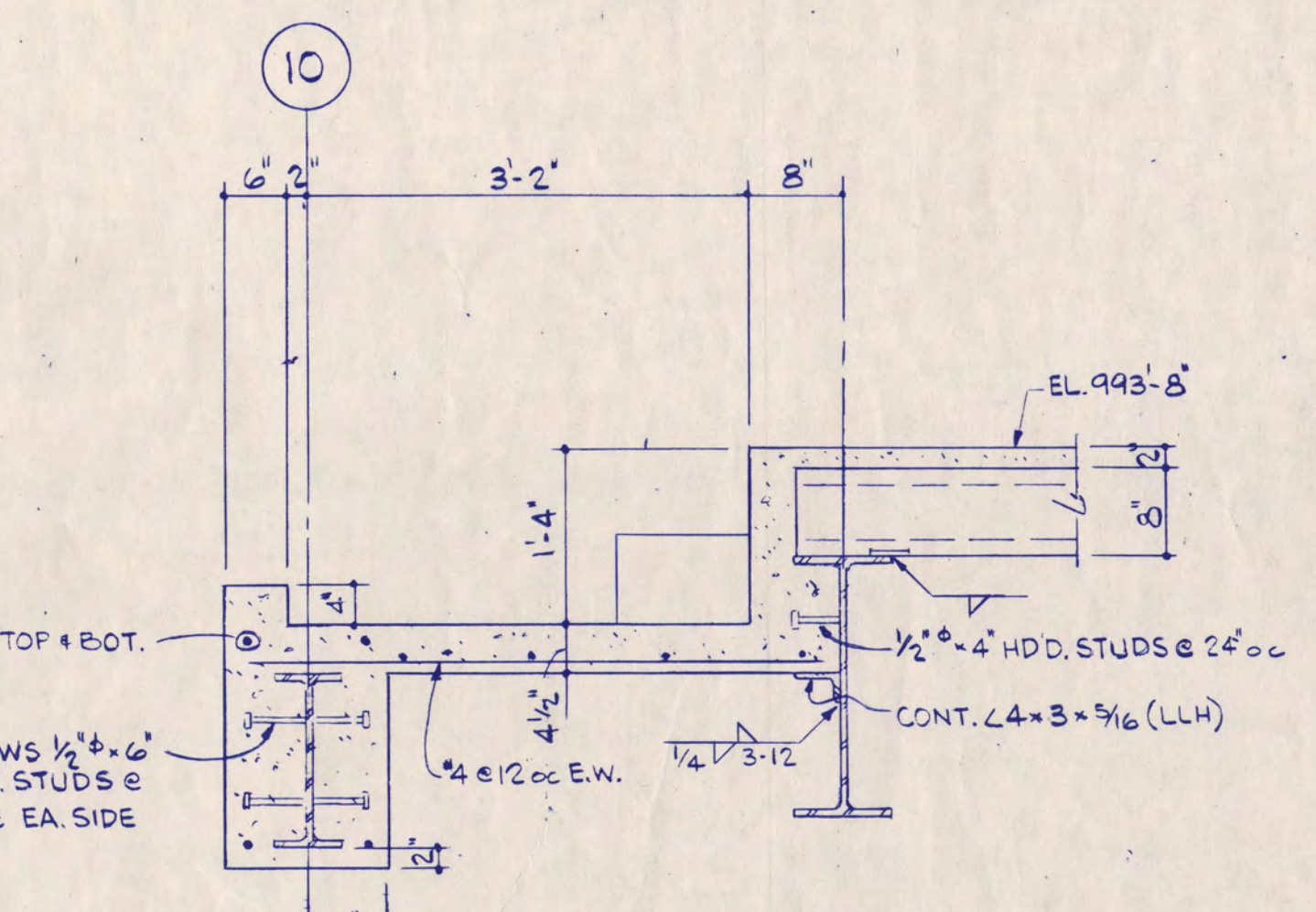
SS-2 SECTION 11  
3/4" = 1'-0"



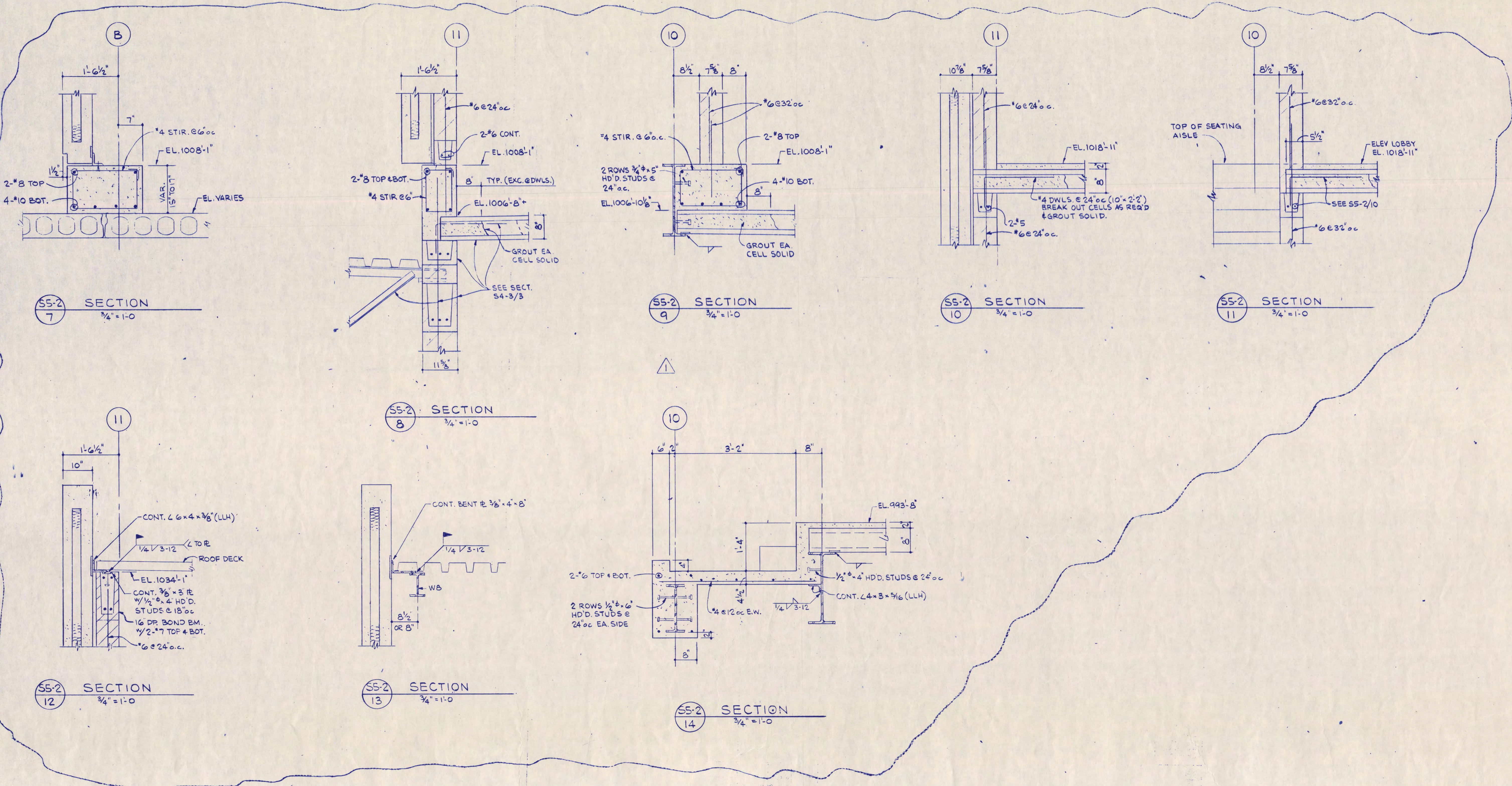
SS-2 SECTION 12  
3/4" = 1'-0"



SS-2 SECTION 13  
3/4" = 1'-0"

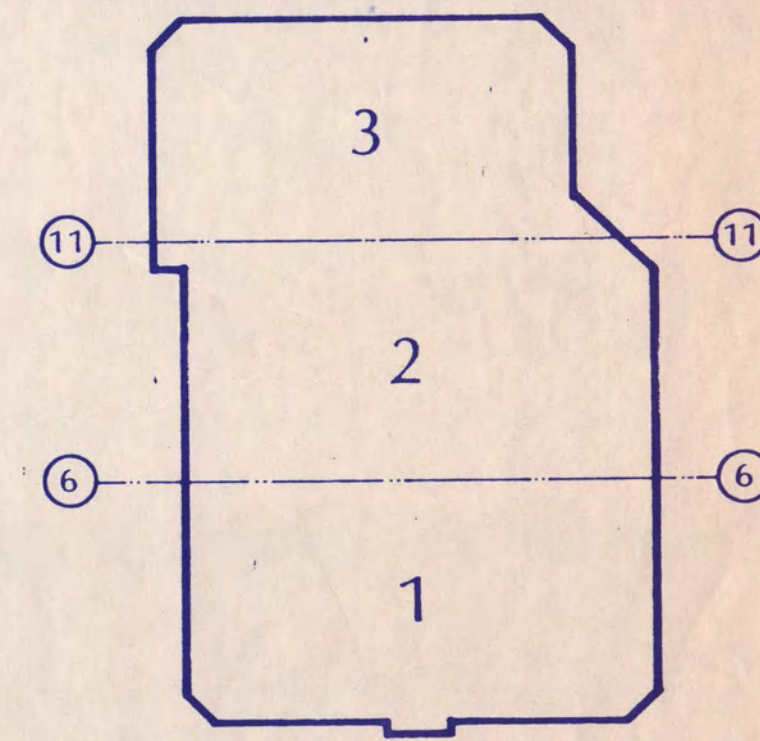


SS-2 SECTION 14  
3/4" = 1'-0"



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Scott E. Sanden*  
 Date 7/12/88 Reg. No. 10889



KEY PLAN  
**NATIONAL HOCKEY CENTER**

**ST. CLOUD STATE UNIVERSITY**  
 ST. CLOUD, MINNESOTA

**Ellerbe**

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 (612) 853-2000  
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STRUCTURAL DETAILS

Scale AS NOTED  
 Date SEP. 9, 1988 Comm. No. 8760-871  
 In Charge SES  
 Drawn By JTL  
 Checked By SES

**S5-2**